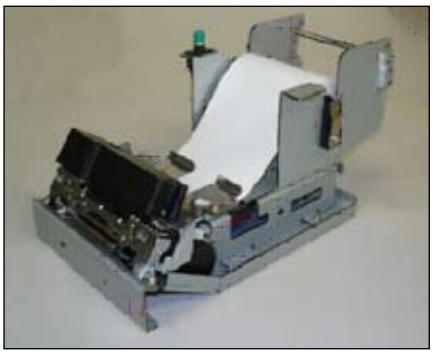
FUJITSU

24V DRIVE, FTP-60A SERIES
ULTRA HIGH SPEED (250mm/s)
3" KIOSK RECEIPT PRINTER UNIT

FTP-63AUSL001

■ OVERVIEW


FTP-63AUSL001

The FTP-60AUSL Series thermal printer (driven by 24VDC) provides ultra-high speed printing (250mm/s) for 3-inch wide paper.

This series is suitable for a variety of applications, such as ATM, kiosk terminals, ticket machines, label printers, banking machines, measuring devices, medical equipment, etc.

■ HIGHLIGHTS

- **Ultra high speed printing**
  It can print at 250 mm/s (2000 dotlines/s) maximum by using Fujitsu Components' unique head drive control.
- **2-D Barcode printing**
  QR, Maxi, PDF417
- **Easy Loading/Reset and Auto Loading of paper**
  Fujitsu Components' unique platen release mechanism allows easy paper loading and easy head maintenance (150km life min.).
- **Auto Cutter**
  Printer with auto cutter (full cut/ partial cut) is available. It can be mounted in front of the mechanism (1 million cuts min.).
- **Heavy duty diecast frame**
  The use of a heavy duty diecast frame allows continous printing due to the heat-sink feature, high ESD threshold, and shock/vibration resistance.
- **Compact size**
  Depth: 246mm (with cutter), width: 130mm, height: 125mm.
- **Thick paper capability**
  Up to 150 microns
- **RoHS compliant**

■ PART NUMBERS

Name			Part Number
Printer unit	Interface	USB	FTP-63AUSL001
		RS-232C	FTP-63AUSL002
Interface board		USB (V 2.0)	FTP-62ADSL001
		Serial (RS-232C)	FTP-62ADSL011
Operation panel cable		(CN7)	FTP-627Y203
Interface cables (board to host PC)		Serial (CN2)	FTP-629Y302
		USB (CN3)	FTP-629Y301
Extension cables (board to mechanism)		Head (CN4)	FTP-62AY001
		Platen / cutter motor (CN5)	FTP-62AY003
Power supply cable		Power (CN1)	FTP-62AY601

*2: Interface is selectable by DIP switch

■ GENERAL SPECIFICATIONS

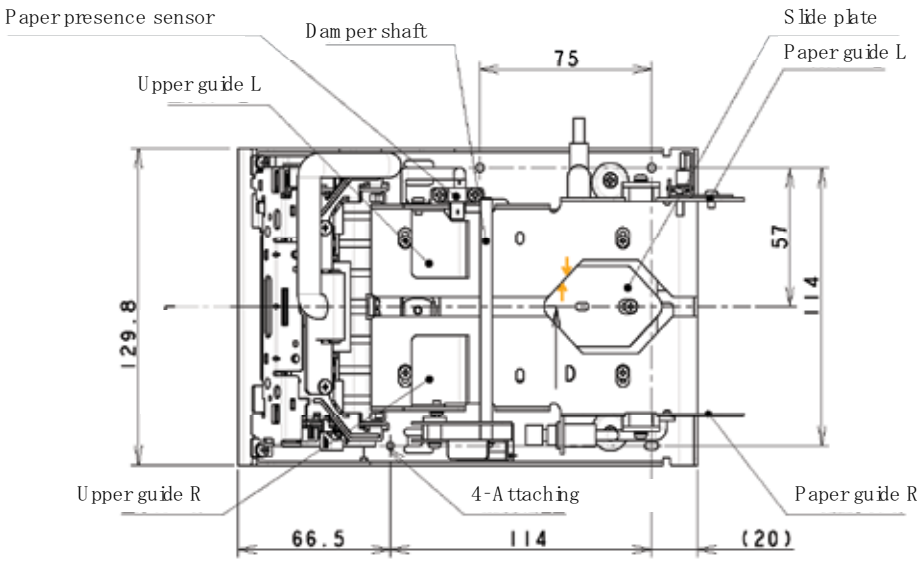
Item		Specifications	
Part number		FTP-63AUSL001	FTP-63AUSL002
Printing method		Thermal sensitive line dot method	
Dot structure		640 dots/line	
Dot pitch (horizontal)		0.125mm (8dots/mm) - Dot density	
Dot ptich (vertical)		0.125mm x0.16mm) - Line feed pitch	
Effective printing area		80 mm	
Number of columns		ANK 53 columns/line (12 x 24 dot font)	
Paper width		80-85mm +0/-1, adjustable to 76.2mm, 75.0mm	
Paper thickness		60-150µm	
Cutting type		Guillotine (full or partial cut)	
Printing speed	FTP-62ADSL series	200mm/sec. (1600 dot lines/sec.) line mode 250mm/sec. (2000 dot lines/sec.) page mode	
Interface types		FTP-62ADSL series	
Character types	Alphanumeric, Kana: International: JIS Kanji (Kanji CG loaded board): OCRI OCRII OCRIII Extended numeric	159 types 195 types about 6,800 types 103 types 23 types 103 types 11 types	
Character, dimensions (WxH), number of columns		8x16 dots, 80 columns: ANK 12x24 dots, 53 columns: ANK 16x16 dots, 40 columns: ANK 24x24 dots, 26 columns: ANK	24x40 dots, 26 columns, OCRI 24x48 dots, 26 columns, OCRIII 36x60 dots, 17 columns, OCRIV 24x48 dots, 26 columns, extended numeric
Interface standard		USB/RS232C	

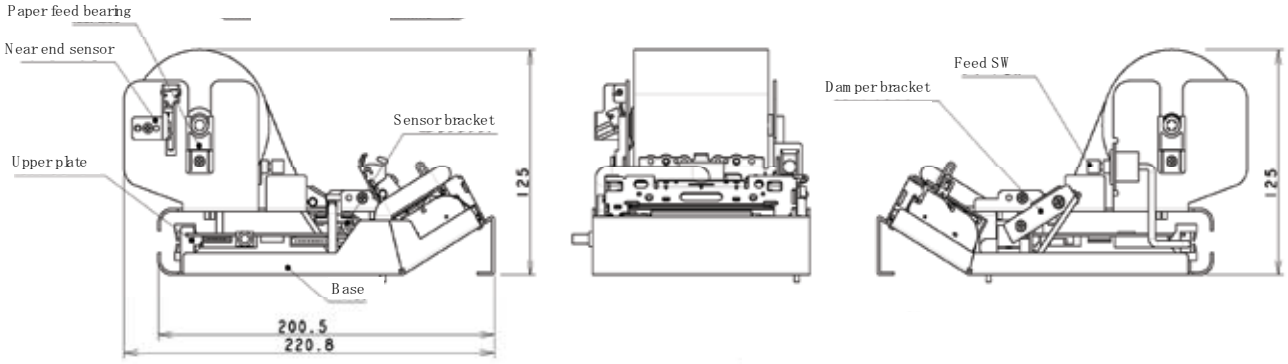
Item		Specifications
Part number		FTP-63AUSL001
Power supply	For head	24 VDC ±5%, 7.1A (24V, 25% printing ratio)
	For printer motor	24 VDC ±5% 1.2A maximum
	For cutter motor	24 VDC ±5% 1.2A maximum
	For logic	3.3 to 5 VDC ±5% 0.2A maximum
Dimension (WxDxH)	Printer unit	130 x 246 x 125mm
Weight	Printer unit	2.0kg
Life	Head	Pulse durability: 150 million pulse/dot (using Fujitsu's standard driving method) Wear resistance: 150km (at 12.5% print ratio)
	Cutter	1,000,000 cuts minimum
	Platen	5,000 times (open/close)
MTBF	Mechanism	3,000 hours
	Circuit board	500,000 hours
Barcodes	Standard	UPC-A, UPC-E, JAN (EAN)13,8, Code 39, ITF, CODA-BAR, CODE128
	2-D	QR, Maxi, PDF417
Environmental conditions	Operating temperature	-20ºC to +70ºC (guarantee)
	Operating humidity	20 to 85% RH (no condensation)
	Storage temperature	-25ºC to +75ºC
	Storage humidity	5 to 95% RH (no condensation)
Detection	Head temperature	By thermistor
	Paper out/Mark detect	By photointerruptor
	Head release	By slide switch
Recommended thermal sensitive paper	High sensitive paper	TF50KS-E4 (Nippon paper)
	Standard paper	TF60KS-E2 (Nippon paper), FTP-030P0104 (80mm) PD150R (Oji paper), FTP-030P0701 (80mm)
	Medium life storage paper	TF60KS-F1 (Nippon paper), FTP-030P0102 (80mm) PD170R (Oji paper) P220VBB-1 (Mitsubishi paper) PD160R-N (Oji paper)
	Long life storage paper	AFP-235 (Mitsubishi paper) TP50KJ-R (Nippon paper) HA220AA (Nippon paper)
Paper diameter	Standard	83mm
	Extender	150mm

■ DIMENSIONS

1. Printer unit

FTP-63AUSL



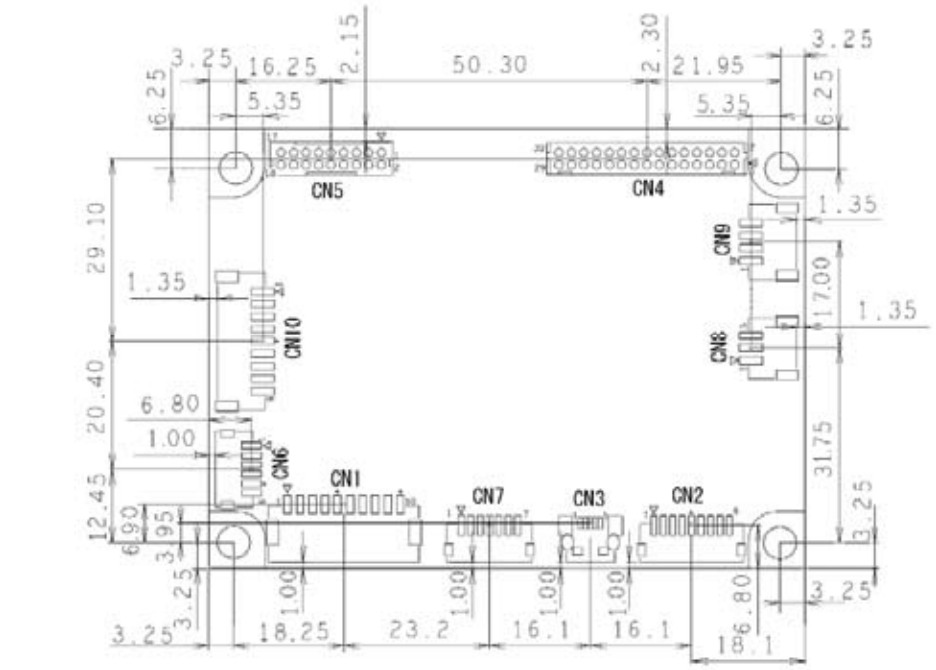


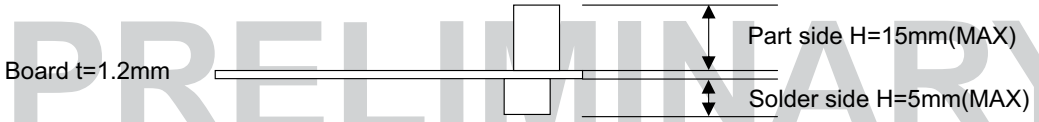
Unit: mm

■ DIMENSIONS

1. External specifications

1.1 External view of control circuit board





1.2 Control circuit board connector types

Symbol	Name	Function	Type case	Manufacturer
CN1	Power supply connector	To connect +24V power supply	SM10B-PASS-TBT (LF)(SN)	JST
CN2	RS-232C I/F control signal connector	To connectRS-232C interface & control signals	S9B-ZR-SM4A-TF (LF)(SN)	JST
CN3 *1	USB I/F connector	To connect USB interface	51387-0530	Molex
CN4	Thermal head connector	To connect thermal head	B30B-PHDSS (LF)(SN)	JST
CN5	Paper feed & cutter connector	To connect paper feed motor & cutter motor	LY20-18P-DL1-P5E	JST
CN6 *1	Drawer kick connector	To connect drawer kick	S6B-ZR-SM4A-TF (LF)(SN)	JST
CN7	Operation panel connector	To connect operation panel	S7B-ZR-SM4A-TF (LF)(SN)	JST
CN8	Near end sensor connector	To connect near end detection switch	S3B-PH-SM4-TB (LF)(SN)	JST
CN9	External sensor connector	To connect external detection switch	S4B-PH-SM4-TB (LF)(SN)	JST
CN10 *2	Presenter connector	---	---	

Notes: *1: Depends on the board type
*2: not mounted

1. Connector for Head, Motor Power Supply (CN1)

Connector part number: *SM10B-PASS-TBT (J.S.T) or equivalent (P.C.B. side)
Mating connector: PAP-10V-S (J.S.T) or equivalent (P.C.B. side)

No	Signal	I/O	Contents	No	Signal	I/O	Contents
1	+24V	I	Power for head	2	+24V	I	Power for head
3	+24V	I	Power for head	4	+24V	|	Power for head
5	+24V	|	Power for head	6	GND	-	Ground
7	GND	-	Ground	8	GND	-	Ground
9	GND	-	Ground	10	GND	-	Ground

■ INTERFACE

2. RS-232C standard

(1) Connector (CN2)

Connector part number : S9B-ZR-SM4A-TF (J.S.T.) or equivalent
Mating connector part number : ZHR-9 (J.S.T.) or equivalent

(2) Connector pin assignment

No	Signal	I/O	Contents	No	Signal	I/O	Contents
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	DSR	I	Data set ready
7	$\overline{\text{SLCTIN}}$	I	Printer select	8	$\overline{\text{INPRM}}$	I	Reset
9	$\overline{\text{AFT}}$	I	Paper feed request				

3. USB standard

(1) Connector (CN3)

Connector part number: 51387-0530 (Molex)
Mating connector part number: UX40-MB-5P-9 (Hirose)

(2) Connector pin assignment

No	Signal	I/O	Contents	No	Signal	I/O	Contents
1	VBUS	I	Bus Power Supply	2	D-	I/O	Differential data-
3	D+	I/O	Differential data+	4	N.C.	-	No connection
5	GND	-	Signal ground				

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

■ CONNECTOR PIN ASSIGNMENT OF INTERFACE BOARD

3. Connector for Drawer Kick (CN6)

Board side: S6B-ZR-SM4A-TF (J.S.T)
Remote side: ZHR-6 (J.S.T.)

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	Power supply +24V	O	Drawer kick	2	Drawer kick1 control	|	Drawer kick1 control
3	Drawer kick2 control	|	Control Z terminal	4	Drawer kick1 sensor	|	Drawer kick2 control
5	Drawer kick1 sensor	|	Sensor2	6	+3V GND	-	Ground terminal for sensor

4. Connector for Operation Panel (CN7)

Connector part number: S7B-ZR-SM4A-TF (J.S.T) or equivalent

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1	$\overline{\text{ATF}}$	|	Motor Phase A	2	$\overline{\text{IMPRM}}$	|	Reset
3	SLCTIN	|	Motor Phase B	4	3V GND	-	Logic ground
5	LED1	O	LED 1 output		LED2	O	LED 2 output
6	3.3V	O	3.3V logic				

5. Connector for Paper Near-End Sensor (CN8)

Connector part number: *S3B-PH-SM4-TB (J.S.T) or equivalent (P.C.B. side)

No	Signal	I/O	Contents	No	Signal	I/O	Contents
1	+3V	O	Power for logic	2	NC	-	Not connected
3	$\overline{\text{NES}}$	|	Paper near end signal				

6. Connector for External I Sensor (CN9)

Connector part numbers: S4B-PH-SM4-TB (J.S.T.) or equivalent

No	Signal	I/O	Contents	No	Signal	I/O	Contents
1	+3V	O	Logic for Power	2	SEK	|	Paper Near End Signal
3	SENS	|	Paper Near End Signal	4	SVCC	O	Paper Near End Signal

7. Connector for Presenter (CN10)

Connector part number: SM09B-SRSS-TB (J.S.T.) or equivalent

No.	Signal	I/O	Contents	No.	Signal	I/O	Contents
1			tbd	2			tbd
3			tbd	4			tbd
5			tbd	6			tbd
7			tbd	8			tbd
9			tbd				tbd

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

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: emea.fujitsu.com/components/

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: components@us.fujitsu.com
Web: http://us.fujitsu.com/printers/

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