

TO BE DISCONTINUED

FCL Components Thermal Printer FTP-62EDSL100 series Interface Board

FCL Components interface board for 24V FTP-60E series

Features

- Interface boards for FTP-6xEMCL thermal printer mechanisms
- High speed 1 division image printing
- USB (full speed) and RS-232C interface
- Various detection functions: paper mark, platen open, thermal head temperature, power supply voltage
- Automatic Division Energizing function
- Selection from 2 font types: 12 dots system character and 16 dots system character
- Support registration of characters and image
- RoHS compliant



FTP-62EDSL100

■ Part numbers

Part number	Interface type	Length	Max. printing speed (DIP switching)	Mechanism part number
FTP-62EDSL101#**	USB/RS-232C	6-inch	100mm/sec.	FTP-66EMCL001 FTP-66EMCL101 FTP-66EMCL112
			50mm/sec.	FTP-66EMCL051 FTP-66EMCL151 FTP-66EMCL162
		8-inch	80mm/sec.	FTP-68EMCL001 FTP-68EMCL101 FTP-68EMCL112
			50mm/sec.	FTP-68EMCL051 FTP-68EMCL151 FTP-68EMCL162

Note: DIP switch setting

■ Font

Part number	Font
FTP-62EDSL101#01-R	ANK, Thai, JIS Kanji, Traditional Chinese
FTP-62EDSL101#02-R	ANK, Thai, Traditional Chinese

■ Specifications

1.1 Basic specifications

Item	Specifications	Remarks
Dimensions	70 x 50mm	
Weight	Approx. 25g	
Communication interface*1	RS-232C USB full speed (max. 12Mbps.)	

*1: Change by command

1.2 Print / paper feed specifications

Item	Specifications			
	FTP-66EMCL		FTP68EMCL	
	Standard	Low speed	Standard	Low speed
Dot pitch	0.125mm (H) x 0.125mm (W)			
Number of dots	1,152 dots/line		1,696 dots/line	
Max. print width	144 mm		212mm	
Max. print height*1	80 mm			
Line space*2	Approx. 1/8 inch (26 dots/line)			
Print speed*3	Max. 100mm/sec.	Max. 50mm/sec.	Max. 80mm/sec.	Max. 50mm/sec.
Paper feed speed(/ATF)	Approx. 50mm/sec.			

*1: At High speed bit image printing

*2: Changeable by command

*3: When the print operation is done in low speed, white line may occur depending on printing pattern or division control. Therefore, please

evaluate in advance when you use low speed printing

Conditions: Paper : PD150R or equivalent

Voltage : 24V

Print ratio : Up to 12.5%

Operating Temperature/Humidity: 25°C, 60±15%

1.3 Print speed

1.3.1 Standard mechanisms

Mechanism	Speed mode/type	Max. print speed (division number)	
		Type 1 (high speed)	Type 2 (low speed)
FTP-66EMCL Standard	Mode 1	100 mm/sec. [1]*1	100 mm/sec. [1]*1
	Mode 2	50 mm/sec. [2]	50 mm/sec. [1]
	Mode 3	25 mm/sec. [2]	25 mm/sec. [1]
FTP-68MCL Standard	Mode 1	80 mm/sec. [1]*1	80 mm/sec. [1]*1
	Mode 2	50 mm/sec. [2]	50 mm/sec. [1]
	Mode 3	25 mm/sec. [2]	25 mm/sec. [1]

*1: Speed mode 1 is only effective in the high-speed batch image print

1.3 Print speed

1.3.2 Low speed mechanisms

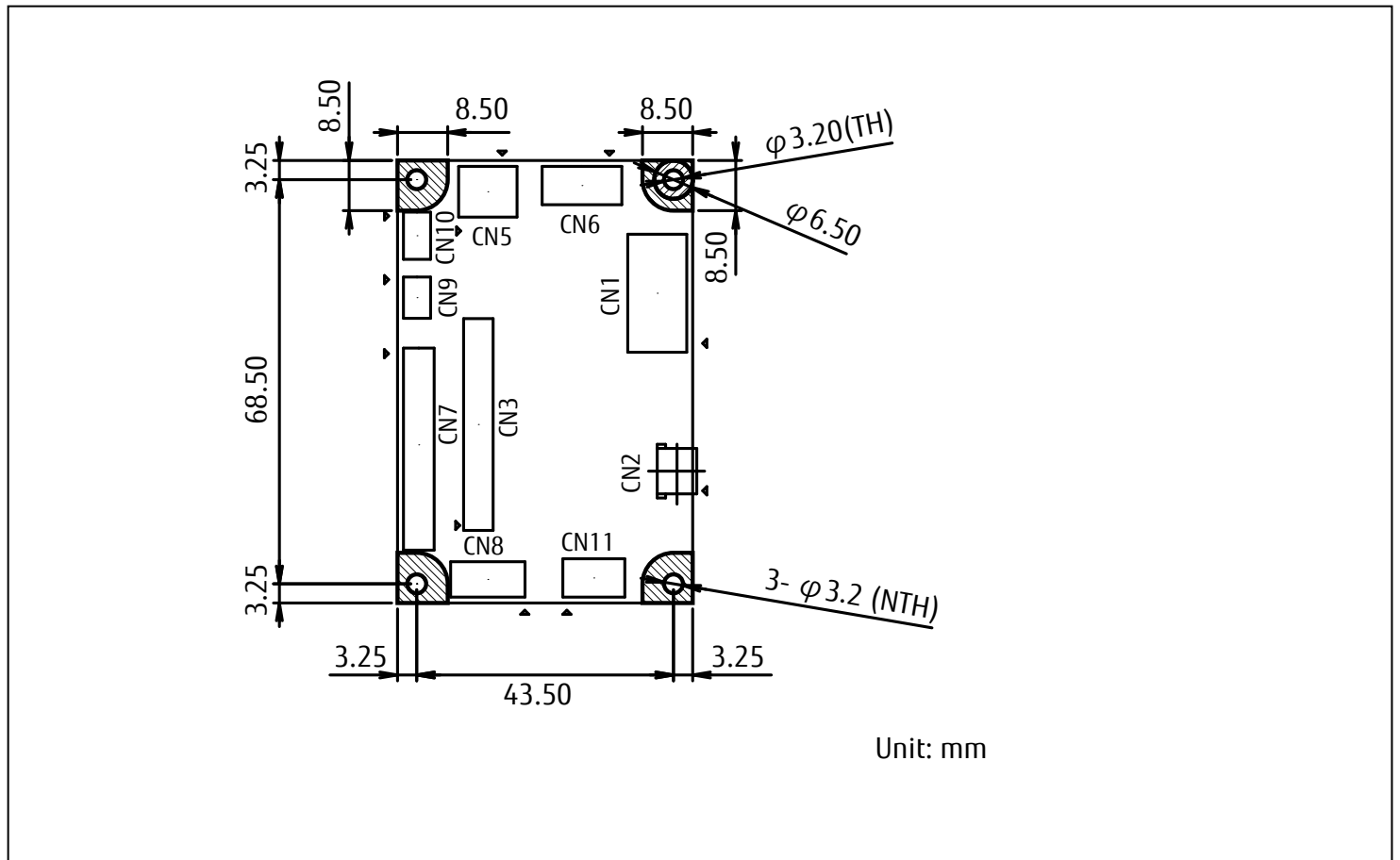
Mechanism	Speed mode/type	Max. print speed (division number)	
		Type 1 (high speed)	Type 2 (low speed)
FTP-66EMCL Low speed	Mode 1	50 mm/sec. [1]*1	10 mm/min. [1]
	Mode 2	50 mm/sec. [1]	10 mm/min. [1]
	Mode 3	25 mm/sec. [1]	20 mm/min. [1]
	Mode 4	12.5 mm/sec. [2]	30 mm/min. [1]
	Mode 5	10 mm/sec. [2]	6 mm/min. [1]
FTP-68MCL Low speed	Mode 1	50 mm/sec. [1]*1	10 mm/min. [1]
	Mode 2	50 mm/sec. [2]	10 mm/min. [1]
	Mode 3	25 mm/sec. [2]	20 mm/min. [1]
	Mode 4	12.5 mm/sec. [4]	30 mm/min. [1]
	Mode 5	10 mm/sec. [4]	6 mm/min. [1]

*1: Speed mode 1 is only effective in the high-speed batch image print

Note: - The printed data transfer rate influences the print speed. The above-mentioned print speed has been measured since time to have disregarded the data transfer time.

- The print speed might decrease by the ambient temperature and applied voltage and a paper setting

■ Dimensions



■ Connectors and switch

No.	Name	Remarks
CN1	Power supply connector	
CN2	USB connector	
CN3	Printer mechanism to connector	To the FPC adaptor
CN5	Near end connector	
CN6	External I/O connector	
CN7	Printer mechanism connector	
CN8	Motor connector	Directly connected to the mechanism
CN9	Sensor connector 1	
CN10	Sensor connector 2	
CN11	RS-232C connector	
SW1	Mechnism select switch	

■ Connector for Power supply (CN1)

- Recommended housing: XHP-6 (J.S.T.) or equivalent

No.	Name	Dir	Description	No.	Name	Dir	Description
1	Vp	I	Power input	2	Vp	I	Power input
3	Vp	I	Power input	4	GND	-	Ground
5	GND	-	Ground	6	GND	-	Ground

Note: DIR is viewed signal from printer side
 Recommended cable: AWG#30 ~ 22, cable length 300mm or less

■ USB Connector (CN2)

- Recommended housing: USB mini-B type

No.	Name	Dir	Description	No.	Name	Dir	Description
1	VBUS	I	Bus power supply	2	D-	I/O	Differential data -
3	D+	I/O	Differential data +	4	NC	-	Not connected
5	GND	-	Signal ground	Shell	FG	-	Frame ground

Note: DIR is viewed signal from printer side
 Recommended cable: USB(V2.0 full speed), cable conforming to USB standards (V2.0 full speed)

■ Printer mechanism connector (CN3)

- Recommended housing: PHDR-34VS (JST) or equivalent
- Pin array: Please see printer mechanical specifications

■ Connector for paper near-end sensor (CN5)

- Recommended housing: PHR-3 (JST) or equivalent

No.	Name	Dir	Description	No.	Name	Dir	Description
1	NVCC	O	Near end power sensor	2	NES	I	Near end signal input
3	GND	-	Near end signal ground				

Recommended cable: AWG#28 to 32, cable length 300mm or less

■ External I/O connector(CN6)

- Recommended housing: ZHR-7 (J.S.T.) or equivalent

No.	Name	Dir	Description	No.	Name	Dir	Description
1	/ATF	I	Paper feed signal	2	/INPRM	I	Initialization signal request
3	/SLCTIN	I	Detection function setting	4	GND	-	Signal ground
5	NC	-	Not connected	6	NC	-	Not connected
7	NC	-	Not connected				

Recommended cable: AWG#28 to 32, cable length 300mm or less

■ Printer mechanism connector (CN7)

- Mounted connector: 1MSA-9619S-28Y920 (IRISO) or equivalent
- Pin array: Please see printer mechanical specifications

■ **Motor connector (CN8)**

Recommended housing: 52610-0672 (Molex) or equivalent
 Pin array: Please see printer mechanical specifications

■ **Sensor connector 1 (CN9)**

Mounted connector: SHR-05V-S(JST) or equivalent
 Pin array: Please see printer mechanical specifications

■ **Sensor connector 2 (CN10)**

Recommended housing: SHR-06V-S(JST) or equivalent
 Pin array: Please see printer mechanical specifications

■ **RS-232C connector (CN11)**

Recommended housing: ZHR-5(JST) or equivalent

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

Recommended cable: AWG#28 to 32, cable length 300mm or less

■ **Commands**

Command	Content
HT	Moves print position
LH	Line feed
FF	Feeds forms (new page)
ESC EM+n	Setting the amount of feeding at automatic paper feed
ESC RS	Sets reverse black and white printing
ESC US	Resets reverse black and white printing
ESC SP+n	Character spacing setting
ESC !+n	Sets print mode
ESC %+n	External registration character specification/cancellation
ESC &+y+c1+c2+x+d1 ~ dn	External registration character definition*2
ESC *+m+n1+n2+d1~dn	Set bit image mode
ESC -+n	Undeline setting
ESC 2	Sets default line spacing
ESC 3+n	Sets line pitch
ESC ?+n	External registration character deletion*2
ESC @	Printer reset
ESC A+n	Set the space between the line
ESC C+n	Sets the page length by character line
ESC D+n1+nk+NUL	Set the horizontal tab position
ESC J+n	Feeds paper in forward direction and prints
ESC K+n	Reverse paper feed and prints
ESC R+n	Selects international character

■ Commands

Command	Content
ESC V+n	Right rotation 90° specification/cancellation
ESC X+m+n	Setting the turning time of the motor excitation
ESC c+1+n	Sets internal processing
ESC c+5+n	Paper feed key valid/invalid setting
ESC d+n	Printing and n-line feeding
ESC e+n	Prints and reverses feeds n-line
ESC s+n	Sets printing speed
ESC t+n	Character code table selection
ESC {+n	Sets/resets upside down printing
ESC DEL+n	Nonvolatile memory deletion *2
FS !+n	Kanji printing mode collective specification*1
FS &	Kanji printing mode specification*1
FS *+m+n1+n2+d1 ~ dn	High speed collective image printing specified*3
FS -+n	Kanji underline specification/cancellation*1
FS .	Kanji printing mode cancellation*1
FS 2+c1+c2+d1~ dn	External character definition*1, *2
FS 9+n	Sets the detection functions
FS C+n	Kanji code system selection*1
FS E+n	Standard energy setting
FS S+n1+n2	Kanji spacing setting*1
FS W+n	Kanji double height and width printing specification/cancellation*1
FS r+n	Reply parameter setting
GS !+n	Character size setting
GS &+m+x+y1+y2+d1 ~ dn	Registered bit image definiton*2
GS '+m+n	Registered bit image printing*2
GS (+E+L1+L2+fn+d1 ~ d9 (fn=67)	RS-232C communication setting*2
GS <	Line feeds to the next mark
GS A+m+n	Sets the line feed length after mark detection
GS E+n	Sets print quality
GS L+n1+n2	Sets left margin
GS W+n1+n2	Sets width of print area
GS a+n	Automatic status transmission setting
GS e+m+n	Sets bar code width
GS h+n	Sets bar code height
GS K+m-n+d1~dn	Barcode printing (number of characters specification mode)
GS k+m+k1+k2+k3+k4+{[p1]}+[d(1,1)]~[d(1,j)]~{[pi][d(i, 1)]~[d(i, j)]}[00]16	QR two dimensional code printing*3
GS k+m+n+k+pL+pH+d1~dn	Bar code (GS1 DataBar) printing*3
GS k+m+n+k1+k2+k3+k4	Bar code (GS1 DataBar) setting*3
GS w+n	Barcode width magnification

*1: Only the model equipped with the Kanji character corresponds. *2: Only the model equipped with the extended nonvolatile memory.

*3: Only the model equipped with the extended volatile memory

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