

TC1100

CCD Scan Engine

Quick Guide

The TC1100 is a linear CCD Scan Engine for OEM applications. It is available in two different versions:

Model	Description	Order Number
TC1100-0100	CCD scan engine for linear codes	939501000
TC1100-0200	CCD scan engine for linear and PDF417	939501010

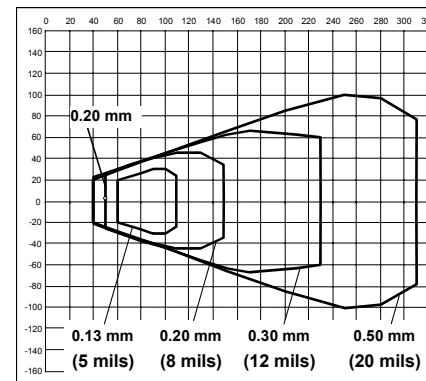
Technical Specifications

Power supply	5 Vdc ± 5%
Consumption	1.5 W
Interfaces	RS232, WEDGE, PEN Emulation
Max Scans/sec	270
Max resolution	0,076mm (3mils)
Readable codes:	EAN/UPC, Code 39, 2/5 family, Codabar, Code 128, EAN 128, ISBT 128, Code 93, pharmaceutical codes, Delta IBM, Code 16K, Code 49, (Telepen, MSI/Plessey, Pharmacode only TC1100-0100), (Codablock-A, Codablock-F Std, Codablock-F EAN, PDF417 only TC1100-0200)

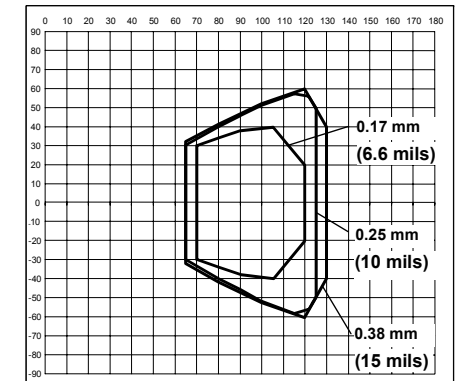
Default Configuration

Power Save	270 scans/sec, sleep disabled, standby disabled
Reading Parameters	On-Line
Code Selection	<ul style="list-style-type: none"> Interleaved 2 of 5: Check Digit transmitted, length: min 4, max 99 Code EAN8, EAN13, UPCA, UPCB: without ADD ON, Check Digit transmitted, no conversions
Enabled codes	<ul style="list-style-type: none"> Code 39: length: min 1, max 99 Code 128: Check Digit not transmitted, length: min 1, max 99 PDF417 (Only TC1100-0200)
Data Format	Code ID disabled, Header = <STX>, Terminator = <CR> <LF>, no Field Adjustment, Code length TX disabled, character replacement disabled, No Read Character = <CAN>
Decoding Parameters	Ink spread enabled, overflow control enabled, interdigit control enabled, Puzzle Solver™ disabled, decoding safety = 1 read
Enabled interface	RS232, 9600, N, 8, 1, no handshaking, ACK/NAK disabled, RX timeout 100 ms, FIFO enabled, inter-character delay disabled

Reading Diagrams



Reading Diagram TC1100-0100 (code 39)



Reading Diagram TC1100-0200 (PDF417)

CODE SELECTION		
EAN/UPC disable	AA0	
EAN 8/EAN 13/UPC A/UPC E enable	AA1	without ADD ON
	AA5	with ADD ON
	AA8	with and without ADD ON
EAN 8/EAN 13 enable	AA3	without ADD ON
	AAK	with ADD ON 2 ONLY
	AAL	with ADD ON 5 ONLY
	AA6	with ADD ON 2 AND 5
UPC A/UPC E enable	AA4	without ADD ON
	AAM	with ADD ON 2 ONLY
	AAN	with ADD ON 5 ONLY
	AA7	with ADD ON 2 AND 5
EAN 8 enable	AAG0	check digit transmission disable
	AAG1	check digit transmission enable
EAN 13 enable	AAH0	check digit transmission disable
	AAH1	check digit transmission enable
UPC A enable	AAI0	check digit transmission disable
	AAI1	check digit transmission enable
UPC E enable	AAJ0	check digit transmission disable
	AAJ1	check digit transmission enable
Code 39 disable	AB0	
Code 39 Standard enable	AB11xxyy	no check digit control
	AB12xxyy	check digit control and transmission
	AB13xxyy	check digit control without transmission
Code 39Full ASCII enable	AB21xxyy	no check digit control
	AB22xxyy	check digit control and transmission
Code 2/5 family disable	AC0	
Interleaved 2/5 enable	AC11xxyy	no check digit control
	AC12xxyy	check digit control and transmission
	AC13xxyy	check digit control without transmission
Normal 2/5 5 bars enable	AC21xxyy	no check digit control
	AC22xxyy	check digit control and transmission
	AC23xxyy	check digit control without transmission
Industrial 2/5 (IATA) enable	AC31xxyy	no check digit control
	AC32xxyy	check digit control and transmission
	AC33xxyy	check digit control without transmission
Matrix 2/5 3 bars enable	AC41xxyy	no check digit control
	AC42xxyy	check digit control and transmission
	AC43xxyy	check digit control without transmission
Codabar family disable	AD0	
Codabar standard enable	AD111xxyy	no start/stop character equality control - nor transmission
	AD112xxyy	no start/stop character equality control but transmission
	AD121xxyy	start/stop character equality control but no transmission
	AD122xxyy	start/stop character equality control and transmission
	AD212xxyy	ABC Codabar no start/stop character equality control but transmission
Code 128 family disable	AI0	
Code 128 enable	AI11 xxyy	control without transmission of check digit
EAN 128 enable	AI21 xxyy	control without transmission of check digit
Code Length	AILxxyy	
Code 93 family disable	AK0	
Code 93 enable	AK1 xxyy	control without transmission of check digit
PDF417 disable	AR0	
PDF417 enable	AR1	
Pharmacode disable	AQ0	
Pharmacode enable	AQ1xxyy	forward code tx direction
	AQ2xxyy	reverse code tx direction
Overflow ratio	AQAz	

xyy = ASCII numbers that define:

xx = min. acceptable code length

yy = max. acceptable code length

zz = overflow ratio value

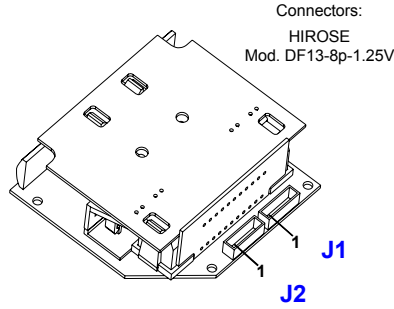
The minimum code length must always be less than or equal to the maximum.

For more detailed information on the TC1100 programmability and complete parameter list, please refer to the TC1100 Reference Manual.



Electrical Connections

J1		
1	SGND	Serial Ground
2	OUT -	See Figure 1
3	OUT +	
4	EXT BEEPER	External beeper connection
5	CTS	Clear to send
6	RX	Reception
7	RTS	Request to send
8	TX	Transmission
J2		
1	VCC+	+5Vdc
2	GND	GND
3	CLKOUT	
4	DATAOUT	
5	DATAIN WAND	
6	CLKIN	
7	EXT TRIG+	See Figure 2
8	EXT TRIG-	



Physical Dimensions

Width	63 mm	2.48 inches
Length	60.5 mm	2.38 inches
Height	27 mm	1.06 inches

Led Status

Led2 ON =	Power supply ON
Led2 OFF =	Power supply OFF
Led1 ON =	Good read (the led will remain ON until status changes)
Led1 OFF =	Miss read

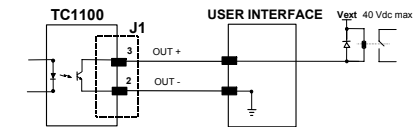
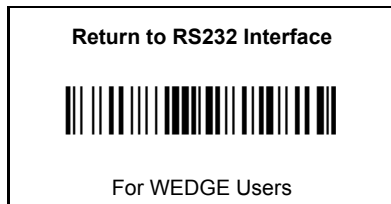
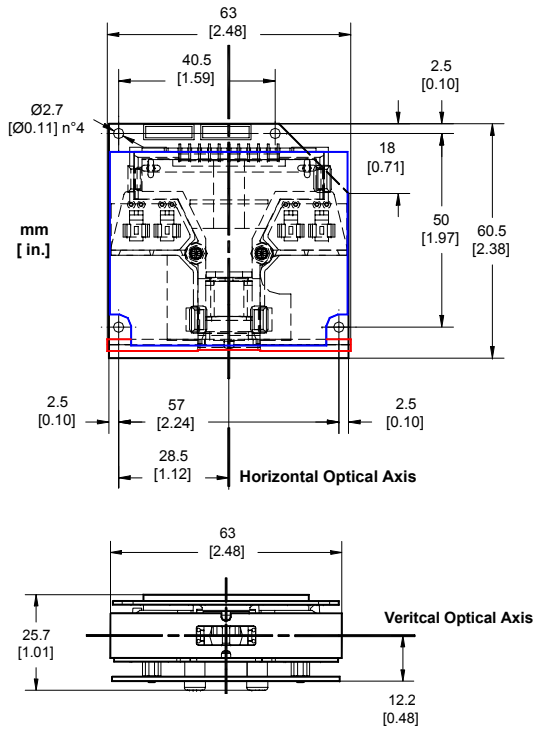
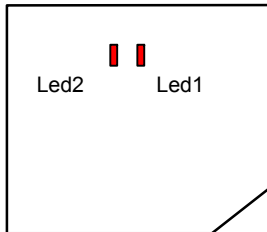
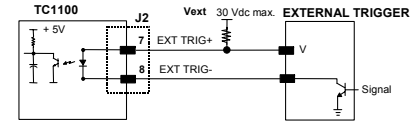
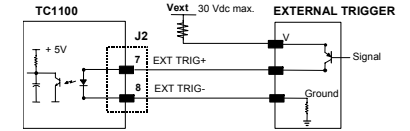


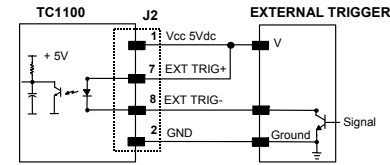
Figure 1 - Output Connection (Good Read). Example NPN



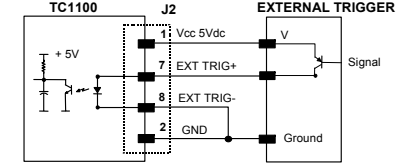
Input NPN command using external power



Input PNP command using external power



Input NPN command using TC1100 power



Input PNP command using TC1100 power

Figure 2 - Trigger Connections

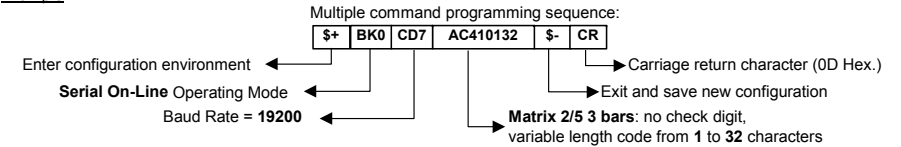
Basic Commands for TC1100

The TC1100 default configuration can be changed by receiving commands through the RS232 Interface. The command syntax is given below with an example.

Command syntax

\$+ Command(s) \$- <CR> the new setting will be definitive (stored in FLASH EPROM)

Example:



Commands:

OPERATING MODES				
On-line	BK1			
Serial On-line	BK0			
Automatic	BK3			
Automatic / Lighting System Standby	BK2			
To enter in Test mode	#+Dstat1<CR> (does not require \$+ or \$-)			
To exit Test mode	#+Dstat0<CR> (does not require \$+ or \$-)			
GENERAL FEATURES				
RS232 interface selection	CP0			
RS232 Baud Rate	CD0 for 150 Baud up to CD8 for 38400 Baud			
WEDGE AT	CP500			
WEDGE Notebook	CP505			
Keyboard Nationality	FJ7	Belgian	FJ1	Italian
	FJ4	English	FJ6	Spanish
	FJ2	French	FJ5	Swedish
	FJ3	German	FJ0	USA
CCD Scan Rate	BT0	67 scans/sec		
	BT1	135 scans/sec		
	BT2	270 scans/sec		
Puzzle Solver	AU1	enable	AU0	disable
Ink Spread	AX1	enable	AX0	disable
Decoding safety	ED0	1 read	ED2	3 reads
	ED1	2 reads	ED3	4 reads
To restore the default configuration	\$+\$<CR> (does not require \$-)			
To get configuration from the reader	\$+\$&<CR> (does not require \$-)			