# **DATALOGIC**

# Datalogic™ OPOS Service Objects





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# n de la contra de la Datalogic<sup>™</sup> OPOS Service Objects

# Introduction

# **Document Conventions**

Formatting conventions are used throughout this guide to provide a consistent method for representing screen shots and command entries.



Notes contain additional information of interest to the user.

NOTE



The CAUTION symbol advises you of actions that could damage equipment or property.

Keystrokes: Filenames, paths, field selections, and data or keystrokes entered by the user are shown in this monospaced typeface.

# About the Datalogic OPOS Service Objects

Service Objects are packaged with the current OPOS control objects. They are fully compatible with the Unified POS Retail Peripheral Architecture and the OPOS appendix to that spec. To view the current version of the document, go online to the National Retail Federation at <u>www.nrf-arts.org/</u> download. The Service Objects support four types of DATALOGIC interfaces: RS232 Standard (also called Dual Cable), RS232 Single Cable, USB-COM, and OEM USB.

# Datalogic Products Supported

Device Type		Scanner				Scale		
		RS232 SC	USB-COM	OEM USB	RS232 Std	RS232 SC	OEM USB	
Table Top Scanner/Scales								
Magellan 3200	•	•	•	•				
Magellan 3300	•	•	•	•				
Magellan 2200VS	•	•		•				
Magellan 2300HS	•	•		•				
Magellan 800i	•	•	•	•				
Magellan 8100	•	•		•	•	•	•	
Magellan 8200	•	•		•	•	•	•	
Magellan 8300	•	•		•	•	•	•	
Magellan 8400	•	•		•	•	•	•	
Magellan 8500	•	•		•	•	•	•	
Magellan 8500xT	•	•		•	•	•	•	
Magellan 9500	•	•		•	•	•	•	
Magellan 9800	•	•	•	•	•	•	•	
Magellan 1000i	•		•	•				
Magellan 1100i	•		•	•				
Magellan 1400i	•		•	•				
Duet	•			•				
VS800	•			•				
Handheld Scanners								
GD41XX	•		•	•				
GM41XX	•		•	•				
GBT41XX	•		•	•				

Device Type		Scanner			Scale		
		RS232 SC	USB-COM	OEM USB	RS232 Std	RS232 SC	OEM USB
Handheld Scanners (continued)							
GD44XX	•		•	•			
GBT44XX	•		•	•			
GM44XX	•		•	•			
QS6000+	•			•			
QS2500	•			•			
QS6500	•			•			
QS6500BT	•			•			
QD23XX	•		•	•			
QD21XX	•		•	•			
PD71XX	•		•	•			

# Installation

# **Running the Install**



Uninstall any previous DATALOGIC or PSC OPOS scanner/scale service objects before proceeding with the installation of the DATALOGIC OPOS Service Objects.

DATALOGIC Service Objects are compatible with OPOS Common Control Objects included in this package.

Installation can be performed in either of two ways: using a standard GUI installation, or as a silent install from the Command Prompt.

# **GUI Installation**

To install, please perform the following steps:

1. Download the most current install file for the DATALOGIC OPOS service objects from the Datalogic website (www.datalogic.com).

- 2. Double-click DatalogicOPOS.msi to run the install program.
- 3. Follow the on-screen instructions to complete the installation.



Version and date fields will be different depending on the version of the downloaded file.

# Silent Install from Command Prompt

To perform a "silent install," open a command window and cd to the directory containing the **DatalogicOPOS.msi** file. Type the following command to execute the install process:

> DatalogicOPOS.msi/quiet



Silent Install mode does not install Common Control Objects.

To install control objects during a silent install, type the following command:

> DatalogicOPOS.msi /quiet INSTALLCONTROLOBJECTS=1

# Utilities

# **DualTest Utility**

The Datalogic OPOS package contains a utility called DualTest that provides customers with the ability to quickly connect and test the operation of a Datalogic scanner/scale with the Datalogic service objects. Simple OPOS operations such as Open, Claim, Enable, Read Weights, bar code scanning, bar code type, Release, and Close can be exercised with this utility. DualTest is a fully operational OPOS application which exercises the connection and data path through the Common Controls and Service Objects to the physical device.

# Scanner with DualTest

To connect to a Scanner, follow these steps after installing the OPOS package from Datalogic:

1. Select device:

DualTest			
SCALE Control Object Version Filename: C:VProgram Files (x Description: OPOS Scale Contr Version: 1.13.1 File Version: 1.13,001,0 Copyright: Copyright (c) RCS-1	186)/DLSOPOS/Controls/OPOSScale.ocx ol 1.13.001 [Public, by CRM/RCS-Dayton] Dayton.	SCANNER Control Object Version Filename: C:Program Files Description: OPOS Scanner Control 1.13.001 Version: 1.13.1 File Version: 1.13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	I [Public, by
Scales: MagellanSC R\$232Scale SCR\$232Scale TableScale USBScale	Open Scale     Close Scale       Claim     Release       Enable     Disable       Read Weight     1000 msec.       Status Notify	Scanners: Bologna-USB-HID HandScanner MagellanSC QS6000 QSLScanner RS232Scanner TableScanner TableScanner USBHScanner USBScanner	en Scanner Close Scanner Claim Release Enable Disable a Event Enable Auto Data Event Power Notify npare Firmware Version Open File
Status: Weight: Error:	SUE Code: Live Weight:	Status: Closed Raw Data: Data: Type:	
Scale Service Object Version Filename: Description: Version: File Version: Copyright:		Scanner Service Object Version Filename: f:Wisual Studio 2005\Projects* Description: DATALDGIC Scanning Service Version: 1.13.0075.000 Copyright: All rights reserved.	NDLOPOS\Debug\DLOPOS.dll a Object
] DualTest (c) 2013 DATALOGIC v	ver 1.13.54.0		Exit

#### 2. Open Scanner:

🔓 DualTest		
- SCALE Control Object Version Filename: C:VProgram Files (x8 Description: OPOS Scale Control Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-D	6)\DLS0P0S\Controls\0P0SScale.ocx I1.13.001 [Public, by CRM/RCS-Dayton] ayton.	SCANNER Control Object Version Filename: C:VProgram Files Description: 0POS Scanner Control 1.13.001 (Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC R5232Scale SCR5232Scale TableScale USBScale USBScale	Open Scale     Close Scale       Claim     Release       Enable     Disable       Read Weight     1000 msec.       Status Notify	Scanners:     Open Scanner       Bologna-USB-HID     Open Scanner       HandScanner     Claim       QS6000     Enable       Disable     Disable       BSC322Scanner     Data Event Enable       SCR5232Scanner     Auto Data Event I       VUSBHHScanner     Compare Firmware Version       USBScanner     Open Firmware
Status: Weight: Error: Scale Service Object Version Filename: Description: Version: File Version:	SUE Code: Live Weight:	Status: Done opening scanner Raw Data: Data: Type: Scanner Service Object Version Filename: f:\Visual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll Description: DATALOGIC Scanning Service Object Version: 1.13.75 File Version: 1.13.0075.000
Copyright:	ər 1 13 54 0	Copyright: All rights reserved.

#### 3. Claim:



Juditest		
CALE Control Object Version Filename: C:\Program File: Description: 0POS Scale Co Version: 1,13,1 File Version: 1,13,001,0 Copyright: Copyright (c) RC	s (x86)\DLSOPOS\Controls\OPOSScale.ocx ntrol 1.13.001 [Public, by CRM/RCS-Dayton] :S-Dayton.	SCANNER Control Object Version Filename: C:VProgram Files Description: OPOS Scanner Control 1.13.001 [Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales:		Scanners:
MagellanSC RS232Scale SCRS232Scale TableScale USBScale USBScale	Open Scale     Close Scale       Claim     Release       Enable     Disable       Read Weight     1000 msec.       Status Notify	Bologna-USB-HID     Open Scanner     Close Scanner       HandScanner     Claim     Release       QS6000     Enable     Disable       QS1Scanner     Data Event Enable     SCRS232Scanner       HS232Scanner     USBHScanner     Image: Auto Data Event Version       USBHScanner     USBScanner     Open Scanner       USBHScanner     USBCanner     Image: Auto Data Event Version       UBSScanner     Update Firmware     Open File
Status: Veight: Error:	SUE Code: Live Weight:	Status: Soanner claimed. Raw Data: Data: Type:
Scale Service Object Version Filename: Description: Version: File Version: Copyright:	)	Scanner Service Object Version Filename: f:\Visual Studio 2005\Projects\DL0P0S\Debug\DL0P0S.dll Description: DATAL0GIC Scanning Service Object Version: 1.13.75 File Version: 1.13.0075.000 Copyright: All rights reserved.

#### 4. Select Power Notify:

#### 5. Enable:



6. Click the "DataEventEnable" button and check the "AutoDataEventEnable" box, and scan a bar code. The bar code data and type will be displayed as shown here:

Control Object Version Filename: C:\Program Files (x& Description: 0P0S Scale Contro Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-D	6)\DLSOPOS\Controls\OPOSScale.ocx 11.13.001 [Public, by CRM/RCS-Dayton] ayton.	SCANNER Control Object Version Filename: C:VProgram Files Description: OPOS Scanner Control 1.13.001 [Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC RS232Scale SCR5222Scale TableScale USBScale	Open Scale     Close Scale       Claim     Release       Enable     Disable       Read Weight     1000 msec.       Status Notify	Scanners:       Bologna-USB-HID       HandScanner       MagellanSC       QS5000       QSLScanner       R52222Canner       SCR5222Scanner       Ut       R5222Scanner       USBNHALSCANNER       Data Event Enable       SCR522Scanner       USBNHScanner       USBScanner       USBScanner       USBScanner       USBScanner       USBScanner       Update Firmware
Status: Weight: Error:	SUE Code: Live Weight:	Status: Ready to scan a label Raw Data: 99000293320669 Data: 9000293320669 [6] Type: OTHER Barcode Type
Scale Service Object Version Filename: Description: Version: File Version: Copyright:		Scanner Service Object Version Filename: f:\Visual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll Description: DATALOGIC Scanning Service Object Version: 1.13,75 File Version: 1.13,075,000 Copyright: All rights reserved.

7. Unplug the Scanner from the system. Power Status will show the new scanner power state.



8. Plug the scanner back into the system. Power Status will update again with the new scanner power state.



# Firmware Update with DualTest

The Datalogic OPOS Scanner Service Object supports the ability to update firmware on select scanners in accordance with the UPOS Specification (version 1.9 and above). The user's application may be written to take advantage of this capability in the service (see the UPOS specification for details). In addition, the DualTest application bundled with Datalogic's services supports this capability and may be used to upgrade firmware on select scanners. The following screen shots represent the steps used to upgrade firmware on a scanner that supports this ability using DualTest.



#### **IMPORTANT NOTE to OPOS programmers:**

Prior to performing a firmware update on a scanner, the Scale Service Object should be closed. Failure to follow this step could lead to firmware update failure and an inoperative scanner.

To perform the firmware update, start DualTest and follow the steps in the previous section to Open and Claim the scanner. Then perform the follow-ing steps.

1. **OpenFile**: Locate the firmware file on your machine or network.



Firmware files are interface and scanner specific and may be obtained from Datalogic Tech Support.

DualTest			
SCALE Control Object Version Filename: C:\Program Files\DATAI Description: 0P0S Sca <mark>0pen</mark>	OGIC INC\Remote Firmwa	SCANNER Control Object Version Filename CAProgram Files\DATALOGIC	INC\Benote Firmware
Version: 1.13.1 File Version: 1, 13, 001. Copyright: Copyright Scales:	ook in: Canada Canad	DAT D.dat	
MagellanSC My Rec RS232Scale Docume SCRS232Scale USBScale USBScale Deskto	P		Close Scanner Release Disable ble
My Docum	ients		ent Enable re Version Open ware File
Weight: Error: - Scale Service Object V Filename: Description:	File name: ork Files of type:	8704-MR8-STD.dat	Open Cancel ebug\DLOPOS.dll
Version: File Version: Copyright:		File Version: 1.13.0020.001 Copyright: All rights reserved.	

CALE Control Object Version Filename: C:\Program Files\DA Description: 0P0S Scale Contro Version: 1.13.1 File Version: 1,13,001,0 Copyright: Copyright (c) RCS-D	TALOGIC INC\Remote Firmware 1.13.001 (Public, by CRM/RCS-Dayto ayton.	SCANNER Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: OPOS Scanner Control 1.13.001 [Public, by Version: 1.13.1 File Version: 1.13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC RS232Scale SCRS232Scale TableScale USBScale	Open Scale     Close Scale       Claim     Release       Enable     Firmware Up       Read Weight     Confirm Firmware       Status Noti	Scanners: Bologna-USB-HID HandS canner MagellanSC QS6000 date Confirmation are Update: File: 8704-MR8-STD.dat OK Cancel Update Firmware Version Update Firmware Update Firmware
Status: //eight: Error: -Scale Service Object Version 	SUE Code: Live Weight:	Status: Initiating Update Firmware, File: 8704-MR8-STD.dat Data: Type: Scanner Service Object Version Filename: C:\Visual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll Description: DATALOGIC Scanning Service Object Version: 1.13.20 File Version: 1.13.0020.001 Copyright: All rights reserved.

#### 2. Confirm Update Firmware:

#### Firmware Update Started

The Status field will update at every 1% of the upload. Depending on the scanner interface and parameters such as baud rate, the update may take from approximately 7 minutes to 40 minutes.

DO NOT disconnect the interface cable or power cable from the scanner during the update!

Control Object Version Filename: C:\Program Files Description: OPOS Scale Co Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RC	\DATALOGIC INC\Remote Firmware htrol 1.13.001 [Public, by CRM/RCS-Dayton] S-Dayton.	Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: OPOS Scanner Control 1.13.001 (Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC RS232Scale SCR5232Scale TableScale USBScale	Open Scale       Close Scale         Claim       Release         Enable       Disable         Read Weight       1000 msec.         Status Notify	Scanners:         Bologna USB-HID         HandScanner         MagelanSC         QS6000         QS6000         QS6000         QS6000         QS6000         Enable         Disable         SCR5232Scanner         SCR5232Scanner         USBHScanner         USBHScanner         USBHScanner         USBHScanner         USBScanner         USBSScanner         USBSScanner
Status: Weight: Error:	SUE Code: Live Weight:	Status: Firmware Update progress: 0% completed Data: Type:
Scale Service Object Version Filename: Description: Version: File Version: Copyright:		Scanner Service Object Version Filename: C:\Visual Studio 2005\Projects\DL0POS\Debug\DL0POS.dll Description: DATALOGIC Scanning Service Object Version: 1.13.00 File Version: 1.13.0020.001 Copyright: All rights reserved.

Update in progress, at 62% complete:

🔤 DualTest	
SCALE Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: OPOS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton] Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	SCANNER Control Object Version Filename: C:VFrogram Files\DATALOGIC INC\Remote Firmware Description: 0POS Scanner Control 1.13.001 (Public, by Version: 1.13.1 File Version: 1,13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC RS232S cale TableScale USBScale USBScale Read Weight Timeout Read Weight Timeout TableScale Read Weight Timeout TableScale Read Weight Timeout TableScale Read Weight Timeout	Scanners:       Bologna-USB-HID       HandScarner       GS6000       QSLScanner       RS232Scanner       SCRS232Scanner       USBHHScanner       USBHHScanner       USBScorner       Data Event Enable       Data Event Enable       USBScorner       USBSScorner       USBSScorner       USBSScorner       USBSScorner       USBSScorner       USBSScorner
Status: SUE Code: Weight: Live Weight: Error: Scale Service Object Version	Status: Firmware Update progress: 62% completed Data: Type: Scanner Service Object Version
Filename: Description: Version: File Version: Copyright:	Filename:       C:\Visual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll         Description:       DATALOGIC Scanning Service Object         Version:       1.13.20         File Version:       1.13.0020.001         Copyright:       All rights reserved.
DualTest (c) 2008 DATALOGIC ver 1.9.2.0	Exit []

# Firmware Update Finished

NOTE that the service will stop at 99% complete until the scanner reboots and comes on line, which may take several seconds.

Control Object Version Filename: C:Vprogram Files Description: OPOS Scale Co Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RC	NDATALOGIC INC\Remote Firmware ntrol 1.13.001 [Public, by CRM/RCS-Dayton S-Dayton.	CANNEH Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: OPOS Scanner Control 1.13.001 (Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC RS232Scale SCRS232Scale TableScale USBScale	Open Scale Close Scal Claim Release Enable Disable	Scanners:       Bologna-USB-HID     Open Scanner       HandScanner     Close Scanner       MagellanSC     Claim       QS6000     Enable       Disable     Disable
	Read Weight Ti Read Weight 1000 msec.	neout SCR5232Scanner TableScanner USBScanner USBScanner USBScanner USBScanner USBScanner USBScanner USBScanner USBScanner USBScanner USBScanner USBScanner USBScanner USBScanner
Status: √eight: Error:	SUE Code: Live Weight:	Status: Firmware Update progress: 98% completed Data: Type:
-Scale Service Object Version Filename: Description: Version: File Version: Copyright:		Scanner Service Object Version Filename: C:Wisual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll Description: DATALOGIC Scanning Service Object Version: 1.13.20 File Version: 1.13.0020.001 Copyright: All rights reserved.

CALE Control Object Version Filename: C:\Program File: Description: 0POS Scale Co Version: 1.13.1 File Version: 1,13,001,0 Copyright: Copyright (c) RC	s\DATALOGIC INC\Remote Firmware Introl 1.13.001 [Public, by CRM/RCS-Dayton] S-Dayton.	SCANNER Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: 0POS Scanner Control 1.13.001 (Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC RS232Scale SCRS232Scale TableScale USBScale USBScale	Open Scale     Close Scale       Claim     Release       Enable     Disable       Read Weight     1000 msec.       Status Notify	Scanners:       Bologna-USB-HID       HandScanner       MagellanSC       QS5000       QS5000       QS5000       QS52scanner       RS232Scanner       TableScanner       USBHRScanner       USBScanner       USBScanner       USBScanner       USBScanner       USBScanner       USBScanner       USBScanner       USBScanner       Update Firmware
Status: √eight Error:	SUE Code: Live Weight:	Status: Scale and Scanner devices in idle state Data: Type:
-Scale Service Object Version Filename: Description: Version: File Version: Copyright:	,	Scanner Service Object Version Filename: C:Wisual Studio 2005\Projects\DL0POS\Debug\DL0POS.dll Description: DATAL.0GIC Scanning Service Object Version: 1.13.20 File Version: 1.13.0020.001 Copyright: All rights reserved.

Finalized: The scanner is now back on line and fully operational.

# Firmware Update from the Command Line

See "Datalogic Remote Management Utility" on page 45.

# Scale with DualTest

To connect to a Scale, follow these steps after installing the OPOS package from Datalogic:

1. Select Device:

SCALE       SCANNER         Control Object Version       Filename: C:VPogram Files\DATALOGIC INCVRemote Firmware         Description:       OPOS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton]         Version:       1.13.1         File Version:       1.13.0         File Version:       1.13.001,0         Copyright:       Copyright (c) RCS-Dayton.         Scales:       Open Scale         MagellanSC       Res232S cale         TableScale       Claim         USBScale       Claim         Read Weight       Timect         1000 msec:       SCRS123S canner         SCRS23S cale       Claim         Read Weight       Timect         1000 msec:       Status Notify	DualTest	
Scales:       Open Scale       Close Scale         RS232Scale       Claim       Release         TableScale       Disable       Disable         USBScale       Enable       Disable         Read Weight       1000 msec.       VSHHScanner         Schrstars Notify       Schrstars Notify	SCALE Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: OPOS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton] Version: 1.13.1 File Version: 1.13.001, 0 Copyright: Copyright (c) RCS-Dayton.	SCANNER Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: OPOS Scanner Control 1.13.001 (Public, by Version: 1.13.1 File Version: 1,13,001,0 Copyright: Copyright (c) RCS-Dayton.
Update Firmware File	Scales: MagellanSC RS232Scale SCRS232Scale TableScale USBScale USBScale Read Weight Timeou Read Weight Timeou Toto msec.	Scanners:       Bologna-USB-HID HandScanner       MagellanSC       QSE000       QSLScanner       RS232Scanner       TableScanner       USBHHScanner       USBScanner       USBScanner       USBScanner       USBScanner       USBCARNER       USBCARNER       USBCARNER       USBCARNER       USBCARNER       USBScanner       USBSCARNER       USBSCARNER       USBSCARNER       USBSCARNER       USBSCARNER       USBSCARNER       USBSCARNER
Status: Closed       SUE Code:         Weight:       Live Weight:         Error:       Data:         Scale Service Object Version         Filename:       C:\Visual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll         Description:       DATALOGIC Scanning Service Object         Version:       1.13.00         File Version:       1.13.002.001         Copyright:       All rights reserved.         DualText (c) 2008 DATAL OGIC ver 1.9.2.0       Evit	Status: Closed     SUE Code:       Weight:     Live Weight:       Error:     Scale Service Object Version       Filename:     C:Wisual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll       Description:     DATALOGIC Scanning Service Object       Version:     1.13.20       File Version:     1.13.002.001       Copyright:     All rights reserved.	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: Copyright:

## 2. Open Scale:

SCALE       SCANER         Control Object Version       Filename: C.VProgram Files\DATALOGIC INC\Remote Firmware         Description: OPDS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton]       Version: 1.13.1         File Version: 1.13.1       File Version: 1.13.001 [Public, by CRM/RCS-Dayton]         Scales:       Open Scale         MagelianSC       Coper Scale         TableScale       Claim         Read Weight Timeout       Bolgma-USP HID         Bisterie       Disable         Read Weight Timeout       Belgma-USP Scanner         Coper Scale       Claim         Read Weight Timeout       Belgma-USP Scanner         Status:       Scale Event Enable         Status:       Scale Scale open         Status:       Scale Scale open         Version:       Live Weight:         Error:       Status:         Scale Service Object Version       Scanner         File version:       Live Weight:         Error:       Control Dipost Version         File version:       Live Weight:         File version:       Live Weight:         File version:       Live Weight:         File version:       Live Weight:         File version:       Live Weight:	😸 DualTest	
Scales:       Open Scale       Close Scale         MagellanSC       Release       Bologna-USB-HID       Open Scanner         SCR5323Scale       Claim       Release       Claim       Release         Disblescale       Enable       Disable       Enable       Disable         Notify       Read Weight Timeout       Release       Enable       Disable         Status:       Scale open       SUE Code:       Status:       Data:         Weight:       Live Weight:       Data:       Type:         Scale Service Object Version       Filename:       C.Visual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll         Description:       DATALOGIC Scanning Service Object       Version:       Tile Version:         File Version:       113.00       File Version:       File Version:         File Version:       1.13.20       File Version:       File Version:         File Version:       1.13.0020.001       Copyright:       Copyright:       Copyright:	SCALE Control Object Version Filename: C:VProgram Files\DATALOGIC INC\Remote Firmware Description: OPOS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton] Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	SCANNER Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: OPOS Scanner Control 1.13.001 [Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Status: Scale open       SUE Code:       Data:         Weight:       Live Weight:       Data:         Error:       Scale Service Object Version       Scanner Service Object Version         Filename:       C:\Visual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll       Scanner Service Object Version         Description:       DATALOGIC Scanning Service Object       Version:         Version:       1.13.002       Version:         File Version:       1.13.002.001       File Version:         Copyright:       All rights reserved.       Copyright:	Scales: MagellanSC RS232Scale TableScale USBScale USBScale Daim Release Enable Disable Read Weight Timeout 1000 msec.	Scanners: Bologna-USB-HID HandScanner QS6000 QSLScanner RS232Scanner USBHHScanner USBHHScanner USBHScanner USBCanner USBHScanner USBHScanner USBCAU Compare Firmware Version Update Firmware Update Firmware
	Status: Scale open     SUE Code:       Weight:     Live Weight:       Error:     Live Weight:       Scale Service Object Version     -       Filename:     C:Wisual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll       Description:     DATALOGIC Scanning Service Object       Version:     1.13.20       File Version:     1.13.0020.001       Copyright:     All rights reserved.	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: File Version: Copyright:

CALE Control Object Version Filename: C:\Program Files\DATALOGIC IN Description: 0POS Scale Control 1.13.001 (Pr Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	IC\Remote Firmware ublic, by CRM/RCS-Dayton]	SCANNER Control Object Version Filename: C:\Program Files\D Description: 0POS Scanner Co Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-1	VATALOGIC INC\Remote Firmware ntrol 1.13.001 (Public, by Dayton.
Scales: MagellanSC RS232S cale SCR5232S cale Calles USBS cale ISBS cale Read Read	n Scale Close Scale laim Release hable Disable Read Weight Timeout Weight 1000 msec.	Scanners: Bologna-USB-HID HandScanner MagellanSC QSE000 QSLScanner RS232Scanner SCRS232Scanner TableScanner USBHHScanner USBHScanner	Open Scanner     Close Scanner       Claim     Release       Enable     Disable       Data Event Enable     Markov Data Event Enable       Compare Firmware Version     Open       Update Firmware     File
Status: Scale Claimed SUE C Veight: Live W Error: C:Visual Studio 2005/Projects/E Description: DATALOGIC Scanning Service C Version: 1.13.20 File Version: 1.13.0020.001 Copyright: All rights reserved.	Code: /eight: DLOPOS\Debug\DLOPOS.dll ]biject	, Data: Type: Scanner Service Object Versio Filename: Description: Version: File Version: Copyright:	n

## 4. Enable:

👑 DualTest	
SCALE Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: 0POS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton] Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	SCANNER Control Object Version Filename: C:VProgram Files/DATALOGIC INC/Remote Firmware Description: 0POS Scanner Control 1.13.001 (Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC RS232Scale TableScale USBScale USBScale Claim Release Enable Disable Read Weight 1000 msec.	Scanners:       Bologna-USB-HID HandScanner       MagellanSC QS6000       QSLScanner       RS232Scanner       TableScanner       USBHRScanner       USBScanner       Update Firmware
Status:     Scale enabled     SUE Code:       Weight:     Live Weight:       Error:     Live Weight:       Scale Service Object Version     Filename:       Filename:     C:\Visual Studio 2005\Projects\DL0POS\Debug\DL0POS.dll       Description:     DATALOGIC Scanning Service Object       Version:     1.13.20       File Version:     1.13.0020.001       Copyright:     All rights reserved.	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: Copyright:
[] DualTest (c) 2008 DATALOGIC ver 1.9.2.0	Exit []

# 5. Read a weight:

监 DualTest	
SCALE Control Object Version Filename: C:VProgram Files/DATALOGIC INC/Remote Firmware Description: 0POS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton] Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	SCANNER Control Object Version Filename: C:VProgram Files\DATALOGIC INC\Remote Firmware Description: OPOS Scanner Control 1.13.001 [Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagelanSC RS232Scale TableScale USBScale Disable Read Weight Timeoul Read Weight Timeoul Status Notify	Scanners:       Bologna-USB-HID HandScanner       MagellarSC QS6000       QS5Conner       RS232Scanner       TableScanner       USBHHScanner       USBHScanner       USBER       Data Event Enable       Data Event Enable       Image: Compare Firmware Version       Update Firmware
Status: Ready to get weight     SUE Code:       Weight:     0.470 lb. [1]     Live Weight:       Error:     Scale Service Object Version       Filename:     C:\Visual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll       Description:     DATALDGIC Scanning Service Object       Version:     1.13.00       File Version:     1.13.002.001       Copyright:     All rights reserved.	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: Copyright:

## Live Weight Display

The Datalogic OPOS Scale Service Object supports the ability to provide Live Weight Display functionality in accordance with the UPOS Specification (version 1.9 and above). The user's application may be written to take advantage of this capability in the service (see the UPOS specification for details). In addition, the DualTest application bundled with Datalogic's services supports this capability and may be used to demonstrate Live Weight Display function with a Datalogic scanner/scale. The following screen shots represent the steps used to activate Live Weight Display with a scale using Dual-Test.



#### **IMPORTANT NOTE to OPOS Programmers:**

PIDXScal\_StatusNotify must be set TRUE while the scale is NOT Enabled. As per the UPOS specification, setting PIDXScal\_StatusNotify TRUE after the scale has been Enabled will not activate the Live Weight Display function in the scale service object.

To demonstrate Live Weight Display, start DualTest and follow the steps to Open and Claim the scale, as described in the previous section. Then perform the following steps:

Control Object Version Filename: C:\Program Files\D/ Description: OPOS Scale Contro Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-C	ATALOGIC INC\Remote Firmware I 1.13.001 [Public, by CRM/RCS-Dayton] Payton.	Control Object Version Filename: C:\Program Files\DA Description: OPOS Scanner Cont Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Da	TALOGIC INC\Remote Firmware trol 1.13.001 [Public, by ayton.
Scales: MagellanSC RS232Scale SCRS232Scale TableScale USBScale	Open Scale     Close Scale       Claim     Release       Enable     Disable       Read Weight Timeout     1000 msec.       Image: Status Notify     Image: Status Notify	Scanners: Bologna-USB-HID HandScanner MagellanSC QS6000 QSLScanner RS232Scanner SCRS232Scanner TableScanner USBHHScanner USBHHScanner	Open Scanner     Close Scanner       Claim     Release       Enable     Disable       Data Event Enable     Image: Compare Firmware Version       Compare Firmware     Open File
Status: Weight: Error: -Scale Service Object Version Filename: C:Visual Studio 201 Description: DATALOGIC Scanr Version: 1.13.20 File Version: 1.13.0020.001 Copyright: All rights reserved.	SUE Code: Live Weight: J5\Projects\DLOPOS\Debug\DLOPOS.dll ing Service Object	Status: Data: Type: Scanner Service Object Version Filename: Version: Version: File Version: Copyright:	

1. Set Status Notify True: Click the "Status Notify" check box.

SCALE Control Object Version Filename: C:VProgram Files\DATALOGIC INC\Remote Firmware Description: OPOS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton] Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	SCANNER Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: 0P0S Scanner Control 1.13.001 (Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MageilanSC R5232Scale SCR5232Scale TableScale USBScale Read Weight Timeout Read Weight Tool msec.	Scanners:       Bologna-USB-HID HandS canner       MagellanSC       QS6000       QSLScanner       RS232S canner       SCRS232S canner       TableS canner       USBHHS canner       USBK canner       Open Scanner       Claim       Release       Data Event Enable       USBHS canner       USBS canner       Open Firmware Version       Open       Update Firmware
Status: Scale enabled     SUE Code: WEIGHT_UNDER_ZERO       Weight:     Live Weight:       Error:     Live Weight:       Scale Service Object Version       Filename:     C:Wisual Studio 2005\Projects\DL0POS\Debug\DL0POS.dll       Description:     DATALOGIC Scanning Service Object       Version:     1.13.002       File Version:     1.13.002       Copyright:     All rights reserved.	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: Copyright:

# 2. Enable: (Live Weight Begins immediately / Zero Weight)

# 3. Underweight: An under zero condition has occurred.

DualTest	
SCALE Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: 0POS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton] Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	SCANNER Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: 0POS Scanner Control 1.13.001 [Public, by Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales:	Scanners:         Bologna-USB-HID         HandScanner         MagellanSC         QSLScanner         Release         QSLScanner         RS232Scanner         SCRS/23Scanner         JSBU0         Data Event Enable         USBH/Scanner         USBK-sonner         USBScanner         USBScanner         USBScanner         USBK-sonner         USBK-sonner         USBScanner         USBScanner         Update Firmware
Status: Scale enabled     SUE Code: WEIGHT_UNDER_ZERO       Weight:     Live Weight:       Error:     Live Weight:       Scale Service Object Version       Filename:     C:Wisual Studio 2005\Projects\DLOPOS\Debug\DLOPOS.dll       Description:     DATALOGIC Scanning Service Object       Version:     1.13.20       File Version:     1.13.0020.001       Copyright:     All rights reserved.	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: Copyright:
[] DualTest (c) 2008 DATALOGIC ver 1.9.2.0	Exit []

Control Object Version Filename: C:\Program Files\DA Description: 0P0S Scale Control Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-D	TALOGIC INC\Remote Firmware 1.13.001 [Public, by CRM/RCS-Dayton] ayton.	Control Object Version Filename: C:\Program Files\D/ Description: OPOS Scanner Cor Version: 1.13.1 File Version: 1.13,001,0 Copyright: Copyright (c) RCS-D	ATALOGIC INC\Remote F htrol 1.13.001 [Public, by )ayton.	imware
Soales: MagellanSC RS232Scale SCRS232Scale TableScale USBScale	Open Scale     Close Scale       Claim     Release       Enable     Disable       Read Weight     1000 msec.       Status Notify	Scanners: Bologna-USB-HID HandScanner MagellanSC QS5000 QSLScanner RS232Scanner SCRS232Scanner TableScanner USBHHScanner USBHScanner	Open Scanner Claim Enable Data Event Enat I Auto Data Even Compare Firmware Update Firmware	Close Scanner Release Disable Ite Ite Nt Enable Version File
Status: Scale enabled Veight: Error: Scale Service Object Version Filename: C:\Visual Studio 200 Description: DATALOGIC Scanni Version: 1.13.20 File Version: 1.13.0020.001 Copyright: All rights reserved.	SUE Code: WEIGHT_UNSTABLE Live Weight: 5\Projects\DLOPOS\Debug\DLOPOS.dll ng Service Object	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: Copyright:	1	

#### 4. In motion: The scale is in motion and has not stabilized.

# 5. Overweight: The scale's weight capacity has been exceeded.

Description: OPOS Scale Control 1.13.001 [Public, by CRM/RCS-Dayton]	Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: DPDS Scanner Control 1.13.001 (Public, by
Version: 1, 13, 1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.	Version: 1, 13, 1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC RS232Scale TableScale USBScale Read Weight Timeou Read Weight 1000 msec.	Scanners:       Bologna-USB-HID       HandScanner       MagelanSC       QSS000       QSLScanner       RS232Scanner       TableScanner       USBHScanner       USBHScanner       USBHScanner       USBCanner       USBHScanner       USBCanner       USBCanner       USBHScanner       USBCanner       USBCANNER       USBCANNER       USBCANNER       USBCANNER       Update Firmware
Status:     Scale enabled     SUE Code:     WEIGHT_OVERWEIGHT       Weight:     Live Weight:        Error:     Live Weight:        Scale Service Object Version        Filename:     C:Visual Studio 2005/Projects\DLOPOS\Debug\DLOPOS.dll       Description:     DATALOGIC Scanning Service Object       Version:     1.13.20       File Version:     1.13.0020.001       Copyright:     All rights reserved.	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: File Version: Copyright:

# 6. Stable Large Weight:

& DualTest		
SCALE Control Object Version Filename: C:VProgram Files\D Description: OPOS Scale Contry Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-D	ATALOGIC INC\Remote Firmware ol 1.13.001 [Public, by CRM/RCS-Dayton] )ayton.	SCANNER Control Object Version Filename: C:\Program Files\DATALOGIC INC\Remote Firmware Description: 0 POS Scanner Control 1.13.001 [Public, by Version: 1.13.1 File Version: 1,13,001,0 Copyright: Copyright (c) RCS-Dayton.
Scales: MagellanSC R5222Scale SCR5232Scale TableScale USBScale	Open Scale       Close Scale         Claim       Release         Enable       Disable         Read Weight       1000 msec.         ✓       Status Notify	Scanners: Bologna-USB-HID HandScanner MagelanSC QS5000 QSLScanner RS232Scanner USBHScanner USBHScanner USBHScanner USBCATT USBCATT Claim Compare Firmware Version Claim Compare Firmware Claim Claim Compare Firmware Claim Claim Claim Compare Firmware Claim Claim Claim Claim Claim Compare Firmware Claim
Status: Scale enabled Weight: Error: Scale Service Object Version Filename: C:Wisual Studio 20 Description: DATALOGIC Scant Version: 1.13.20 File Version: 1.13.0020.001 Copyright: All rights reserved.	SUE Code: STABLE_WEIGHT Live Weight: 12.560 lb. 05\Projects\DLOPOS\Debug\DLOPOS.dll ning Service Object	Status: Data: Type: Scanner Service Object Version Filename: Description: Version: File Version: File Version: Copyright:
[] DualTest (c) 2008 DATALOGIC	ver 1.9.2.0	E xit

# 7. Stable Small Weight:

Control Object Version Filename: C:VProgram Files () Description: 0POS Scale Contr Version: 1.13.1 File Version: 1, 13, 001, 0 Copyright: Copyright (c) RCS-	x86)\DLSOPOS\Controls\OPOSScale.ocx rol 1.13.001 [Public, by CRM/RCS-Dayton] Dayton.	Control Object Version Filename: C:\Program Files Description: OPOS Scanner Control 1.13.001 [Public, by Version: 1.13.1 File Version: 1.13,001,0 Copyright: Copyright (c) RCS-Dayton.		
Scales:		Scanners:		
MagellanSC	Open Scale Close Scale	Bologna-USB-HID	Open Scanner	Close Scanner
SCHS222Scale	Claim Release	MagellanSC	Claim	Release
TableScale USBScale	Enable Disable	QS6000 QSLScanner	Enable	Disable
	Read Weight Timeout	RS2325canner SCRS232Scanner TableScanner TestSCannerName USBHHScanner USBScanner	Data Event Enab Auto Data Even Compare Firmware Update Firmw	e Version Open vare File
Status: Scale enabled √eight: Error:	SUE Code: STABLE_WEIGHT Live Weight: 0.410 lb.	Status: Data: Type:		
Scale Service Object Version           Filename:         C:NProgram Files (x)           Description:         DATALOGIC Scar           Version:         1.13.20           File Version:         1.13.0020.001           Copyright:         All rights reserved	x86)\DLSOPOS\Driver\ServiceOPOS.dll nning Service Object	Scanner Service Object Versio Filename: Description: Version: File Version: Copyright:	n	

# Registry

# Windows Management Instrumentation (WMI) Compatible

Datalogic OPOS Service Objects provide WMI compatible Remote Management for certain scanners when properly configured. For scanners that support this data gathering capability, the Service Objects must be configured via registry settings to provide scanner data to the WMI data store. There are two registry settings that must be active to pull data from the scanner and provide it to the WMI data store: "CheckIHSOnClaim" and "WMIOnClaim" must both be set = 1. When these settings are active, each time the scanner is "claimed" by an OPOS application, the service will query the scanner and send the information to the WMI data store. Any WMI-data gathering application will then have access to the data. As noted in the registry section below, these settings are defaulted to "active" upon installation. Note that this process may have a small impact upon system performance.

The data provided to the WMI database follows the format as specified in the UPOS specification, Appendix I, "Systems Management Information", which is modeled on the Common Information Model (CIM) from the DMTF. This standard provides a means of Remote Management of Datalogic scanner/scales under the Windows Management Instrumentation process.

The default WMI repository:

root\CIMV2

contains two class definitions for statistics information:

- UPOS\_Scanner
- UPOS\_Scale

There will be one instance of each class per unique serial number identified scanner used by an OPOS object.

# **OPOS Registry**

Datalogic OPOS Service Objects use the Windows registry for configuration of the OPOS software. When the OPOS package is installed, the installer creates registry entries under HKEY\_LOCAL\_MACHINE\SOFTWARE\OLEfor-Retail\ServiceOPOS; Scale and Scanner. Under each UPOS category, there are named entries for each device. Under each name, there are some user-configurable entries that control the operation of the OPOS Service Objects.

The registry system on Windows 64 bit machines has changed where 'default' 32 bit application registry settings are stored. In the registry, all settings will be found under:

[HKEY\_LOCAL\_MACHINE\SOFTWARE\WOW6432NODE\...]



Changing items in the registry does not change corresponding items in the scanner. For example, baud rate can be changed in the RS232Scanner registry, but the baud rate in the scanner must be changed via programming label to match the registry entry, or the Service Object will be unable to communicate to the scanner.

## Scanner

Under SCANNER in the registry, there are a number of named entities: HandScanner, MagellanSC, QS6000, and so forth. Note that some of these are duplicates that have been maintained for legacy purposes: for example, "HandScanner" and "USBHHScanner" refer to the same device (a handheld scanner running OEM USB interface); "MagellanSC" is the same as "SCRS232Scanner"; "TableScanner" and "USBScanner" are equivalent; QS6000 and RS232Scanner are equivalent, QSLScanner is a unique entry. The following screen shots cover the important user-configurable registry settings for each category of scanner.

💣 Registry Editor			
File Edit View Favorites Help			
	Name     Adot To Fault     Adot To Fault	Type           REG_52           REG_52	Data           DLOPOS.DLScanner           EF155E2A_6CE9_4c37_9FC2_FC85EA74CC0C           1           1           DATALOGIC PSC USB Handheld Scanner           B88E0CB6_1B4F_4812_A796_CD28D734FA42           40960           1000           0           1           12
Paint.NET Paint.NET Piolicies	WMIOnClaim	REG_SZ REG_SZ	1

#### HandScanner = USBHHScanner:

- (Default) = DLOPOS.DLScanner this is the default name used by the service. The user should not edit this entry.
- **AbstractDevice** this represents the GUID and should not be edited by the user.
- Add01ToRSS defaulted to active (1), if the scanner does not return a "01" at the start of a Databar label, the service will add the "01" if this item is active.
- CheckIHSOnClaim defaulted to active (1). When 1, the service will request information-health-statistics data from the scanner each time it is "claimed".
- **ConvertBCDtoASCII** defaulted to active (1), the service will convert any label sent in BCD format to ASCII.
- **DeviceNameOverride** this is the name reported by OPOS as the "device name" in the OPOS object. If the user's application is coded to use a certain specific name, the user can insert that name here.
- **FirmwareUpdate** Firmware endpoint GUID, user should not modify this entry.
- **FirmwareUsage** this is the USB "usage" for the firmware endpoint, in decimal (the USB spec defines this in hexadecimal). User should not modify this entry.
- **Pollrate** this is the period, in milliseconds, that the service polls the scanner for connection.
- ScanDataEqualScanDataLabel default is off. This will make the ScanData property always equal the ScanDataLabel property.

- UPCEANCheckDigitCalc defaulted to active, the service will calculate the check digit for a UPC/EAN label if it is not present on the scanner interface, and append this to the data in the ScanDataLabel property.
- **Usage** this is the USB "usage" for the scanner device. (The USB spec defines this in hexadecimal). User should not modify this entry.
- **USBMonitor** defaulted to active, the service will periodically ensure that the scanner and host "enable" state is the same.
- **WMIOnClaim** defaulted to active, the service will compile WMI data upon "claim" of the device. This may slow down the claim process slightly.

#### MagellanSC = SCRS232Scanner

🔊 Registry Editor				
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WIDIA Corporation     ODEC     ODE		Name  (Default)  (Default)  (Default)  DeviceVice  DeviceVice  DeviceViceVice  DeviceViceVice  FirmwareUpdate  FirmwareUpdate	Type           REG_SZ           REG_SZ	Data           DLOPOS.DLScenner           2D226897_3A6A_4c97_8AF8_B18716C8AA2E           9600           1           1           7           DATALOGIC PSC Single-Cable R5232 Scanner-Scale           1000A7C2_E748_4553_946B_A14B18E853DF           0           0           0           0           1           1           1           1           1           1           0           1           1
😥 🧰 Realtek	~	<		>
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\OLEforRel	ail\Se	rviceOPOS\SCANNER\SCR5232Scanner		

Common fields as per Handheld scanner above; in addition the following fields are:

BaudRate - default to 9600.



Changing this value REQUIRES changing the scanner to a matching value – failure to do so will result in failure to communicate!

- **DataBits** default to 7, same caveat as for baud rate.
- **OverrideUPCASuplimental** default not active; can be used in certain circumstances to differentiate label+addon from label only packet. This setting would rarely need user modification.
- **OverrideUPCESuplimental** default not active; can be used in certain circumstances to differentiate label+addon from label only packet. This setting would rarely need user modification.
- **Parity** defaults to Odd to match scanner default on SC RS232 interface, same caveat as for baud rate.
- **Port** defaults to COM1. User can change as needed to match system com port.
- **RTSControl** defaulted to active. Service will set CTS line active at the host port and leave it set high.

• StopBits - defaulted to 1, same caveat as for baud rate.

#### RS232Scanner = QS6000

🔊 Registry Editor					
<u>File Edit View Favorites Help</u>					
😟 🧰 NVIDIA Corporation 🛛 🧧	Name	Туре	Data		
DDBC	ab (Default)	REG_SZ	DLOPOS.DLScanner		
OLEForRetail	ab AbstractDevice	REG_SZ	817614FD_C918_4060_9767_CC92B6CF5C43		
	abBaudRate	REG_SZ	9600		
	(CheckIHSOnClaim	REG_SZ	0		
Belana USB UTD	ConvertBCDtoASCII	REG_SZ	1		
	ab DataBits	REG_SZ	8		
	ab DeviceNameOverride	REG_SZ	DATALOGIC PSC RS232 Scanner		
	ab FirmwareUpdate	REG_SZ	FC2D854E_06C6_46fd_8FA6_CAF85A50DBE1		
		REG_SZ	0		
	ab OverrideUPCASuplimental	REG_SZ	0		
SCR52325canner	ab OverrideUPCESuplimental	REG_SZ	0		
TableScanner	ab Parity	REG_SZ	None		
USBHHScanner	abPort	REG_SZ	COM1		
🛅 USBScanner	ab RTSControl	REG_SZ	1		
Paint.NET	ScanDataEqualsScanDataLabel	REG_SZ	0		
pidgin	ab StopBits	REG_SZ	1		
Policies	ab TransmitUnknown	REG_SZ	0		
Program Groups	UPCEANCheckDigitCalc	REG_SZ	1		
RealNetworks	(WarholParsing	REG_SZ	0		
🖽 🛄 Realtek	ab WMIOnClaim	REG_SZ	1		
Reducek Semiconductor Corp.					
RegisteredApplications	. <				
My Computer/WEY, LOCAL, MACHINE/SOFTWARE/OU	For Pot sill Service OPOS'SC ANNER D S222	Scapper			
Computer(HKEY_LOCAL_MACHINE(SOF) WARE(OLEFORREtail(SerViceOPOS(SCANNER(RS232Scanner					

Common fields as above; in addition the following field is:

- **IncludeCR** This will add a {0x0D} to the end of barcodes. Default off.
- TransmitUnknown when set to 0, the service will not send barcodes to the application if the symbology is unknown. When set to 1, all barcode data will be sent to the application, regardless of the value of ScanDataLabel (symbology type). Default is 0.
- WarholParsing defaults to not active. When using a QD21xx, QD23xx, PD71xx, or GD41xx handheld scanner, the user should set this to active and select the "RS232 OPOS" interface in the scanner programming guide. This setting enables correct identification of Label Ids from the scanner through the Service Object.

#### QSLScanner

🔊 Registry Editor						
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Ele Edit View Favorites Help B VIDIA Corporation CODC ODC ODC CODC Control ServiceOPOS CALE ServiceOPOS CALE ScANNER Bologna-USB-HID HandScanner QS5000 CSSCanner CSSC232Scanner CSSC23Scanner	Name (Default) a) AbstractDevice a) BaudRate a) ChecH/SOnClam b) ConvertBCDtoASCII a) DataBits a) DeviceNameOverride a) FirmwareUpdate b) Parity a) Fort a) SconDataEqualsScanDataLabel a) StorpBits b) UPCEANCheckDigitCalc a) WMIOnClaim	Type           REG_SZ           REG_SZ	Data           DLOPOS.DLScanner           66E24BDD_9966_4c45_9BCD_SF6842AC87B3           9600           0           1           8           Datalogic QSLScanner           0           Odd           COM1           0           1           0           1			
Compare Realtek     Compare Realtek Semiconductor Corp.     Compare Realter Semiconductor Corp.						
	<					
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\OLE	y Computer\HKEY_LOCAL_MACHINE\SOFTWARE\OLEforRetail\ServiceOPOS\SCANNER\QSLScanner					

There are no unique fields for this scanner, but some of the settings default to different values because of limited capabilities:

- **FirmwareUpdate** defaults to 0; this device cannot be updated by the service.
- CheckIHSOnClaim defaults to 0; this device does not support commands needed to determine scanner health and status.

#### TableScanner = USBScanner



Settings are identical to **USBHHScanner/HandScanner**, except that **Usage = 18944** (4A00 hex), and **DeviceNameOverride = "...USB** Scanner".

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Notepad++	~	Name	Туре	Data
NVIDIA Corporation		(Default)	REG_SZ	DLOPOS.DLScanner
DDBC		AbstractDevice	REG_SZ	817614FD_C918_4060_9767_CC92B6CF5C
🖃 🛄 OLEforRetail		BaudRate	REG_SZ	115200
		CheckIHSOnClaim	REG_SZ	0
		ConvertBCDtoASCII	REG_SZ	1
		ab DataBits	REG_SZ	8
HandScapper		ab DeviceNameOverride	REG_SZ	DATALOGIC PSC RS232 Scanner
ManellanSC		FirmwareUpdate	REG_SZ	FC2D854E_06C6_46fd_8FA6_CAF85A50DB
OS6000			REG_SZ	0
OSLScanner		OverrideUPCASuplimental	REG_SZ	0
- Carl RS232Imager		OverrideUPCESuplimental	REG_SZ	0
R52325canner		ab Parity	REG_SZ	None
- CRS232Scanner		abPort	REG_SZ	COM1
TableScanner		a RTSControl	REG_SZ	1
- 🚞 USBHHScanner		ScanDataEqualsScanDataLabel	REG_SZ	0
USBScanner		ab StopBits	REG_SZ	1
Paint.NET		ab TransmitUnknown	REG_SZ	0
Policies			REG_SZ	1
		WarholParsing	REG_SZ	1
Program Groups     RealNetworks		(MIOnClaim	REG_SZ	1
🕀 🧰 Realtek	~	<		

RS232Imager

The RS232Imager utilizes a 115,200 baud rate and enhanced parsing capabilities. These registry items are turned on for this scanner type.

• **UseVirtualPort** – when set to 1, the service will look for a virtual com port and ignore the Port number if it finds a virtual port (USB COM device). If set to 0, the Port = COMn setting will be used.

#### Scale

Under the **SCALE** in the registry, there are five named entities. Some are redundant and have been maintained for legacy applications. The following screen shots cover the important user-configurable settings for each category of scale.



#### MagellanSC = SCRS232Scale



IMPORTANT NOTE: COM port settings for this scale device are identical to the corresponding scanner names; this is because the two devices share the same COM port and must use the same communication parameters. The same caveats apply to changing these values in the registry and scanner/scale – the settings must match.

- CapStatusUpdate defaulted to 1, this indicates that the scale service is capable of supplying Status Update events as per the UPOS
   Live Weight Display description in the scale section of the UPOS spec.
- CapZeroScale defaulted to not active. The Single Cable scale does not support host zeroing of the scale.
- LiveWeightInterval default to 500; this is the poll rate in milliseconds that the scale service polls the scale for weight in the case of Live Weight Display enabled.



The user should never set this value below 250 msec.

**Metric** – defaulted to 0. This setting controls the type of Weight Request sent to the scale by the service; the default is English Weight Request. The user can set this to 1 to obtain Metric weights.



The scanner/scale <u>must</u> be programmed to the same data type or weight requests will fail.

ZeroValid - defaulted to Active. When active, the service will deliver a stable zero weight as a valid weight to the host. When set to 0, the service will follow the pre-1.13 UPOS specification and not deliver zero as a valid weight (this setting is used by some customers to maintain a live weight display outside of the UPOS specification).

#### RS232Scale

Registry Editor					
e <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>H</u> elp					
😥 🧰 Mozilla	~	Name	Туре	Data	
mozilla.org     Mozilla.org     Mozilla.org     Mozilla.org     Notework.Associates     Notepad++     NVIDIA Corporation     ODEC     ODEC     ODEC     ODEC     ScruceOPOS     ScALE     ReszaSscale     ReszaSscale     OCECORD		(befault)     (befault)	REG_52 REG_52 REG_52 REG_52 REG_52 REG_52 REG_52 REG_52 REG_52 REG_52 REG_52 REG_52	DLOPOS,DLScale DD703C4E_0849_4674_81C9_DB139D67AC84 9600 1 1 1 7 DATALOGIC PSC Single-Cable RS232 Scale 500 0 0	)
TableScale     T		aport a)Port a)RtsControl a)StopBits a)StopBits a)ZeroValid	REG_52 REG_52 REG_52 REG_52 REG_52	COM2 1 2 0	
Redemotion	$\mathbf{\sim}$	<		III.	

- **CapZeroScale** defaulted to Active, the scale service can zero the scale through the interface.
- **Port** defaulted to COM2. The user can select the desired COM port for their system.



This MUST be a different COM port than the associated Scanner port.

NOTE

- **BaudRate** defaulted to 9600. The user should not change this setting, as the scale baud rate is NOT configurable.
- **DataBits** set to 7. The user should not change this setting, as the scale data bits are NOT configurable.
- **Parity** set to Even. The user should not change this setting, as the scale parity is NOT configurable.
- **StopBits** set to 2. The user should not change this setting, as the scale stop bits are NOT configurable.

#### TableScale = USBScale

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🕀 🧰 Mozilla	^	Name	Туре	Data
🕀 🛄 mozilla.org		•••••••••••••••••••••••••••••••••••••	REG_SZ	DLOPOS.DLScale
MozillaPlugins		AbstractDevice	REG_SZ	88A3454C_A987_4a75_941F_348583C6FEC3
Network Associates		CapStatusUpdate	REG_SZ	1
Notenad++		CapZeroScale	REG_SZ	1
		CheckIHSOnClaim	REG_SZ	1
		DeviceNameOverride	REG_SZ	DATALOGIC PSC Single-Cable RS232 USB Scale
Ol EforBetail		LiveWeightInterval	REG_SZ	500
ServiceOPOS		Metric	REG_SZ	0
😑 🧰 SCALE		Mode	REG_SZ	0
MagellanSC		ab Usage	REG_SZ	28160
RS232Scale		DeroValid	REG_SZ	0
- SCRS232Scale				
USBScale				
🕀 🧰 SCANNER				
Paint.NET				
pidgin				
Policies				
Program Groups				
RealNetworks				
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Redicer Semiconductor Corp.     Pedemotion	~	<		
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\C	DLEFe	rRetail\ServiceOPOS\SCALE\Table	Scale	

# Logging

The DLS Service Objects have the ability to log various data items to a file for reporting, troubleshooting, and monitoring. The logging level is controlled by registry settings under the location: **HKEY\_LOCAL\_MA-CHINE\SOFTWARE\DATALOGIC\DL\_OPOS\_SERVICE**.

By default, only Error logging is turned on upon installation. If desired, the user can log various reporting levels by turning on settings.

🔊 Registry Editor			
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HARDWARE	Name	Туре	Data
I SAM	(Default)	REG_SZ	(value not set)
SECURITY	CompanyName	REG_SZ	Datalogic Scanning INC
G 7 7	DeviceName	REG_SZ	DATALOGIC Scanning Device
/-2/p	a) Error	REG_SZ	1
AutoHotkey	ab Event	REG_SZ	0
Additioney	a) Func	REG_SZ	0
	ab gVar	REG_SZ	0
🕀 🧰 Citrix	a)LogFile	REG_SZ	C:\Documents and Settings\rscasita\Application Data\Datalogic_LOG_FILE_%d.log
🗉 🧰 Classes	and MSDELAY	REG_SZ	100
😟 🧰 Clients	MumberOfFirmwareRetries	REG_SZ	150
🕀 🧰 Crystal Decisions	ab ServiceName	REG_SZ	DATALOGIC Scanning Service Object
😥 🚞 DameWare Development		REG_SZ	C:\Documents and Settings\rscasita\Application Data\SingleCableSpliter.exe
🖨 🧰 DATALOGIC	and StatsFile	REG_SZ	C:\Documents and Settings\rscasita\Application Data\Logs\
ConfigMaster	ab) TotalFiles	REG_SZ	10
DL_OPO5_Service	UpdateStatsEveryMinutes	REG_SZ	1
- FWG			
My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\DA	TALOGIC\DL_OPOS_Service		

The location of log files is shown under the **LogFile** name; the default path is as shown above. Total number of log files is defaulted to 10. Note that when all logging features are turned on, the logs will become very large. Logging should normally be left in the "error" mode only to conserve system resources.

# Levels

Error - defaulted Active; logs only OPOS errors.

Event - defaulted Off; if set active, the service will log OPOS events.

**Func** – defaulted Off; if set active, the service will log all function entry/exit.

gVar - defaulted Off; if set active, the service will log variable values.

# **Registry Service Properties**

- **CompanyName:** Value is the name displayed in the Service Object. This value should not be changed.
- **DeviceName**: Value is the name displayed in the Service Object. This value should not be changed.
- **LogFile**: Contains the location where the log files are written. Changing this value may cause logging failures under Windows 7 and newer operating systems.
- **MSDELAY:** Contains the global lock feedback timeout. This value should not be changed.
- **NumberofFirmwareRetries**: Value is the number of times to retry connecting to the scanner after firmware update. This value should not be changed.
- **ServiceName**: Value contains the name displayed in the Service Object. This value should not be changed.
- **SingleCableSplitter**: Contains the location of the RS232 Splitter program. This value should not be changed.
- **StatsFile**: Contains the directory to store the .PRF file. Changing this value may cause logging failures under Windows 7 and newer operating systems.
- **TotalFiles:** Controls how many log files to maintain before rolling over. It is recommended not to change this value.
- UpdateStatsEveryMinutes: Controls how many minutes between updates of the StatsFile and WMI store. If set to a non-zero value, the OPOS Service Object will query the scanner for statistical information every N minutes, where N is the value of this control, and update the stats file and WMI store.

# **Additional Logging**

The DLS OPOS Service Object can also create two additional logs. A "Stats-File" is created every time the scanner is "claimed", provided the "CheckIHSOnClaim" control is set to active in the scanner registry. This file holds the result of the latest "info-health-statistics" call to the scanner, and is overwritten upon each "claim". This file holds information about the scanner that may be of interest to customers, and is similar to the UPOS Statistics data. Entries such as scanner software revision, S/N, hourson, number of labels scanned, system health, and additional information can be found in this log.

An example is shown in the following screen shot:



# **Developers Guide**

OPOS service objects export a uniform interface; however there may be slight differences between the same types of devices from different vendors and models. Queries of OPOS properties reveal these differences. Below listed properties, methods, and events are DATALOGIC device specific return values. Other DATALOGIC service objects with different interfaces may produce slightly different results. Developers are advised to consider all error conditions in designing an application.

# **Scanner Properties**

#### **Common Properties**

#### AutoDisable:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### **BinaryConversion**:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### CapCompareFirmwareVersion:

Returns **TRUE** (also depends on the firmware and model of the scanner).

#### CapPowerReporting: Returns OPOS PR STANDARD

#### CapStatisticsReporting:

Returns **TRUE** (also depends on the firmware and the model of the scanner).

#### CapUpdateFirmware:

Returns **TRUE** (also depends on the firmware and model of the scanner).

#### CapUpdateStatistics:

Returns FALSE.

#### CheckHealthText:

Internal HCheck: will return health string
External HCheck: not supported
Interactive HCheck: not supported
This property is empty before the first call to the CheckHealth method.

#### Claimed:

Returns **TRUE** after Claim method has been called. **FALSE** otherwise.

**DATALOGIC** devices are exclusive. It is recommended that a program keep the device **Claimed** as long as the application is running.

#### DataCount:

Returns the number of Data Events Queued.

#### DataEventEnabled:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### **DeviceEnabled:**

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### FreezeEvents:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### **OpenResult:**

Returns 0.

#### **PowerNotify:**

Returns OPOS PN DISABLED or OPOS PN ENABLED.

#### **PowerState:**

Returns **OPOS\_PS\_ONLINE**.

If the communication channel is having difficulties, an **OPOS\_E\_NOHARD-WARE** will be returned on calls that send and receive data from the scanner.

If PowerNotify is set to "OPOS\_PN\_ENABLED", then:

- If the Scanner is Plugged and Enabled:
   OPOS PS ONLINE
- otherwise: OPOS\_PS\_OFF\_OFFLINE

#### **ResultCode:**

Returns result of last operation.

#### **ResultCodeExtended:**

Returns 0

#### State:

Returns

OPOS\_S\_CLOSED OPOS\_S\_IDLE OPOS\_S\_ERROR

#### DeviceServiceDescription:

Returns a descriptive string depending on the interface and device type.

#### DeviceServiceVersion:

Returns 101200xx. where xx is the minor version.

#### PhysicalDeviceDescription:

Returns a descriptive string depending on the interface and device type.

#### PhysicalDeviceName:

Returns a descriptive string depending on the interface and device type.

#### **Device Specific Properties**

#### DecodeData:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### ScanData:

Holds the raw scanned data received from the scanner.

ScanData property always has bar code data when a DataEvent is fired. For Tabletop scanners, the bar code data may be sent across the USB interface as uncompressed Binary Coded Decimal (BCD), depending upon scanner configuration and bar code type.

#### ScanDataLabel:

Holds the scanned and decoded data from the scanner if **DecodeData** property is **TRUE**. If the decoded data did not contain a check digit, the scanner service will add the check digit to **ScanDataLabel** for EAN/UPC bar codes.

Contains data if **DecodeData** is **TRUE**.

#### ScanDataType:

Returns scanned data type of the most recent label from the scanner.

Returned value is one of **SCAN\_SDT\_XXXX** constants, where **XXXX** is the type of the label. Refer to OPOS Scanner header file for the numerical values.

Contains label type if DecodeData is TRUE.

Label type as reported on scanner interface — the scanner assigns a label type identifier and sends this with the label data across the interface. The Service Object translates this into one of the OPOS defined label types. For the RS-232 interface, the scanner configuration must be correctly set for the Service Object to properly identify label type.

# **Scanner Methods**

#### **Common Methods**

Open:

Returns

OPOS\_SUCCESS OPOS\_E\_NOSERVICE OPOS\_E\_NOEXIST OPOS\_E\_ILLEGAL

#### **Close:**

Returns OPOS SUCCESS

#### **ClaimDevice:**

Returns

OPOS\_SUCCESS OPOS\_E\_NOSERVICE OPOS\_E\_ILLEGAL OPOS\_E\_CLAIMED

This call will activate the communication with the device. **DATALOGIC** devices are exclusive. It is recommended that a program keep the device **Claimed** as long as the application is running.

#### **CheckHealth:**

OPOS CH INTERNAL is supported.

OPOS CH EXTERNAL is not supported.

**OPOS CH INTERACTIVE** is not supported.

Returns

OPOS SUCCESS

CheckHealthText property will hold the text result of this method call.

#### **ClearInput:**

Returns

OPOS\_SUCCESS OPOS\_E\_DISABLED OPOS\_E\_NOTCLAIMED

#### DirectIO:

Returns

OPOS\_SUCCESS OPOS\_E\_NOTCLAIMED

#### DirectIO: (continued)

OPOS\_E\_OFFLINE OPOS\_E\_ILLEGAL



Please refer to DR90000351, Datalogic UPOS DirectIO Commands (available at www.datalogic.com) for a complete list of DirectIO commands and implementation details.

#### **ReleaseDevice:**

Returns OPOS\_SUCCESS, OPOS\_E\_ILLEGAL, or OPOS\_E\_NOTCLAIMED. This call will deactivate the communication with the device.

#### **ResetStatistics**:

Returns OPOS E ILLEGAL

**DATALOGIC** service objects do not support reset statistics.

#### **RetrieveStatistics:**

Returns

OPOS\_SUCCESS OPOS\_E\_NOHARDWARE OPOS\_E\_DISABLED OPOS\_E\_NOTCLAIMED OPOS\_E\_ILLEGAL

Results of the **RetrieveStatistics** call are written to the OPOS Log and returned as per the OPOS spec.

Supported statistics are:

- Device category
- Manufacturer
- Model number
- Serial Number
- Firmware revision
- Interface type
- Power on time
- Number of label scans

#### UpdateStatistics:

Returns OPOS\_E\_ILLEGAL

**DATALOGIC OPOS** Scanner service object does not support update statistics.

#### **Device Specific Methods**

None.

# Scanner Events

#### **Common Event**

#### DataEvent:

This event fires when a label is forwarded from scanner.

#### **DirectIOEvent:**

Not supported.

#### ErrorEvent:

Not used.

#### StatusUpdateEvent:

During the Firmware Update Process the following Status Update Events will be delivered:

OPOS\_SUE\_UF\_PROGRESS OPOS\_SUE\_UF\_COMPLETE OPOS\_SUE\_UF\_COMPLETE\_DEV\_NOT\_RESTORED OPOS\_SUE\_UF\_FAILED\_DEV\_OK OPOS\_SUE\_UF\_FAILED\_DEV\_UNRECOVERABLE OPOS\_SUE\_UF\_FAILED\_DEV\_NEEDS\_FIRMWARE OPOS\_SUE\_UF\_FAILED\_DEV\_UNKNOWN

If PowerNotify is set to OPOS\_PN\_ENABLED when the scanner is claimed:

On Enable and/or If the current Power State Changes:
 OPOS\_SUE\_POWER\_ONLINE
 OPOS\_SUE\_POWER\_OFF\_OFFLINE

#### **Device Specific Events:**

None.

# **Scale Properties**

#### **Common Properties**

#### AutoDisable:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### **BinaryConversion:**

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### CapCompareFirmwareVersion:

Returns FALSE.

#### CapPowerReporting:

Returns OPOS PR STANDARD.

#### CapStatisticsReporting:

Returns FALSE.

#### CapUpdateStatistics:

Returns FALSE.

#### CapUpdateFirmware:

Returns FALSE.

#### CheckHealthText:

**Internal HCheck**: not supported, will return **OPOS\_E\_ILLEGAL**.

External HCheck: not supported.

Interactive HCheck: not supported.

#### Claimed:

Returns **TRUE** after Claim method has been called. **FALSE** otherwise.

**DATALOGIC** devices are exclusive. It is recommended that the device be claimed and continue to be claimed thru-out a session.

#### DataCount:

Returns Number of Data Events Queued.

#### DataEventEnabled:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### DeviceEnabled:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### FreezeEvents:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### **OpenResult:**

Returns 0.

#### **PowerNotify:**

Returns OPOS\_PN\_DISABLED or OPOS\_PN\_ENABLED.

#### PowerState:

Returns OPOS\_PS\_ONLINE.

If the communication channel if having difficulties, an **OPOS\_E\_NOHARD-WARE** will be returned on calls that send and receive data from the scale. If PowerNotify is set to "OPOS\_PN\_ENABLED", then:

- If the Scanner is Plugged and Enabled: OPOS\_PS\_ONLINE
- otherwise:
   OPOS\_PS\_OFF\_OFFLINE

#### **ResultCode:**

Returns result of last operation.

#### **ResultCodeExtended:**

Returns extended result if the last operation produced an **OPOS\_E\_EX-TENDED**. Otherwise this value is considered invalid.

#### State:

Returns

OPOS\_S\_CLOSED OPOS\_S\_IDLE OPOS\_S\_ERROR

#### DeviceServiceDescription:

Returns a descriptive string depending on the interface and device type.

#### DeviceServiceVersion:

Returns **10YY0XXX** where **YY** is the major version and **XXX** is the minor version.

#### PhysicalDeviceDescription:

Returns a descriptive string depending on the interface and device type.

#### **PhysicalDeviceName:**

Returns a descriptive string depending on the interface and device type.

#### **Device Specific Properties**

#### CapDisplay:

Returns TRUE.

TRUE is returned regardless of a remote display being connected to the scanner/scale or not.

#### CapDisplayText:

#### Returns FALSE.

**FALSE** is returned regardless of a remote display being connected to the scanner/scale or not.

#### CapPriceCalculating:

Returns FALSE.

#### CapStatusUpdate:

Returns TRUE.

#### CapTareWeight:

Returns FALSE.

#### CapZeroScale:

Returns **TRUE**.

#### AsyncMode:

Returns **TRUE** or **FALSE** depending on the previous **SetProperty** call.

#### MaxDisplayTextChars:

Returns 0.

#### MaximumWeight:

Returns **15000** in metric mode. Returns **30000** in pound mode.

#### ScaleLiveWeight:

Updated if **LiveWeight** is enabled.

#### StatusNotify:

If CapStatusUpdate is TRUE, the application can set StatusNotify to either SCAL\_SN\_DISABLED or SCAL\_SN\_ENABLED.

## SalesPrice: Returns 0 currency.

# TareWeight:

Returns 0.

#### UnitPrice: Returns 0 currency.

#### WeightUnit:

Returns **SCAL\_WU\_KILOGRAM** in metric mode. Returns **SCAL WU POUND** in pound mode.

# **Scale Methods**

#### **Common Methods**

Open:

Returns

OPOS\_SUCCESS OPOS\_E\_NOSERVICE OPOS\_E\_ILLEGAL

#### **Close:**

Returns OPOS SUCCESS.

#### **ClaimDevice:**

Returns

OPOS\_SUCCESS OPOS\_E\_NOSERVICE OPOS\_E\_ILLEGAL OPOS\_E\_CLAIMED

This call will activate the communication with the device. **DATALOGIC** devices are exclusive. It is recommended that a program keep the device **Claimed** as long as the application is running.

#### CheckHealth:

**OPOS CH INTERNAL** is not supported.

OPOS CH EXTERNAL is not supported.

**OPOS CH INTERACTIVE** is not supported.

Returns

OPOS\_SUCCESS OPOS\_E\_NOTCLAIMED OPOS\_E\_DISABLED OPOS\_E\_ILLEGAL

CheckHealthText property will hold the text result of this method call.

#### **ClearInput:**

Returns

OPOS\_SUCCESS OPOS\_E\_DISABLED OPOS\_E\_NOTCLAIMED

#### DirectIO:

Returns

OPOS\_E\_NOTCLAIMED OPOS\_E\_OFFLINE OPOS\_E\_ILLEGAL



Please refer to DR90000351, Datalogic UPOS DirectIO Commands (available at www.datalogic.com) for a complete list of DirectIO commands and implementation details.

#### **ReleaseDevice:**

Returns OPOS\_SUCCESS.

**OPOS\_E\_ILLEGAL** if the device has not been claimed.

This call will deactivate the communication with the device. It is recommended that a program keep the device Claimed until an application quits.

#### **ResetStatistics**:

Returns OPOS\_E\_ILLEGAL DATALOGIC OPOS Scale service objects do not support reset statistics.

#### UpdateStatistics:

Returns **OPOS\_E\_ILLEGAL**.

**DATALOGIC OPOS** Scale service objects do not support update statistics.

#### **Device Specific Methods**

#### **GetSalesPrice:**

Returns **0** Not implemented

#### GetUnitPrice:

Returns **0** Not implemented

#### SetUnitPrice:

Returns **OPOS\_E\_ILLEGAL** Not implemented

#### **DisplayText:**

Returns OPOS E ILLEGAL

#### **ReadWeight:**

Returns

OPOS SUCCESS
OPOS E EXTENDED
OPOS_E_TIMEOUT
CANCELLED
OPOS_E_NOTCLAIMED
OPOS_E_DISABLED
OPOS_E_OFFLINE
OPOS_E_ILLEGAL
OPOS_E_FAILURE
OPOS_E_BUSY
OPOS E NOHARDWARE

If the result is **OPOS\_SUCCESS** valid weight is returned.

If the result is **OPOS\_E\_EXTENDED** extended status will return either **OPOS\_ESCAL\_OVERWEIGHT** or **OPOS\_ESCAL\_UNDER\_ZERO** in result code extended.

If the result is **OPOS\_E\_TIMEOUT** there was not valid settled weight on the platter before the timeout. **Weight** and the **ExtendedStatus** values are invalid.



The Weight Unit entry in the Registry must match the Scale configuration (Metric or English). See the Registry Description section starting on page 21.

NOTE

#### ZeroScale:

Returns

OPOS\_SUCCESS OPOS\_E\_NOHARDWARE OPOS\_E\_OFFLINE OPOS\_E\_DISABLED OPOS\_E\_NOTCLAIMED

# **Scale Events**

# **Common Event**

#### DataEvent:

Used for asynchronous weight requests

#### **DirectIOEvent:**

Not supported

#### **ErrorEvent:**

Used if a cancel weight is called during an asynchronous weight request

#### StatusUpdateEvent:

Supported as per **LiveWeightDisplay** as documented in the UPOS specification.

If PowerNotify is set to OPOS\_PN\_ENABLED when the scanner is claimed:

 On Enable and/or If the current Power State Changes: OPOS\_SUE\_POWER\_ONLINE OPOS\_SUE\_POWER\_OFF\_OFFLINE

## **Device Specific Events**

None

# NOTES

# Appendix A

# **Datalogic Remote Management Utility**

# **Overview**

Datalogic Remote Management Utility (DLRMU) is a command line-driven program that uses the Datalogic OPOS drivers to perform firmware/configuration updates. The command line-driven interface provides an easy way to perform updates via batch files.

This document will provide information on operation, command line options as well as command line and batch file examples.

# Operation

DLRMU supports the following interfaces: Standard RS232, Single-Cable RS232, USBCOM and USBOEM.

Operating System Requirements: Windows XP (.NET Version 3.5 and up), Windows 7 (32,64 bit), Windows 8

If DLRMU is run from the command line without any command line options it will return the Help file contents to the screen.

Each command line execution will return a status. A zero status indicates a successful operation and non-zero status indicates an error.

The program creates a log (dlslog.txt) that is located in the same folder as the DLRMU program. This log is appended with each execution.

DLRMU also creates a scanner information file (.prf) that contains all the information gathered during the last query. This file is overwritten each time the scanner is queried so that it only contains the most current information.

This file is used for remote management data collection. This file is located in C:\ProgramData\Datalogic\Logs. The file name will be the same as the OPOS profile called on the command line, such as "USBHHScan-ner.prf".

The new firmware/configuration files that are going to be downloaded into the scanner should be in the same folder as DLRMU. If a different location is chosen, the full path to the file must be entered on the command line.

All options not defined in the command line use the default values: COM 0, Baud 9600, Data Bits 7, Parity Odd, Stop Bits 1 If a COM port is not specified it is assumed that the scanner interface is USBOEM. Baud, Data bits, Parity and Stop Bits do not apply.

- --help Display the help screen.
- -a x Scanner Profile. Selects the scanner profile: Std RS232, Single-Cable RS232, USBCOM or USBOEM interface. The OPOS scanner profile name must be used. These names are case sensitive.

List of OPOS Scanner Profiles:	RS232 Interfaces	USBOEM Interfaces
	MagellanSC	HandScanner
	SCRS232Scanner	TableScanner
	RS232Scanner	USBHHScanner
	RS232Imager	USBScanner

- -b x Selects baud rate x to be used for initial identification and firmware update. Default is 9600. Supports 2400 - 115200
- -c x COM Port. Selects COM port x for communication. Default is 0.
- -d x Data Bits. Selects number of Data bits to be used. x may be 7,8 Default is 7.
- EC Level Checking. Checks the scanner's EC Level before starting a firmware update. The x value is a 4 character numeric string. The EC Level should match the new firmware file.

If the scanner responds with an EC Level "equal to" or "greater than" the value on the command line the firmware update will be aborted.

If the scanner responds with an EC Level "less than" the value on the command line the firmware update will continue.

Return Codes:

- 1 = OLDER
- 2 = SAME
- 3 = NEWER
- $4 = \mathsf{DIFFERENT}$
- 5 = UNKNOWN
- -E, --Enabled. Leave the scanner in the Enabled state after firmware update. Default = true.

- -f x File Name. Update the scanner with the firmware or config file x. The scanner's ID, health, and status is recorded before and after the firmware update.
- **-F x** Model Number Validation. Validate the scanner's model number before performing firmware/config update.

 $\mathbf{x}=\mathbf{s}\mathsf{canner}$  model number. The model number entered on the command line is compared to the model number extracted from the scanner.

If the model numbers match the firmware/config update will proceed, if not, no firmware/config update is performed. This option is only used when performing a firmware/config update.

If this switch is not present, no comparison is performed and update will proceed.

If the "-r" short model number option is used the command line must have one of the models listed above.

\*\*\*The short model numbers must be quoted on the command line\*\*\*

- -1 x Log File Name. x sets the log file name. Default is dlslog.txt.
- -o List Options.
- **-p x** Parity. Selects parity x to be used for communication with the scanner.
  - x may be: 'n' no parity 'o' odd 'e' even parity 'm' mark parity 's' space parity
- -r Short Model Names. Specifies the use of Short Model Names.

"2200 VS"	"2300 HS"
"8200 SO"	"8200 SS"
"8300 SO"	"8300 SS"
"8400 SO"	"8400 SS"
"8500 SO"	"8500 SS"
"8500XT SO" "8500XTS SO"	"8500XT SS" "8500XTS SS"
"9300i SO"	"9300iSS"
"9400i SO"	"9400i SS"
"9500 SO"	"9500 SS"
"9800i SO"	"9800i SS"
SO = Scanner Only	SS = Scanner Scale

- -s x Stop Bits. Selects the number of Stop Bits. x may be 1,2, Default is 1.
- -t x Selects baud rate x to be used for identification following a firmware update.



The new firmware and configuration may change the baud rate of the scanner.)

Default is 9600. Supports 2400 - 115200

-v x Timeout Delay. x sets the Timeout Delay in Seconds. Controls the amount of time the program will wait for the scanner to come back online after an update. The minimum is 10. Default is 60.

# **Examples of Command Line Entries:**

faces:

#### **USE: Retrieving Scanner ID.**

The DLRMU program will automatically query the scanner for ID information. The following examples show how to query the three supported serial inter-

DLRMU -c 5 -a SCRS232Scanner	(Single-Cable RS232 Scanner, COM 5)
DLRMU -c 18 -a RS232Imager	(USBCOM Scanner, virtual COM 18)
DLRMU -c 1 -a RS232Scanner -p N -d 8	(RS232 Scanner, COM 1, No Parity, 8 databits)
DLRMU -a USBHHScanner	(USBOEM, Handheld Scanner)

The information gathered will be displayed on screen.

The **<scanner profile name>.prf** file will also be updated.

#### USE: Retrieving Scanner ID at 115200.

To query a Single-Cable scanner for ID information at 115200.

DLRMU -c 5-b 115200 -a SCRS232Scanner

#### USE: Scanner Firmware Update.

The -f option is used to perform a firmware update. The filename of the firmware update image follows the "-f" option.

For example, to update a Single-Cable RS232 scanner connected to COM2, the following command may be used:

```
DLRMU -c 2 -a SCRS232Scanner -f DRxxxxxxx.s37
DLRMU -c 2 -a SCRS232Scanner -F 868005211-0421000R
-f DRxxxxxxx.s37
```

The command above will download the firmware at the default 9600 baud rate and will take approximately 30 minutes to complete.

#### USE: Scanner Firmware Update with Model Number Validation.

The  $-\mathbf{F}$  option validates the scanners model number before updating the firmware. The long model number follows the  $-\mathbf{F}$  option.

The **-f** option is used to perform a firmware update.

The filename of the firmware update image follows the **-f** option.

For example, to update a scanner with a model number of 868005211-0421000R and connected to COM2, the following command may be used:

DLRMU -c 2-a SCRS232Scanner -F 868005211-0421000R -f DRxxxxxx.s37

The command above will download the firmware at the default 9600 baud rate and will take anywhere from 20 minutes to 1 hour to complete.

The file size determines the amount of time it takes.

# USE: Scanner Firmware Update with Short Model Number Validation.

The **-r** option specifies the use of short model numbers.

The  $-\mathbf{F}$  option validates the scanners model number before updating the firmware. The short model number follows the " $-\mathbf{F}$ " option.

The -f option is used to perform a firmware update. The filename of the firmware update image follows the "-f" option.

For example, to update a scanner with a short model number of 8500XTS SS and connected to COM2, the following command may be used:

# DLRMU -c 2 -a SCRS232Scanner -r -F "8500XTS SS" -f DRxxxxxxx.s37

\*\*\*The short model numbers must be quoted on the command line\*\*\*

The command above will download the firmware at the default 9600 baud rate and will take anywhere from 20 minutes to 1 hour to complete. The file size determines the amount of time it takes.

# USE: Scanner Firmware Update with KeepConfig<sup>1</sup> at two baud rates.

This example uses two different baud rates to reduce the amount of time it takes to perform the update. A download at 9600 baud that takes 30 minutes can be reduced to 6-7 minutes at 115200 baud.

The s37 firmware file in this example does not contain a config file. It is using KeepConfig to maintain all scanner settings. This example uses two unique .s37 files that contain a single configuration item to change the scanner's baud rate. DLRMU must communicate with the scanner at both of these baud rates so both must be specified on the command line.

The example contains three command line strings, the first queries the scanner, validates the scanners model and changes the scanner's baud to 115200.

The second updates the firmware at 115200.

The third returns the scanner to 9600 baud and validates the update was a success.

String 1: DLRMU -c 1 -a SCRS232Scanner -b 9600 -t 115200 r -F "8500XTS SS" -f 115200.s37

<sup>1.</sup> KeepConfig is required when performing host download on the 83/ 8400 and 8500Xtscanner/scales.

Validates short model name, communicates at 9600 baud for scanner ID and file download.

Communicates at 115200 for scanner ID and validates baud change.

String 2: DLRMU -c 1DLRMU -c 1 -a SCRS232Scanner -b 115200 -t 115200 -f DRxxxxxxx.s37.

Communicates at 115200 baud for scanner ID and file down-load.

Communicates at 115200 for scanner ID and to validate firmware update.

String 3: DLRMU -c 1 -a SCRS232Scanner -b 115200 -t 9600 f 9600.s37

Communicates at 115200 baud for scanner ID and file down-load.

Communicates at 9600 for scanner ID and to validate baud change.

These three command strings can be used together in a batch file:

DLRMU -c 1 -a SCRS232Scanner -b 9600 -t 115200 -r -F "8500XTS SS" -f 115200.s37

DLRMU -c 1 -a SCRS232Scanner -b 115200 -t 115200 -f DRxxxxxxx.s37

```
DLRMU -c 1 -a SCRS232Scanner -b 115200 -t 9600 -f 9600.s37
```

# **Real World Batch file**

The following batch file is an example of how DLRMU can be used to target specific scanners and perform updates across an enterprise. In this example, the customer had over 1000 self-checkout lanes which utilized 3 different Datalogic Scanner/Scales (MgI9500,MgI8500Xt, MgI9800i). Two of the scanners required updating and the third did not. This batch file determines if the scanner is one of the two needing an update or not, then loads the appropriate firmware for the scanner found. This batch file combines many of the DLRMU features to form a very powerful update solution.

- Queries the scanner and gathers Information, Health and Statistics.
- Validates that the responding scanner is one of the two desired models. Uses "Short Model Names" and "Model Number Validation."
- Validates the scanner needs updating. Uses the "EC Level Checking."
- Checks command status to make decision on which firmware to load.
- Changes baud rate to 115200 to increase the update speed.

Changes baud rate back to 9600 for customer's application (8500Xt only).

set comport=2

DLRMU -a SCRS232Scanner -c %comport% -b 9600 -r -F "8500XTS SS" --EC 0939 if "%errorlevel%"=="0" goto download 8500xts

DLRMU -a SCRS232Scanner -c %comport% -b 9600 -r -F "9800i SS" --EC 0340if "%errorlevel%"=="0" goto download 9800i

goto exit

:download 8500xts

DLRMU -a SCRS232Scanner -c %comport% -b 9600 -t 115200 -r -F "8500XTS SS" -f8500 115200.s37

DLRMU -a SCRS232Scanner -c %comport% -b 115200 -t 115200 -r -F "8500XTS SS" f8500 9801 SCRS232 ULE.s37

DLRMU -a SCRS232Scanner -c %comport% -b 115200 -t 9600 -r -F "8500XTS SS" -f8500 9600.s37

goto exit

:download 9800i

DLRMU -a SCRS232Scanner -c %comport% -b 9600 -t 115200 -r -F "9800i SS" -f9800i 115200.s37 -v 10

DLRMU -a SCRS232Scanner -c %comport% -b 115200 -t 9600 -r -F "9800i SS" -fMR21 0494 KRSCO.s37 -v 10

goto exit

:exit

#### **Unsupported Features**

These features are planned to be added in the future

- -m x STX Character. Specifies the start character used in the singlecable message format. If omitted, the default value matches the DLS scanner default of 83 (decimal for ASCII 'S'). The value x is in decimal.
- **-n x ETX** Character. Specifies the end character used in the single-cable message format.

If omitted, the default value matches the DLS scanner default of 13 (decimal for ASCII Carriage Return). The value  $\mathbf{x}$  is in decimal.

-x BCC Character. Specifies that a BCC is to be used in the singlecable message format. BCC character is calculated and transmitted with the data packets.

# NOTES

# **OIDOJATACO**

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