

FUJITSU Component Thermal Printer FTP-628WSL100/200 series (Easy Loading Method)

Fujitsu compact, battery drive, 2" high speed, standalone thermal printer

Overview

The supply voltage of the FTP-628WSL Series is 120/240VAC (via AC adaptor) or battery. The unit uses 2 inch wide paper. The mechanism and interface board is a standard multiple purpose unit.

The semi-rugged printer unit is most suitable for markets such as handheld, mobile and portable devices, applications such as healthcare, hospitality and retail.

Features

- Light weight and ultra small size
- Easy paper loading
- Bluetooth® infrared, serial and USB interfaces
- 3.7V Lithion battery, 120 or 240VAC adaptor
- Drop-resistant - 1.5 meters
- Water resistant
- Prints 2-D barcodes and stacked barcodes
- 3 hour charge cycle
- Up to 6 paper rolls / charge
- Thin label capability
- RoHS compliant
- IP54 compliant
- Windows®2000/XP, CE 6.0, WIN 7 and 8 PC and tablet, Linux and iPhone Bluetooth drivers



FTP-628WSL100



FTP-628WSL200

■ Interface specification at host side

Item	Specifications	
Bluetooth V2.1 +EDR (standard or iOS)	Profile	GAPSDP, SPP
	Modulation	FHSS/GFSK, 8DPSK
	Data speed	460kbps, 1306.9kbps
	Maximum distance	10m
	Protocol stack	IrAP, IrLMP, IrLAS, TinyTP, IrCoMM
RS-232C	Data speed	115,200, 19,200 / 9,600 / 4,800 bps
	Synchronous method	Full duplex
	Handshake	DTR/DSR, XON/XOFF control
	Input/output level	RS-232C
IrDA (Ver. 1.2, IrCoMM)	Data speed	115,200 / 57,600 / 38,400 / 19,200 / 9,600bps
USB (2.0 full speed)	Data speed	12Mbps max.

■ Part numbers

Item	Part Number	Adaptor	Included
Bluetooth, IrDA and serial interfaces	FTP-628WSL110#11	120 VAC	With AC cable, battery, belt clip & paper roll
	FTP-628WSL110#21	120/240 VAC	
IrDA and serial (RS-232C) interfaces	FTP-628WSL120#11	120 VAC	Without AC cable, with battery, without belt clip & with paper roll
	FTP-628WSL120#21	120/240 VAC	
Bluetooth/USB (iOS)	FTP-628WSL210#20	120/240 VAC	
Bluetooth/USB (Android, Blackberry)	FTP-628WSL211#20	120/240 VAC	
USB only	FTP-628WSL212#20	120/240 VAC	With AC cable, battery, and paper roll
Bluetooth (iOS, Android, Blackberry)	FTP-628WSL220	120/240VAC	
Serial interface cable	FTP-628Y304		
USB interface cable	FTP-629Y301#11		

■ Power supply

- Battery

Item	Specifications
Type	Lithium Ion, 1 parallel, 1 series
Manufacturer	Panasonic
Model	FTP-628MP0011
Rated voltage	3.7V
Life	300 cycles
Weight	44g

- AC adaptor

Item	Specifications
Type	Switching regulator
Manufacturer	Nogano Japan Radio Co., Ltd
Model	FTP-628MP0012
Rated voltage	5VDC
Weight	160g

■ Specifications

Item		Specifications	
Part number		FTP-628WSL100 series	FTP-628WSL200 series
Dot structure		384 dots/lines	
Dot pitch (horizontal)		0.125mm	
Dot pitch (vertical)		0.125mm	
Effective printing area		48mm	
Paper width/diameter		58mm / ID 8mm, OD 36mm maximum	
Paper thickness		60-110µm* ¹	
Maximum printing speed	FTP-628WSL1x0/21x	Battery 40mm/sec. at 4.2V, AC adaptor, 50mm/sec. at 5V (320 dotlines/s) at 12% print ratio	
	FTP-628WSL22x	Battery 70mm/sec at 4.2V, AC adaptor, 90mm/sec. at 5V (720 dotlines/s)	
Character types		Alphanumeric KANA: 159 International characters: 195 Registered characters: 224 JIS KANJI: approx. 6800	
Character dimensions (W x H), number of characters		12 x 24 dots (1.5 x 3.0mm), 32 columns 24 x 24 dots (3.0 x 3.0mm), 16 columns 8 x 16 dots (1.0 x 2.0mm), 48 columns 16 x 16 dots (2.0 x 2.0mm), 24 columns	
Power	Battery (Lithium Ion)	3.7VDC lithium, 1,850mAh	
	AC adaptor	100VAC to 120VAC adaptor#11 100VAC to 240VAC adaptor#20, 21, output 4 VDC at 3A	
Power consumption		1.6 - 1.7A printing (print ration 12.5%) standby 30-60mA communication 90-170mA	
Dimensions		84 x 136.5 x 30.0mm (WxDxH) 43.6mm paper holder	
Case color		Gray	Black
Weight	Printer with battery	Approximately 220g	
	Battery & paper included	Approximately 270g	
Expected life	Head	Pulse durability: 100 million pulse/dot (12.5% print ratio) Wear resistance: 50km	
	Battery	One charge: 100m, 300 charge cycles	500 charge cycles
	Paper holder	5,000 times open/close	
MTBF	Mechanism	3,000 hours	
	Interface board	500,000 hours	

*¹: there may be exceptions

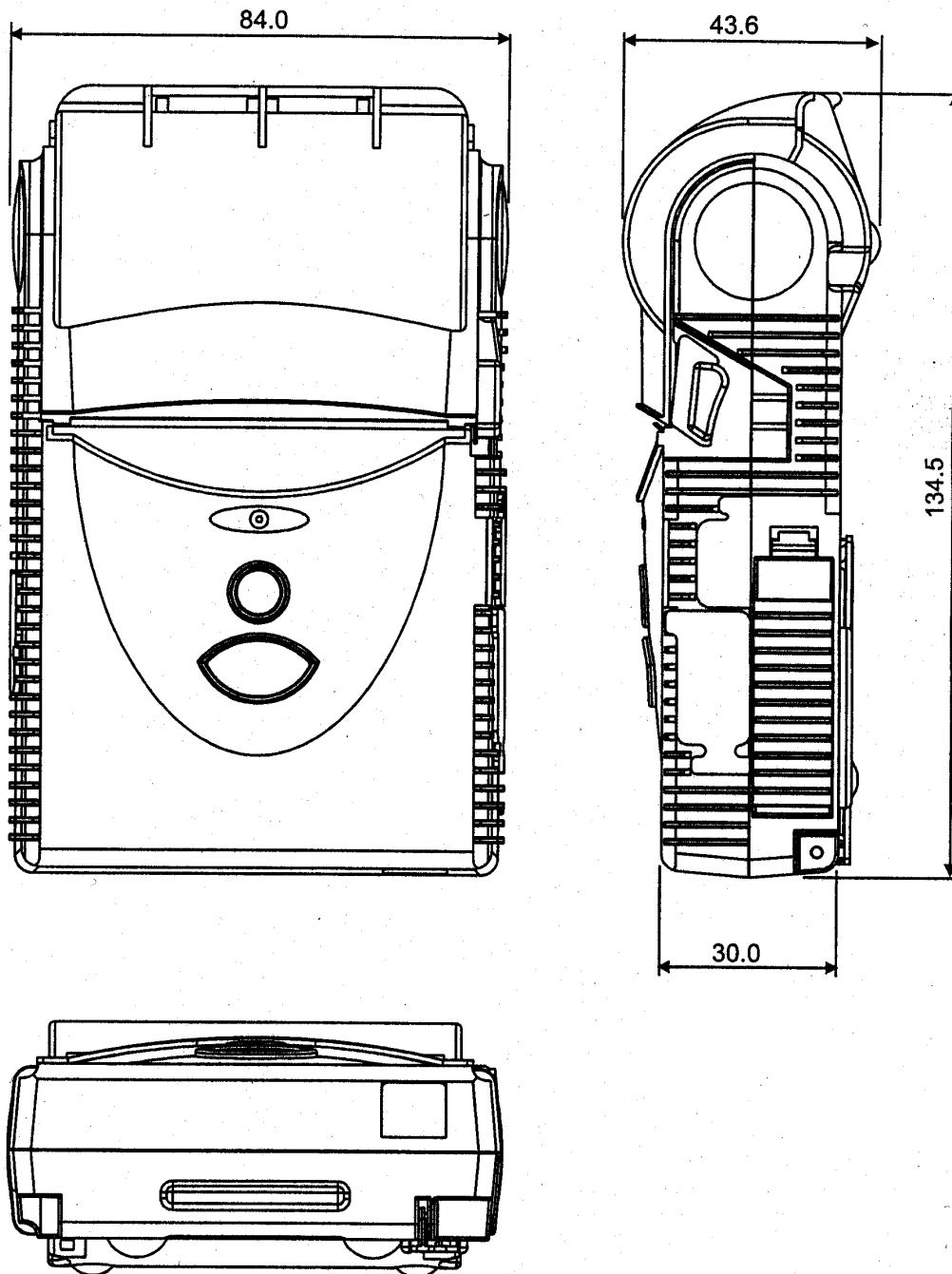
Item		Specifications
Bar code type	Standard	UPC-A, UPC-E, JAN13, JAN8, CODE39, ITF, CODABAR, CODE 128, GS1 DataBar
	2-D	MAXI, PDF417, QR, GS1 Databar expanded, GS1 Databar omni directional, stacked
Interface	Serial	RS-232C
	IrDA	Version 1.2 (Ir COMM protocol)
	Bluetooth ^{*2}	Version 2.1 + EDR (standard and iOS)
	USB	2.0 full speed
Safety standard	Noise	FCC Class B, FCC Part 15
	Water resistant	JIS C0920 Class 2
Environmental conditions	Operating temperature	0°C to +50°C ^{*4}
	Operating humidity	30 to 85% RH (no condensation)
	Storage temperature	-20°C to +60°C
	Storage humidity	5 to 90% RH (no condensation)
Detection functions	Head temperature	Detected by thermistor
	Head detect	Detected by photo-interruptor
	Paper out	Detected by photo-interruptor
	Cover open	Detected by micro-switch
Major functions		Page mode Registration of character and image Enlarge characters Auto status reply
Recommended thermal sensitive paper	High sensitive paper	FT50KS-E4 (Nippon paper)
	Standard paper	FTP-020P0704 TF-60KS-E (Nippon paper) PD150R (Oji paper)
	Medium term paper	TF-60KS-F1 (Nippon paper) PD170R (Oji paper) P220VBB-1 (Mitsubishi paper)
	Long term paper	(Oji paper) HA220AA (Mitsubishi paper)
	Label paper	HW54T (Nippon paper)

^{*2}: FTP-628WSL110, 211 (standard), FTP-628WSL210 (iOS)

^{*3}: 0° to +40°C guarantee of print quality

■ Dimensions

- Printer mechanism: 2-inch



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

■ Commands

Command	Content
HT	Horizontal tab
LF	Line feed with printing
FF	Feeds forms (new page)
ECS RS	Sets reverse printing
ESC US	Resets reverse printing
ESC FF	Data printing in page print mode
ESC ! +n	Sets print mode
ESC \$ + n ¹ +n ²	Horizontal absolute position setting
ESC % + n	External registraion character specification / cancellation
ESC &+y+c ¹ +c ² +x+d ¹ ~dn	External registration character definition
ESC*+m+n ¹ +n ² +[d ¹ ~dn]	Bit image mode registration
ESC -+n	Underline setting
ESC 3+n	Sets the line feed length
ESC ?+n	External registration character delection
ESC @	Printer initialization
ESC A+n	Set the space between lines
ESC C+n	Sets the page length by character line
ESC D+n	Set the tab position
ESC E+n	Printing specification / cancellation
ESC J+n	Feeds paper in forward direction and prints
ESC K+n	Reverse paper feed
ESC L	Page print mode selection
ESC Q+n+!+j	Frame overlay detection
ESC R+n	Selects international character
ESC S	Line print mode selection
ESC T+n	Print direction setting in page mode
ESC V+n	Right rotation 90° specification / cancellation
ESC W+x ¹ +x ² +y ¹ +y ² +Dx ¹ +dx ² +dy ¹ +dy ²	Print area setting in page print mode
ESC X+m+n	Sleep mode time setting
ESC ¥+n ¹ +n ²	Internal process setting
ESC c+1+n	Set internal processing
ESC s+n	Print speed setting
ESC {+n	Sets/resets upside down printing
FS !+n	Kanji printing mode collective specification
FS &	Kanji printing mode specification
FS -+n	Kanji underline specification / cancellation
FS .	Kanji printing mode cancellation
FS 2+c ¹ +c ¹ +d ¹ ~dn	User defined character definition
FS 9+n	Sets the detection functions

Command	Content
FS c+n	Kanji code system selection
FS E+n	Correction of impressed energy
FS r+n	Parameter transmission (valid for non-protocol mode)
GS \$+n+1+2	Vertical absolute position specification in page print mode
GS &+m+x+y ¹ +y ² + [d]k	Registration of image data
GS "+m+n	Prints registered image data
GS <	Line feeds to the next mark
GS A+m+n	Sets the line feed length after mark detection
GS B+n	Bar code angle setting
GS E+n	Print quality setting
GS L+n ¹ +n ²	Left margin setting
GS W+n ¹ +n ²	Print area width setting
GS ¥+ n ¹ +n ²	Vertical relative position setting in page mode
GS a+n	Setting and cancellation of status transmission (non-protocol mode)
GS e+n+m	Bar code width setting
GS h+n	Bar code height setting
GS k+m+n+d ¹ ~dn	Bar code printing
GS k+m+k ¹ +k ² +k ³ +k ⁴ +d ¹ ~dn	Two dementional code printing
GS k+m+n+pL+pH+d ¹ ~dn	Barcodes (GS1 databar) printing
GS k+m+n+k ¹ +k ² +k ³ +k ⁴	Barcode (GS1 databar) setting
GS (A+ETX+n	Bluetooth link time setting
GS (A+ACK+m+n	Bluetooth security mode setting
GS (A+HT+n+d ¹ to dn	Bluetooth device name setting
GS (A+ENQ	Bluetooth information printing (WSL110 only)

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
 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: components@us.fujitsu.com
 Web: <http://us.fujitsu.com/components/>

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/

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: fcsl@fcal.fujitsu.com
www.fujitsu.com/sg/services/micro/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: fcsl@fcal.fujitsu.com
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: fcsl@fcal.fujitsu.com
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 February 7, 2014