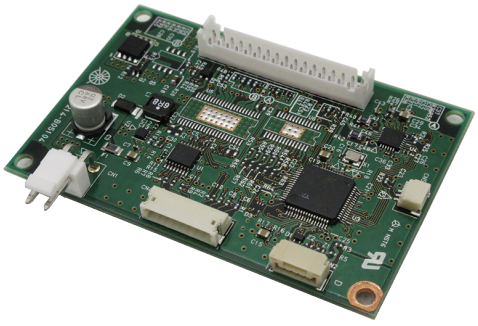
FCL Components Thermal Printer
FTP-62EDSL200 series
Interface Board

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

Features

- Interface boards for FTP-6xEMCL thermal printer mechanisms
- USB (full speed) adn RS-232C interface
- Various detection functions: Paper, mark, platen open, thermal head/motor temperature, power supply voltage, near end
- Various alarm function and protective functions: temperature, power supply voltage, MCU operation, motor over current
- Print quality stabilization by the thermal head temperature and power supply voltage monitoring
- RoHS compliant



FTP-62EDSL200

Part numbers

Part number	Interface type	Length	Max. printing speed (DIP switching)	Mechanism part number
FTP-62EDSL201	USB/RS-232C	6-inch	100mm/sec.	FTP-66EMCL112
		8-inch	80mm/sec.	FTP-68EMCL101 FTP-68EMCL112
FTP-62EDSL202	USB/RS-232C	6-inch	50mm/sec.	FTP-66EMCL162
		8-inch	50mm/sec.	FTP-68EMCL162

Font

Part number	Font
FTP-62EDSL201	ANK
FTP-62EDSL202	ANK

Interface specification at host side

Item	Specifications
USB v2.0	Transmission rate: Full speed 12Mbps max. Data input/output method: Differential
RS-232C	Data speed: 9,600 / 19,200 / 38,400 / 115,200 / 230,400* Synchronous method: Asynchronous, full duplex communications Handshake: RTS(DTR) / CTS(DSR) control, XON/XOFF control* Output level: RS-232C

*: Changeable settings to (***) by command

■ Specifications

Item			Specifications	
Part numbers			FTP-62EDSL201	FTP-62EDSL202
Power supply			24VDC ±10%	
Print speed		6-inch	Max. 100mm/sec.	Max. 50mm/sec. (min 10mm/min.)
		8-inch	Max. 80mm/sec.	Max. 50mm/sec. (min 10mm/min.)
Print specifications	Printing mode		Line mode	
	Character	Type	Alphametric and katakana: 159, International and special characters: 195	
		Structure*1	8x16 dots, 12x24 dots	
		Modification	Black-white reversed, double width size, double height size, quadruple size, underline, 90 degree, right rotate, upside down	
	Bit image	6-inch	Horizontal: 8 to 1,152 dots, Vertical 1 to 65,535 dots*2	
		8-inch	Horizontal: 8 to 1,696 dots, Vertical: 1 to 65,535 dots*2	
		Modification	Black-white reversed	
Detection function			Mark, paper, platen open, paper end, thermal head irregularity, motor on head temperature irregularity, power supply irregularity, MCU operation irregularity, transmission data irregularity, hardware irregularity, near end, thermal head over heat, thermal head's cable disconnection, non-volatile memory irregularity, RAM irregularity	
Dimension			75 x 50 mm	
Weight			Approx. 15g	
Environment	Operating temperature/ humidity		0 to +50 degree C guarantee: +5 to +40 degree C with FCL Components recommended thermal paper) 20 to 85%RH (No condensation)	
	Storage temperature/ humidity		-20 to +60 degree C (excluding paper), 5 to 90% RH (No condensation)	
Mean time between failure (MTBF)			500,000 hours	

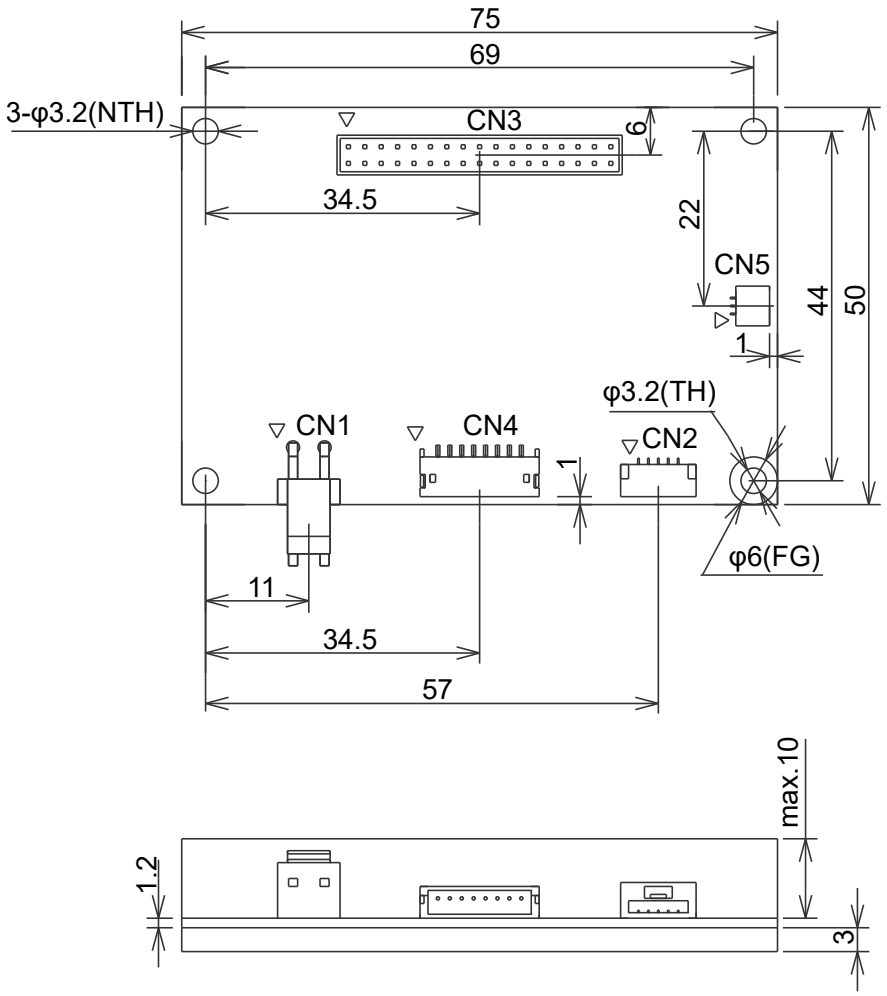
*1: Depending on embedded characters
*2: Width settings are available by left margin position setting and printing area width setting

■ Accessories (optional)

Item	Part number	Connector	Length
USB interface cable	FTP-62GY311#01	USB type A plug, GHR05V-S (J.S.T.)	1m
Power supply cable	FTP-629Y602	VHR-2 (J.S.T.)	0.5m
Mechanism connection (extended) cable	FTP-62EY001	PHDR-34VS (J.S.T.)	0.3m

*: These cables are RoHS compliant

■ Dimensions



*Please connect to the frame ground and φ (phi) 6.0 through hole screw hole (FG).

Tolerance: ±0.2 mm
( ): Reference
Unit: mm

■ Connectors and switch

No.	Name	Remarks
CN1	Power supply connector	
CN2	USB connector	
CN3	Printer mechanism to connector	To the adapter board on printer mechanism
CN4	RS-232C connector	
CN5	Near end connector	

■ Connector for Power supply (CN1)

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

No.	Name	Dir	Description	No.	Name	Dir	Description
1	Vp	I	Power input	2	GND	-	Ground

Note: DIR is viewed signal from printer side

■ USB Connector (CN2)

• Recommended housing: GHR05V-S, SSHL-002GA1-p0.2 (gold plating) (J.S.T.) or equivalent

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	GND	-	Ground
5	FG	-	Frame ground				

Note: DIR is viewed signal from printer side

■ Printer mechanism connector (CN3)

Recommended housing: PHDR-34VS (JST) or equivalent

Pin array: Please see printer mechanial specifications

No.	Name	Dir	Description	No.	Name	Dir	Description
1	MTMP	I	Motor temperature detection signal	2	GND	-	Ground
3	MT_/A	-	Motor /A signal	4	MT_A	-	Motor A signal
5	MT_B	-	Motor B signal	6	MT_/B	-	Motor /B signal
7	VSEN_P	O	Paper sensor power	8	PHE_P	I	Paper sensor signal
9	PHK_P	I	Paper sensor cathode signal	10	VSEN_M	O	Mark sensor power
11	PHE_M	I	Mark sensor signal	12	PHK_M	I	Mark sensor cathode signal
13	SW	I	Platen detection signal	14	SW	O	Platen detection signal
15	VH	O	Head power	16	VH	O	Head power
17	DI	I	Head power	18	/LAT	O	Head latch signal
19	CLK	O	Head lock signal	20	VDD	O	Head logic power
21	/STB1	O	Head strobe 1 signal	22	/STB2	O	Head strobe 2 signal
23	/STB3	O	Head strobe 3 signal	24	GND	-	Ground
25	GND	-	Ground	26	GND	-	Ground
27	GND	-	Ground	28	HTMP	I	Head temperature detection signal
29	/STB4	O	Head strobe 4 signal	30	/STB5	O	Head strobe 5 signal
31	/STB6	O	Head strobe 6 signal	32	DO	O	Head data output signal
33	VH	O	Head power	34	VH	O	Head power

■ RS-232C connector (CN4)

Recommended housing: ZHR-8 (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	-	Ground
5	CTS (DSR)	I	Clear to send signal	6	/SIN	I	Detection function setting signal
7	/RST	I	Reset	8	/ATF	I	Paper feed

Note: DIR is viewed signal from printer side

■ Connector for paper near-end sensor (CN5)

Recommended housing: SHR-03V-S (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				

Note: DIR is viewed signal from printer side

■ Commads

Command	Content
LF	Line feed
ESC ! n	Sets print mode
ESC * m nL nH d1~dk	Bit image print
ESC 3 n	Set line pitch
ESC @	Printer reset
ESC C n	Sets the page length by character line
ESC J n	Print and feed paper in forward directions
ESC R n	Selects internationl character
ESC X m n	Motor off time setting
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 s n	Sets printing speed
ESC t n	Character code table selection
FS 9 n	Sets the detection functions
FS r n	Reply parameter setting
GS (E pL pH fn d1 ~ d9 (fn=67)	RS-232C communication setting
GS (K pL pH fn n (fn=49)	Print density setting
GS (K pL pH fn n (fn=97)	Number of head division setting
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 nL nH	Sets left margin
GS W nL nH	Sets width of print area
GS a n	Automatic status transmission setting
GS (E pL pH fn a b8 ~ b1 (fn=3)	Memory switch setting

Contact

Japan
FCL COMPONENTS LIMITED
Shinagawa Seaside Park Tower
12-4, Higashi-shinagawa 4-chome,
Tokyo 140 0002, Japan
Tel: +81 3 3450 1682
Email: fcl-contact@cs.fcl-components.com

North and South America
FCL COMPONENTS AMERICA, INC.
2055 Gateway Place, Suite 480
San Jose, CA 95110 U.S.A.
Tel: +1 408 745 4900
Email: fcai.components@fcl-components.com

Europe
FCL COMPONENTS EUROPE B.V.
Diamantlaan 25
2132 WV Hoofddorp
Netherlands
Tel: +31 23 5560910
Email: info@fcl-components.eu

Asia Pacific
FCL COMPONENTS ASIA, LTD.
No. 20 Harbour Drive, #07-01B
Singapore 117612
Tel: +65 6375 8560
Email: fcal@fcl-components.com

China
FCL COMPONENTS (SHANGHAI) CO., LTD.
Unit 1105, Central Park –Jing An, No.329 Heng
Feng Road, Shanghai 200070, China
Tel: +86 021 3253 0998
Email: fcsh@fcl-components.com

Hong Kong
FCL COMPONENTS HONG KONG CO., LIMITED
Room 13, 23/F, Seapower Tower, Concordia Plaza,
No.1 Science Museum Road,
Tsim Sha Tsui East, Kowloon, Hong Kong
Tel: +852 2881 8495
Email: fcsh@fcl-components.com

Web: www.fcl-components.com/en/