

FCL Components Thermal Printer

FTP-62HDSL201-R

Interface Board

FCL Components interface board for low voltage printer mechanisms

Features

- Interface board for FTP-6xHMCL thermal printer mechanisms
- RS-232C and USB (full speed) interface
- Various detection functions: paper, mark, thermal head temperature, power supply voltage, etc.
- Barcode printing available
- Auto cutter drive compatible (full or partial)
- Supports registration of characteristics and images
- UL File No. E171434
- RoHS compliant



FTP-62HDSL

■ Part numbers

Part number	Interface type	Length	Max. printing speed	Mechanism part numbers
FTP-62HDSL201-R	USB/RS-232C	2-inch	120mm/sec.	FTP-62HMCL153 FTP-62HMCL163 FTP-62HMCL463
		3-inch	100mm/sec.	FTP-63HMCL153 FTP-63HMCL163 FTP-63HMCL463
		4-inch	100mm/sec.	FTP-64HMCL153

■ Font

FTP-62HDSL201-R	ANK, Thai, JIS Kanji, Traditional Chinese
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■ Barcode and image

Barcode	1D	UPC-A, UPC-E, JAN(EAN)13, JAN(EAN)8, CODE39, ITF, CODABAR, CODE128, GS1 DataBar-14, GS1 DataBar-14 truncated
	2D	QR code, PDF417, GS1DataBar-14 stacked, GS1 DataBar-14 Omnidirectional, GS1 DataBar Expanded
Bit image	Horizontal: 8 to 832 dots, vertical 1 to 1023 dots	

■ Specifications

Item	Specifications
Supply voltage	6.0 to 9.5VDC
Dimension	70 x 35 mm
Weight	Approx. 10g
Environment	Operating temperture/humidity 0°C to +50°C guarantee, +5°C to +40°C with FCL Components recommended thermal paper 20 to 85%RH (no condensation)
	Storage temperture/humidity -20°C to +60°C (excluding paper), 5 to 90%RH (no condensation)
Communication interface	RS-232C USB full speed

■ Print/paper feed specifications

Item	Specifications		
Mechanism	FTP-62HMCL	FTP-63HMCL	FTP-64HMCL
Dot pitch	0.125mm (H) x 0.125mm (W)		
Number of dots	384 dots	576 dots	832 dots
Max. print width	48mm	72mm	104mm
Line space	Approx. 1/8 inch (26 dots/line) Changeable by command		
Print speed*1	Max. 120mm/s	Max. 100mm/s	Max. 100mm/s
Paper feed (/ATF)	Approx. 100mm/s		

■ Interface specifications at host side

Item	Specifications
USB Ver. 2.0	Data speed: Full speed (max. 12Mbps.) Differential input/output
RS-232C	Data speed: 9,600 / 19,200 / 38,400 / 115,200 / 230,400 bps*2 Communication method: Full duplex communication Synchronous method: Asynchronous Flow control: RTS (DTR) • CTS (DSR) signal or X ON / X OFF* 2 Input/output level: RS-232C level

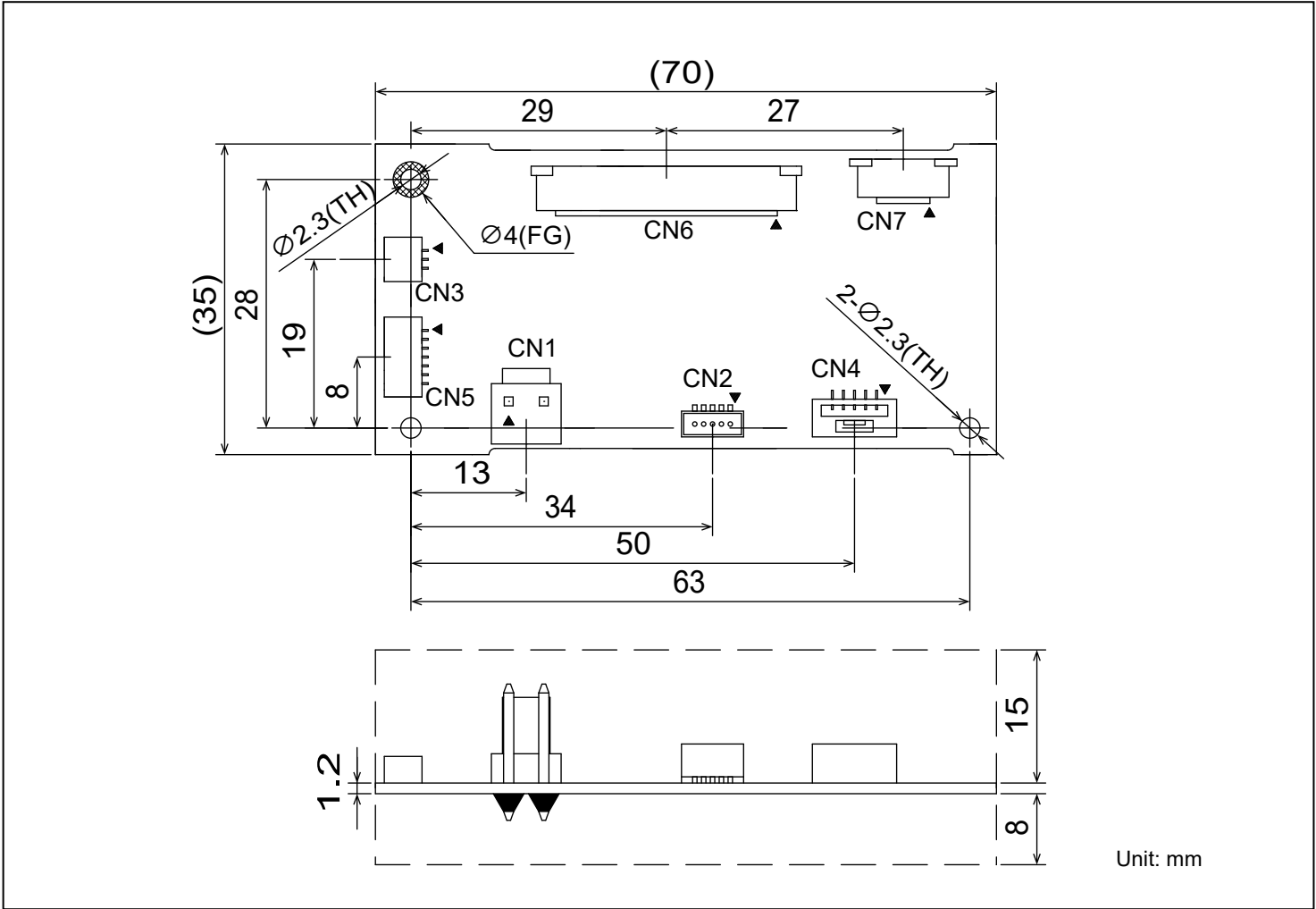
Notes:

1*: Conditions when using PD150R motor current 600mA/phase voltage 7.6V print ratio 12.5% max., operating temperature 25°C, humidity 60±15%RH.

White lines may appear depending on the printing pattern or division control when printing. Please evaluate in advance.

2*: Settings changed by command

■ Dimensions



■ Connectors

Symbol	Name
CN1	Power supply connector
CN2	RS-232C connector
CN3	Near end connector
CN4	USB connector
CN5	External I/O connector
CN6	Printer mechanism connector
CN7	Cutter connector

■ Connector for power supply - Connector (CN1)

Recommended housing: VHR-2(J.S.T.) or equivalent

Recommended cable: AWG#22 to 30, cable length at 300mm maximum

No.	Signal	I/O	Content	No	Signal	I/O	Content
1	V _p	I	Power input	2	GND	-	Ground

■ RS-232C connector - Connector (CN2)

Recommended housing: SHR-05V-S (J.S.T.) or equivalent

Recommended cable: AWG#28 to 32, cable length at 500mm maximum

No.	Signal	I/O	Content	No	Signal	I/O	Content
1	RXD	I	Receive data signal	2	TXD	O	Transmit data signal
3	RTS (DTR)	O	Request to send signal	4	GND	-	Ground
5	CTS (DSR)	I	Clear to send signal				

■ Near end connector - Connector (CN3)

Recommended housing: SHR-03V-S (J.S.T.) or equivalent

Recommended cable: AWG#28 to 32, cable length at 300mm maximum

No.	Signal	I/O	Content	No	Signal	I/O	Content
1	NVCC	O	Near end sensor power	2	/NES	I	Near end signal input
3	GND	-	Ground				

■ USB connector - Connector (CN4)

Recommended housing: GHR05V-S (J.S.T.) or equivalent

Recommended cable: AWG#32 to 26, cable length at 1000mm maximum

No.	Signal	I/O	Content	No	Signal	I/O	Content
1	VBUS	I	VBUS signal	2	D-	I/O	D- signal
3	D+	I/O	D+ signal	4	GND	-	Ground
5	FG	-	Frame ground				

■ External I/O connector - Connector (CN5)

Recommended housing: GHR05V-S (J.S.T.) or equivalent

Recommended cable: AWG#28 to 32, cable length at 300mm maximum

No.	Signal	I/O	Content	No	Signal	I/O	Content
1	/RST	I	Initialization request signal	2	/ATF	I	Feed input signal
3	/SIN	I	Detection function setting signal	4	LED1	O	Power LED signal
5	LED2	O	Power LED signal	6	/CUT	I	Paper cut signal (low active)
7	GND	-	Ground				

■ Printer mechanism connector - Connector (CN6)

Please refer to the printer mechanism specifications.

■ Cutter connector - Connector (CN7)

Please refer to the printer mechanism specifications.

Note: Symbol “-” means a negative logic signal.
 “I” or “O” means a signal direction from the interface board side

■ Commands

Command	Content
HT	Moves print position
LF	Line feed
FF	Feeds forms (new page)
DC2	Power down
ESC FF	Data print in page mode
ESC EM+n	Auto loading amount setting
ESC RS	Sets reverse printing
ESC US	Resets reverse printing
ESC SP+n	Character spacing setting
ESC !+n	Sets print mode
ESC \$+nL+nH	Horizontal absolute position setting
ESC %+n	Downloaded character specification/cancellation
ESC &+y+c1+c2+x+d1~dn	Downloaded character definition*1, 3
ESC *+m+nL+nH+d1~dk	Prints bit image
ESC -n	Undeline setting
ESC 2	Sets default line spacing
ESC 3+n	Sets the line feed length
ESC ?+n	Downloaded character deletion*1, 3
ESC @	Printer initialization
ESC A+n	Set the space between the line
ESC C+n	Sets the page length by character line
ESC D+n1~nk+NUL	Sets the horizontal tab position
ESC J+n	Feeds paper in forward direction and prints
ESC K+n	Print and backward paper feed
ESC L	Page mode selection
ESC R+n	Selects international character
ESC S	Line mode selection
ESC T+n	Print direction setting in page mode
ESC V+n	Right rotation 90° specification/cancellation
ESC W+xL+xH+yL+yH+dxL+dxh+dyL+dyH	Print area setting in page mode
ESC X+n+m	Setting the turning time of the motor excitation
ESC Y+SOH+ESC+x+a+FF+m+n+d1~dk	Program download
ESC ¥+nL+nH	Horizontal relative position setting
ESC a+n	Position alignment
ESC c+1+n	Sets internal processing
ESC c+5+n	External input signal valid/invalid setting
ESC d+n	Printing and n-line feeding
ESC e+n	Print and back forward paper feed paper n lines
ESC s+n	Sets printing speed
ESC t+n	Character code table selection

■ Commands

Command	Content
ESC {+n	Sets/resets upside down printing
ESC DEL +n	Nonvolatile memory deletion* ^{1, 3}
FS !+n	Kanji printing mode collective specification* ²
FS &	Kanji printing mode specification* ²
FS *+m+nL+nH+d1~dk	High-speed batch image print
FS -n	Kanji underline specification/cancellation* ²
FS .	Kanji printing mode cancellation* ²
FS 2+c1+c2+d1~dn	User defined character definition* ^{1, 2, 3}
FS 9+n	Sets the detection functions
FS C+n	Kanji code system selection* ²
FS E+n	Standard energy setting
FS S+n1+n2	Kanji spacing setting* ²
FS W+n	Specify/cancel double tall, double wide Kanji characters* ²
FS r+n	Parameter transmission (serial mode)
GS !+n	Character size setting
GS \$+nL+nH	Vertical absolute position setting in page mode
GS &+m+x+yL+yH+d1~dn	Downloaded image definition* ¹
GS '+m+n	Downloaded image print* ³
GS (E+pL+pH+fn+a+b8~b1 (fn=3)	Memory switch setting* ¹
GS (E+pL+pH+fn+a (fn=4)	Memory switch transmission
GS (E+pL+pH+fn+d1~d9(fn=67)	RS-232C communication setting* ¹
GS (E+pL+pH+fn+d1~d9 (fn=68)	USB communication setting* ¹
GS (E+pL+pH+fn+a+n (fn=70, a=5)	Mark width setting* ¹
GS (E+pL+pH+fn+a+n (fn=73, a=1)	Language model setting* ¹
GS (K+pL+pH+fn	Print control setting
GS (K+pL+pH+fn+n (fn=49)	Print density setting
GS (K+pL+pH+fn+n (fn=50)	Print speed setting
GS (K+pL+pH+fn+n (fn=97)	Number of head division setting
GS (l+pL+pH+fn+a (fn=65, a=65)	Firmware information transmission
GS <	Mark detection execution
GS A+m+n	Sets the line feed length after mark detection
GS E+n	Sets print quality
GS H+n	HRI character printing position selection
GS L+nL+nH	Sets left margin
GS V+m+n	Cut paper
GS W+nL+nH	Sets print area width
GS ¥+nL+nH	Vertical relative position setting in page mode
GS a+n	Sets automatic status transmission
GS e+m+n	Sets bar code width
GS f+n	HRI character font selection
GS h+n	Sets bar code height
GS k+m+n+d1~dn	Bar code print

■ Commands

Command	Content
GS k+m+k1+k2+k3+k4+{p1+d(1,1)~d(1,j)}~{pi+d(i, 1)~d(i, j)}NUL	QR code print
GS k+m+k1+k2+k3+k4+nL+nH+d1~dn	PDF417 print
GS k+m+n+k+pL+pH+d1~dp	Bar code (GS1 DataBar) print
GS k+m+n+k1+k2+k3+k4	Bar code (GS1 DataBar) setting
GS w+n	Barcode horizontal size setting

- *1: Makes write/erase to the nonvolatile memory.
*2: Only the model equipped with the Kanji character corresponds.
*3: Only the model equipped with the extended nonvolatile memory.

■ Options

Item		Part number	Length
Interface cable	USB (CN4)	FTP-62GY311#01	1,000mm (39.4 inches)
	RS-232C (CN2)	FTP-62GY302	500mm (19.7 inches)
Power supply cable	Logic, head, motor (CN1)	FTP-629Y603	500mm (19.7 inches)

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