

INTERFACE BOARDS FOR FTP-604 Series

FTP-624DCL/DSL002

■ INTERFACE

1. Centronics standard

(1) Connector (CN3)

Connector part number : FCN-605Q030-G/M (Fujitsu Components)

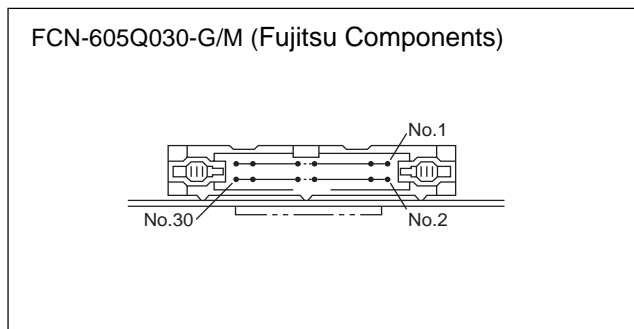
Mating connector part number : FCN-607B030-G/B or -G/O (Fujitsu Components) or equivalent

(2) Connector pin assignment

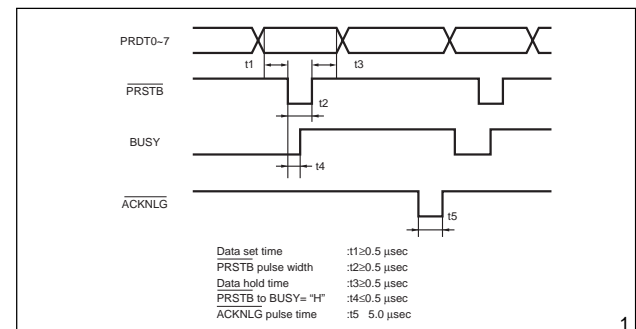
No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	$\overline{\text{PRSTB}}$	I	Data strobe	2	$\overline{\text{PRSTB-RET}}$	—	Connected to logic GND
3	PRDT0	I	Data 0	4	PRDT0-RET	—	Connected to logic GND
5	PRDT1	I	Data 1	6	PRDT1-RET	—	Connected to logic GND
7	PRDT2	I	Data 2	8	PRDT2-RET	—	Connected to logic GND
9	PRDT3	I	Data 3	10	PRDT3-RET	—	Connected to logic GND
11	PRDT4	I	Data 4	12	PRDT4-RET	—	Connected to logic GND
13	PRDT5	I	Data 5	14	PRDT5-RET	—	Connected to logic GND
15	PRDT6	I	Data 6	16	PRDT6-RET	—	Connected to logic GND
17	PRDT7	I	Data 7	18	PRDT7-RET	—	Connected to logic GND
19	$\overline{\text{ACKNLG}}$	O	Data input acknowledge	20	$\overline{\text{ACKNLG-RET}}$	—	Connected to logic GND
21	BUSY	O	Busy	22	BUSY-RET	—	Connected to logic GND
23	RINF2	O	Printer status	24	$\overline{\text{INPRM-RET}}$	—	Connected to logic GND
25	$\overline{\text{SLCTIN}}$	I	Printer select	26	$\overline{\text{INPRM}}$	I	Reset
27	RINF1	O	Printer status	28	RINF3	O	Printer status
29	$\overline{\text{ATF}}$	I	Paper feed request	30	GND	—	Logic GND

- Notes:
- Symbol “—” means a negative logic signal.
 - “-RET” signal is a return signal of the twisted pair cable.
 - “I” or “O” means a signal direction from the interface board side.

(3) Connector pin number



(4) Data input signal timing



(5) Printer status signals

	Error status	RINF1	RINF2	RINF3
1.	Paper out	Low	High	Low
2.	Paper near end	High	High	Low
3.	Head up	High	Low	Low
4.	Head temperature abnormality	High	Low	High
5.	Head voltage abnormality	Low	High	High
6.	Hardware abnormality	High	High	High
7.	Mark detection abnormality	Low	Low	Low
8.	Normal	Low	Low	High

2. RS-232C

(1) Connector (CN9)

Connector part number : B9B-PH-K-white (J.S.T.)

Mating connector part number : PHR-9 (J.S.T.) or equivalent

(2) Connector pin assignment

No.	Signal	I/O	ContentsNo.
1	FG	—	Frame ground
2	RD	I	Receive data
3	TD	O	Transmission data
4	DTR	O	Data terminal ready
5	GND	—	Signal ground
6	ASR	I	Data set ready
7	$\overline{\text{SLCTIN}}$	I	Printer select
8	$\overline{\text{INPRM}}$	I	Reset
9	$\overline{\text{ATF}}$	I	Paper feed request

Notes:

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

■ CONNECTOR PIN ASSIGNMENT

1. Connector for logic power supply (CN1)

Part number : B2B-XH-A-WHITE (J.S.T)
 Mating connector : XHP-2 (J.S.T) or equivalent

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	+5V	I	Power for logic IC	2	GND (+5V)	—	Logic GND

2. Connector for thermal head and motor power supply (CN2)

Part number : B6B-XH-A-WHITE (J.S.T)
 Mating connector : XHP-6 (J.S.T) or equivalent

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	5VH	I	Power for thermal head/motor	2	5VH	I	Power for thermal head/motor
3	5VH	I	Power for thermal head/motor	4	GND(5VH)	—	Thermal head/motor GND
5	GND(5VH)	—	Thermal head/motor GND	6	GND(5VH)	—	Thermal head/motor GND

3. Connector for stepping motor drive (CN4)

Part number : B4B-PH-K-S (J.S.T)

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	MT/B \bar{B}	O	Stepping motor coil excitation	2	MT/B	O	Stepping motor coil excitation
3	MT/A \bar{A}	O	Stepping motor coil excitation	4	MT/A	O	Stepping motor coil excitation

4. Connector for sensor (CN5)

Part number : B5B-PH-K-S (J.S.T)

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	+5V	O	Power for detector	2	PES \bar{PES}	I	Paper out detect signal
3	GND	—	Logic GND	4	+5V	O	Power for detector
5	HUP	I	Head-up detect signal				

5. Connector (1 of 2) for thermal head drive (CN6)

Part number : B10B-PH-K-S (J.S.T)
 Mating connector : PHR-10 (J.S.T) or equivalent

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	5VH	O	Power for head	2	5VH	O	Power for head
3	GND	—	Head GND	4	GND	—	Head GND
5	TMP	I	Temperature detection signal	6	$\overline{\text{ENB0}}$	O	Print enable 0
7	$\overline{\text{ENB1}}$	O	Print enable 1	8	$\overline{\text{ENB2}}$	O	Print enable 2
9	$\overline{\text{ENB3}}$	O	Print enable 3	10	+5V	O	Power for logic

6. Connector (2of 2) for thermal head drive (CN7)

Part number : B11B-PH-K-S (J.S.T)
 Mating connector : PHR-11 (J.S.T) or equivalent

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	$\overline{\text{ENB4}}$	O	Print enable 4	2	$\overline{\text{ENB5}}$	O	Print enable 5
3	$\overline{\text{ENB6}}$	O	Print enable 6	4	$\overline{\text{ENB7}}$	O	Print enable 7
5	HCLK	O	Data clock output	6	$\overline{\text{LAT}}$	O	Print data latch
7	HD	O	Print data output signal	8	GND	—	Head GND
9	GND	—	Head GND	10	5VH	O	Power for head
11	5VH	O	Power for head				

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

7. Connector for thermal head drive (CN8)

Part number : B16B-PH-K-S (J.S.T)
 Mating connector : PHR-16 (J.S.T) or equivalent

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	5VH	O	Power for thermal head	2	GND	—	Logic/head GND
3	GND	—	Logic/head GND	4	$\overline{\text{ENB0}}$	O	Print enable 0
5	$\overline{\text{ENB1}}$	O	Print enable 1	6	$\overline{\text{ENB2}}$	O	Print enable 2
7	$\overline{\text{ENB3}}$	O	Print enable 3	8	TMP	I	Temperature detection signal
9	$\overline{\text{ENB4}}$	O	Print enable 4	10	$\overline{\text{LAT}}$	O	Print data latch signal
11	$\overline{\text{ENB5}}$	O	Print enable 5	12	5V	O	Power for logic
13	HCLK	O	Data transmission clock	14	HD	O	Print data output signal
15	GND	—	Logic/head GND	16	5VH	O	Power for head

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

8. Connector for paper near end detection (CN10)

Part number : B2B-PH-K-S (J.S.T)

No.	Signal	I/O	Contents
1	+5VH	O	Power supply for detector
2	$\overline{\text{NES}}$	I	Paper near end detection

CN8: Not used (use for 624MCL)

CN9: Use for 624DSL

CN11: Not used

CN12: Not used

■ COMMANDS

Command	Contents
HT	Moves print position to the next tab.
LF	Line feed.
FF	Feeds forms (new page).
DC 2	Power down.
ECS RS	Sets reverse printing.
ESC US	Resets reverse printing.
ESC ! + n	Sets print mode.
ESC %+n	Download character set specification//cancellation (valid only when optional memory is installed).
ESC &+y+c1+c2+x+[d]k	Download character definition (valid only when optional memory is installed).
ESC *+m+n1+n2+[d]k	Sets bit image mode.
ESC ?+n	External registration character deletion (Valid only when optional memory is installed).
ESC 2	Sets 1/6 inch line feed length.
ESC 3+n	Sets the line feed length.
ESC @	Printer initialization.
ESC A+n	Sets the space between the line.
ESC C+n	Sets the page length by character line.
ESC D+[n]k+NUL	Sets the tab position.
ESC J+n	Feeds paper in forward direction and prints.
ESC K+n	Reverse paper feed.
ESC R+n	Selects international character.
ESC c+1+n	Sets internal processing.
ESC d+n	Printing and n-line feeding.
ESC e+n	Prints and reverse feeds n-lines.
ECS s+n	Sets printing speed.
ECS t+n	Character code table selection.
ESC {+n	Sets/resets upside down printing.
FS !+n	Kanji printing mode collective specification (valid only for FTP-624DCL102).
FS &	Kanji printing mode specification (valid only for FTP-624DCL102).
FS .	Kanji printing mode cancellation (valid only for FTP-624DCL102).
FS 9+n	Sets the detection functions.

Commands continued

Command	Contents
FS W+n	Kanji double height and width mode specification/cancellation (valid only for FTP-624DCL102).
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 V+n+m	Paper cutting (this command is only available for chip).
GS e+n+m	Sets bar code width.
GS h+n	Sets bar code height.
GS k+m+n+[d]k	Selects bar code type and prints.
GS w+n	Sets bar code length.
FS *+m+n1+n2+[d]k	High speed collective image printing specified.
GS &+m+x+y1+y2+[d]k	Registration of image data.
GS '+m+n	Prints registered image data.
FS E+n	Correction of impressed energy.
ESC V+n	Right Rotation 90° specification / cancellation.
GS a+n	Sets and cancels status transmission (valid only for DSL).
FS r+n	Parameter transmission (valid only for DSL).
ESC EM+n	Setting the amount of the feeding at automatic paper feed.
ESC X+m+n	Setting the turning time of the motor excitation.

■ OPTIONS

1. Cable (With FTP-634MCL001/002)

Name		Part Number	Cable length
Thermal head connection cable (CN8)	624MCL	FTP-624Y001	170mm (6.7 in.)
Interface cable (CN3)	Centronics	FTP-441Y201	500mm(19.7 in.)
Interface cable (CN9)	Serial	FTP-624Y301	300mm (11.8 in.)
Power cable (CN1) (CN2)	Logic	FTP-624Y401	300mm (11.8 in.)
	Head, motor	FTP-624Y601	300mm (11.8 in.)

**Fujitsu Components
International
Headquarter
Offices**

Japan
Fujitsu Component Limited
Gotanda-Chuo Building
3-5, Higashigotanda 2-chome, Shinagawa-ku
Tokyo 141, Japan
Tel: (81-3) 5449-7010
Fax: (81-3) 5449-2626
Email: promothq@ft.ed.fujitsu.com
Web: www.fcl.fujitsu.com

North and South America
Fujitsu Components America, Inc.
250 E. Caribbean Drive
Sunnyvale, CA 94089 U.S.A.
Tel: (1-408) 745-4900
Fax: (1-408) 745-4970
Email: marcom@fcai.fujitsu.com
Web: www.fcai.fujitsu.com

Europe
Fujitsu Components Europe B.V.
Diamantlaan 25
2132 WV Hoofddorp
Netherlands
Tel: (31-23) 5560910
Fax: (31-23) 5560950
Email: info@fceu.fujitsu.com
Web: www.fceu.fujitsu.com

Asia Pacific
Fujitsu Components Asia Ltd.
102E Pasir Panjang Road
#04-01 Citilink Warehouse Complex
Singapore 118529
Tel: (65) 6375-8560
Fax: (65) 6273-3021
Email: fcal@fcal.fujitsu.com
www.fcal.fujitsu.com

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