

# FUJITSU Component Thermal Printer FTP-608 Series

Fujitsu battery drive, 2" high speed, easy loading thermal printer

## Overview

The easy loading FTP-608 MCL Series is ultra compact high speed, battery driven thermal printer, printing on 2-inch wide paper (58mm) where platens are removable. Our original platen removal mechanism improved paper loading and maintenance.

The FTP-608 MCL series can be used for a variety of applications, such as portable terminals, POS, ticket issuing terminals, label printers, banking terminals, and measurement and medical equipment.



FTP-628MCL203

## Features

- **Easy loading type**  
Our original platen removal mechanism improved paper loading and maintenance.
- **Easy opening type**  
Our original platen lever/lock improves retention and release.
- **Ultra compact**  
Height 15mm, width 69mm, depth 30mm for the 2-inch model
- **High speed printing**  
It can print at 90mm/s (720 dotlines/s) maximum at 9.5VDC
- **High resolution printing**  
8 dots/mm of resolution printing is possible
- **Compact mechanism with platen lock**  
Platen is held by platen lock mechanism. The platen pop up by lever operation.
- **RoHS compliant**

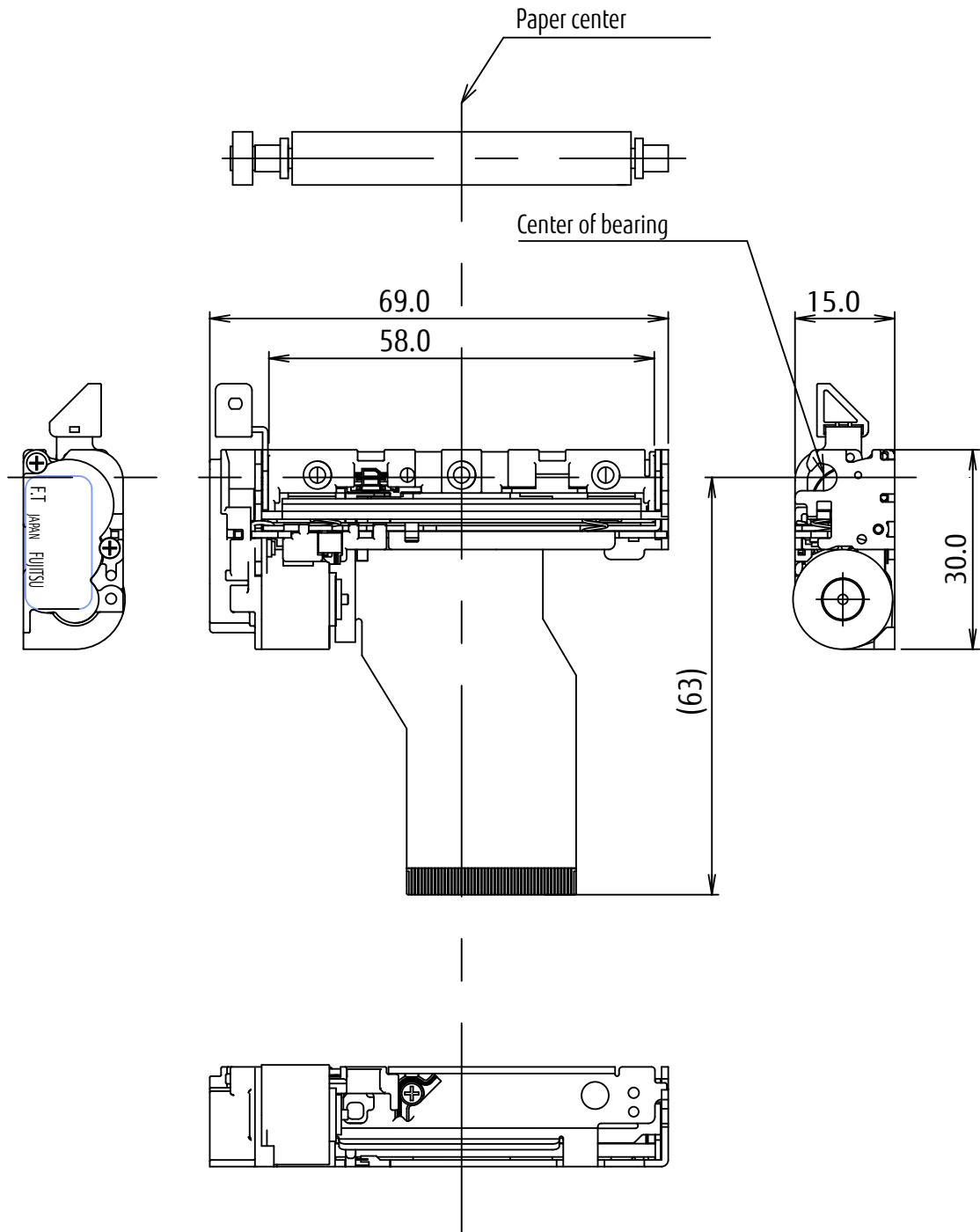
Item	Part Number
Printer mechanism	FTP-628MCL201 (2-inch wide paper: 58mm) without open detect switch FTP-628MCL203 (2-inch wide paper: 58mm) with open detect switch
LSI for driving	FTP-628CU620
Interface board	N/A

Item	Specifications	
Part number	FTP-628MCL201/203	
Printing method	Thermal-line dot method	
Dot structure	384 dots/lines	
Dot pitch (horizontal)	0.125mm (8 dots/mm) - dot density	
Dot pitch (vertical)	0.125 mm (8 dots/mm) - line feed pitch	
Effective printing area	48 mm	
Number of columns	ANK 32 columns/line (maximum 12 x 24 dot font)	
Paper	Width	58mm +/-1
	Thickness	60-85µm
Operating voltage	For print head	4.2 VDC to 9.5 VDC 2.4 A, average current 0.87 A (0.93), peak value Printing ratio: 12.5%, printing speed: 50 mm/sec. at 7.2 V
	For motor	4.2 VDC to 9.5 V, 1 A maximum
	For logic	3.0 VDC to 3.6 VDC or 4.75 VDC to 5.25 VDC, 1 A maximum
Print speed	90mm/sec. at 9.5VDC	
Dimensions	Printer mechanism	69 x 30 x 15mm (WxDxH)
Weight	Printer mechanism	Approximately 48g
Head life		Pulse resistance: 100 million pulses/dot (under our standard conditions) Abrasion resistance: paper traveling distance 50km (print ratio: 25% or less)
Operating environment	Operating temperature*	0°C to 50°C
	Operating humidity	20 to 85% RH (no condensation)
	Storage temperature	-20°C to +60°C (paper not included)
	Storage humidity	5 to 95% RH (no condensation)
Detection function	Head temperature detection	Detected by thermistor
	Paper out / mark detection	Detected by photo-interrupter
Recommended thermal sensitive paper	High sensitive paper	TF50KS-E4 (Nippon paper)
	Standard paper	TF60KS-E (Nippon paper) PD150R (Oji paper)
	Medium life storage paper	TF60KS-F1 (Nippon paper) PD170R (Oji paper) P220VBB-1 (Mitsubishi paper)
	Long life storage paper	PD160R-N (Oji paper) AFP-235 (Mitsubishi paper) HA220AA (Nippon paper)

\*: +5° to +40°C printing density assurance range (-25 to +70°C capability)

■ Dimension

- Printer mechanism: 2-inch



Note: 1. Dimensions are nominal value )tolerance  $\pm 5\text{mm}$  unless otherwise specified.  
2. Dimensions in ( ) is reference value.

■ Printer connector (flexible PT board) PIN arrays

- Thermal head, control circuit side connector: 54104-5031 Molex or equivalent product

No	Signal	I/O	Contents
1	VH	I	
2	VH	I	
3	VH	I	Head drive power
4	VH	I	
5	VH	I	
6	VH	I	
7	DI	I	Data in
8	CLK	I	Clock
9	GND	I	
10	GND	I	
11	GND	I	Ground power supply for thermal head
12	GND	I	
13	GND	I	
14	GND	I	
15	STB6	I	Strobe6
16	STB5	I	Strobe5
17	STB4	I	Strobe4
18	Vdd	I	Logic power
19	TM	O	
20	TM	O	Thermistor
21	TM	O	
22	STB3	I	Strobe3
23	STB2	I	Strobe2
24	STB1	I	Strobe1
25	GND	-	Ground power supply for thermal head

No	Signal	I/O	Contents
26	GND	-	
27	GND	-	
28	GND	-	Ground power supply for thermal head
29	GND	-	
30	GND	-	
31	/LAT	I	
32	VH	I	
33	VH	I	
34	VH	I	Head drive power
35	VH	I	
36	VH	I	
37	VH	I	
38	N.C.	-	No connection
39	PS	O	Output signal of paper sensor (collector)
40	Vsp	I	Power supply of paper sensor (LED anode)
41	GND	-	Ground power supply for thermal head
42	SW	I	Platen release switch
43	FG	-	Frame ground
44	FG	-	
45	N.C.	-	No connection
46	N.C.	-	No connection
47	MT /A	I	
48	MT B	I	Stepping motor excitation signal
49	MT A	I	
50	MT /B	I	

Do not plug or unplug the FPC when power is on.

**Contact**

**Japan**  
 FUJITSU COMPONENT LIMITED  
 Gotanda-Chuo Building  
 3-5, Higashigotanda 2-chome, Shinagawa-ku  
 Tokyo 141 8630, Japan  
 Tel: (81-3) 5449-7010  
 Fax: (81-3) 5449-2626  
 Email: [promothq@fcl.fujitsu.com](mailto:promothq@fcl.fujitsu.com)  
 Web: [www.fcl.fujitsu.com](http://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](mailto:info@fceu.fujitsu.com)  
 Web: [emea.fujitsu.com/components/](http://emea.fujitsu.com/components/)

**China**  
 FUJITSU COMPONENTS SHENZHEN  
 Room 1001, Di Wang Commercial Ctr.  
 5002 shen Nan Dong Road  
 Shenzhen 518008, PRC  
 Tel: (86 755) 8247 8463  
 Fax: (86 755) 8246 1510  
 Email: [fcal@fcal.fujitsu.com](mailto:fcal@fcal.fujitsu.com)  
[www.fujitsu.com/sg/services/micro/components](http://www.fujitsu.com/sg/services/micro/components)

**Copyright**  
 All trademarks or registered trademarks are the property of their respective owners.  
 Fujitsu Components America or its affiliates do not warrant that the content of datasheet is error free. In a continuing effort to improve our products Fujitsu Components America, Inc. or its affiliates reserve the right to change specifications/ datasheets without prior notice. Copyright ©2014 Fujitsu Components America, Inc.  
 All rights reserved.  
 Revised July 28, 2014

**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/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:fcal@fcal.fujitsu.com)  
[www.fujitsu.com/sg/services/micro/components](http://www.fujitsu.com/sg/services/micro/components)

**Hong Kong**  
 FUJITSU COMPONENTS HONG KONG Co., Ltd.  
 Suite 913, Ocean Centre, 5 Canton Rd, TST  
 Kowloon, Hong Kong 118529  
 Tel: (852) 2881 8495  
 Fax: (852) 2894 9512  
 Email: [fcal@fcal.fujitsu.com](mailto:fcal@fcal.fujitsu.com)  
[www.fujitsu.com/sg/services/micro/components](http://www.fujitsu.com/sg/services/micro/components)