

# 24V DRIVE, FTP-60A SERIES

## ULTRA HIGH SPEED (250mm/s)

## 3" KIOSK RECEIPT PRINTER UNIT

### FTP-63AUSL001

#### ■ OVERVIEW

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 continuous printing due to the heat-sink feature, high ESD threshold, and shock/vibration resistance.

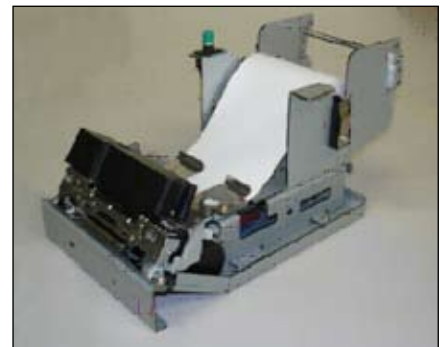
- **Compact size**

Depth: 246mm (with cutter), width: 130mm, height: 125mm.

- **Thick paper capability**

Up to 150 microns

- **RoHS compliant**



FTP-63AUSL001

PRELIMINARY

## ■ 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

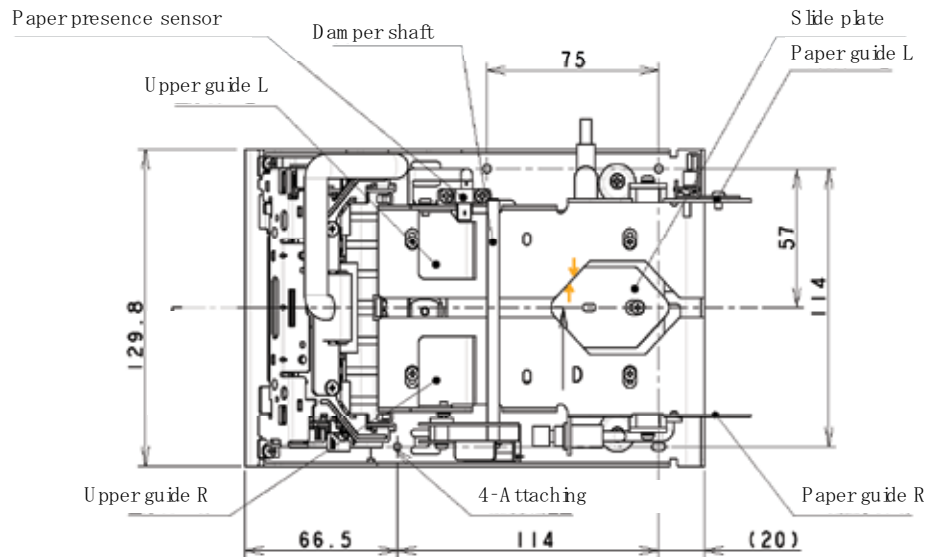
Item		Specifications	
Part number		FTP-63AUSL001	FTP-63AUSL002
Printing method		Thermal sensitive line dot method	
Dot structure		640 dots/line	
Dot pitch (horizontal)		0.125mm (8dots/mm) - Dot density	
Dot pitch (vertical)		0.125mm x0.16mm) - Line feed pitch	
Effective printing area		80 mm	
Number of 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 $\pm 5\%$ , 7.1A (24V, 25% printing ratio)
	For printer motor	24 VDC $\pm 5\%$ 1.2A maximum
	For cutter motor	24 VDC $\pm 5\%$ 1.2A maximum
	For logic	3.3 to 5 VDC $\pm 5\%$ 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	-20°C to +70°C (guarantee)
	Operating humidity	20 to 85% RH (no condensation)
	Storage temperature	-25°C to +75°C
	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

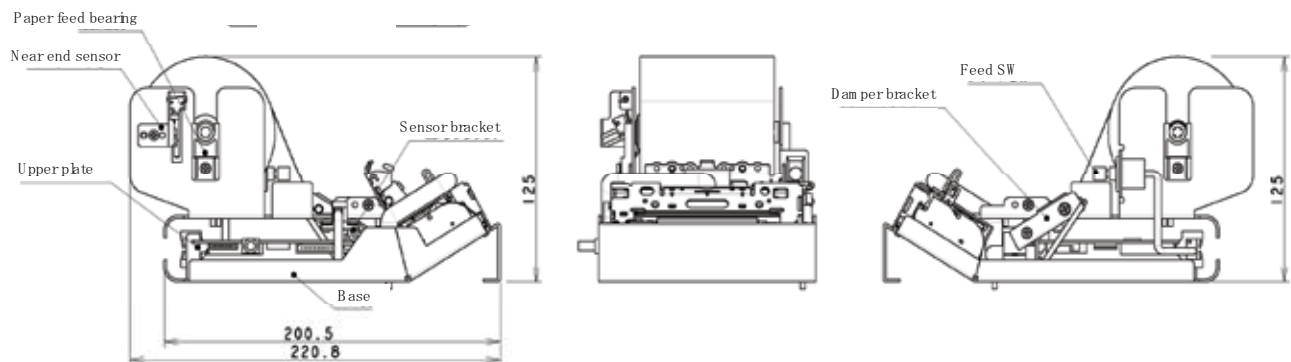
## ■ DIMENSIONS

### 1. Printer unit

FTP-63AUSL



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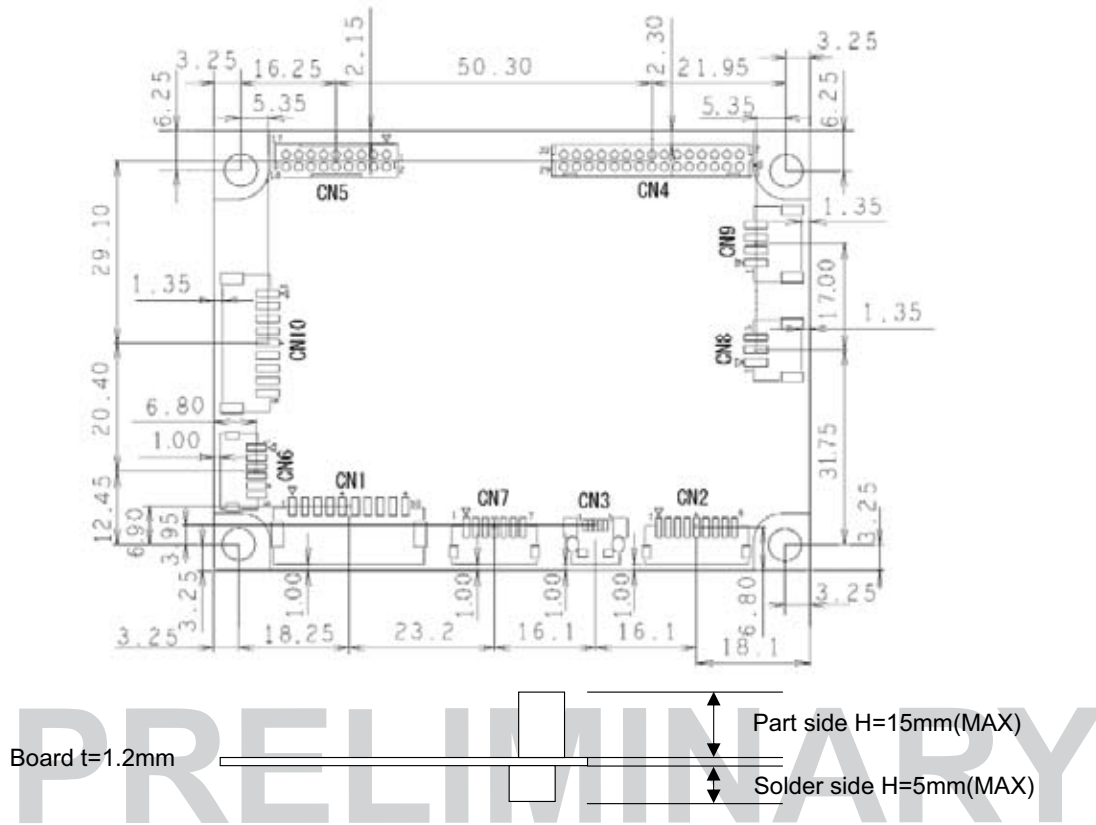


Unit: mm

## ■ 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 connect RS-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	I	Power for head
5	+24V	I	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	SLCTIN	I	Printer select	8	INPRM	I	Reset
9	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	ATF		Motor Phase A	2	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	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](mailto:promothq@ft.ed.fujitsu.com)  
Web: [www.fcl.fujitsu.com](http://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: [components@us.fujitsu.com](mailto:components@us.fujitsu.com)  
Web: <http://us.fujitsu.com/printers/>

**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](mailto:info@fceu.fujitsu.com)  
Web: [emea.fujitsu.com/components/](http://emea.fujitsu.com/components/)

**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](mailto:fcsl@fcal.fujitsu.com)  
Web: <http://www.fujitsu.com/sg/services/micro/components/>

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