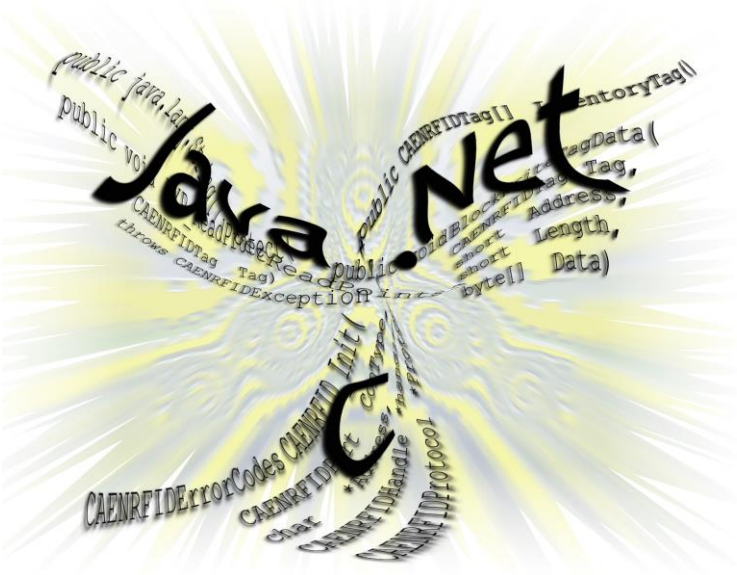
DL RFID API

Reference Manual



DATALOGIC

Reference Manual

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Scope of Manual

This manual documents the API used by C, Java, Android and .Net programmers who want to write applications for controlling and using DL RFID readers.

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1 Introduction

This Chapter gives basic information about DLRFID Software Development Kit (SDK). It contains these topics:

- Overview on SDK
- Functions and methods names
- Error Handling
- Managing connections with the readers
- Return data mechanism
- Passing parameters to methods and functions

Overview on SDK

DL RFID provides a Software Development Kit (SDK) aimed to facilitate the software developers in interfacing with its readers. The SDK provides Application Program Interfaces (API) for three programming languages: C, Java and J#/C#/Visual Basic .NET.

The functionalities and the behaviors exported by the libraries are exactly the same for all the languages but, due to the syntax differences between them, there are differences in the implementation of functions and methods. Java and .NET implementation are very similar because they are both Object Oriented environments while the C implementation differs more.

The Object Oriented implementation (Java and .NET) defines a set of classes that models the devices characteristics, the main one are the DLRFIDReader class and the DLRFIDLogicalSource class. The first one implements the main methods used to configure general readers' parameters like the output power, the link interface and so on, the latter provides the methods to be used in order to communicate with the RFID tags (tags detection, read and write commands and so on).

The C implementation, on the contrary, implements a set of data types (defined into the DLRFIDTypes.h header file) and a list of functions (defined into the DLRFIDLib.h header file) in order to obtain the same functionalities as the Java and .NET classes.

In the Object Oriented languages (C# and Java) there are some methods that return objects, these methods have no correspondent in C language.

Further details on .NET and Java APIs can be found into the DL RFID API User Manual.

The following paragraphs will denote the differences in functionality for the topics listed below:

- Functions and methods names
- Error Handling
- Managing connections with the readers
- Return data mechanism
- Passing parameters to methods and functions

Functions and methods names

The functions and methods with the same functionalities have the same name in all languages. The only exceptions are due to the absence of the overloading feature in the C language: methods that are overloaded in Java and .NET are translated in a corresponding set of different functions in C.

Note: some methods and functions have changed name in the last revision of the API but older names are still functional to preserve backward compatibility (see § DLRFID Obsolete Methods pag.125).

Error Handling

Java and .NET language API handle error conditions using the exceptions mechanism: when a method encounters an error, an exception is thrown to the calling code. The API defines a proper class for the exception generated by its methods (DLRFIDException) the origin of the error is represented inside the DLRFIDException object as a string.

C language does not provide the exception mechanism so the errors are handled using the return value of the functions. Each C function returns a numeric error code that can be interpreted using

the DLRFIDErrorCodes enumeration. Since no exceptions are generated, the execution flow of the program is not interrupted by the errors so it is always suggested to check for error conditions in the code before to call other functions.

Managing connections with the readers

Java and .NET languages allow to initiate and terminate the communication with the reader by means of two specific methods of the DLRFIDReader objects. So, after an object of the class DLRFIDReader is instantiated, the Connect method permits to start the communication with a reader while the Disconnect method permits to terminate the communication.

C language is not object oriented and the handling of the communication state is implemented using two functions. DLRFID_Init is used to start the communication with a reader and to initialize all the library's internal data structures needed in order to maintain the communication active. The function returns a "handle" (very similar to the handles used in managing files) that have to be used in any subsequent function calls relative to that reader. At the end of the operation, a call to the DLRFID_End function permits to close the communication link and to free the internal data structures.

Return data mechanism

As seen in the Error Handling paragraph, all the C functions return a numeric error codes. Due to that reason, functions that need to return data to the caller use output parameters. Output parameters for the C functions are highlighted in this reference manual by the underlined name in the formal parameter list.

Java and .NET languages use exception for the error handling so, typically, the data is returned to the caller using the return value of the methods.

Passing parameters to methods and functions

There are differences in the parameters' lists between Java/.NET methods and C functions. Many of those differences are due to the implicit reference of the methods to their objects. This characteristic of object oriented languages is emulated in C functions using an additional explicit parameter. Methods belonging to DLRFIDLogicalSource objects, for example, are emulated in C functions that accept SourceName parameters.

Other differences are due to the better handling of complex data types in Java and .NET languages. Arrays, for example, have implicit size in Java/.NET that permit to pass a single parameter to methods requiring this data type. In C functions, passing an array as a parameter, need to specify both the memory address of the array and its size explicitly.

2 DL RFID API Structure

This chapter describes DL RFID API Structure. It contains these topics:

- DLRFID Classes
- DLRFID Enumerations

DLRFID Classes

In .NET (henceforth C#), Java and Android languages, DLRFID methods are divided into the following classes:

Class	Description
DLRFIDEventArgs[1]	This class defines the DLRFID event arguments.
DLRFIDException	This class defines the DL RFID exceptions.
IDSTagData	This class represents data returned by tags based on IDS Chip SL900A.
DLRFIDLogicalSource	The DLRFIDLogicalSource class is used to create logical source objects. Logical source objects represent an aggregation of read points (antennas). Operations on the tags are performed using the logical source methods. In addition to the methods used to operate on the tags, the logical source class exports methods to configure the anticollision algorithm and to configure the composition of the logical source itself.
DLRFIDNotify	This class defines the structure of a notification message.
DLRFIDReader	The DLRFIDReader class is used to create reader objects which permit to access to DL RFID readers' configuration and control commands.
DLRFIDReaderInfo	The DLRFIDReaderInfo class is used to create reader info objects. Reader info objects represent the information about the reader device (model and serial number).
DLRFIDTag	This class is used to define objects representing the tags. These objects are used as return value for the inventory methods and as arguments for many tag access methods.

Tab. 2.1: DLRFID classes

Each class contains the following methods:

Methods	Description
DLRFIDEventArgs Class	
getData	Returns the event object value.
DLRFIDException Class	
getError	Gets the error string associated to the exception.
DLRFID IDSTagData Class	
getADError	Gets the error status of the A/D.
getRangeLimit	Gets the range limit parameter.
getSensorValue	Gets the value obtained by the sensor.
DLRFIDLogicalSource Class	
AddReadPoint	Adds a read point to the logical source.
BlockWriteTagData	Overloaded. This method can be used to write a portion of the user memory in an ISO18000-6B tag using blocks of four bytes for each command.
CustomCommand_EPC_C1G2	Overloaded. This method can be used to issue a generic Custom command as defined by the EPC Class1 Gen2

[1] For the description of this class, see § Event Handling pag.107

Methods	Description
	protocol specification. The parameters are used to specify the type of the custom command and its parameters.
EventInventoryTag	A call to this method will start a sequence of read cycle on each read point linked to the logical source. The readings will be notified to the controller via event generation.
GetBufferedData	The function returns all the Tags stored in reader's memory using all the ReadPoints belonging to the Source.
GetDESB_ISO180006B	This method can be used to retrieve the Data Exchange Status Bit setting (see ISO18000-6B protocol specification) used by the anticollision algorithm when called on this logical source.
GetName	Gets a string representing the name of the logical source.
GetQ_EPC_C1G2	This method can be used to retrieve the current setting for the initial Q value (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.
GetReadCycle	Gets the current setting for the number of read cycles performed by the logical source during the inventory algorithm execution.
GetSelected_EPC_C1G2	This method can be used to retrieve the Selected flag (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.
GetSession_EPC_C1G2	This method can be used to retrieve the Session setting (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.
GetTarget_EPC_C1G2	This method can be used to retrieve the Target setting (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.
GroupSelUnsel	This method can be used to send a Group Select/Unselect command to the tag (see ISO18000-6B protocol specification).
InventoryTag	Overloaded. A call to this method will execute a read cycle on each read point linked to the logical source. Depending on the air protocol setting it will execute the appropriate anticollision algorithm.
isReadPointPresent	Checks if a read point is present in the logical source.
KillTag_EPC_C1G1	This method can be used to kill an EPC Class 1 Gen 1 tag.
KillTag_EPC_C1G2	Overloaded. This method can be used to kill an EPC of an EPC Class 1 Gen 2 tag.
LockBlockPermaLock_EPC_C1G2	This method implements the BLockPermaLock with ReadLock=1 as specified in EPCC1G2 rev. 1.2.0 protocol.
LockTag_EPC_C1G2	Overloaded. This method can be used to lock a memory bank of an EPC Class 1 Gen 2 tag.
LockTag_ISO180006B	This method can be used to lock a byte in the memory of a ISO18000-6B tag.
NXP_ChangeEAS	This method can be used to issue a ChangeEAS custom command as defined by the NXP G2XM and G2XL datasheet after having put it in Secured state using the Access command.

Methods	Description
NXP_ChangeConfig	Overloaded. This method can be used to issue a NXP_ChangeConfig custom command as defined in the NXP UCODE G2iM and G2iM+ datasheet.
NXP_EAS_Alarm	This method can be used to issue an EAS_Alarm custom command as defined by the NXP G2XM and G2XL datasheet.
NXP_ReadProtect	Overloaded. This method can be used to issue a ReadProtect custom command as defined by the NXP G2XM and G2XL datasheet.
NXP_ResetReadProtect	This method can be used to issue a ResetReadProtect custom command as defined by the NXP G2XM and G2XL datasheet.
ProgramID_EPC_C1G1	This method can be used to write the EPC of an EPC Class 1 Gen 1 tag.
ProgramID_EPC_C1G2	Overloaded. This method can be used to write the EPC of an EPC Class 1 Gen 2 tag.
ProgramID_EPC119	This method can be used to write the UID of an EPC 1.19 tag.
Query_EPC_C1G2	This method make the reader generate an EPC Class1 Gen2 Query command.
QueryAck_EPC_C1G2	This method make the reader generate a sequence of EPC Class1 Gen2 Query and Ack commands. It can be used to read a single tag under the field. If there are more than one tag under the field the method fails.
ReadBLockPermalock_EPC_C1G2	This method implements the BLockPermaLock with ReadLock=0 as specified in EPCC1G2 rev. 1.2.0 protocol.
ReadTagData	This method can be used to read a portion of the user memory in a ISO18000-6B tag.
ReadTagData_EPC_C1G2	Overloaded. This method can be used to read a portion of memory in a ISO18000-6C (EPC Class1 Gen2) tag.
RemoveReadPoint	Removes a read point from the logical source.
ResetSession_EPC_C1G2	This method can be used to reset the Session status for EPC Class1 Gen2 tags. After the execution of this method all the tags in the field of the antennas belonging to this logical source are back in the default Session.
SetDESB_ISO180006B	This method can be used to set the Data Exchange Status Bit (see ISO18000-6B protocol specification) used by the anticollision algorithm when called on this logical source.
SetQ_EPC_C1G2	This method can be used to set the initial Q value (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.
SetReadCycle	Sets the number of read cycles to be performed by the logical source during the inventory algorithm execution.
SetSelected_EPC_C1G2	This method can be used to set the Session (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.
SetSession_EPC_C1G2	This method can be used to set the Session (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Methods	Description
SetTarget_EPC_C1G2	This method can be used to set the Target setting (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.
SL900A_EndLog	This method can be used to issue an IDS SL900A EndLog custom command as defined in the IDS SL900A datasheet.
SL900A_GetLogState	This method can be used to issue an IDS SL900A GetLogState custom command as defined in the IDS SL900A datasheet.
SL900A_GetSensorValue	This method can be used to issue an IDS SL900A GetSensorValue custom command as defined in the IDS SL900A datasheet.
SL900A_Initialize	This method can be used to issue an IDS SL900A Initialize custom command as defined in the IDS SL900A datasheet.
SL900A_SetLogMode	This method can be used to issue an IDS SL900A SetLogMode custom command as defined in the IDS SL900A datasheet.
SL900A_StartLog	This method can be used to issue an IDS_SL900A StartLog custom command as defined in the IDS SL900A datasheet.
WriteTagData	This method can be used to write a portion of the user memory in a ISO18000-6B tag.
WriteTagData_EPC_C1G2	Overloaded. This method can be used to write a portion of memory in a ISO18000-6C (EPC Class1 Gen2) tag.
DLRFIDNotify Class	
getDate	Returns a timestamp representing the time at which the event was generated.
getPC	Returns the tag's PC code
getReadPoint	Returns the read point that has detected the tag.
getRSSI	Returns the RSSI value measured for the tag.
getStatus	Returns the event type associated to the tag.
getTagID	Returns the tag's ID (the EPC code in Gen2 tags).
getTagLength	Returns the tag's ID length.
getTagSource	Returns the name of the logical source that has detected the tag.
getTagType	Returns the air protocol of the tag.
getTID	Returns the TID field value in a EPC Class 1 Gen 2 Tag
getXPC	Returns the tag's XPC words.
DLRFIDReader Class	
Connect	Overloaded. Starts the communication with the reader. It must be called before any other call to method of the DLRFIDReader object.
Disconnect	Closes the connection with the DL RFID Reader releasing all the allocated resources.
GetBitRate	Gets the current setting of the RF bit rate.
GetFirmwareRelease	Permits to read the release of the firmware loaded into the device.
GetIO	Gets the current digital Input and Output lines status.
GetIODirection	Gets the current I/O direction setting as a bitmask. Each bit represents a I/O line, a value of 0 means that the line is configured as an input, 1 as an output. This setting has a

Methods	Description
	meaning only for those readers with configurable I/O lines.
GetLBTMode	Gets the current LBT mode setting. If the current regulation is based on the frequency hopping mechanism it returns the FH status.
GetPower	Gets the current setting of the RF power expressed in mW.
GetProtocol	Gets the current air protocol of the Reader.
GetReaderInfo	Permits to read the reader information loaded into the device.
GetReadPoints	Gets the names of the read points (antennas) available in the reader.
GetReadPointStatus	Gets the DLRFIDReadPointStatus object rapresenting the status of a read point (antenna).
GetRFChannel	Gets the index of the RF channel currently in use. The index value meaning change for different country regulations.
GetRFRegulation	Gets the current RF regulation setting value.
GetSource	Gets a DLRFIDLogicalSource object given its name
GetSourceNames	Gets the names of the logical sources available in the reader.
GetSources	Gets the DLRFIDLogicalSource objects available on the reader.
InventoryAbort	Stops the EventInventoryTag execution.
RFControl Method	Permits to control the RF CW (Carrier Wave) signal generation.
SetBitRate	Sets the RF bit rate to use.
SetDateTime	Sets the Date/Time of the reader.
SetIO	Sets the Output lines value.
SetIODIRECTION	Sets the current I/O direction setting as a bitmask. Each bit represents a I/O line, a value of 0 means that the line is configured as an input, 1 as an output. This setting has a meaning only for those readers with configurable I/O lines.
SetNetwork	Permits to configure the network settings of the reader. In order to apply the changes the reader must be restarted.
SetPower	Sets the conducted RF power of the Reader.
SetProtocol	Set the air protocol of the reader.
SetRFChannel	Sets the RF channel to use. This method fixes the RF channel only when the listen before talk or the frequency hopping feature is disabled.
SetRS232	Permits to change the serial port settings. Valid settings values depend on the reader model.
DLRFIDReaderInfo Class	
GetModel	Gets the reader's model.
GetSerialNumber	Gets the reader's serial number.
DLRFIDTag Class	
GetId	Returns the tag's ID (the EPC code in Gen2 tags).
GetLength	Returns the tag's ID length.
GetPC	Returns the tag's PC code
GetReadPoint	Returns the read point that has detected the tag.
GetRSSI	Returns the RSSI value measured for the tag.

Methods	Description
GetSource	Returns the name of the logical source that has detected the tag.
GetTID	Returns the tag's TID (valid only for EPC Class 1 Gen 2 tags).
GetTimeStamp	Gets the Tag's TimeStamp.
GetType	Returns the air protocol of the tag.
GetXPC	Returns the tag's XPC words.

Tab. 2.2: DLRFID methods

DLRFID Enumerations

The following enumerations are present in C# language. They correspond to classes in Java language and to enumerations and data types in C language:

Enumerations	Description
BitRate	Gives a list of the supported radiofrequency profiles.
LogicalSourceConstants	Gives a list of constants used for the configuration of the logical sources. Detailed explanation of the settings can be found in the EPC Class 1 Gen 2 and ISO 18000-6B specification documents.
DLRFIDLogicalSource.InventoryFlag	Gives a list of constants used for the configuration of the inventory function.
Port	Gives a list of the communication ports supported by the DL RFID readers.
Protocol	Gives a list of the air protocol supported by the DL RFID readers.
ReadPointStatus	Gives a list of the possible ReadPoint status values.
DLRFIDRFRegulations	The DLRFIDRFRegulations gives a list of country radiofrequency regulations.
RS232Constants	Gives a list of settings for the serial port configuration.
SelUnselOptions	Gives a list of operations supported by the Group Select/Unselect command (valid only for the ISO18000-6B air protocol).
DLRFIDTag.MemBanks	The DLRFIDTag.MemBanks enumerates the bank name of a generic ISO18000-6C tag.

Tab. 2.3: DLRFID Enumerations

3 Classes Description

This chapter gives a description of DLRFID methods divided into classes. It contains these topics:

DLRFIDException Class

The DLRFIDException class defines the DL RFID exceptions.

getError Method

Description:
This method gets the error string associated to the exception.

Return value:
The string representing the error.

Syntax:

C# representation:

```
public string                getError()
```

Java and Android representation:

```
public java.lang.String      getError()
```

Remarks:
This function does not exist in C language, see § Error Handling pag. 9 for more information.

IDSTagData Class

This class represents data returned by tags based on IDS Chip SL900A.

In Java, Android and C# lanuguages this class is composed by methods while in C language is represented by a struct (for more information see § Overview on SDK pag.9):

C representation:

```
typedef struct {
                    BOOL                ADError_i;
                    unsigned int        RangeLimit_i;
                    unsigned int        SensorValue_i;
                    } DLRFID_IDSTagData;
```

getADError Method

Description:
This method returns if an A/D error is raised.

Return value:
True if an A/D error occurs, false otherwise.

Syntax:

C# representation:

```
public bool ADError     {
                        get;
                        }
```

Java and Android representation:

```
public boolean getADError()
```

getRangeLimit Method

Description:
This method returns the range limit set on sensor.

Return value:
A bitmask representing the range limit.

Syntax:

C# representation:

```
public uint RangeLimit   {
                         get;
                         }
```

Java and Android representation:

```
public int getRangeLimit()
```

getSensorValue Method

Description:
This method returns the sensor value.

Return value:
A bitmask representing the value obtained by the sensor.

Syntax:

C# representation:

```
public uint SensorValue  {
                         get;
                         }
```

Java and Android representation:

```
public int getSensorValue()
```

DLRFIDLogicalSource Class

The DLRFIDLogicalSource class is used to create logical source objects. Logical source objects represent an aggregation of read points (antennas). Operations on the tags are performed using methods belonging to the logical source. In addition to the methods used to operate on the tags, the logical source class exports methods to configure the anticollision algorithm and to configure the composition of the logical source itself.

AddReadPoint Method

Description:
This method adds a read point to the logical source.

Parameters:

Name	Description
ReadPoint	A string representing the name of the read point (antenna).

Syntax:

C# representation:

```
public void         AddReadPoint(
                              string              ReadPoint)
```

Java and Android representation:

```
public void         AddReadPoint(
                              java.lang.String    ReadPoint)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_AddReadPoint(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              char                *ReadPoint);
```

BlockWriteTagData Method

BlockWriteTagData Method (DLRFIDTag, Int16, Int16, Byte[])

Description:

This method can be used to write a portion of the user memory in a ISO18000-6B tag using blocks of four bytes for each command.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be written.
Address	The address where to start writing the data.
Length	The number of byte to be written.
Data	The data to be written into the tag's user memory.

Syntax:

C# representation:

```
public void         BlockWriteTagData(
                              DLRFIDTag           Tag,
                              short               Address,
                              short               Length,
                              byte[]              Data)
```

Java and Android representation:

```
public void         BlockWriteTagData(
                              DLRFIDTag           Tag,
                              short               Address,
                              short               Length,
                              byte[]              Data)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_BlockWriteTagData(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              int                 Address,
                              int                 Length,
                              void                *Data);
```

BlockWriteTagData Method (DLRFIDTag, Int16, Int16, Int16, Byte[])

Description:

This method can be used to write a portion of the user memory in a ISO18000-6B tag using blocks of four bytes for each command.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be written.
Address	The address where to start writing the data.
Mask	A bitmask that permit to select which of the four bytes have to be written (i.e. mask 0x05 write the bytes on position Address + 1 and Address + 3).
Length	The number of byte to be written.
Data	The data to be written into the tag's user memory.

Syntax:

C# representation:

```
public void         BlockWriteTagData(
                              DLRFIDTag           Tag,
                              short               Address,
                              short               Mask,
                              short               Length,
                              byte[]              Data)
```

Java and Android representation:

```
public void         BlockWriteTagData(
                              DLRFIDTag           Tag,
                              short               Address,
                              short               Mask,
                              short               Length,
                              byte[]              Data)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_FilterBlockWriteTagData(
                              DLRFIDHandle handle,
                              DLRFIDTag           *ID,
                              int                 Address,
                              short               Mask,
                              int                 Length,
                              void                *Data);
```

CustomCommand_EPC_C1G2 Method

CustomCommand_EPC_C1G2 Method (DLRFIDTag, Byte, Int16, Byte[], Int16)

Description:

This method can be used to issue a generic Custom command as defined by the EPC Class1 Gen2 protocol specification. The parameters are used to specify the type of the custom command and its parameters.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to which send the Custom command.
SubCmd	The SubCommand field of the Custom command.
TxLen	The length of the data to be sent to the tag.
Data	The data to be sent to the tag.
RxLen	The length of the data to be received by the tag.

Return value:

An array of bytes representing the reply from the tag as specified by the custom command.

Syntax:

C# representation:

```
public byte[]       CustomCommand_EPC_C1G2(
                              DLRFIDTag           Tag,
                              byte                SubCmd,
                              short               TxLen,
                              byte[]              Data,
                              short               RxLen)
```

Java and Android representation:

```
public byte[]       CustomCommand_EPC_C1G2(
                              DLRFIDTag           Tag,
                              byte                SubCmd,
                              short               TxLen,
                              byte[]              Data,
                              short               RxLen)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_CustomCommand_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              unsigned char       SubCmd,
                              int                 TxLen,
                              void                *Data,
                              int                 RxLen,
                              void                *TRData);
```

CustomCommand_EPC_C1G2 Method (DLRFIDTag, Byte, Int16, Byte[], Int16, Int32)

Description:

This method can be used to issue a generic Custom command as defined by the EPC Class1 Gen2 protocol specification. The parameters are used to specify the type of the custom command and its parameters. The Custom command is executed after an Access command to switch the tag in the Secured state using the provided password.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to select.
SubCmd	The SubCommand field of the Custom command.
TxLen	The length of the data to be sent to the tag.
Data	The data to be sent to the tag.
RxLen	The length of the data to be received by the tag.
AccessPassword	The access password.

Return value:

An array of bytes representing the reply from the tag as specified by the custom command.

Syntax:

C# representation:

```
public byte[]       CustomCommand_EPC_C1G2(
                              DLRFIDTag           Tag,
                              byte                SubCmd,
                              short               TxLen,
                              byte[]              Data,
                              short               RxLen,
                              int                 AccessPassword)
```

JAVArepresentation:

```
public byte[]       CustomCommand_EPC_C1G2(
                              DLRFIDTag           Tag,
                              byte                SubCmd,
                              short               TxLen,
                              byte[]              Data,
                              short               RxLen,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SecureCustomCommand_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              unsigned char       SubCmd,
                              int                 TxLen,
                              void                *Data,
                              int                 RxLen,
                              int                 AccessPassword,
                              void                *TRData);
```

EventInventoryTag Method

For the description of this method, see § Event Handling pag.106.

GetDESB_ISO180006B Method

Description:

This method can be used to retrieve the Data Exchange Status Bit setting (see ISO18000-6B protocol specification) used by the anticollision algorithm when called on this logical source.

Return value:

The current DESB setting value.

Syntax:

C# representation:

```
public DLRFIDLogicalSourceConstants GetDESB_ISO180006B()
```

Java and Android representation:

```
public DLRFIDLogicalSourceConstants GetDESB_ISO180006B()
                                    throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes                    GetDESB_ISO180006B(
                                    DLRFIDHandle handle,
                                    unsigned short     *Status);
```

GetName Method

Description:
This method gets a string representing the name of the logical source.

Return value:
A string representing the name of the logical source.

Syntax:

C# representation:

```
public string           GetName()
```

Java and Android representation:

```
public java.lang.String  GetName()
```

Remarks:
This function does not exist in C language, see § Overview on SDK pag. 9 for more information.

GetQ_EPC_C1G2 Method

Description:
This method can be used to retrieve the current setting for the initial Q value (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Return value:
The current initial Q value setting.

Syntax:

C# representation:

```
public int          GetQ_EPC_C1G2()
```

Java and Android representation:

```
public int          GetQ_EPC_C1G2()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetQValue_EPC_C1G2(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              int                 *Q);
```

GetReadCycle Method

Description:
This method gets the current setting for the number of read cycles performed by the logical source during the inventory algorithm execution.
ReadCycle affects only inventory performed with continuos mode (see § *EventInventoryTag Method* pag. 27).

Return value:
The number of read cycles.

Syntax:

C# representation:

```
public int          GetReadCycle()
```

Java and Android representation:

```
public int          GetReadCycle()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetReadCycle(
                              DLRFIDHandle handle,
                              char               *SourceName,
                              int                *value);
```

GetSelected_EPC_C1G2 Method

Description:
This method can be used to retrieve the Selected flag (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Return value:
The current Selected value

Syntax:

C# representation:

```
public DLRFIDLogicalSourceConstants  GetSelected_EPC_C1G2()
```

Java and Android representation:

```
public DLRFIDLogicalSourceConstants  GetSelected_EPC_C1G2()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetSelected_EPC_C1G2(
                              DLRFIDHandle              handle,
                              char                           *SourceName,
                              DLRFIDLogicalSourceConstants   *value);
```

GetSession_EPC_C1G2 Method

Description:
This method can be used to retrieve the Session setting (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Return value:
The current Session value setting.

Syntax:

C# representation:

```
public DLRFIDLogicalSourceConstants  GetSession_EPC_C1G2()
```

Java and Android representation:

```
public DLRFIDLogicalSourceConstants  GetSession_EPC_C1G2()
                                     throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetSession_EPC_C1G2(
                              DLRFIDHandle              handle,
                              char                           *SourceName,
                              DLRFIDLogicalSourceConstants   *value);
```

GetTarget_EPC_C1G2 Method

Description:
This method can be used to retrieve the Target setting (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Return value:
The current Target value setting.

Syntax:

C# representation:

```
public DLRFIDLogicalSourceConstants  GetTarget_EPC_C1G2()
```

Java and Android representation:

```
public DLRFIDLogicalSourceConstants  GetTarget_EPC_C1G2()
                                     throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetTarget_EPC_C1G2(
                              DLRFIDHandle              handle,
                              char                           *SourceName,
                              DLRFIDLogicalSourceConstants   *value);
```

GroupSelUnsel Method

Description:

This method can be used to send a Group Select/Unselect command to the tag (see ISO18000-6B protocol specification).

Parameters:

Name	Description
Code	The operation code as defined by the protocol.
Address	The Address from which start the comparison.
BitMask	The bit mask to use.
Data	The data to be compared.

Return value:

The selected tag.

Syntax:

C# representation:

```
public DLRFIDTag        GroupSelUnsel(
                              DLRFIDSelUnselOptions Code,
                              short                 Address,
                              short                 BitMask,
                              byte[]                Data)
```

Java and Android representation:

```
public DLRFIDTag        GroupSelUnsel(
                              DLRFIDSelUnselOptions Code,
                              short                 Address,
                              short                 BitMask,
                              byte[]                Data)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes        DLRFID_GroupSelUnsel(
                              DLRFIDHandle handle,
                              char                 *SourceName,
                              DLRFID_SelUnsel_Op Code,
                              int                  Address,
                              int                  BitMask,
                              void                 *Data,
                              DLRFIDTag            *Tag);
```

InventoryTag Method

InventoryTag Method ()

Description:

A call to this method will execute a read cycle on each read point linked to the logical source. Depending on the air protocol setting it will execute the appropriate anticollision algorithm.

Return value:

An array containing the DLRFIDTag objects representing the tags read from the read points.

Syntax:

C# representation:

```
public DLRFIDTag[]  InventoryTag()
```

Java and Android representation:

```
public DLRFIDTag[]  InventoryTag()
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes         DLRFID_InventoryTag (
                               DLRFIDHandle handle,
                               char                *SourceName,
                               DLRFIDTag           **Receive,
                               int                 *Size);
```

InventoryTag Method (Byte[], Int16, Int16)

Description:

A call to this method will execute a read cycle on each read point linked to the logical source.

Parameters:

Name	Description
Mask	A byte array representing the bitmask to apply.
MaskLength	A value representing the bit-oriented length of the bitmask.
Position	A value representing the first bit of ID where the match will start.

Return value:

An array containing the DLRFIDTag objects representing the tags read from the read points.

Syntax:

C# representation:

```
public DLRFIDTag[]  InventoryTag(
                                byte[]              Mask,
                                short               MaskLength,
                                short               Position)
```

Java and Android representation:

```
public DLRFIDTag[]  InventoryTag(
                                byte[]              Mask,
                                short               MaskLength,
                                short               Position)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_FilteredInventoryTag(
                                DLRFIDHandle handle,
                                char                *SourceName,
                                char                *Mask,
                                unsigned char       MaskLength,
                                unsigned char       Position,
                                DLRFIDTag           **Receive,
                                int                 *Size);
```

Remarks:

Depending on the air protocol setting it will execute the appropriate anticollision algorithm. This version of the method permits to specify a bitmask for filtering tag's populations as described by the EPC Class1 Gen2 (ISO18000-6C) air protocol. The filtering will be performend on the memory bank specified by bank parameter, starting at the bit indicated by the Position index and for a MaskLength length. The method will return only the tags that match the given Mask. Passing a zero value for MaskLength it performs as the non-filtering InventoryTag method.

InventoryTag Method (Byte[], Int16, Int16, Int16)

Description:

A call to this method will execute a read cycle on each read point linked to the logical source.

Parameters:

Name	Description
Mask	A byte array representing the bitmask to apply.
MaskLength	A value representing the bit-oriented length of the bitmask.
Position	A value representing the first bit of ID where the match will start.
Flag	A bitmask representing the InventoryTag options.

Return value:

An array containing the DLRFIDTag objects representing the tags read from the read points.

Syntax:

C# representation:

```
public DLRFIDTag[]  InventoryTag(
                                byte[]              Mask,
                                short               MaskLength,
                                short               Position,
                                short               Flag)
```

Java and Android representation:

```
public DLRFIDTag[]  InventoryTag(
                                byte[]              Mask,
                                short               MaskLength,
                                short               Position,
                                short               Flag)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_FlagInventoryTag (
                                DLRFIDHandle handle,
                                char                *SourceName,
                                char                *Mask,
                                unsigned char       MaskLength,
                                unsigned char       Position,
                                unsigned char       Flag,
                                DLRFIDTag           **Receive,
                                int                 *Size);
```

Remarks:

Depending on the air protocol setting it will execute the appropriate anticollision algorithm. This version of the method permits to specify a bitmask for filtering tag's populations as described by the EPC Class1 Gen2 (ISO18000-6C) air protocol. The filtering will be performend on the memory bank specified by bank parameter, starting at the bit indicated by the Position index and for a MaskLength length. The method will return only the tags that match the given Mask. Passing a zero value for MaskLength it performs as the non-filtering InventoryTag method. The Flags parameter permits to set InventoryTag method's options.In this case bit 1 and 2 of the flag (continuos and framed mode) are ignored.

Flag value meaning	
Bit 0	RSSI: a 1 value indicates that the reader will transmit the RSSI (Return Signal Strength Indicator) in the response.
Bit 1	Framed data: a 1 value indicates that the tag's data will be transmitted by the reader to the PC as soon as the tag is detected, a 0 value means that all the tags detected are buffered in the reader and trasmitted all together at the end of the inventory cycle.
Bit 2	Continuous acquisition: a 1 value indicates that the inventory cycle is repeated by the reader depending on the SetReadCycle setting value, a 0 value means that only one inventory cycle will be performed. If the continuous mode is selected a 0 value in the ReadCycle setting will instruct the reader to repeat the inventory cycle until an InventoryAbort method is invoked, a value X different from 0 means that the inventory cycle will be performed X times by the reader.
Bit 3	Compact data: a 1 value indicates that only the EPC of the tag will be returned by the reader, a 0 value indicates that the complete data will be returned. In case that the compact option is enabled all the other data will be populated by this library with fakes values.
Bit 4	TID reading: a 1 value indicates that also the TID of the tag will be returned by the reader together with the other information.
Bit 5	Event trigger: when this flag is set together with the continuous acquisition flag, the inventory cycle is performed in the same way of the continuous mode.
Bit 6	XPC: a 1 value allows the reader to get the XPC word if backscattered by a tag.Tags that do not backscatter the XPC words will return an XPC array with all the 4 bytes set to 0
Bit 7	Not Used
Bit 8	Not Used

InventoryTag Method (Int16, Byte[], Int16, Int16)

Description:

A call to this method will execute a read cycle on each read point linked to the logical source.

Parameters:

Name	Description
bank	A value representing the memory bank where apply the filter.
Mask	A byte array representing the bitmask to apply.
MaskLength	A value representing the bit-oriented length of the bitmask.
Position	A value representing the first bit of ID where the match will start.

Return value:

An array containing the DLRFIDTag objects representing the tags read from the read points.

Syntax:

C# representation:

```
public DLRFIDTag[]  InventoryTag(
                                short               bank,
                                byte[]              Mask,
                                short               MaskLength,
                                short               Position)
```

Java and Android representation:

```
public DLRFIDTag[]  InventoryTag(
                                short               bank,
                                byte[]              Mask,
                                short               MaskLength,
                                short               Position)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_BankFilteredInventoryTag (
                                DLRFIDHandle handle,
                                char                *SourceName,
                                short               bank,
                                short               Position,
                                short               MaskLength,
                                char                *Mask,
                                DLRFIDTag           **Receive,
                                int                 *Size);
```

Remarks:

Depending on the air protocol setting it will execute the appropriate anticollision algorithm. This version of the method permits to specify a bitmask for filtering tag's populations as described by the EPC Class1 Gen2 (ISO18000-6C) air protocol. The filtering will be performend on the memory bank specified by bank parameter, starting at the bit indicated by the Position index and for a MaskLength length. The method will return only the tags that match the given Mask. Passing a zero value for MaskLength it performs as the non-filtering InventoryTag method.

InventoryTag Method (Int16, Byte[], Int16, Int16, Int16)

Description:

A call to this method will execute a read cycle on each read point linked to the logical source.

Parameters:

Name	Description
bank	A value representing the memory bank where apply the filter.
Mask	A byte array representing the bitmask to apply.
MaskLength	A value representing the bit-oriented length of the bitmask.
Position	A value representing the first bit of ID where the match will start.
Flag	A bitmask representing the InventoryTag options.

Return value:

An array containing the DLRFIDTag objects representing the tags read from the read points.

Syntax:

C# representation:

```
public DLRFIDTag[]  InventoryTag(
                                short               bank,
                                byte[]              Mask,
                                short               MaskLength,
                                short               Position,
                                short               Flag)
```

Java and Android representation:

```
public DLRFIDTag[]  InventoryTag(
                                short               bank,
                                byte[]              Mask,
                                short               MaskLength,
                                short               Position,
                                short               Flag)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_BankFilteredFlagInventoryTag (
                                DLRFIDHandle handle,
                                char                *SourceName,
                                short               bank,
                                short               Position,
                                short               MaskLength,
                                char                *Mask,
                                unsigned char       Flag,
                                DLRFIDTag           **Receive,
                                int                 *Size);
```

Remarks:

Depending on the air protocol setting it will execute the appropriate anticollision algorithm. This version of the method permits to specify a bitmask for filtering tag's populations as described by the EPC Class1 Gen2 (ISO18000-6C) air protocol. The filtering will be performend on the memory bank specified by bank parameter, starting at the bit indicated by the Position index and for a MaskLength length. The method will return only the tags that match the given Mask. Passing a zero value for MaskLength it performs as the non-filtering InventoryTag method. The Flags parameter permits to set InventoryTag method's options.In this case bit 1 and 2 of the flag (continuos and framed mode) are ignored.

Flag value meaning	
Bit 0	RSSI: a 1 value indicates that the reader will transmit the RSSI (Return Signal Strength Indicator) in the response.
Bit 1	Framed data: a 1 value indicates that the tag's data will be transmitted by the reader to the PC as soon as the tag is detected, a 0 value means that all the tags detected are buffered in the reader and trasmitted all together at the end of the inventory cycle.
Bit 2	Continuous acquisition: a 1 value indicates that the inventory cycle is repeated by the reader depending on the SetReadCycle setting value, a 0 value means that only one inventory cycle will be performed. If the continuous mode is selected a 0 value in the ReadCycle setting will instruct the reader to repeat the inventory cycle until an InventoryAbort method is invoked, a value X different from 0 means that the inventory cycle will be performed X times by the reader.
Bit 3	Compact data: a 1 value indicates that only the EPC of the tag will be returned by the reader, a 0 value indicates that the complete data will be returned. In case that the compact option is enabled all the other data will be populated by this library with fakes values.
Bit 4	TID reading: a 1 value indicates that also the TID of the tag will be returned by the reader together with the other information.
Bit 5	Event trigger: when this flag is set together with the continuous acquisition flag, the inventory cycle is performed in the same way of the continuous mode.
Bit 6	XPC: a 1 value allows the reader to get the XPC word if backscattered by a tag.Tags that do not backscatter the XPC words will return an XPC array with all the 4 bytes set to 0
Bit 7	Not Used
Bit 8	Not Used

FreeTagsMemory

Description:

The function permits to free the allocated memory by DLRFID_InventoryTag.

Unlike the C#/Java languages where objects are automatically destroyed by the Runtime Environment, in C language it is necessary to esplicitly deallocate the memory allocated by the identified tags. To do that, the FreeTagsMemory function is available, passing the pointer to the identified tags list.

Parameters:

Name	Description
Tags	tags array returned by one of the inventory family function.

Syntax:

C representation:

```
void                DLRFID_FreeTagsMemory(
                                DLRFIDTag           **Tags);
```

isReadPointPresent Method

Description:
This method checks if a read point is present in the logical source.

Parameters:

Name	Description
ReadPoint	A string representing the name of the read point (antenna).

Return value:
A boolean value representing the presence of a read point in the logical source (true means that it is present, false if it is not present).

Syntax:

C# representation:

```
public bool         isReadPointPresent(
                              string              ReadPoint)
```

Java and Android representation:

```
public boolean      isReadPointPresent(
                              java.lang.String    ReadPoint)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_isReadPointPresent(
                              DLRFIDHandle handle,
                              char                *ReadPoint,
                              char                *SourceName,
                              short               *isPresent);
```

KillTag_EPC_C1G1 Method

Description:
This method can be used to kill a EPC Class 1 Gen 1 tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be killed.
Password	The tag's kill password.

Syntax:

C# representation:

```
public void         KillTag_EPC_C1G1(
                              DLRFIDTag           Tag,
                              short               Password)
```

Java and Android representation:

```
public void         KillTag_EPC_C1G1(
                              DLRFIDTag           Tag,
                              short               Password)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_KillTag_EPC_C1G1(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              char                Password);
```

KillTag_EPC_C1G2 Method

KillTag_EPC_C1G2 Method (DLRFIDTag, Int32)

Description:

This method can be used to kill a EPC Class 1 Gen 2 tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be killed.
Password	The tag's kill password.

Syntax:

C# representation:

```
public void         KillTag_EPC_C1G2(
                              DLRFIDTag           Tag,
                              int                 Password)
```

Java and Android representation:

```
public void         KillTag_EPC_C1G2(
                              DLRFIDTag           Tag,
                              int                 Password)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_KillTag_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              int                 Password);
```

KillTag_EPC_C1G2 Method (Int16, Int16, Int16, Byte[], Int32)

Description:

This method can be used to kill a EPC Class 1 Gen 2 tag.

Parameters:

Name	Description
BankMask	Memory bank for tag identificantion.
PositionMask	Bit position (from the start of the selected bank) where apply the mask to match.
LengthMask	Length of the mask.
Mask	Mask of byte.
Password	The tag's kill password.

Syntax:

C# representation:

```
public void         KillTag_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              int                 Password)
```

Java and Android representation:

```
public void         KillTag_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              int                 Password)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_BankFilteredKillTag_EPC_C1G2(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              char                *Mask,
                              int                 Password);
```

LockBlockPermaLock_EPC_C1G2 Method

Description:

This method implements the BLockPermaLock with ReadLock=1 as specified in EPC C1G2 rev. 1.2.0 protocol.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be written.
MemBank	The memory bank where to write the data.
BlockPtr	The address where to start writing the data.
BlockRange	The number of word of the mask.
Mask	A bitmask that permit to select which of the four bytes have to be locked (i.e. mask 0x05 write the bytes on position Address + 1 and Address + 3).
AccessPassword	The access password.

Syntax:

C# representation:

```
public void         LockBlockPermaLock_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               BlockPtr,
                              short               BlockRange,
                              byte[]              Mask,
                              int                 AccessPassword)
```

Java and Android representation:

```
public void         LockBlockPermaLock_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               BlockPtr,
                              short               BlockRange,
                              byte[]              Mask,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_LockBlockPermaLock_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               MemBank,
                              short               BlockPtr,
                              short               BlockRange,
                              byte[]              Mask,
                              int                 AccessPassword);
```

LockTag_EPC_C1G2 Method

LockTag_EPC_C1G2 Method (DLRFIDTag, Int32)

Description:

This method can be used to lock a memory bank of a EPC Class 1 Gen 2 tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be locked.
Payload	The Payload parameter for the lock command as defined by the EPC Class 1 Gen 2 protocol specification.

Syntax:

C# representation:

```
public void         LockTag_EPC_C1G2(
                              DLRFIDTag           Tag,
                              int                 Payload)
```

Java and Android representation:

```
public void         LockTag_EPC_C1G2(
                              DLRFIDTag           Tag,
                              int                 Payload)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_LockTag_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              int                 Payload);
```

LockTag_EPC_C1G2 Method (DLRFIDTag, Int32, Int32)

Description:

This method can be used to lock a memory bank of a EPC Class 1 Gen 2 tag after having put it in Secured state using the Access command.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be locked.
Payload	The Payload parameter for the lock command as defined by the EPC Class 1 Gen 2 protocol specification.
AccessPassword	The access password.

Syntax:

C# representation:

```
public void         LockTag_EPC_C1G2(
                              DLRFIDTag           Tag,
                              int                 Payload,
                              int                 AccessPassword)
```

Java and Android representation:

```
public void         LockTag_EPC_C1G2(
                              DLRFIDTag           Tag,
                              int                 Payload,
```

```
                                int                 AccessPassword)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SecureLockTag_EPC_C1G2(
                                DLRFIDHandle handle,
                                DLRFIDTag           *Tag,
                                int                 Payload,
                                int                 AccessPassword);
```

LockTag_EPC_C1G2 Method (Int16, Int16, Int16, Byte[], Int32)

Description:

This method can be used to lock a memory bank of a EPC Class 1 Gen 2 tag.

Parameters:

Name	Description
BankMask	Memory bank for tag identificantion.
PositionMask	Bit position (from the start of the selected bank) where apply the mask to match.
LengthMask	Length of the mask.
Mask	Mask of byte.
Payload	The Payload parameter for the lock command as defined by the EPC Class 1 Gen 2 protocol specification.

Syntax:

C# representation:

```
public void         LockTag_EPC_C1G2(
                                short               BankMask,
                                short               PositionMask,
                                short               LengthMask,
                                byte[]              Mask,
                                int                 Payload)
```

Java and Android representation:

```
public void         LockTag_EPC_C1G2(
                                short               BankMask,
                                short               PositionMask,
                                short               LengthMask,
                                byte[]              Mask,
                                int                 Payload)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_BankFilteredLockTag_EPC_C1G2(
                                DLRFIDHandle handle,
                                char                *SourceName,
                                short               BankMask,
                                short               PositionMask,
                                short               LengthMask,
                                char                *Mask,
                                int                 Payload);
```

LockTag_EPC_C1G2 Method (Int16, Int16, Int16, Byte[], Int32, Int32)

Description:

This method can be used to lock a memory bank of a EPC Class 1 Gen 2 tag after having put it in Secured state using the Access command.

Parameters:

Name	Description
BankMask	Memory bank for tag identification.
PositionMask	Bit position (from the start of the selected bank) where apply the mask to match.
LengthMask	Length of the mask.
Mask	Mask of byte.
Payload	The Payload parameter for the lock command as defined by the EPC Class 1 Gen 2 protocol specification.
AccessPassword	Access password.

Syntax:

C# representation:

```
public void         LockTag_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              int                 Payload,
                              int                 AccessPassword)
```

Java and Android representation:

```
public void         LockTag_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              int                 Payload,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SecureBankFilteredLockTag_EPC_C1G2(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              char                *Mask,
                              int                 Payload,
                              int                 AccessPassword);
```

LockTag_ISO180006B Method

Description:

This method can be used to lock a byte in the memory of a ISO18000-6B tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be locked.
Address	The byte's address to lock.

Syntax:

C# representation:

```
public void         LockTag_ISO180006B(
                              DLRFIDTag           Tag,
                              short               Address)
```

Java and Android representation:

```
public void         LockTag_ISO180006B(
                              DLRFIDTag           Tag,
                              short               Address)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_LockTag_ISO180006B(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               Address);
```

NXP_ChangeEAS Method

Description:

This method can be used to issue a ChangeEAS custom command as defined by the NXP G2XM and G2XL datasheet after having put it in Secured state using the Access command.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to select.
EAS	A boolean representing the EAS state to set.
AccessPassword	The access password.

Syntax:

C# representation:

```
public void         NXP_ChangeEAS(
                              DLRFIDTag           Tag,
                              bool                EAS,
                              int                 AccessPassword)
```

Java and Android representation:

```
public void         NXP_ChangeEAS(
                              DLRFIDTag           Tag,
                              boolean             EAS,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_SecureChangeEAS(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              char                EAS,
                              int                 AccessPassword);
```

NXP_ChangeConfig Method

NXP_ChangeConfig Method (DLRFIDTag, UInt16)

Description:

This method can be used to issue a NXP_ChangeConfig custom command as defined in the NXP UCODE G2iM and G2iM+ datasheet.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to select.
ConfigWord	The configuration word.

Syntax:

C# representation:

```
public void         NXP_ChangeConfig(
                              DLRFIDTag           Tag,
                              ushort              ConfigWord)
```

Java and Android representation:

```
public void         NXP_ChangeConfig(
                              DLRFIDTag           Tag,
                              short               ConfigWord)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_ChangeConfig(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               ConfigWord,
                              char                *TRData);
```

NXP_ChangeConfig Method (DLRFIDTag, UInt16, Int32)

Description:

This method can be used to issue a NXP_ChangeConfig custom command as defined in the NXP UCODE G2iM and G2iM+ datasheet after having put it in Secured state using the Access Password.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to select.
ConfigWord	The configuration word.
Password	The access password.

Syntax:

C# representation:

```
public void         NXP_ChangeConfig(
                              DLRFIDTag           Tag,
                              ushort              ConfigWord,
                              int                 Password)
```

Java and Android representation:

```
public void         NXP_ChangeConfig(
                              DLRFIDTag           Tag,
                              short               ConfigWord,
                              int                 Password)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_SecureChangeConfig(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               ConfigWord,
                              char                *TRData,
                              int                 SecurePassword);
```

NXP_EAS_Alarm Method

Description:

This method can be used to issue a EAS_Alarm custom command as defined by the NXP G2XM and G2XL datasheet.

Return value:

An array of bytes representing the EAS Code.

Syntax:

C# representation:

```
public byte[]       NXP_EAS_Alarm()
```

Java and Android representation:

```
public byte[]       NXP_EAS_Alarm()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_EAS_Alarm(
                              DLRFIDHandle handle,
                              char                *TRData);
```

NXP_ReadProtect Method

NXP_ReadProtect Method (DLRFIDTag)

Description:

This method can be used to issue a ReadProtect custom command as defined by the NXP G2XM and G2XL datasheet.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to select.

Syntax:

C# representation:

```
public void         NXP_ReadProtect(
                              DLRFIDTag           Tag)
```

Java and Android representation:

```
public void         NXP_ReadProtect(
                              DLRFIDTag           Tag)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_ReadProtect(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag);
```

NXP_ReadProtect Method (DLRFIDTag, Int32)

Description:

This method can be used to issue a ReadProtect custom command as defined by the NXP G2XM and G2XL datasheet after having put it in Secured state using the Access command.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to select.
AccessPassword	The access password.

Syntax:

C# representation:

```
public void         NXP_ReadProtect(
                              DLRFIDTag           Tag,
                              int                 AccessPassword)
```

Java and Android representation:

```
public void         NXP_ReadProtect(
                              DLRFIDTag           Tag,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_SecureReadProtect(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              int                 AccessPassword);
```

NXP_ResetReadProtect Method

Description:

This method can be used to issue a ResetReadProtect custom command as defined by the NXP G2XM and G2XL datasheet.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to reset the read protection.
Password	The ReadProtect password.

Syntax:

C# representation:

```
public void         NXP_ResetReadProtect(
                              DLRFIDTag           Tag,
                              int                 Password)
```

Java and Android representation:

```
public void         NXP_ResetReadProtect(
                              DLRFIDTag           Tag,
                              int                 Password)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_ResetReadProtect(
                              DLRFIDHandle handle,
```

```
                                    DLRFIDTag           *Tag,
                                    int                 Password);
```

NXP_ChangeConfig Method

NXP_ChangeConfig Method (DLRFIDTag, UInt16)

Description:

This method can be used to issue a NXP_ChangeConfig custom command as defined in the NXP UCODE G2iM and G2iM+ datasheet.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to select.
ConfigWord	The Configuration word.

Syntax:

C# representation:

```
public void         NXP_ChangeConfig(
                                    DLRFIDTag           Tag,
                                    ushort ConfigWord)
```

Java and Android representation:

```
public void         NXP_ChangeConfig(
                                    DLRFIDTag           Tag,
                                    short               ConfigWord)
                                    throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_ChangeConfig(
                                    DLRFIDHandle handle,
                                    DLRFIDTag           *Tag,
                                    short               ConfigWord,
                                    char                *TRData);
```

NXP_ChangeConfig Method (DLRFIDTag, UInt16, Int32)

Description:

This method can be used to issue a NXP_ChangeConfig custom command as defined in the NXP UCODE G2iM and G2iM+ datasheet after having put it in Secured state using the Access Password.

Parameters:

Name	Description
Tag	The DLRFIDTag object representing the tag to select.
ConfigWord	The Configuration word.
Password	The access password.

Syntax:

C# representation:

```
public void         NXP_ChangeConfig(
                                    DLRFIDTag           Tag,
                                    ushort              ConfigWord,
                                    int                 Password)
```

Java and Android representation:

```
public void         NXP_ChangeConfig(
                              DLRFIDTag           Tag,
                              short               ConfigWord,
                              int                 Password)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_NXP_SecureChangeConfig(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               ConfigWord,
                              char                *TRData)
                              int                 SecurePassword);
```

ProgramID_EPC_C1G1 Method

Description:

This method can be used to write the EPC of a EPC Class 1 Gen 1 tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be programmed, the ID contained in this object will be programmed into the tag.
Password	The password needed in order to write into the tag.
Lock	A flag used to lock the EPC in the tag (1 if the EPC have to be locked).

Syntax:

C# representation:

```
public void         ProgramID_EPC_C1G1(
                              DLRFIDTag           Tag,
                              short               Password,
                              bool                Lock)
```

Java and Android representation:

```
public void         ProgramID_EPC_C1G1(
                              DLRFIDTag           Tag,
                              short               Password,
                              boolean             Lock)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_ProgramID_EPC_C1G1(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              char                Password,
                              unsigned short      Lock);
```

ProgramID_EPC_C1G2 Method

ProgramID_EPC_C1G2 Method (DLRFIDTag, Int16)

Description:

This method can be used to write the EPC of a EPC Class 1 Gen 2 tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be programmed, the ID contained

	in this object will be programmed into the tag.
NSI	The Numbering System Identifier as defined in EPC Class 1 Gen 2 protocol specifications.

Syntax:

C# representation:

```
public void         ProgramID_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               NSI)
```

Java and Android representation:

```
public void         ProgramID_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               NSI)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_ProgramID_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              unsigned short      NSI);
```

ProgramID_EPC_C1G2 Method (DLRFIDTag, Int16, Int32)

Description:

This method can be used to write the EPC of a EPC Class 1 Gen 2 tag after having put it in Secured state using the Access command.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be programmed, the ID contained in this object will be programmed into the tag.
NSI	The Numbering System Identifier as defined in EPC Class 1 Gen 2 protocol specifications.
AccessPassword	The access password.

Syntax:

C# representation:

```
public void         ProgramID_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               NSI,
                              int                 AccessPassword)
```

Java and Android representation:

```
public void         ProgramID_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               NSI,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SecureProgramID_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              unsigned short      NSI,
                              int                 AccessPassword);
```

ProgramID_EPC119 Method

Description:

This method can be used to write the UID of a EPC 1.19 tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be programmed.
NewID	An array of bytes representing the new UID for the tag.

Syntax:

C# representation:

```
public void         ProgramID_EPC119(
                              DLRFIDTag           Tag,
                              byte[]              NewID)
```

Java and Android representation:

```
public void         ProgramID_EPC119(
                              DLRFIDTag           Tag,
                              byte[]              NewID)
```

C representation:

```
DLRFIDErrorCodes    DLRFID_ProgramID_EPC119(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              char                *NewID);
```

Query_EPC_C1G2 Method

Description:

This method makes the reader generate a EPC Class1 Gen2 Query command.

Return value:

True on successfull completion.

Syntax:

C# representation:

```
public bool         Query_EPC_C1G2()
```

Java and Android representation:

```
public boolean      Query_EPC_C1G2()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_Query_EPC_C1G2(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              short               *isPresent);
```

QueryAck_EPC_C1G2 Method

Description:

This method make the reader generate a sequence of EPC Class1 Gen2 Query and Ack commands. It can be used to read a single tag under the field. If there are more than one tag under the field the method fails.

Return value:
An array of bytes representing the EPC of the tag

Syntax:

C# representation:

```
public byte[]       QueryAck_EPC_C1G2()
```

Java and Android representation:

```
public byte[]       QueryAck_EPC_C1G2()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    QueryAck_EPC_C1G2(
                              DLRFIDHandle handle,
                              char               *SourceName,
                              byte               *Tag);
```

ReadBLockPermalock_EPC_C1G2 Method

Description:

This method implements the BLockPermaLock with ReadLock=0 as specified in EPCC1G2 rev. 1.2.0 protocol.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be read.
MemBank	The memory bank where to read the data.
Blockptr	The address where to start reading the data.
BlockRange	The number of word to be read.
AccessPassword	The access password.

Return value:

An array of bytes representing the data read from the tag.

Syntax:

C# representation:

```
public byte[]       ReadBLockPermalock_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Blockptr,
                              short               BlockRange,
                              int                 AccessPassword)
```

Java and Android representation:

```
public byte[]       ReadBLockPermalock_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Blockptr,
                              short               BlockRange,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_ReadBLockPermalock_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               MemBank,
                              short               Blockptr,
                              short               BlockRange,
                              int                 AccessPassword)
```

ReadTagData Method

Description:

This method can be used to read a portion of the user memory in a ISO18000-6B tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be read.
Address	The address where to start reading the data.
Length	The number of byte to be read.

Return value:

An array of bytes representing the data read from the tag.

Syntax:

C# representation:

```
public byte[]       ReadTagData(
                              DLRFIDTag           Tag,
                              short               Address,
                              short               Length)
```

Java and Android representation:

```
public byte[]       ReadTagData(
                              DLRFIDTag           Tag,
                              short               Address,
                              short               Length)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_ReadTagData(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              int                 Address,
                              int                 Length,
                              void                *Data);
```

ReadTagData_EPC_C1G2 Method

ReadTagData_EPC_C1G2 Method (DLRFIDTag, Int16, Int16, Int16)

Description:

This method can be used to read a portion of memory in an ISO18000-6C (EPC Class1 Gen2) tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be read.
MemBank	The memory bank where to read the data.
Address	The address where to start reading the data.
Length	The number of byte to be read.

Return value:

An array of bytes representing the data read from the tag.

Syntax:

C# representation:

```
public byte[]       ReadTagData_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Address,
                              short               Length)
```

Java and Android representation:

```
public byte[]       ReadTagData_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Address,
                              short               Length)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_ReadTagData_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               MemBank,
                              int                 Address,
                              int                 Length,
                              void                *Data);
```

ReadTagData_EPC_C1G2 Method (DLRFIDTag, Int16, Int16, Int16, Int32)

Description:

This method can be used to read a portion of memory in an ISO18000-6C (EPC Class1 Gen2) tag after having put the tag in Secured state using the Access command.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be read.
MemBank	The memory bank where to read the data.
Address	The address where to start reading the data.
Length	The number of byte to be read.
AccessPassword	The access password.

Return value:

An array of bytes representing the data read from the tag.

Syntax:

C# representation:

```
public byte[]       ReadTagData_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              int                 AccessPassword)
```

Java and Android representation:

```
public byte[]       ReadTagData_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SecureReadTagData_EPC_C1G2 (
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               MemBank,
                              int                 Address,
                              int                 Length,
                              int                 AccessPassword,
                              void                *Data);
```

ReadTagData_EPC_C1G2 Method (Int16, Int16, Int16, Byte[], Int16, Int16, Int16)

Description:

This method can be used to read a portion of memory in an ISO18000-6C (EPC Class1 Gen2) tag. In this case the target tag is identified by 'LenghtMask' bytes of passed mask placed in a memory bank 'BankMask' at 'PositionMask' byte from bank starting address byte.

Parameters:

Name	Description
BankMask	Memory bank for tag identificantion.
PositionMask	Bit position (from the start of the selected bank) where apply the mask to match.
LengthMask	Length of the mask.
Mask	Mask of byte.
MemBank	Memory bank where read.
Address	Address where starts reading.
Length	Number of byte to read.

Return value:

An array of bytes representing the data read from the tag.

Syntax:

C# representation:

```
public byte[]       ReadTagData_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              short               Address,
                              short               Length)
```

Java and Android representation:

```
public byte[]       ReadTagData_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              short               Address,
                              short               Length)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_BankFilteredReadTagData_EPC_C1G2(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              char                *Mask,
                              short               MemBank,
                              int                 Address,
                              int                 Length,
                              void                *Data);
```

ReadTagData_EPC_C1G2 Method (Int16, Int16, Int16, Byte[], Int16, Int16, Int16, Int32)

Description:

This method can be used to read a portion of memory in an ISO18000-6C (EPC Class1 Gen2) tag. In this case the target tag is identified by 'LenghtMask' bytes of passed mask placed in a memory bank 'BankMask' at 'PositionMask' byte from bank starting address byte. This is the secure version using the Access command.

Parameters:

Name	Description
BankMask	Memory bank for tag identificantion.
PositionMask	Bit position (from the start of the selected bank) where apply the mask to match.
LengthMask	Length of the mask.
Mask	Mask of byte.
MemBank	Memory bank where read.
Address	Address where starts reading.
Length	Number of byte to read.
AccessPassword	Access Password.

Return value:

An array of bytes representing the data read from the tag.

Syntax:

C# representation:

```
public byte[]       ReadTagData_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              int                 AccessPassword)
```

Java and Android representation:

```
public byte[]       ReadTagData_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SecureBankFilteredReadTagData_EPC_C1G2 (
                              DLRFIDHandle handle,
                              char                *SourceName,
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              int                 Address,
```

```
int                 Length,
void                *Data,
int                 AccessPassword);
```

RemoveReadPoint Method

Description:
This method removes a read point from the logical source.

Parameters:

Name	Description
ReadPoint	A string representing the name of the read point (antenna).

Syntax:

C# representation:

```
public void         RemoveReadPoint(
                              string              ReadPoint)
```

Java and Android representation:

```
public void         RemoveReadPoint(
                              java.lang.String    ReadPoint)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_RemoveReadPoint(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              char                *ReadPoint);
```

ResetSession_EPC_C1G2 Method

Description:
This method can be used to reset the Session status for EPC Class1 Gen2 tags. After the execution of this method all the tags in the field of the antennas belonging to this logical source are back in the default Session.

Syntax:

C# representation:

```
public void         ResetSession_EPC_C1G2()
```

Java and Android representation:

```
public void         ResetSession_EPC_C1G2()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_ResetSession_EPC_C1G2(
                              DLRFIDHandle handle,
                              char                *SourceName);
```

SetDESB_ISO180006B Method

Description:

This method can be used to set the Data Exchange Status Bit (see ISO18000-6B protocol specification) used by the anticollision algorithm when called on this logical source.

Parameters:

Name	Description
Value	The DESB setting value.

Syntax:

C# representation:

```
public void         SetDESB_ISO180006B(
                              DLRFIDLogicalSourceConstants     Value)
```

Java and Android representation:

```
public void         SetDESB_ISO180006B(
                              DLRFIDLogicalSourceConstants     Value)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetDESB_ISO180006B(
                              DLRFIDHandle               handle,
                              unsigned int                      Value);
```

SetQ_EPC_C1G2 Method

Description:

This method can be used to set the initial Q value (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Parameters:

Name	Description
Value	The initial Q value setting.

Syntax:

C# representation:

```
public void         SetQ_EPC_C1G2(
                              int                Value)
```

Java and Android representation:

```
public void         SetQ_EPC_C1G2(
                              int                Value)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetQValue_EPC_C1G2(
                              DLRFIDHandle handle,
                              char               *SourceName,
                              int                Value);
```

SetReadCycle Method

Description:

This method sets the number of read cycles to be performed by the logical source during the inventory algorithm execution.

Parameters:

Name	Description
value	The number of read cycles.

Syntax:

C# representation:

```
public void         SetReadCycle(
                              int                 value)
```

Java and Android representation:

```
public void         SetReadCycle(
                              int                 value)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetReadCycle(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              int                 value);
```

SetSelected_EPC_C1G2 Method

Description:

This method can be used to set the Selected flag (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Parameters:

Name	Description
Value	The Selected flag value.

Syntax:

C# representation:

```
public void         SetSelected_EPC_C1G2(
                              DLRFIDLogicalSourceConstants     Value)
```

Java and Android representation:

```
public void         SetSelected_EPC_C1G2(
                              DLRFIDLogicalSourceConstants     Value)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetSelected_EPC_C1G2(
                              DLRFIDHandle              handle,
                              char                           *SourceName,
                              DLRFIDLogicalSourceConstants     Value);
```

SetSession_EPC_C1G2 Method

Description:

This method can be used to set the Session (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Parameters:

Name	Description
Value	The Session value.

Syntax:

C# representation:

```
public void         SetSession_EPC_C1G2(
                              DLRFIDLogicalSourceConstants     Value)
```

Java and Android representation:

```
public void         SetSession_EPC_C1G2(
                              DLRFIDLogicalSourceConstants     Value)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetSession_EPC_C1G2(
                              DLRFIDHandle               handle,
                              char                             *SourceName,
                              DLRFIDLogicalSourceConstants     Value);
```

SetTarget_EPC_C1G2 Method

Description:

This method can be used to set the Target setting (see EPC Class1 Gen2 protocol specification) used by the anticollision algorithm when called on this logical source.

Parameters:

Name	Description
Value	The Target value.

Syntax:

C# representation:

```
public void         SetTarget_EPC_C1G2(
                              DLRFIDLogicalSourceConstants     Value)
```

Java and Android representation:

```
public void         SetTarget_EPC_C1G2(
                              DLRFIDLogicalSourceConstants     Value)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetTarget_EPC_C1G2(
                              DLRFIDHandle               handle,
                              char                             *SourceName,
                              DLRFIDLogicalSourceConstants     Value);
```

SL900A_EndLog Method

Description:

This method can be used to issue an IDS SL900A EndLog custom command as defined in the IDS SL900A datasheet.

Parameters:

Name	Description
Tag	The tag where stop the log

Syntax:

C# representation:

```
public void         SL900A_EndLog(
                              DLRFIDTag           Tag)
```

Java and Android representation:

```
public void         SL900A_EndLog(
                              DLRFIDTag           Tag)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_IDS_SL900A_EndLog(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag);
```

SL900A_GetLogState Method

Description:

This method can be used to issue an IDS SL900A Get Log State custom command as defined in the IDS SL900A datasheet.

Parameters:

Name	Description
Tag	The tag selected
ShelfLife	This parameter is used to inform the reader if the shelf life flag is set in the tag's EEPROM

Return Value:

This method returns the status of the logging process. The structure of the byte array is the following:

byte[0]÷byte[1] : Limite Counter.
byte[2]÷byte[3] : System status.
byte[4]÷byte[11] : Shelf Life Block (only if the ShelfLife parameter is true).
byte[12]÷byte[14] : Current Shelf Life (only if the ShelfLife parameter is true).
byte[15] : Status Flags (if ShelfLife parameter is false this byte follows immediately the System status word).

Syntax:

C# representation:

```
public byte[]       SL900A_GetLogState(
                              DLRFIDTag           Tag,
                              bool                ShelfLife)
```

Java and Android representation:

```
public byte[]       SL900A_GetLogState(
                              DLRFIDTag           Tag,
                              boolean             ShelfLife)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    IDS_SL900A_GetLogState(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              BOOL                ShelfLife,
                              char                * TRData);
```

SL900A_GetSensorValue Method

Description:

This method can be used to issue an IDS SL900A Get Sensor Value custom command as defined in the IDS SL900A datasheet.

Parameters:

Name	Description
Tag	The tag to extract sensor data.
SensorType	Describes which sensor to choose.(see remark)

Return Value:

Returns an IDSTagData object containing all the data read from the tag's selected sensor.

Syntax:

C# representation:

```
public IDSTagData   SL900A_GetSensorValue(
                                DLRFIDTag                   Tag,
                                byte                        SensorType)
```

Java and Android representation:

```
public IDSTagData   SL900A_GetSensorValue(
                                DLRFIDTag                   Tag,
                                byte                        SensorType)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_IDS_SL900A_GetSensorValue(
                                DLRFIDHandle        handle,
                                DLRFIDTag                   *Tag,
                                byte                        SensorType,
                                DLRFID_IDSTagData   *IDSTagData);
```

Remarks:

According to the IDS SL900A datasheet, the Sensor Type byte is composed as:

bit 07..02: Extreme Lower

bit 01..00: Sensor Type.

Sensor type bits can be:

00: Temperature sensor

01: External sensor 1.

10: External sensor 2.

11: Battery Voltage.

SL900A_Initialize Method

Description:

This method can be used to issue an IDS SL900A Initialize custom command as defined in the IDS SL900A datasheet.

Parameters:

Name	Description
Tag	The tag to initialize
DelayTime	The DelayTime parameter. See the IDS SL900A datasheet for further details.
ApplicationData	The Application data. See the IDS SL900A datasheet for further details.

Syntax:

C# representation:

```
public void         SL900A_Initialize(
                              DLRFIDTag           Tag,
                              ushort              DelayTime,
                              ushort              ApplicationData)
```

Java and Android representation:

```
public void         SL900A_Initialize(
                              DLRFIDTag           Tag,
                              short               DelayTime,
                              short               ApplicationData)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_IDS_SL900A_Initialize(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              unsigned short      DelayTime,
                              unsigned short      ApplicationData);
```

Remarks:

According to the IDS SL900A datasheet, the DelayTime parameter is composed as:

bit 15..4: Delay time (expressed in seconds)

bit 3..2: RFU

bit 1: Delay mode (0 : Internal timer, 1 : External switch)

bit 0: IRQ + Timer Enable

According to the IDS SL900A datasheet, the Application Data parameter is composed as:

bit 15..7: Application Area size (in words)

bit 6..3: RFU bit 2..0 : Broken word pointer.

SL900A_SetLogMode Method

Description:

This method can be used to issue an IDS SL900A Set Log Mode custom command as defined in the IDS SL900A datasheet.

Parameters:

Name	Description
Tag	The tag to set log mode on.
LogMode	The LogMode parameter. See the IDS SL900A datasheet for further details.

Syntax:

C# representation:

```
public void         SL900A_SetLogMode(
                              DLRFIDTag           Tag,
                              uint                LogMode)
```

Java and Android representation:

```
public void         SL900A_SetLogMode(
                              DLRFIDTag           Tag,
                              int                 LogMode)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_IDS_SL900A_SetLog(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              unsigned int        LogMode);
```

Remarks:

According to the IDS SL900A datasheet, the DelayTime parameter is composed as:

bit 31..24: RFU.
bit 23..21: Logging Form.
bit 20: Storage Rule.
bit 19: Ext1 sensor enable.
bit 18: Ext2 sensor enable.
bit 17: Temperature sensor enable.
bit 16: Battery Check enable.
bit 15..0: Log Interval.
bit 0: RFU.

SL900A_StartLog Method

Description:

This method can be used to issue an IDS SL900A Start Log custom command as defined in the IDS SL900A datasheet.

Parameters:

Name	Description
Tag	The Tag where start logging.
StartTime	The start time. See remark for structures.

Syntax:

C# representation:

```
public void         SL900A_StartLog(
                              DLRFIDTag           Tag,
                              uint                StartTime)
```

Java and Android representation:

```
public void         SL900A_StartLog(
                              DLRFIDTag           Tag,
                              int                 StartTime)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_IDS_SL900A_StartLog(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              unsigned int        StartTime);
```

Remarks:

According to the IDS SL900A datasheet, the StartTime parameter is composed as:

bit 31..26: Year
bit 25..21: Month
bit 15..11: Hour
bit 10.. 6: Minute
bit 5.. 0: Second.

WriteTagData Method

Description:

This method can be used to write a portion of the user memory in an ISO18000-6B tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be written.
Address	The address where to start writing the data.
Length	The number of byte to be written.
Data	The data to be written into the tag's user memory.

Syntax:

C# representation:

```
public void         WriteTagData(
                              DLRFIDTag           Tag,
                              short               Address,
                              short               Length,
                              byte[]              Data)
```

Java and Android representation:

```
public void         WriteTagData(
                              DLRFIDTag           Tag,
                              short               Address,
                              short               Length,
                              byte[]              Data)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_WriteTagData(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              int                 Address,
                              int                 Length,
                              void                *Data);
```

WriteTagData_EPC_C1G2 Method

WriteTagData_EPC_C1G2 Method (DLRFIDTag, Int16, Int16, Int16, Byte[])

Description:

This method can be used to write a portion of memory in an ISO18000-6C (EPC Class1 Gen2) tag.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be written.
MemBank	The memory bank where to write the data.
Address	The address where to start writing the data.
Length	The number of byte to be written.
Data	An array of bytes representing the data to be written into the tag.

Syntax:

C# representation:

```
public void         WriteTagData_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              byte[]              Data)
```

Java and Android representation:

```
public void         WriteTagData_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              byte[]              Data)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_WriteTagData_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               MemBank,
                              int                 Address,
                              int                 Length,
                              void                *Data);
```

WriteTagData_EPC_C1G2 Method (DLRFIDTag, Int16, Int16, Int16, Byte[], Int32)

Description:

This method can be used to write a portion of memory in an ISO18000-6C (EPC Class1 Gen2) tag after having put the tag in Secured state using the Access command.

Parameters:

Name	Description
Tag	The DLRFIDTag representing the tag to be written.
MemBank	The memory bank where to write the data.
Address	The address where to start writing the data.
Length	The number of byte to be written.
Data	An array of bytes representing the data to be written into the tag.
AccessPassword	The access password.

Syntax:

C# representation:

```
public void         WriteTagData_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              byte[]              Data,
                              int                 AccessPassword)
```

Java and Android representation:

```
public void         WriteTagData_EPC_C1G2(
                              DLRFIDTag           Tag,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              byte[]              Data,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SecureWriteTagData_EPC_C1G2(
                              DLRFIDHandle handle,
                              DLRFIDTag           *Tag,
                              short               MemBank,
                              int                 Address,
                              int                 Length,
                              void                *Data,
                              int                 AccessPassword);
```

WriteTagData_EPC_C1G2 Method (Int16, Int16, Int16, Byte[], Int16, Int16, Int16, Byte[])

Description:

This method can be used to write a portion of memory in an ISO18000-6C (EPC Class1 Gen2) tag.

Parameters:

Name	Description
BankMask	Memory bank for tag identificantion.
PositionMask	Bit position (from the start of the selected bank) where apply the mask to match.
LengthMask	Length of the mask.
Mask	Mask of byte.
MemBank	The memory bank where to write the data.
Address	The address where to start writing the data.
Length	The number of byte to be written.
Data	An array of bytes representing the data to be written into the tag.

Syntax:

C# representation:

```
public void         WriteTagData_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              byte[]              Data)
```

Java and Android representation:

```
public void         WriteTagData_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              byte[]              Data)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_BankFilteredWriteTagData_EPC_C1G2(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              char                *Mask,
                              short               MemBank,
                              int                 Address,
                              int                 Length,
                              void                *Data);
```

WriteTagData_EPC_C1G2 Method (Int16, Int16, Int16, Byte[], Int16, Int16, Int16, Byte[], Int32)

Description:

This method can be used to write a portion of memory in an ISO18000-6C (EPC Class1 Gen2) tag after having put the tag in Secured state using the Access command.

Parameters:

Name	Description
BankMask	Memory bank for tag identificantion.
PositionMask	Bit position (from the start of the selected bank) where apply the mask to match.
LengthMask	Length of the mask.
Mask	Mask of byte.
MemBank	The memory bank where to write the data.
Address	The address where to start writing the data.
Length	The number of byte to be written.
Data	An array of bytes representing the data to be written into the tag.
AccessPassword	The access password.

Syntax:

C# representation:

```
public void         WriteTagData_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              byte[]              Data,
                              int                 AccessPassword)
```

Java and Android representation:

```
public void         WriteTagData_EPC_C1G2(
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              byte[]              Mask,
                              short               MemBank,
                              short               Address,
                              short               Length,
                              byte[]              Data,
                              int                 AccessPassword)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SecureBankFilteredWriteTagData_EPC_C1G2(
                              DLRFIDHandle handle,
                              char                *SourceName,
                              short               BankMask,
                              short               PositionMask,
                              short               LengthMask,
                              char                *Mask,
                              short               MemBank,
                              int                 Address,
                              int                 Length,
                              void                *Data,
                              int                 AccessPassword);
```

DLRFIDNotify Class

The DLRFIDNotify class defines the structure of a notification message.

In Java, Android and C# lanuguages this class is composed by methods while in C language is present as a struct (for more information see § Overview on SDK pag.9):

C representation:

```
typedef struct {
                    byte                ID[MAX_ID_LENGTH];
                    short               Length;
                    char                LogicalSource[MAX_LOGICAL_SOURCE_NAME];
                    char                ReadPoint[MAX_READPOINT_NAME];
                    DLRFIDProtocolType;
                    short               RSSI;
                    byte                TID[MAX_TID_SIZE];
                    short               TIDLen;
                    byte                XPC[XPC_LENGTH];
                    byte                PC[PC_LENGTH];
} DLRFIDNotify;
```

getDate Method

Description:
This method returns a timestamp representing the time at which the event was generated.

Return value:
The timestamp value.

Syntax:

C# representation:

```
public DateTime             getDate()
```

Java and Android representation:

```
public java.util.Date       getDate()
```

getPC Method

Description:
This method represents the PC code in the tag.

Return value:
The tag's Protocol Control code.

Syntax:

C# representation:

```
public byte[]           getPC()
```

Java and Android representation:

```
public byte[]           getPC()
```

getReadPoint Method

Description:
This method returns the read point that has detected the tag.

Return value:
The name of the read point that has detected the Tag.

Syntax:

C# representation:

```
public string                getReadPoint()
```

Java and Android representation:

```
public java.lang.String      getReadPoint()
```

getRSSI Method

Description:
This method returns the RSSI value measured for the tag.

Return value:
The tag's RSSI.

Syntax:

C# representation:

```
public short                 getRSSI()
```

Java and Android representation:

```
public short                 getRSSI()
```

getStatus Method

Description:
This method returns the event type associated to the tag.

Return value:
The event type associated to the Tag.

Syntax:

C# representation:

```
public DLRFIDTagEventType    getStatus()
```

Java and Android representation:

```
public DLRFIDTagEventType    getStatus()
```

getTagID Method

Description:
This method returns the tag's ID (the EPC code in Gen2 tags).

Return value:
An array of bytes representing the tag's ID (the EPC code in EPC Class 1 Gen 2 tags).

Syntax:

C# representation:

```
public byte[]                getTagID()
```

Java and Android representation:

```
public byte[]                getTagID()
```

getTagLength Method

Description:
This method returns the tag's ID length.

Return value:
The tag's length.

Syntax:

C# representation:

```
public short                 getTagLength()
```

Java and Android representation:

```
public short                 getTagLength()
```

getTagSource Method

Description:
This method returns the name of the logical source that has detected the tag.

Return value:
The name of the logical source that has detected the tag.

Syntax:

C# representation:

```
public string                getTagSource()
```

Java and Android representation:

```
public java.lang.String      getTagSource()
```

getTagType Method

Description:
This method returns the air protocol of the tag.

Return value:
The air protocol of the tag.

Syntax:

C# representation:

```
public short                    getTagType()
```

Java and Android representation:

```
public DLRFIDProtocol           getTagType()
```

getTID Method

Description:
This method returns the TID field value in a EPC Class 1 Gen 2 Tag

Return value:
The bytes of the TID field.

Syntax:

C# representation:

```
public byte[]                   getTID()
```

Java and Android representation:

```
public java.lang.String         getAntenna()
```

getXPC Method

Description:
This method returns the tag's XPC words.

Return value:
The tag's XPC words.

Syntax:

C# representation:

```
public byte[]             getXPC()
```

Java and Android representation:

```
public byte[]             getXPC()
```

DLRFIDReader Class

The DLRFIDReader class is used to create reader objects which permit to access to DL RFID readers' configuration and control commands.

Connect Method

Connect Method (DLRFIDPort, string

Description:

In C# and Java languages, this method starts the communication with the reader. It must be called before any other call to method of the DLRFIDReader object. See § Managing connections with the readers pag. 10 for more information. For android bluetooth connection see below § *Connect Method (BluetoothSocket)*

Parameters:

Name	Description
ConType	The communication link to use for the connection.
Address	Depending on ConType parameter: IP address for TCP/IP communications ("xxx.xxx.xxx.xxx"), COM port for RS232 communications ("COMx"), An index for USB communications (not yet supported).

Syntax:

C# representation:

```
public void         Connect(
                              DLRFIDPort          ConType,
                              string              Address)
```

Java and Android representation:

```
public void         Connect(
                              DLRFIDPort          ConType,
                              java.lang.String    Address)
                              throws DLRFIDException
```

Connect Method (BluetoothSocket)

Description:

Start the andorid SPP bluetooth communication with the DL RFID Reader. This method must be called before any other methods of the Reader object.

Parameters:

Name	Description
BTSock	The BluetoothSocket to read/write data.

Syntax:

Android representation:

```
public void         Connect(
                              BluetoothSocket BTSock)
                              throws DLRFIDException
```

Remarks

The BTSock parameter must be obtained trought a createRfcommSocketToServiceRecord(UUID uuid) call.

The standard UUID for the Serial Port Profile is 00001101-0000-1000-8000-00805F9B34FB.

Init Function

Description:
In C language, this function generates an opaque handle to identify a module attached to the PC. See § Managing connections with the readers pag. 10 for more information.

Parameters:

Name	Description
ConType	The communication link to use for the connection.
Address	Communication address (i.e.: "COM1" for RS232, "USB0" for USB of IP address for TCP/IP etc.).
handle	The handle that identifies the device.

Syntax:

C representation:

```
DLRFIDErrorCodes    DLRFID_Init(
                              DLRFIDPort          ConType,
                              char                *Address,
                              DLRFIDHandle *handle,
                              DLRFIDProtocol      *Protocol);
```

Disconnect Method

Description:
In C# and Java languages, this method closes the connection with the DL RFID Reader releasing all the allocated resources. See § Managing connections with the readers pag. 10 for more information.

Syntax:

C# representation:

```
public void         Disconnect()
```

Java and Android representation:

```
public void         Disconnect()
                              throws DLRFIDException
```

End

Description:
In C language, this function closes the connection with the DL RFID Reader releasing all the allocated resources. See § Managing connections with the readers pag. 10 for more information.

Parameters:

Name	Description
handle	The handle that identifies the device.

Syntax:

C representation:

```
DLRFIDErrorCodes    DLRFID_End(
                              DLRFIDHandle handle);
```

GetBitRate Method

Description:
This method gets the current setting of the RF bit rate.

Return value:
The current RF bit rate value.

Syntax:

C# representation:

```
public DLRFIDBitRate     GetBitRate()
```

Java and Android representation:

```
public DLRFIDBitRate     GetBitRate()
                               throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes         DLRFID_GetBitrate(
                               DLRFIDHandle handle,
                               DLRFID_Bitrate      *Bitrate);
```

GetFirmwareRelease Method

Description:
This method permits to read the release of the firmware loaded into the device.

Return value:
A string representing the firmware release of the device.

Syntax:

C# representation:

```
public string            GetFirmwareRelease()
```

Java and Android representation:

```
public java.lang.String  GetFirmwareRelease()
                               throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes         DLRFID_GetFirmwareRelease(
                               DLRFIDHandle handle,
                               char                *FWRel);
```

GetIO Method

Description:
This method gets the current digital Input and Output lines status.

Return value:
A bitmask representing the I/O lines status. The format and the meaning of the bits depend on the Reader's model. Please refer to the corresponding user manual available at www.datalogic.com.

Syntax:

C# representation:

```
public int          GetIO()
```

Java and Android representation:

```
public int          GetIO()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetIO(
                              DLRFIDHandle handle,
                              unsigned int        *IORegister);
```

GetIODirection Method

Description:
This method gets the current I/O direction setting as a bitmask. Each bit represents a I/O line, a value of 0 means that the line is configured as an input, 1 as an output. This setting has a meaning only for those readers with configurable I/O lines.

Return value:
A bitmask representing the I/O setting.

Syntax:

C# representation:

```
public int          GetIODirection()
```

Java and Android representation:

```
public int          GetIODirection()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetIODirection(
                              DLRFIDHandle handle,
                              unsigned int        *IODirection);
```

GetLBTMode Method

Description:
This method gets the current LBT mode setting. If the current regulation is based on the frequency hopping mechanism it returns the FH status.

Return value:
A zero value if the LBT/FH is disabled, non-zero value if it is enabled.

Syntax:

C# representation:

```
public short        GetLBTMode()
```

Java and Android representation:

```
public short        GetLBTMode()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetLBTMode(
                              DLRFIDHandle handle,
                              unsigned short      *LBTMode);
```

GetPower Method

Description:
This method gets the current setting of the RF power expressed in mW.

Return value:
The current conducted RF power expressed in mW.

Syntax:

C# representation:

```
public int          GetPower()
```

Java and Android representation:

```
public int          GetPower()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetPower(
                              DLRFIDHandle handle,
                              unsigned int        *Power);
```

GetProtocol Method

Description:
This method gets the current air protocol of the Reader.

Return value:
A DLRFIDProtocol representing the current air protocol set on the reader.

Syntax:

C# representation:

```
public DLRFIDProtocol    GetProtocol()
```

Java and Android representation:

```
public DLRFIDProtocol    GetProtocol()
                               throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes         DLRFID_GetProtocol(
                               DLRFIDHandle handle,
                               DLRFIDProtocol      *Protocol);
```

GetReaderInfo Method

Description:
This method permits to read the reader information loaded into the device.

Return value:
The reader information of the device.

Syntax:

C# representation:

```
public DLRFIDReaderInfo  GetReaderInfo()
```

Java and Android representation:

```
public DLRFIDReaderInfo  GetReaderInfo()
                               throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes              DLRFID_GetReaderInfo(
                                     DLRFIDHandle handle,
                                     char               *Model,
                                     char               *SerialNum);
```

GetReadPoints Method

Description:
This method gets the names of the read points (antennas) available in the reader.

Return value:
An array containing the read points (antennas) names available in the reader.

Syntax:

C# representation:

```
public string[]                 GetReadPoints()
```

Java and Android representation:

```
public java.lang.String[]       GetReadPoints()
```

C representation:

```
DLRFIDErrorCodes                DLRFID_GetReadPoints(
                                       DLRFIDHandle handle,
                                       char                **AntNames [],
                                       int                 *AntNumber);
```

GetReadPointStatus Method

Description:
This method gets the DLRFIDReadPointStatus object representing the status of a read point (antenna).

Parameters:

Name	Description
ReadPoint	The name of the read point to check.

Return value:
The DLRFIDReadPointStatus object rapresenting the current status of the read point.

Syntax:

C# representation:

```
public DLRFIDReadPointStatus    GetReadPointStatus(
                                       string              ReadPoint)
```

Java and Android representation:

```
public DLRFIDReadPointStatus    GetReadPointStatus(
                                       java.lang.String    ReadPoint)
                                       throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes                        DLRFID_GetReadPointStatus(
                                        DLRFIDHandle handle,
                                        char                *ReadPoint,
                                        DLRFIDReadPointStatus *Status);
```

GetRFChannel Method

Description:
This method gets the index of the RF channel currently in use. The index value meaning changes for different country regulations.

Return value:
The RF channel index.

Syntax:

C# representation:

```
public short        GetRFChannel()
```

Java and Android representation:

```
public short        GetRFChannel()
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_GetRFChannel(
                              DLRFIDHandle handle,
                              unsigned short      *RFChannel);
```

Remarks
This method is only used for testing applications.

GetRFRegulation Method

Description:
This method gets the current RF regulation setting value.

Return value:
The RF regulation value.

Syntax:

C# representation:

```
public DLRFIDRFRegulations    GetRFRegulation()
```

Java and Android representation:

```
public DLRFIDRFRegulations    GetRFRegulation()
                                    throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes              DLRFID_GetRFRegulation(
                                    DLRFIDHandle        handle,
                                    DLRFIDRFRegulations *RFRegulation);
```

GetSource Method

Description:
This method gets a DLRFIDLogicalSource object given its name.

Parameters:

Name	Description
Source	The name of the logical source.

Return value:
The DLRFIDLogicalSource object corresponding to the requested name.

Syntax:

C# representation:

```
public DLRFIDLogicalSource    GetSource(
                                    string              Source)
```

Java and Android representation:

```
public DLRFIDLogicalSource    GetSource(
                                    java.lang.String    Source)
                                    throws DLRFIDException
```

Remarks:
This function does not exist in C language, see § Overview on SDK pag. 9 for more information.

GetSourceNames Method

Description:
This method gets the names of the logical sources available in the reader.

Return value:
An array containing the logical source names available in the reader.

Syntax:

C# representation:

```
public static string[]              GetSourceNames()
```

Java and Android representation:

```
public static java.lang.String[]    GetSourceNames()
```

C representation:

```
DLRFIDErrorCodes                    DLRFID_GetSourceNames(
                                    DLRFIDHandle handle,
                                    char                **SrcNames[],
                                    int                 *SrcNumber);
```

GetSources Method

Description:
This method gets the DLRFIDLogicalSource objects available on the reader.

Return value:
An array of the logical source objects available in the Reader.

Syntax:

C# representation:

```
public DLRFIDLogicalSource[]  GetSources()
```

Java and Android representation:

```
public DLRFIDLogicalSource[]  GetSources()
```

Remarks:
This function does not exist in C language, see § Overview on SDK pag. 9 for more information.

InventoryAbort Method

For the description of this method, see § Event Handling pag.106.

RFControl Method

Description:
Permits to control the RF CW (Carrier Wave) signal generation.

Parameters:

Name	Description
OnOff	The value to set. 1 generates the CW , 0: stops the CW generation.

Syntax:

C# representation:

```
public void         RFControl(
                              int                OnOff)
```

Java and Android representation:

```
public void         RFControl(
                              int                OnOff)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_RFControl(
                              DLRFIDHandle handle,
                              int                OnOff);
```

Remarks
This method is only used for testing applications.

SetBitRate Method

Description:

This method sets the RF bit rate to use.

Parameters:

Name	Description
BitRate	The RF bit rate value to be set.

Syntax:

C# representation:

```
public void         SetBitRate(
                              DLRFIDBitRate       BitRate)
```

Java and Android representation:

```
public void         SetBitRate(
                              DLRFIDBitRate       BitRate)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetBitRate(
                              DLRFIDHandle handle,
                              DLRFID_Bitrate      BitRate);
```

SetDateTime Method

Description:

This method sets the Date/Time of the reader.

Parameters:

Name	Description
DateTime	The Date/Time to be set on the reader as a string in the format: "yyyy-mm-dd hh:mm:ss".

Syntax:

C# representation:

```
public void         SetDateTime(
                              string              DateTime)
```

Java and Android representation:

```
public void         SetDateTime(
                              java.lang.String    DateTime)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetDateTime(
                              DLRFIDHandle handle,
                              char                *DateTime);
```

SetIO Method

Description:

This method sets the Output lines value.

Parameters:

Name	Description
IOValue	A bitmask representing the I/O lines value. The format and the meaning of the bits depend on the reader's model. Please refer to the corresponding user manual available on www.datalogic.com

Syntax:

C# representation:

```
public void         SetIO(
                                int                 IOValue)
```

Java and Android representation:

```
public void         SetIO(
                                int                 IOValue)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetIO(
                                DLRFIDHandle handle,
                                unsigned int        IOValue);
```

SetIODIRECTION Method

Description:

This method sets the current I/O direction setting as a bitmask. Each bit represents a I/O line, a value of 0 means that the line is configured as an input, 1 as an output. This setting has a meaning only for those readers with configurable I/O lines.

Parameters:

Name	Description
IODirection	The IODirection value to set.

Syntax:

C# representation:

```
public void         SetIODIRECTION(
                                int                 IODirection)
```

Java and Android representation:

```
public void         SetIODIRECTION(
                                int                 IODirection)
                                throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetIODirection(
                                DLRFIDHandle handle,
                                unsigned int        IODirection);
```

SetNetwork Method

Description:

This method permits to configure the network settings of the reader. In order to apply the changes the reader must be restarted.

Parameters:

Name	Description
IPAddress	The IP address to set on the reader network interface.
NetMask	The netmask to set on the reader network interface.
Gateway	The gateway to set on the reader network interface.

Syntax:

C# representation:

```
public void         SetNetwork(
                              string              IPAddress,
                              string              NetMask,
                              string              Gateway)
```

Java and Android representation:

```
public void         SetNetwork(
                              java.lang.String    IPAddress,
                              java.lang.String    NetMask,
                              java.lang.String    Gateway)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetNetwork(
                              DLRFIDHandle handle,
                              char                *IPAddress,
                              char                *NetMask,
                              char                *Gateway);
```

SetPower Method

Description:

This method sets the conducted RF power of the Reader.

Parameters:

Name	Description
power	The conducted RF power value expressed in mW.

Syntax:

C# representation:

```
public void         SetPower(
                              int                 power)
```

Java and Android representation:

```
public void         SetPower(
                              int                 power)
                        throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetPower(
                              DLRFIDHandle handle,
                              unsigned int        Power);
```

SetProtocol Method

Description:

This method sets the air protocol of the reader.

Parameters:

Name	Description
Protocol	The DLRFIDProtocol representing the air protocol to be set.

Syntax:

C# representation:

```
public void         SetProtocol(
                              DLRFIDProtocol      Protocol)
```

Java and Android representation:

```
public void         SetProtocol(
                              DLRFIDProtocol      Protocol)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetProtocol(
                              DLRFIDHandle handle,
                              DLRFIDProtocol      Protocol);
```

SetRFChannel Method

Description:

This method sets the RF channel to use. This method fixes the RF channel only when the listen before talk or the frequency hopping feature is disabled.

Parameters:

Name	Description
Channel	The RF channel index to be set.

Syntax:

C# representation:

```
public void         SetRFChannel(
                              short               Channel)
```

Java and Android representation:

```
public void         SetRFChannel(
                              short               Channel)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetRFChannel(
                              DLRFIDHandle handle,
                              unsigned short      Channel);
```

Remarks

This method is only used for testing applications.

SetRS232 Method

Description:

This method permits to change the serial port settings. Valid settings values depend on the reader model.

Parameters:

Name	Description
baud	The baud rate value to set.
datab	The number of data bits to set.
stopb	The number of stop bits to set.
parity	The parity value to set.
flowc	The flow control value to set.

Syntax:

C# representation:

```
public void         SetRS232(
                              int                       baud,
                              int                       datab,
                              int                       stopb,
                              DLRFIDRS232Constants      parity,
                              DLRFIDRS232Constants      flowc)
```

Java and Android representation:

```
public void         SetRS232(
                              int                       baud,
                              int                       datab,
                              int                       stopb,
                              DLRFIDRS232Constants      parity,
                              DLRFIDRS232Constants      flowc)
                              throws DLRFIDException
```

C representation:

```
DLRFIDErrorCodes    DLRFID_SetRS232(
                              DLRFIDHandle        handle,
                              unsigned long             baud,
                              unsigned long             datab,
                              unsigned long             stopb,
                              DLRFID_RS232_Parity       parity,
                              DLRFID_RS232_FlowControl flowc);
```

DLRFIDReaderInfo Class

The DLRFIDReaderInfo class is used to create reader info objects. Reader info objects represent the information about the reader device (model and serial number).

GetModel Method

Description:
This method gets the reader's model.

Return value:
The reader's model.

Syntax:

C# representation:

```
public string                GetModel()
```

Java and Android representation:

```
public java.lang.String      GetModel()
```

Remarks:
This method does not exist in C language. It is possible to use the *GetReaderInfo Method* pag. 90 instead. In fact *GetReaderInfo Method* (in the C language) returns the reader's model and the serial number.

GetSerialNumber Method

Description:
This method gets the reader's serial number.

Return value:
The reader's serial number.

Syntax:

C# representation:

```
public string                GetSerialNumber()
```

Java and Android representation:

```
public java.lang.String      GetSerialNumber()
```

Remarks:
This method does not exist in C language. It is possible to use the *GetReaderInfo Method* pag. 90 instead. In fact *GetReaderInfo Method* (in the C language) returns the reader's model and the serial number.

DLRFIDTag Class

The DLRFIDTag class is used to define objects representing the tags. These objects are used as return values for the inventory methods and as arguments for many tag access methods.

In both Java and C# lanuguage this class is composed by methods while in C language the following struct is present (for more information see § Overview on SDK pag.9):

C representation:

```
typedef struct {
                    byte            ID[MAX_ID_LENGTH];
                    short           Length;
                    char            LogicalSource[MAX_LOGICAL_SOURCE_NAME];
                    char            ReadPoint[MAX_READPOINT_NAME];
                    DLRFIDProtocol  Type;
                    short           RSSI;
                    byte            TID[MAX_TID_SIZE];
                    short           TIDLen;
                    byte            XPC[XPC_LENGTH];
                    byte            PC[PC_LENGTH];
                    } DLRFIDTag;
```

GetId Method

Description:
This method returns the tag's ID (the EPC code in Gen2 tags).

Return value:
An array of bytes representing the tag's ID (the EPC code in EPC Class 1 Gen 2 tags).

Syntax:

C# representation:

```
public byte[]           GetId()
```

Java and Android representation:

```
public byte[]           GetId()
```

GetLength Method

Description:
This method returns the tag's ID length.

Return value:
The tag's length.

Syntax:

C# representation:

```
public short            GetLength()
```

Java and Android representation:

```
public short            GetLength()
```

GetPC Method

Description:
This method returns the Protocol Control(PC) word code of the tag.

Return value:
The tag's Protocol Control code.

Syntax:

C# representation:

```
public byte[]            GetPC()
```

Java and Android representation:

```
public byte[]            GetPC()
```

GetReadPoint Method

Description:
This method returns the read point that has detected the tag.

Return value:
The name of the read point that has detected the Tag

Syntax:

C# representation:

```
public string                GetReadPoint()
```

Java and Android representation:

```
public java.lang.String      GetReadPoint()
                             throws DLRFIDException
```

GetRSSI Method

Description:
This method returns the RSSI value measured for the tag.

Return value:
The tag's RSSI.

Syntax:

C# representation:

```
public short                 GetRSSI()
```

Java and Android representation:

```
public short                 GetRSSI()
```

GetSource Method

Description:
This method returns the name of the logical source that has detected the tag.

Return value:
The name of the logical source that has detected the tag.

Syntax:

C# representation:

```
public DLRFIDLogicalSource          GetSource()
```

Java and Android representation:

```
public DLRFIDLogicalSource          GetSource()
```

GetTID Method

Description:
This method returns the tag's TID (valid only for EPC Class 1 Gen 2 tags).

Return value:
An array of bytes representing the tag's TID.

Syntax:

C# representation:

```
public byte[]           GetTID()
```

Java and Android representation:

```
public byte[]           GetTID()
```

GetTimeStamp Method

Description:
This method gets the Tag's TimeStamp.

Return value:
The Tags's Unix TimeStamp.

Syntax:

C# representation:

```
public DateTime             GetTimeStamp()
```

Java and Android representation:

```
public java.util.Date       GetTimeStamp()
```

GetType Method

Description:
This method returns the air protocol of the tag.

Return value:
The air protocol of the tag.

Syntax:

C# representation:

```
public new DLRFIDProtocol           GetType()
```

Java and Android representation:

```
public DLRFIDProtocol               GetType()
```

GetXPC Method

Description:
This method returns the tag's XPC words.

Return value:
The tag's XPC words.

Syntax:

C# representation:

```
public byte[]           GetXPC()
```

Java and Android representation:

```
public byte[]           GetXPC()
```

4 Event Handling

This chapter gives a description of DLRFID event handling. It contains these topics:

Event Handling

Standard tag's detection method (InventoryTag) is based on a polling mechanism: a call to the InventoryTag method/function results in a single read cycle and the detected tags in that cycle are returned.

An useful variant ("continuous mode") uses an event mechanism to notify detected tags: a call to the EventInventoryTag method/function starts a continuous tags' detection algorithm (multiple read cycles) and an event is generated for each read cycle to notify the detected tags (see the DL RFID API User Manual.for further information).

The user of the library can define an event handler method/function that is called automatically when the event raises; the data related to the event is passed to the handler as a parameter.

The user can define the number of read cycles that the EventInventoryTag have to perform using the ReadCycle parameter of the relevant LogicalSource. If ReadCycle is equal to 0 the EventInventoryTag method loops indefinetely.

The continuous mode is obtained by setting to 1 both *framed* (bit 1) and *continuous* (bit 2) flags.

The "continuous mode" can be interrupted using the InventoryAbort method function.

In readers equipped with button, if the *event trigger* flag (bit 5) is enabled and the continuous mode is enabled (bit 1 and bit 2), the event handler is recalled every time the button is pressed.

The event handling is implemented using the standard event handling mechanism in .NET and Java/Android while in C it is simulated using the callback mechanism.

No other methods can be invoked on logical source and reader, during the continuous mode, nor inside the event handler. The only operation allowed is an inventory abort, that must be used to stop a reader which is working in continuous mode.

For further information on the use of the EventInventoryTag, please refer to the DL RFID API User Manual.

EventInventoryTag Method

Description:

A call to this method will start a sequence of read cycle on each read point linked to the logical source. The readings will be notified to the controller via event generation.

Parameters:

Name	Description
Mask	A byte array representing the bitmask to apply.
MaskLength	A value representing the bit-oriented length of the bitmask.
Position	A value representing the first bit where the match will start.
Flag	A bitmask representing the InventoryTag options.
pCallBack	The user defined handler called by EventInventoryTag (only in C language).

Return value:

A boolean value that represents the status of the command: true if the reader has accepted the command; false otherwise.

Syntax:

C# representation:

```
public bool         EventInventoryTag(
                        byte[]                          Mask,
                        short                           MaskLength,
                        short                           Position,
                        short                           Flag)
```

Java and Android representation:

```
public boolean      EventInventoryTag(
                        byte[]                          Mask,
                        short                           MaskLength,
                        short                           Position,
                        short                           Flag)
                        throws DLRFIDException
```

C representation:

```
typedef struct {
                        char                            *SourceName;
                        char                            *Mask;
                        unsigned char                   MaskLength;
                        unsigned char                   Position;
                        DLRFID_INVENTORY_CALLBACK pCallBack;
                        short                           flag;}
                        DLRFID_EventInventoryParams;

DLRFIDErrorCodes    DLRFID_EventInventoryTag (
                              DLRFIDHandle        handle,
                              DLRFID_EventInventoryParams      InvParams);
```

Remarks:

Depending on the air protocol setting it will execute the appropriate anticollision algorithm. This version of the method permits to specify a bitmask for filtering tag's populations as described by the EPC Class1 Gen2 (ISO18000-6C) air protocol. The filtering will be performend on the memory bank specified by bank parameter, starting at the bit indicated by the Position index and for a MaskLength length. The method will return only the tags that match the given Mask. Passing a zero value for MaskLength it performs as the non-filtering InventoryTag method. The Flags parameter permits to set InventoryTag method's options.

Flag value meaning	
Bit 0	RSSI: a 1 value indicates the reader will transmit the RSSI (Return Signal Strength Indicator) in the response.
Bit 1	Framed data: a 1 value indicates that the tag's data will be transmitted by the reader to the PC as soon as the tag is detected, a 0 value means that all the tags detected are buffered in the reader and trasmitted all together at the end of the inventory cycle. Bit1 and bit 2 work in conjunction and must have the same value (00 or 11).
Bit 2	Continuous acquisition: a 1 value indicates that the inventory cycle is repeated by the reader depending on the SetReadCycle setting value, a 0 value means that only one inventory cycle will be performed. If the continuous mode is selected a 0 value in the ReadCycle setting will instruct the reader to repeat the inventory cycle until an InventoryAbort method is invoked, a value X different from 0 means that the inventory cycle will be performed X times by the reader. Bit1 and bit 2 work in conjunction and must have the same value (00 or 11).
Bit 3	Compact data: a 1 value indicates that only the EPC of the tag will be returned by the reader, a 0 value indicates that the complete data will be returned. In case that the compact option is enabled all the other data will be populated by this library with fakes values.
Bit 4	TID reading: a 1 value indicates that also the TID of the tag will be returned by the reader together with the other information.
Bit 5	Event trigger: when this flag is set together with the continuous mode (continuous acquisition flag + framed data flag), the inventory cycle is performed in the same way of the continuous mode
Bit 6	XPC: a 1 value allows the reader to get the XPC word if backscattered by a tag.Tags that do not backscatter the XPC words will return an XPC array with all the 4 bytes set to 0
Bit 7	Not Used
Bit 8	Not Used

InventoryAbort Method

Description:

This method stops the EventInventoryTag execution.

Syntax:

C# representation:

```
public void         InventoryAbort()
```

Java and Android representation:

```
public void         InventoryAbort()
```

C representation:

```
DLRFIDErrorCodes    DLRFID_InventoryAbort(
                                DLRFIDHandle handle);
```

C# Event Handling

DLRFIDEventArgs Class

The DLRFIDEventArgs class defines the DLRFID event arguments.

getData Method

Description:
This method returns the event object value.

Return value:
The value of the event object.

Syntax:

C# representation:

```
public DLRFIDNotify[]          getData()
```

DLRFIDEventHandler Delegate

DLRFIDEventHandler delegate declaration.

Parameters:

Name	Description
Event	the Data Event.

Syntax:

C# representation:

```
public delegate void     DLRFIDEventHandler(
                                              object              Sender,
                                              DLRFIDEventArgs     Event)
```

DLRFIDEvent Event

The DL RFID event is generated by the library each time tag data arrives from the reader. The event is generated only when the EventInventoryTag method is used. It is an event of the Reader Class.

Syntax:

C# representation:

```
public event DLRFIDEventHandler            DLRFIDEvent
```

Event Data

The event handler receives an argument of type DLRFIDEventArgs containing data related to this event. The following DLRFIDEventArgs property provides information specific to this event.

Property	Description
Data	Represents the event object value.

Java and Android Event Handling

DLRFIDEvent Class

The DLRFIDEvent class defines the DLRFID event arguments.

getData Method

Description:
This method returns the event object value.

Return value:
The value of the event object.

Syntax:

Java and Android representation:

```
public java.util.ArrayList    getData()
```

DLRFIDEventListener Interface

The listener interface for receiving DL RFID events.

DLRFIDTagNotify

Description:
This method is invoked when an action occurs.

Parameters:

Name	Description
evt	The DLRFIDEvent contains the Data Event.

Syntax:

Java and Android representation:

```
void                    DLRFIDTagNotify(
                                        DLRFIDEvent  evt)
```

addDLRFIDEventListener

This is a Reader Class method. It adds the specified DLRFIDEvent listener to receive DLRFIDEvent events from this DLRFIDReader.

Parameters:

Name	Description
listener	listener – the DLRFIDEvent listener.

Syntax:

Java and Android representation:

```
public void         addDLRFIDEventListener(
                              DLRFIDEventListener       listener)
```

removeDLRFIDEventListener

This is a Reader Class method. It Removes the specified DLRFIDEvent listener so that it no longer receives DLRFID events from this DLRFIDReader.

Parameters:

Name	Description
listener	listener – the DLRFIDEvent listener.

Syntax:

Java and Android representation:

```
public void         removeDLRFIDEventListener(
                                DLRFIDEventListener       listener)
```

C Event Handling

DLRFID_INVENTORY_CALLBACK

This function prototype defines the type of the user defined event handler (see the DL RFID API User Manual. for further information)

Syntax:

C representation:

```
typedef DLRFIDErrorCodes (__stdcall *DLRFID_INVENTORY_CALLBACK)
                         (const DLRFIDNotify* Tags, const int Size);
```

5 Enumerations Description

This chapter gives a description of DLRFID enumerations. It contains these topics:

DLRFIDBitRate Enumeration

The DLRFIDBitRate Enumeration gives a list of the supported radiofrequency profiles.

Syntax:

C# representation:

```
public enum             DLRFIDBitRate
```

Java and Android representation:

```
public final class      DLRFIDBitRate
```

C representation:

```
typedef enum            DLRFID_Bitrate;
```

In the following table, the DLRFIDBitRate Enumeration members are listed:

Member	Description
DSB_ASK_FM0_TX10RX40	DSB-ASK transmission modulation, FM0 return link encoding, 10 Kbit in transmission, 40 Kbit in reception.
DSB_ASK_FM0_TX40RX40	DSB-ASK transmission modulation, FM0 return link encoding, 40 Kbit in transmission, 40 Kbit in reception.
DSB_ASK_FM0_TX40RX160	DSB-ASK transmission modulation, FM0 return link encoding, 40 Kbit in transmission, 160 Kbit in reception.
DSB_ASK_FM0_TX160RX400	DSB-ASK transmission modulation, FM0 return link encoding, 160 Kbit in transmission, 400 Kbit in reception.
DSB_ASK_M2_TX40RX160	DSB-ASK transmission modulation, Miller (M=2) return link encoding, 40 Kbit in transmission, 160 Kbit in reception.
DSB_ASK_M4_TX40RX256	DSB-ASK transmission modulation, Miller (M=4) return link encoding, 40 Kbit in transmission, 256 Kbit in reception.
PR_ASK_FM0_TX40RX640	PR-ASK transmission modulation, FM0 return link encoding, 40 Kbit in transmission, 640 Kbit in reception.
PR_ASK_M2_TX40RX250	PR-ASK transmission modulation, Miller (M=2) return link encoding, 40 Kbit in transmission, 250 Kbit in reception.
PR_ASK_M4_TX40RX250	PR-ASK transmission modulation, Miller (M=4) return link encoding, 40 Kbit in transmission, 250 Kbit in reception.
PR_ASK_M4_TX40RX256	PR-ASK transmission modulation, Miller (M=4) return link encoding, 40 Kbit in transmission, 256 Kbit in reception.
PR_ASK_M4_TX40RX300	PR-ASK transmission modulation, Miller (M=4) return link encoding, 40 Kbit in transmission, 300 Kbit in reception.
PR_ASK_M4_TX40RX320	DSB-ASK transmission modulation, Miller (M=4) return link encoding, 40 Kbit in transmission, 320 Kbit in reception.
PR_ASK_M4_TX80RX320	PR-ASK transmission modulation, Miller (M=4) return link encoding, 80 Kbit in transmission, 320 Kbit in reception.

DLRFIDLogicalSourceConstants Enumeration

The DLRFIDLogicalSourceConstants Enumeration gives a list of constants used for the configuration of the logical sources. Detailed explanation of the settings can be found in the EPC Class 1 Gen 2 and ISO 18000-6B specification documents.

Syntax:

C# representation:

```
public enum              DLRFIDLogicalSourceConstants
```

Java and Android representation:

```
public final class       DLRFIDLogicalSourceConstants
```

C representation:

```
typedef enum             DLRFIDLogicalSourceConstants;
```

In the following table, the DLRFIDLogicalSourceConstants Enumeration members are listed:

Member	Description
EPC_C1G2_SESSION_S0	Session 0 is selected for the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
EPC_C1G2_SESSION_S1	Session 1 is selected for the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
EPC_C1G2_SESSION_S2	Session 2 is selected for the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
EPC_C1G2_SESSION_S3	Session 3 is selected for the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
EPC_C1G2_TARGET_A	Target A is selected for the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
EPC_C1G2_TARGET_B	Target B is selected for the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
EPC_C1G2_SELECTED_YES	Only the tags with the SL flag set to true are considered in the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
EPC_C1G2_SELECTED_NO	Only the tags with the SL flag set to false are considered in the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
EPC_C1G2_ALL_SELECTED	All the tags are considered in the anticollision algorithm execution on the logical source (valid only for the EPC Class1 Gen2 air protocol).
ISO18006B_DESB_ON	The Data Exchange Status Bit feature is used for the anticollision algorithm execution on the logical source (valid only for the ISO18000-6B air protocol).
ISO18006B_DESB_OFF	The Data Exchange Status Bit feature is not used for the anticollision algorithm execution on the logical source (valid only for the ISO18000-6B air protocol).

DLRFIDLogicalSource.InventoryFlag Enumeration

The DLRFIDLogicalSource.InventoryFlag Enumeration gives a list of constants used for the configuration of the inventory function that comes with Flag parameter.

Syntax:

C# representation:

```
public enum              DLRFIDLogicalSource.InventoryFlag
```

Java and Android representation:

```
public final class       DLRFIDLogicalSource.InventoryFlag
```

C representation:

```
typedef enum             DLRFIDLogicalSource.InventoryFlag;
```

In the following table, the DLRFIDLogicalSource.InventoryFlag Enumeration members are listed:

Member	Description
RSSI	When enabled, the RSSI value representing the backscattered RF field strenght is returned by the reader for each tag read. Some reader cannot have this feature.
FRAMED	Tags found in an inventoy cycle are not bufferized in reader and sent all together, but sent one by one as soon as a tag is detected. It Is used in conjunction with the continuous flag.
CONTINUOUS	Enables the continuos mode acquisition. Logical source must have ReadCycle parameter set to 0.
COMPACT	Instruct the reader to not return any other information than the ID. Other values are fake and filled by the library.
TID_READING	Instruct the reader to return the TID memory. On some reader it must be used in conjunction with SetTIDLength to work more efficiently.
EVENT_TRIGGER	Work only in combination with continuous mode. In reader provided with identification button, it instructs the reader to do an inventory cycle only when the button is pressed.
XPC	It instructs the reader to return XPC. If no XPC is present on the tag, the XPC field of a tag is filled up with zero values.
PC	Instruct the reader to return the PC of the EPC bank for each inventoried tag.

DLRFIDPort Enumeration

The DLRFIDPort Enumeration gives a list of the communication ports supported by the DL RFID readers.

Syntax:

C# representation:

```
public enum             DLRFIDPort
```

Java and Android representation:

```
public final class      DLRFIDPort
```

C representation:

```
typedef enum            DLRFIDPort;
```

Remarks:

In order to align the three libraries, the members name in C language have changed, now reporting the DLRFID_ suffix, but the value of the members is the same of the previous library version.

In the following table, the DLRFIDPort Enumeration members are listed:

Member	Description
DLRFID_RS232	Serial port communication link.
DLRFID_TCP	TCP/IP network communication link.
DLRFID_USB	USB communication link.

DLRFIDProtocol Enumeration

The DLRFIDProtocol Enumeration gives a list of the air protocol supported by the DL RFID readers.

Syntax:

C# representation:

```
public enum             DLRFIDProtocol
```

Java and Android representation:

```
public final class      DLRFIDProtocol
```

C representation:

```
typedef enum            DLRFIDProtocol;
```

Remarks:

In order to align the three libraries, the members name in C language have changed, now reporting the DLRFID_ suffix, but the value of the members is the same of the previous library version.

In the following table, the DLRFIDProtocol Enumeration members are listed:

Member	Description
DLRFID_ISO18000_6b	ISO18000-6B air protocol.
DLRFID_EPC119	EPC 1.19 air protocol.
DLRFID_EPC_C1G1	EPCGlobal Class1 Gen1 air protocol.
DLRFID_ISO18000_6a	ISO18000-6A air protocol.
DLRFID_EPC_C1G2	EPCGlobal Class1 Gen2 (aka ISO18000-6C) air protocol.
DLRFID_MULTIPROTOCOL	This value permits to use all the supported air protocol at the same time. Suggested setting only for demo purposes.

DLRFIDReadPointStatus Enumeration

The DLRFIDReadPointStatus gives a list of the possible ReadPoint status values.

Syntax:

C# representation:

```
public enum              DLRFIDReadPointStatus
```

Java and Android representation:

```
public final class       DLRFIDReadPointStatus
```

C representation:

```
typedef enum             DLRFIDReadPointStatus;
```

Remarks:

In order to align the three libraries, the members name in C language have changed, now reporting the STATUS_ suffix, but the value of the members is the same of the previous library version.

In the following table, the DLRFIDReadPointStatus Enumeration members are listed:

Member	Description
STATUS_BAD	Bad antenna connection.
STATUS_GOOD	Good antenna connection.
STATUS_POOR	Poor antenna connection.

DLRFIDRFRegulations Enumeration

The DLRFIDRFRegulations gives a list of country radiofrequency regulations.

Syntax:

C# representation:

```
public enum             DLRFIDRFRegulations
```

Java and Android representation:

```
public final class      DLRFIDRFRegulations
```

C representation:

```
typedef enum            DLRFIDRFRegulations;
```

Remarks:

In order to align the three libraries, the regulations, previously declared as #define, are now members of an enumeration, but the value of the members is the same of the previous library version.

In the following table, the DLRFIDRFRegulations Enumeration members are listed:

Member	Description
ETSI_302208	ETSI_302208 radiofrequency regulation.
ETSI_300220	ETSI_300220 radiofrequency regulation.
FCC_US	FCC_US radiofrequency regulation.
MALAYSIA	MALAYSIA radiofrequency regulation.
JAPAN	JAPAN radiofrequency regulation.
KOREA	KOREA radiofrequency regulation.
AUSTRALIA	AUSTRALIA radiofrequency regulation.
CHINA	CHINA radiofrequency regulation.
TAIWAN	TAIWAN radiofrequency regulation.
SINGAPORE	SINGAPORE radiofrequency regulation.
BRAZIL	BRAZIL radiofrequency regulation.
JAPAN_STD_T106 11	JAPAN radiofrequency regulation (ARIB STD-T106 Premises radio station (1W) - LBT free)
JAPAN_STD_T107 12	JAPAN radiofrequency regulation (ARIB STD-T107 Specified low power radio station (250mW) - with LBT)

DLRFIDRS232Constants Enumeration

The DLRFIDRS232Constants gives a list of settings for the serial port configuration.

Syntax:

C# representation:

```
public enum             DLRFIDRS232Constants
```

Java and Android representation:

```
public final class      DLRFIDRS232Constants
```

C representation:

```
typedef enum            DLRFID_RS232_Parity;
typedef enum            DLRFID_RS232_FlowControl;
```

In the following table, the DLRFIDRS232Constants Enumeration members are listed:

Member	Description
DLRS232_Parity_None	No parity bit is sent at all.
DLRS232_Parity_Odd	Odd parity.
DLRS232_Parity_Even	Even parity.
DLRFID_RS232_FlowControl_XonXoff	Software flow control.
DLRFID_RS232_FlowControl_Hardware	Hardware flow control.
DLRFID_RS232_FlowControl_None	No flow control.

DLRFIDSelUnselOptions Enumeration

The DLRFIDSelUnselOptions gives a list of operations supported by the Group Select/Unselect command (valid only for the ISO18000-6B air protocol).

Syntax:

C# representation:

```
public enum              DLRFIDSelUnselOptions
```

Java and Android representation:

```
public final class       DLRFIDSelUnselOptions
```

C representation:

```
typedef enum             DLRFID_SelUnsel_Op;
```

In the following table, the DLRFIDSelUnselOptions Enumeration members are listed:

Member	Description
SEL_EQUAL	select equal to.
SEL_NOT_EQUAL	select not equal to.
SEL_GREATER_THAN	select greater than.
SEL_LOWER_THAN	select lower than.
UNS_EQUAL	unselect equal to.
UNS_NOT_EQUAL	unselect not equal to.
UNS_GREATER_THAN	unselect greater than.
UNS_LOWER_THAN	unselect lower than.

DLRFIDTag.MemBanks Enumeration

The DLRFIDTag.MemBanks enumerates the bank name of a generic ISO18000-6C tag.

Syntax:

C# representation:

```
public enum         MemBanks
                        {
                        RESERVED = 0,
                        EPC = 1,
                        TID = 2,
                        USER = 3
                        }
```

Java and Android representation:

```
public enum         MemBanks {
                        RESERVED(0), EPC(1), TID(2), USER(3);
                        private int code;
                        private MemBanks(int c) {
                        code = c;
                        }
                        public int getBankNum() {
                        return code;
                        }
                        }
```

C representation:

```
typedef enum        {
                        RESERVED    = 0,
                        EPC         = 1,
                        TID         = 2,
                        USER        = 3
                        } DLRFIDMemBanks;
```

In the following table, the DLRFIDTag.MemBanks Enumeration members are listed:

Member	Description
RESERVED	Indicates the reserved bank
EPC	Indicates the EPC bank
TID	Indicates the TID bank
USER	Indicates the USER bank

6 DLRFID Obsolete Methods

This chapter gives a list of DLRFID obsolete methods, functions, members and data types. It contains these topics:

- C# Obsolete Methods
- C# Obsolete Members
- Java and Android Obsolete Methods
- C Obsolete Functions
- C Obsolete Data Types

Below it is available a list of obsolete methods, functions, members and data types for the three different program languages.
It is recommended not to use these methods since they will not be available in new reader's firmware release.
Some of these obsolete methods have been replaced by new ones as specified in the table below.

C# Obsolete Methods

Method	Description
Channel Class	
AddSource	This method is now obsolete.
AddTrigger	This method is now obsolete.
GetChannelStatus	This method is now obsolete.
GetChannelType	This method is now obsolete.
GetName	This method is now obsolete.
IsSourcePresent	This method is now obsolete.
IsTriggerPresent	This method is now obsolete.
RemoveSource	This method is now obsolete.
RemoveTrigger	This method is now obsolete.
LogicalSource Class	
AddTrigger	This method is now obsolete.
Fujitsu_BurstErase	This method is now obsolete.
Fujitsu_BurstWrite	This method is now obsolete.
Fujitsu_ChgBlockGroupPassword	This method is now obsolete.
Fujitsu_ChgBlockLock	This method is now obsolete.
Fujitsu_ChgWordLock	This method is now obsolete.
Fujitsu_ReadBlockLock	This method is now obsolete.
Fujitsu_Refresh	This method is now obsolete.
GetLostThreshold	This method is now obsolete.
GetObservedThreshold	This method is now obsolete.
Hitachi_BlockLock	This method is now obsolete.
Hitachi_BlockReadLock	This method is now obsolete.
Hitachi_GetSystemInformation	This method is now obsolete.
Hitachi_ReadLock	This method is now obsolete.
Hitachi_SetAttenuate	This method is now obsolete.
Hitachi_WriteMultipleWords	This method is now obsolete.
Inventory	This method is now obsolete.
KillTag	This method is now obsolete.
LockTag	This method is now obsolete.
NXP_Calibrate	This method is now obsolete.
ProgramID	This method is now obsolete.
RemoveTrigger	This method is now obsolete.
SetLostThreshold	This method is now obsolete.
SetObservedThreshold	This method is now obsolete.
Reader Class	
ConnectRS232	This method is now obsolete.
CreateChannel	This method is now obsolete.
CreateTrigger	This method is now obsolete.
FWUpgradeTFTP	This method is now obsolete.

Method	Description
GetAllocatedChannels	This method is now obsolete.
GetAllocatedTriggers	This method is now obsolete.
GetChannelData	This method is now obsolete.
GetDESB	This method is now obsolete.
GetEventMode	This method is now obsolete.
RemoveChannel	This method is now obsolete.
RemoveTrigger	This method is now obsolete.
SetDESB	This method is now obsolete.
SetEventMode	This method is now obsolete.
SetReaderOPtions	This method is now obsolete.
Receiver Class	
KillServer	This method is now obsolete.
Trigger Class	
GetIOLineValue	This method is now obsolete.
GetName	This method is now obsolete.
GetTimerValue	This method is now obsolete.
IsLinkedToChannel	This method is now obsolete.
IsLinkedToSource	This method is now obsolete.

Tab. 6.1: C# Obsolete Methods

C# Obsolete Members

Member	Description
BitRate Enumeration	
TX10RX40	This member is now obsolete.
TX40RX40	This member is now obsolete.
TX40RX160	This member is now obsolete.
EventMode Enumeration	
READCYCLE_MODE	This member is now obsolete.
TIME_MODE	This member is now obsolete.
NOEVENT_MODE	This member is now obsolete.
TagEventType Enumeration	
TAG_GLIMPSED	This member is now obsolete.
TAG_LOST	This member is now obsolete.
TAG_OBSERVED	This member is now obsolete.
TAG_UNKNOWN	This member is now obsolete.

Tab. 6.2: C# Obsolete Members

Java and Android Obsolete Methods

Method	Description
BitRate Class	
TX10RX40	This method is now obsolete.
TX40RX40	This method is now obsolete.
TX40RX160	This method is now obsolete.
Channel Class	
AddSource	This method is now obsolete.

Method	Description
AddTrigger	This method is now obsolete.
GetChannelStatus	This method is now obsolete.
GetChannelType	This method is now obsolete.
GetName	This method is now obsolete.
IsSourcePresent	This method is now obsolete.
IsTriggerPresent	This method is now obsolete.
RemoveSource	This method is now obsolete.
RemoveTrigger	This method is now obsolete.
Event Class	
Data	This method is now obsolete. Use getData instead.
EventMode Class	
READCYCLE_MODE	This method is now obsolete.
TIME_MODE	This method is now obsolete.
NOEVENT_MODE	This method is now obsolete.
LogicalSource Class	
AddTrigger	This method is now obsolete.
Fujitsu_BurstErase	This method is now obsolete.
Fujitsu_BurstWrite	This method is now obsolete.
Fujitsu_ChgBlockGroupPassword	This method is now obsolete.
Fujitsu_ChgBlockLock	This method is now obsolete.
Fujitsu_ChgWordLock	This method is now obsolete.
Fujitsu_ReadBlockLock	This method is now obsolete.
Fujitsu_Refresh	This method is now obsolete.
GetLostThreshold	This method is now obsolete.
GetObservedThreshold	This method is now obsolete.
Hitachi_GetSystemInfo	This method is now obsolete.
Hitachi_BlockLock	This method is now obsolete.
Hitachi_BlockReadLock	This method is now obsolete.
Hitachi_GetSystemInformation	This method is now obsolete.
Hitachi_ReadLock	This method is now obsolete.
Hitachi_SetAttenuate	This method is now obsolete.
Hitachi_WriteMultipleWords	This method is now obsolete.
Inventory	This method is now obsolete.
NXP_Calibrate	This method is now obsolete.
NXP_ChangeEAS (only non secure version)	This method is now obsolete.
NXP_EAS_Alarm (only secure version)	This method is now obsolete.
NXP_ResetReadProtect (only secure version)	This method is now obsolete.
RemoveTrigger	This method is now obsolete.
SetLostThreshold	This method is now obsolete.
SetObservedThreshold	This method is now obsolete.
Notify Class	
getAntenna	This method is now obsolete. Use getReadPoint instead.
Reader Class	
CreateChannel	This method is now obsolete.
CreateTrigger	This method is now obsolete.

Method	Description
FWUpgradeTFTP	This method is now obsolete.
GetAllocatedChannels	This method is now obsolete.
GetAllocatedTriggers	This method is now obsolete.
GetChannelData	This method is now obsolete.
GetEventMode	This method is now obsolete.
RemoveChannel	This method is now obsolete.
RemoveTrigger	This method is now obsolete.
SetEventMode	This method is now obsolete.
SetReaderOPtions	This method is now obsolete.
Receiver Class	
KillServer	This method is now obsolete.
TagEventType Class	
TAG_GLIMPSED	This method is now obsolete.
TAG_LOST	This method is now obsolete.
TAG_OBSERVED	This method is now obsolete.
TAG_UNKNOWN	This method is now obsolete.
Trigger Class	
GetIOLineValue	This method is now obsolete.
GetName	This method is now obsolete.
GetTimerValue	This method is now obsolete.
IsLinkedToChannel	This method is now obsolete.
IsLinkedToSource	This method is now obsolete.
HitachiSysInfo	
GetBankLock	This method is now obsolete.
GetBlockReadLock	This method is now obsolete.
GetBlockReadWriteLock	This method is now obsolete.
GetBlockWriteLock	This method is now obsolete.
GetInfoFlag	This method is now obsolete.
getReserved	This method is now obsolete.
getSetAttenuateLevel	This method is now obsolete.
getTID	This method is now obsolete.
getUII	This method is now obsolete.
getUser	This method is now obsolete.

Tab. 6.3: Java and Android Obsolete Methods

C Obsolete Functions

Function	Description
AddNotifyTrigger	This function is now obsolete.
AddReadTrigger	This function is now obsolete.
AddSourceToChannel	This function is now obsolete.
AllocateChannel	This function is now obsolete.
AllocateTrigger	This function is now obsolete.
CustomCmd_C1G2	This function is now obsolete. Use CustomCommand_EPC_C1G2 instead.
DeallocateChannel	This function is now obsolete.
DeallocateTrigger	This function is now obsolete.
ExtendedInventoryTag	This function is now obsolete.
FirmwareUpgrade	This function is now obsolete.
FreeNotifyMemory	This function is now obsolete.
Fujitsu_BurstErase	This function is now obsolete.
Fujitsu_BurstWrite	This function is now obsolete.
Fujitsu_ChgBlockGroupPassword	This function is now obsolete.
Fujitsu_ChgBlockLock	This function is now obsolete.
Fujitsu_ChgWordLock	This function is now obsolete.
Fujitsu_ReadBlockLock	This function is now obsolete.
Fujitsu_Refresh	This function is now obsolete.
GetAllocatedChannels	This function is now obsolete.
GetAllocatedTriggers	This function is now obsolete.
GetChannelData	This function is now obsolete.
GetChannelInTrigger	This function is now obsolete.
GetChannelStatus	This function is now obsolete.
GetDE_SB	This function is now obsolete. Use GetDESB_ISO180006B instead.
GetEventMode	This function is now obsolete.
GetFWRelease	This function is now obsolete. Use GetFirmwareRelease instead.
GetModulation	This function is now obsolete.
GetNotification	This function is now obsolete.
GetQ_C1G2	This function is now obsolete. Use GetQValue_EPC_C1G2 instead.
GetQ_EPC_C1G2	This function is now obsolete. Use GetQValue_EPC_C1G2 instead.
GetReadPointInSource	This function is now obsolete. Use isReadPointPresent instead.
GetSourceConfiguration	This function is now obsolete.
GetSourceInChannel	This function is now obsolete.
GetSourceInTrigger	This function is now obsolete.
GetSWRelease	This function is now obsolete.
GetTriggerInChannel	This function is now obsolete.
Hitachi_BlockLock	This function is now obsolete.
Hitachi_BlockReadLock	This function is now obsolete.
Hitachi_GetSystemInformation	This function is now obsolete.
Hitachi_ReadLock	This function is now obsolete.

Function	Description
Hitachi_SetAttenuate	This function is now obsolete.
Hitachi_WriteMultipleWords	This function is now obsolete.
Inventory	This function is now obsolete.
KillTag	This function is now obsolete. Use KillTag_EPC_C1G1 instead.
KillTag_C1G2	This function is now obsolete. Use KillTag_EPC_C1G2 instead.
Lock	This function is now obsolete. Use LockTag_ISO180006B instead.
Lock_C1G2	This function is now obsolete. Use LockTag_EPC_C1G2 instead.
NXP_Calibrate	This function is now obsolete.
NXP_ChangeEAS	This function is now obsolete.
NXP_SecureCalibrate	This function is now obsolete.
NXP_SecureEAS_Alarm	This function is now obsolete.
NXP_SecureResetReadProtect	This function is now obsolete.
ProgramID	This function is now obsolete. Use ProgramID_EPC_C1G1 instead.
ProgramID_C1G2	This function is now obsolete. Use ProgramID_EPC_C1G2 instead.
QueryAck_C1G2	This function is now obsolete. Use QueryAck_EPC_C1G2 instead.
QueryTag_C1G2	This function is now obsolete. Use Query_EPC_C1G2 instead.
Read	This function is now obsolete. Use ReadTagData instead.
Read_C1G2	This function is now obsolete. Use ReadTagData_EPC_C1G2 instead.
RemoveNotifyTrigger	This function is now obsolete.
RemoveReadTrigger	This function is now obsolete.
RemoveSourceFromChannel	This function is now obsolete.
SecureCustomCmd_C1G2	This function is now obsolete. Use SecureCustomCommand_EPC_C1G2 instead.
SecureLock_C1G2	This function is now obsolete. Use SecureLockTag_EPC_C1G2 instead.
SecureProgramID_C1G2	This function is now obsolete. Use SecureProgramID_EPC_C1G2 instead.
SecureRead_C1G2	This function is now obsolete. Use SecureReadTagData_EPC_C1G2 instead.
SecureWrite_C1G2	This function is now obsolete. Use SecureWriteTagData_EPC_C1G2 instead.
SetBitrate	This function is now obsolete. Use DLRFID_SetBitRate instead.
SetDE_SB	This function is now obsolete. Use SetDESB_ISO180006B instead.
SetEventMode	This function is now obsolete.
SetModulation	This function is now obsolete.
SetQ_C1G2	This function is now obsolete. Use SetQValue_EPC_C1G2 instead.

Function	Description
SetQ_EPC_C1G2	This function is now obsolete. Use SetQValue_EPC_C1G2 instead.
SetSourceConfiguration	This function is now obsolete.
Write	This function is now obsolete. Use WriteTagData instead.
Write_C1G2	This function is now obsolete. Use WriteTagData_EPC_C1G2 instead.

Tab. 6.4: C Obsolete Functions

C Obsolete Data Types

Data Type	Description
DLRFID_SOURCE_Parameter	
CONFIG_READCYCLE	This data type is now obsolete. Use Get/SetReadCycle Method instead.
CONFIG_OBSERVEDTHRESHOLD	This data type is now obsolete.
CONFIG_LOSTTHRESHOLD	This data type is now obsolete.
CONFIG_G2_Q_VALUE	This data type is now obsolete. Use Get/SetQ_EPC_C1G2 Method instead.
CONFIG_G2_SESSION	This data type is now obsolete. Use Get/SetSession_EPC_C1G2 Method instead.
CONFIG_G2_TARGET	This data type is now obsolete. Use Get/SetTarget_EPC_C1G2 Method instead.
CONFIG_G2_SELECTED	This data type is now obsolete. Use Get/SetSelected_EPC_C1G2 Method instead.
CONFIG_ISO18006B_DESB	This data type is now obsolete. Use Get/SetDESB_ISO180006B Method instead.
DLRFID_EventMode	
READCYCLE_MODE	This data type is now obsolete.
TIME_MODE	This data type is now obsolete.
NOEVENT_MODE	This data type is now obsolete.
DLRFID_FWUpgradeType	
RFID_TFTP	This data type is now obsolete.
DLRFID_ExtendedInventoryParams	This data type is now obsolete.

Tab. 6.5: C Obsolete Data Types