

FUJITSU FP-2000 series

1 Station Thermal POS Printer

Ultra high speed, 400mm/sec

Multi-function & Compact Design

FUJITSU Super Green Product

FUJITSU advanced printing algorithm

Dual printing mode, 180dpi & 203dpi

New compression printing mode

FP-2200 400mm/sec.

FP-2100 300mm/sec.

FP-2000 230mm/sec.



Good effect for running cost

■ Helping paper consumption

- Helping paper consumption 30% OFF by printing thin (53 μ m) paper.
(*Comparing with 75 μ m)
- Reduced printing by printer driver

■ Non-synchronous thermal head control technology

- Compression printing with high grade quality by printer

Stress free operation

■ Non-waiting ultra high speed printing & Throughput

■ User friendly functions

- Removing Paper curl function
- Retry printing
- Alarming for Paper Near End (PNE), Paper End (PE), Cover Open

High quality printing by the new FUJITSU algorithm

■ Automatic optimum power printing mode

■ 16 gray scale printing

For End users

Why FUJITSU

Salable printer for your business

■ All accessories in one printer box

■ Selectable interface cards

Contribute to the replace business

■ New FUJITSU advanced printing algorithm

- Support 180dpi & 203dpi with 1 thermal head
- Automatic optimum printing mode

■ Low field failure rate

Appropriate printer for international business

■ Multi language equipment

■ Covering safety standard for each region

For Distributor
&
Dealers

Advanced connectivity for hardware

- Protecting inrush current
- Countermeasure for ESD (Level 4 of IEC61000-4-2)

High quality printing by new FUJITSU algorithm

- Automatic optimum printing mode
(For POS system which only provides low power)
- Simulated 180 dpi printing mode

Supporting customization for your POS system

- Printer's design
 - Software, commands.
- *All technical manuals are completed

For POS system
&
KIOSK

FP-2000 series?

For System
Integrators

Completed supports for your integration

- Completed drivers & software
 - Windows, OPOS, Java, CUPS, Utility, SDK(Android, iOS)

Customization support for hardware / software

- Fiscal printer supports
(providing module, without board)
- Customization for software, commands

Advanced connectivity & integration to your system

- No need to uninstall drivers & utilities
(FP-1000 series)
- Versatile Utility
 - LAN utility, Status Monitor

Certain Serviceability for the trouble

- Log functions
 - Receiving host data & printer' s status information
- Completed technical documents
 - Maintenance manual, Command specifications, and so on

User friendly printer by FUJITSU mechanical design



Easy open



Drop in



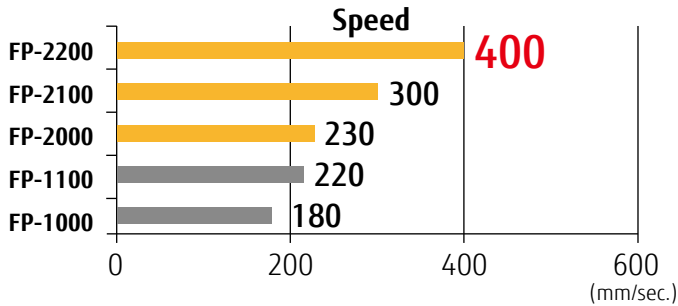
Ultra high speed printing

ECO platform design printer for users and environment

FP-2000 series is adapted simple cover design (top & middle cover) by clean and recyclable material for environment. Moreover, FP-2000 series are composed by few parts quantities which is included screws in order to not only consider eco friendly but also make maintenance easy for users. FP-2000 series are well considered printer for users and environment.

Ultra high speed printing in the class

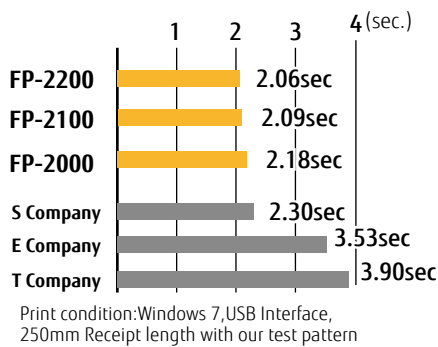
~ Achievement of "Non-waiting" printing ~



400mm/s is the Max. printing speed of FP-2200 with excellent printing quality in POS thermal printers in the world.

FP-2100 and FP-2000 are also more enhanced printing speed than previous models. (360mm/sec: At 50mm, 58mm use of width)

Optimum driver/ Firmware technology and High speed paper feed mechanism enhances the throughput. This enables customers not to waste time.



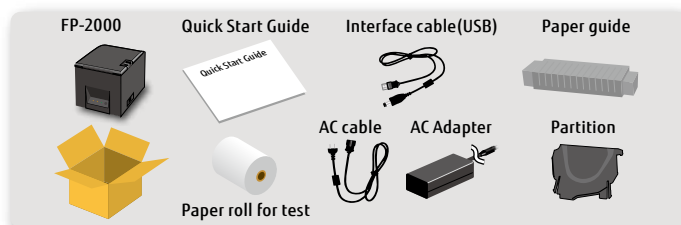
*Throughput:
The speed from pressing enter to finish of printing 1 receipt

All in one box design

~ FP-2000 series have everything you need ~

All accessories to use this printer are prepared in one box. FP-2000 series can cover the procurement cost and time for preparing accessories.

Accessories are different depending on model

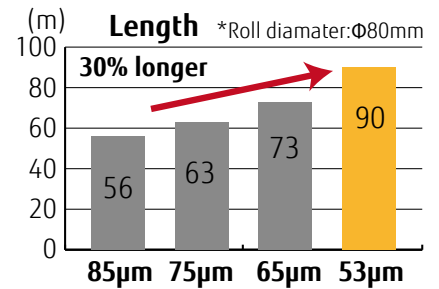


Printing for thin paper (53µm)

~ Helping paper consumption 30% OFF ~

FP-2000 series support printing for thin paper thickness (53µm). Comparing with 75µm thickness, there is 30% difference of receipt consumption.

FP-2000 series can help support of low paper consumption for end users
In case of Print width, 50mm and 58mm (Horizontal use) : 53µm-65µm is not supported



Removing paper curl adjustment function

~ Stress free operation ~

When the end of paper roll is closed, the paper curl becomes strong, and it is hard to pass the receipt straightly to show the receipt's surface.

This function loosens the strong curl of paper, and it helps for users to pass the receipt to the customers easily.
(FP-2200 only)



Cutter mechanism for paper jam

~ Consideration design for trouble ~

When paper jam happened, cutter position need to be adjusted to take out jammed paper.

However, even if paper jam is happened accidentally by FP-2000 series, users just power off, cover open, take out jammed paper, cover close and power on. Users don't have to operate cutter position because when printer power on, the cutter is set to initial position.



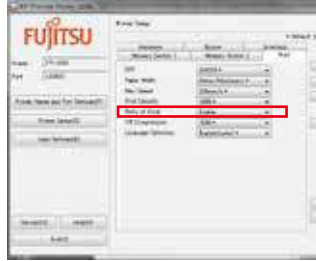
FUJITSU advanced algorithm software

Retry printing

~ Trouble free function when printer stops suddenly ~

Printing is stopped in the middle of data because of paper out, and so on. Sometimes, end users have to operate to print the data again.

If the printing is stopped in the middle of data, the printing is started over by this function. "Retry printing" can be setup by Printer Utility (Default is disenable.)



Compression & Reduced printing functions

~ Helping paper consumption with great printing ~

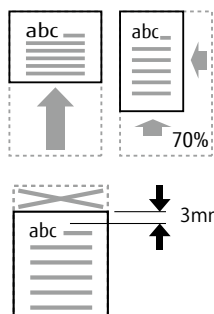
■ Compression printing by printer

Print data is compressed vertically by 7 patterns setup (from 95% to 50%). The current function is only enable to compress print date, however, this function achieves the excellent printing quality with non-synchronous thermal head control technology. Also, driver setting is not necessary, and it can save the paper.

■ Reduced printing by printer driver

FP-2000 series have function of "Reduced printing" & "Reducing Top margin 3mm printing". These functions helps to reduce wasted margin for printing and contribute to low paper consumption.

- 1/4 reduced vertically
- 1/2 reduced vertically
- 80mm width paper -> convert to 58mm



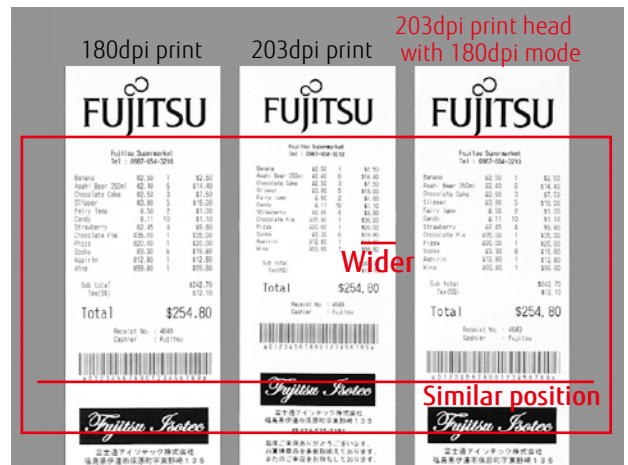
Take off each receipt every time after printing in case of 3mm setting.

High quality printing by FUJITSU technology

~ Achievement high quality printing in any environment ~

■ Simulated 180 dpi printing mode

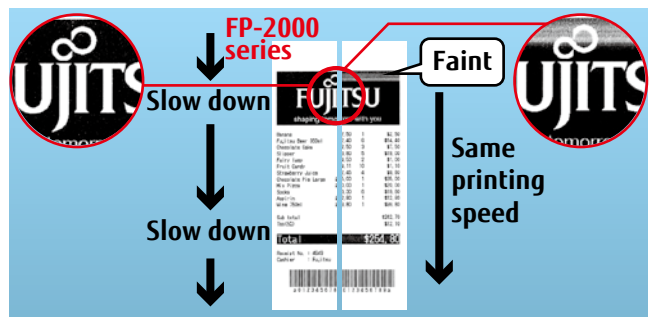
Print head for 203dpi is adapted for FP-2000 series because fine character or barcode are printed with high resolution, and it is flexible to print a large amount of information for the limited receipt's space. However, If customers require to print 180dpi printing result which is bigger character than 203dpi. This mode enable to print 180dpi printing result (not only character but also all print data which are barcode or image and so on) without layout adjustment from the replacement of 180dpi printer.



(This function can be selected by printer setup)

■ Automatic optimum printing mode

Printer calculates the density of print data before printing. Depending on the print density, printer controls power and speed to print clearly for high duty printing.



■ 16 gray scale printing

16 gray scale printing in receipts like a logo printing or coupon printing have advertise effects to attract customers. FP-2000 series support this function. (FP-2200, FP-2100 only)



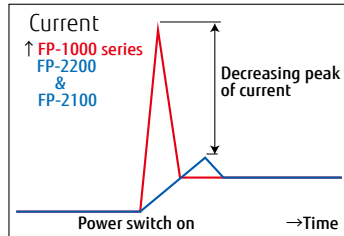
FUJITSU professional hardware

Protecting from inrush current

~ Certain connectivity ~

FP-2200 and FP-2100 are supported by Down inrush current circuit to decrease the peak of sudden current's start up.

This support helps to prevent the printer from system down in the environment even though using powered USB, for example, situations of connecting POS system or KIOSK machine.



Countermeasure for ESD

~ Proper operation in any environment ~

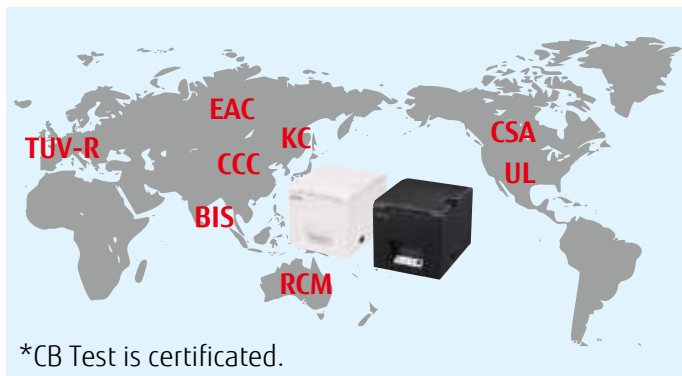
FP-2000 series are passed the strict FUJITSU standard which is adequate Level 4 of IEC61000-4-2 in categories of ESD. This technology has been adapted FUJITSU thermal printer which is high-end model, however, FUJITSU developed the technology to adapt low-end models, FP-2000 series.

Details	
Air discharge	Level 4 (± 8 KV)
Contact discharge	Level 4 (± 15 KV)

Covering safety standard for each region

~ Appropriate printer for international business ~

FUJITSU products covers safety standard for each region. (*Safety standard is different depending on product)



*CB Test is certificated.

Moreover, FP-2000 series obtain the standards which are advantage for your business.

(*Other standard)
Energy Star, CE mark, FUJITSU Super Green Products
RoHS

Selectable interface cards

~ Selectable interface cards to accommodate end users needs ~

USB is a standard interface card with Drawer kick connector and AC connector on the main board. Also, various optional interface cards are available depending on end user's usage environments.



RS232C



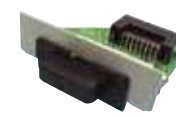
LAN



LAN+RS232C(9pin)



Powered USB



Bluetooth



Wireless LAN

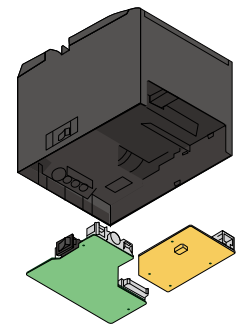
*Interface board can be changed by removing screw.
* Acquisition of countries on WiFi standards

Fiscal Printer Support

~ Completed support for your integration ~

Controller board of FP-2000 series is considered design for adding fiscal board (fiscal printer project).

Moreover, printer which is without control board also can be provided for fiscal project.



Energy saving




~ ECO & Saving printer's cost ~

FP-2000 series comply with the New Energy Star Program. Also, the power consumption is 1W or less at the waiting mode and 30W or less at the operation (average). (at using USB interface only)

Power consumption			
	FP-2200	FP-2100	FP-2000
Standby	1W or less		
Operation (Average)	30W or less		

Technical specifications

Mechanical & Functions

Model		FP-2200	FP-2100	FP-2000		
						
Printing Technology		Direct Line Thermal Method				
Print Resolution		8 dot/mm (0.125mm/dot), 203dpi				
Print Speed (Monochrome only)		Max. 400mm/s 360mm/sec: 50mm, 58mm width paper	Maximum 300mm/s	Maximum 230mm/s		
Paper Feed-out Direction		Top feed out				
Cutter Method		Full/Partial cut	Partial cut			
Installation Direction		Two ways (Horizontal, Vertical) (LAN or RS232C+LAN card is inserted, Horizontal setting may not be available depending on the connector)				
Paper	Paper width	80mm, 58mm, 50mm				
	Outer Diameter of Roll Paper	less than \varnothing 83mm				
	Paper Thickness	53 μ m - 85 μ m (53 μ m - 65 μ m thickness paper which width is 50mm and 58mm are not supported, but FP-2200 with paper guide can support all thickness.)				
Maximum Print Width	50mm with paper	45mm (360dots)				
	58mm with paper	48mm (384dots) or 52.5mm (420dots)				
	80mm with paper	64mm (512dots) or 72mm (576dots)				
Font size and Column *1		203dpi(Normal Mode)			Extended Mode	
		Font A (Column)	Font B (Column)	Font C (Column)	Font A (Column)	Font B (Column)
Paper width 50mm	Body Face	12x24 (30)	10x24 (36) 9x24 (40)	8x16 (45)	-	-
	Letter Face	11x22 (30)	9x17 (36) 9x22(40)	8x13 (45)	-	-
Paper width 58mm	Body Face	12x24 (32 or 35) 12x24 (30)	10x24 (38 or 42) 9x24(42 or 46) 10x24 (36) 9x24 (40)	8x16 (48 or 52) 8x16 (45)	12x24 (32) 12x24 (42)	10x24 (38 or 42) 9x24 (42 or 46) 10x24 (51) 9x24 (56)
	Letter Face	11x22 (32 or 35) 11x22 (30)	9x17 (38 or 42) 9x22 (42 or 46) 9x17 (36) 9x22 (40)	8x13 (48 or 52) 8x13 (45)	12x24 (32) 12x24 (42)	9x22 (38 or 42) 9x17 (42 or 46) 9x22 (51) 9x17 (56)
Paper width 80mm	Body Face	12x24 (42 or 48) 12x24(42)	10x24 (51 or 57) 9x24 (56 or 64) 10x24 (51) 9x24 (56)	8x16 (64 or 72) 8x16 (64)	12x24 (42) 12x24 (42)	10x24 (51) 9x24 (56) 10x24 (51) 9x24 (56)
	Letter Face	11x22 (42 or 48) 11x22(42)	9x17 (51 or 57) 9x22 (56 or 64) 9x17 (51) 9x22 (56)	8x13 (64 or 72) 8x13 (64)	12x24 (42) 12x24 (42)	9x22 (51) 9x17 (56) 9x22 (51) 9x17 (56)
Barcode	Barcode	UPC-A, UPC-E, JAN13 (EAN13), JAN8(EAN8), CODE39, ITF, CODABAR(NW-7), CODE93, CODE128				
	Two dimensional code	QR code(Common to all models), PDF417 & DataMatrix(FP-2200&FP-2100)				
Receive Buffer		Max. 4KB				
Logo Store Memory		1088KB			576KB	
Removing paper curl adjustment function		Available	Not Available		Not Available	
Paper Near End Sensor		Available				
Paper End Sensor		Available				
Black Mark Sensor or Paper Exit Sensor		Available (Factory Option)	Not Available		Not Available	
Internal Buzzer		Available to notice errors and printer status				
Retry printing		Available (Approx.200cm reprinting)	Available (Approx.40cm reprinting)		Not Available	
Simulated 180 dpi printing mode		Available (Default)				
16 gray scale printing		Available	Available		Not Available	
Acoustic Noise		Less than 55 dB(A)				
Software Interface		ESC/POS emulation				
Drawer Interface		2 Drawers Controllable				
Interface *2	USB	USB(2.0 Full-speed)				
	USB + RS232C	USB(2.0 Full-speed) + RS232C Serial (25pins)				
	USB + LAN	USB(2.0 Full-speed) + Wired, 10BASE-T/100BASE-TX				
	USB + Bluetooth	USB(2.0 Full-speed) + Bluetooth				
	USB + Powered USB	USB(2.0 Full-speed) + Powered USB (2.0 Full-speed)			Not Available	
	USB + RS232C + LAN	USB(2.0 Full-speed) + RS232C Serial (9pins) + Wired, 10BASE-T/100BASE-TX				
	USB+Wireless LAN	USB(2.0 Full-speed)+Wireless LAN (WiFi802.11a/b/g/n)			Not Available	

* Mechanical specification is in the previous page.

Software & Driver for FP-2200, FP-2100, FP-2000

Software	Printer Driver	Windows	Windows driver OPOS driver (Ver.1.13) JavaPOS driver (Ver.1.10) *3	Windows® 10, Windows Server® 2012 R2, Windows® 12, Windows® 8.1, Windows® 8, Windows Server® 2008 R2, Windows® 7, Windows Server® 2008, Windows Vista®, Windows® POSReady 7, Windows® POSReady 2009,
		Linux	JavaPOS driver (Ver.1.10) *3 CUPS driver	Linux SuSE11.4/13.2, Cent OS 6.4. Linux SuSE11.4/13.2, Cent OS 6.4., Ubuntu 14.04
	Printer Utility	Software to set the printer's setup items(only Windows OS)		
	SDK	Android : LAN/ Bluetooth : 2.3.3 or more. USB : 3.1 or more iOS : LAN/Bluetooth : 6.1.3 or more		
Language *7	Language selection		English, Simple Chinese, Traditional Chinese, Korean, Thai	
	Character Sets	1 byte	Alphanumeric character(95), International character(16 sets: Gothic), International character(14 sets: Mincho), Enlarged graphics(128 x 21pages: Gothic), Enlarged graphics(128 x 9pages: Mincho (It contain a Thai page)), Downloaded registration(95)	
		2 bytes	Hangul character(8227), Big5-2003 character(13501), GB18030-2000character(28427), Use-defined Kanji(94)	
	Code page		PC437, Katakana, PC850, PC860, PC863, PC865, WPC1252, PC866, PC852, PC858, Thai code page, MIK, PC857, Thai code 18, PC864, PC851, PC869, ISO8859-2, ISO8859-7, PC866 Type 2, TCVN 5712:1993 VN1) JIS (1st, 2nd, 3rd level,), KS code, GB18030-2000, Big 5	

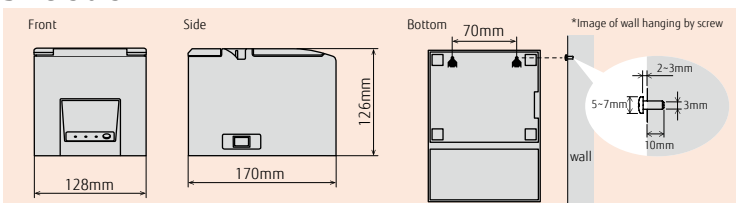
Reliability

Model	FP-2200	FP-2100	FP-2000
RELIABILITY *4	MCBF (Mean-cycle-between-failure)	70million Lines	60million Lines
	MTBF (Mean-Time-between-failure)	Main Board : 360,000H	
	Printer Mechanism life	25 million line-feed	20 million line-feed
	Print Head	150km 150million pulse	100km 100million pulse
	Cutter Life(times of cut)	3million (Full cut: 2million)	2million

Physical

Model	FP-2200	FP-2100	FP-2000
Power Requirements	DC Input: +24VDC±10% AC Input: 100 - 240V, 50/60Hz, Single Phase		
Power Consumption	Standby	During standby 1W or less (40mA) (USB interface use)	
	Operation (Average)	30W or less (1A) (USB interface use)	
Protecting from Inrush current	Available	Available	Not Available
Countermeasure for ESD (IEC61000-4-2)*6	Direct discharge	Contact discharge: 0~8kV, Air discharge: 0~15kV	
	Indirect discharge	0~15kV	
Temperature	Operation guarantee: 0 °C to 40°C Print quality guarantee: 5 °C to 35°C		
Humidity	Operation guarantee: 10 % RH to 95% RH Print quality guarantee: 10 % RH to 85% RH		
Dimensions	128(W)x170(D)x126(H)mm, 5.0(W)x6.8(D)x4.9(H) inch		
Weight (without the packing box)	1.0kg		
Cover Color	Ocean Black & Royal White		
Standard / Regulations	Safety	UL/CSA, TUV-mark, BIS, CCC, CB Test certificate, RCM, EAC	
	EMC*5	FCC Class A, EN 55022 Class A, RCM (AS/ NZA CISRR Class A)	
	Other	Energy Star, CE Mark, FUJITSU Super Green Product	

Dimensions



*1 Italic character for Font Size and Column shows 180dpi fonts mode

*2 Standard Interface is USB, and Interface card can be selectable as an option for other interfaces.

*3 JavaPOS Driver supports RS232C Interface and USB Interface.

*4 Operation condition is under 500 transactions/day(1 transaction=25LF + 1cut), 340days/year, print duty less than 9%, and the life of Head or Cutter with using specified paper by FUJITSU. If unspecified paper is used, the life of printer might be shortened than expected. Also, it might be a cause of the trouble of the printer.

*5 EMS for Wireless interface (Bluetooth model and Wireless LAN) is different depending on each country. Please contact to confirm it.

*6 The values of Interface for LAN and LAN+RS232C (9pin) are TBA.

*7 Language is different depending on products

All specifications are subject to change without notices.



JMI-0046

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