EPSON
EXCEED YOUR VISION

2005-2006

Printing Product Guide

Mini Printer Mechanism **MPM**
Embedded Unit **EU**

Standard

The history for Epson is, in a sense, a history of standards. Epson unveiled the world's first miniprinter, for calculators, all the way back in 1968. And for more than three decades Epson has used its outstanding engineering ability and know-how to turn innovative ideas into creative, useful products. We at Epson have always believed that communicating with customer is critical. We listen to your voices, uncover your needs, and develop products and proposals designed to earn true customer satisfaction. Epson has created, and will continue to create new, industry-leading standards. Best Printing Solution for Your Needs.

Global Network

Today, Epson, the creator of the mini printer, is a truly global company with an extensive lineup of products. Our commitment to innovation and to our customers is backed up by a network of sales and service support offices around the globe. Each site stays in close contact with customers and share a variety of information and know-how. We offer you're the best printing solution by closely monitoring the latest market trends and building high-value-added products that directly address your needs.

EPSON Roots

Epson's first major product was a digital watch featuring micromechatronics and electronic technology. This was followed by a printing timer used as the official timekeeper at the 1964 Olympics. Four years later there came the EP-101, the world's first electronic calculator mini printer. This ultra-compact printer was a huge hit worldwide and heralded the start of Epson's multi-faceted business expansion, giving rise to many other products or "sons". Actually, the name EPSON is a combination of the EP from the EP-101 and SON. EPSON. A name associated with cutting-edge, high quality products around the world.

Co-Existence

In Harmony With The Environment

In line with its commitment to maintaining harmony with nature, Epson has implemented a wide range of measures to protect the environment.
These began more than ten years ago, with the declaration that the company would stop using CFCs. Other examples include the reduction of CO_2 emissions at factories and facilities, reduction of waste materials, and recycling.
This careful attention to the environment has enabled a number of Epson factories to acquire ISO14001 certification.

Quality

Unrivalled Quality

All Epson products have one thing in common – outstanding quality.
This is the result of the careful attention we pay to customers' particular requirements.
Thanks to this superior quality, Epson was the first mini printer manufacturer to acquire accreditation for ISO9001, the strictest of the ISO9000 international quality standards, covering every aspect of quality control, from quality assurance systems to services.
ISO9001 compliance is just another example of the measures Epson takes to bring you total product satisfaction.

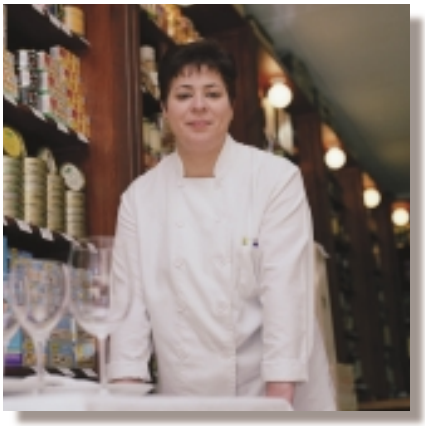
S.MOS Systems Inc.
U.S. Epson Inc.
Epson Electronics America,Ltd.
Epson Canada Ltd.
Epson America Inc.
Epson Accessories, Inc.
Epson Latin America Inc.
Epson Venezuela S.A.
Epson Colombia Ltda.
Epson Costa Rica S.A.
Epson Mexico, S.A. de C.V.
Epson do Brasil Industria e Comercio Ltda.
Epson Argentina S.A.
Epson Chile S.A.
Epson Peru, S.A.

Epson Korea Co., Ltd.
Seiko Epson Corporation Korea Office
JAPAN
Seiko Epson Corporation Beijing Representative Office
Epson (China)Co.,Ltd.
Epson New Zealand Ltd.
Epson Australia Pty. Ltd.

Epson Taiwan Technology&Trading Ltd.
Epson Hong Kong Ltd.
Epson Philippines Corporation
Epson Electronics (Thailand)Co.,Ltd.
Epson Trading (Malaysia)Sdn. Bhd.
Epson Singapore Pte.Ltd.

Best Printing Solution for Your Needs

Epson's extensive line of Thermal and Impact (both serial dot and shuttle dot) printers cover a wide range of user needs. Our models range from compact, low-power units on the low end to powerful, heavy-duty units on the high end. From such applications as Hand-held terminals, CAT/EFT, ATM/CD, and Kiosks etc., we fully answer your most advanced needs.




Epson Printing Technologies

Impact

The history of the impact printer began more than thirty years ago, with the EP-101. Over the decades, impact printers have steadily evolved. Never complacent as the frontrunner, Epson has continued to innovate and refine its impact printer technology. Our impact models are highly reliable, cost effective, and compact. These characteristics have helped Epson win an overwhelming and lasting share of the business printer market.

Thermal

The advanced technology, know-how, and experience Epson gained in impact printing has been transferred to a mastery of thermal printing. Like our impact printers, our thermal printers boast extremely high reliability, an Epson hallmark. Add to that the quiet operation and attractive print of the thermal printer line, and it is easy to see why these products continue to rapidly grow into new applications in a variety of fields.

Inkjet

Widely acknowledged as the ideal for printing high quality color images from a PC, inkjet technology offers customer benefits such as fast, silent, graphic-rich printout. Even more interesting is the fact that inkjet printers can use plain paper rolls, and offer the possibility of color output. Epson's expertise in inkjet technology, combined with its understanding of the demands of the customer's environment, means that it is in a unique position to meet this challenge.

You Can Get The Ideas and Power in Epson Mini Printers

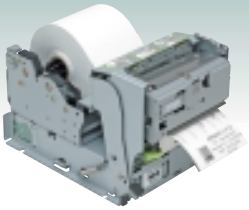
Embedded Unit and Mini Printer Mechanism let you easily create new system architecture for a wide range of applications and technologies. Just look on the charts, and you can find the best one.

		Application Examples								
		Hand-held terminal	CAT/EFT	ECR/POS	Ticket machine	ATM/CD	Kiosk	Lottery machine	Models	
Embedded Unit					●	●	●	●	EU-T300 Series	10
					●	●	●	●	EU-T400 Series	11
					●	●	●	●	EU-T500 Series	12
				●	●	●	●	●	M/BA-T500 Series	13
Mini Printer Mechanism	Thermal			○					M-T200 Series	16
		○	○	○					M-T51II/T53II/T123	17
		○	○			○			M/BA-T100 Series	18
				○					M-T245	18
	Impact	●	●						M-150II	19
		●	●	●					M-190/190G Series	19
			●	●					M-U110 Series	20
				●					M-780	21
				●					M-U420 Series	21
				●					M-290	22

EMBEDDED UNIT

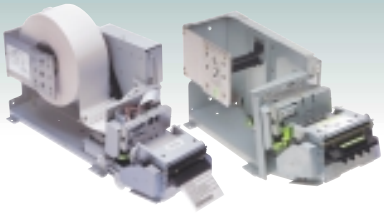
Epson Embedded Units offer a whole new dimension of self-service terminal design.
They feature high printing speeds, high quality and reliability, a wide variety of module configuration selections, an original Epson Advanced Printer Drivers, and many new ideas and functions.
Epson Embedded Units are sure to provide you with a rich environment for self-service terminal design innovation in both hardware and applications.

EU-T300 Series

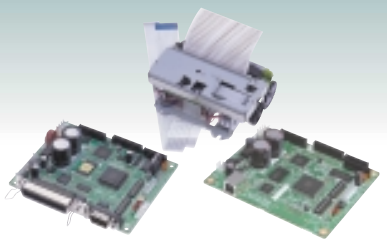


EU-T400 Series

EU-T500 Series



M/BA-T500 Series



Epson Advanced Printer Drivers

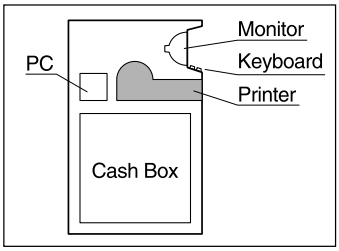
Epson advanced printer drivers make it easy. Available for Windows® 2000 / XP, and Linux®, the ever-adaptable Epson advanced printer drivers make it so easy to develop applications software, saving you time and money. And that's not all. In addition to printer drivers, the Epson Advanced Printer Drivers help keep your system running with an invaluable status monitor and maintenance counter. Allowing you to check the current status of your equipment, the status monitor is an essential tool that helps you to monitor consumables and solve errors. And for remote terminal use, Epson provides software that allows printer status monitoring from the PC side. The maintenance counter, on the other hand, informs you of operating data about parts such as the autocutter, retractor and print head. This reduces time by helping you determine when maintenance is needed - before it is needed. Epson advanced printer drivers for efficient system operation.

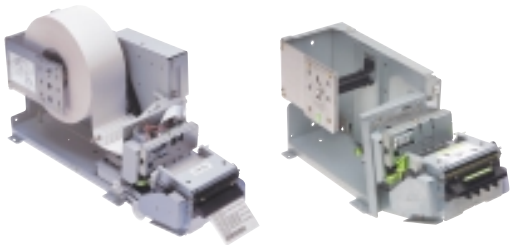
Solution proposal from Epson

ATM

- Big paper roll diameter (Max. 10 inches)
- Durable and reliable
- Flexibility in placement

Typical Terminal Construction





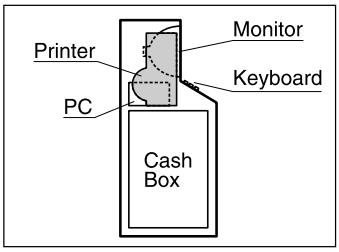
EU-T500 Series

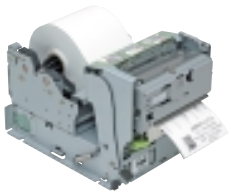
M/BA-T500 Series

CD

- Slim unit
- Durable and reliable
- Big paper roll diameter (Max. 8 inches)

Typical Terminal Construction





EU-T300 Series

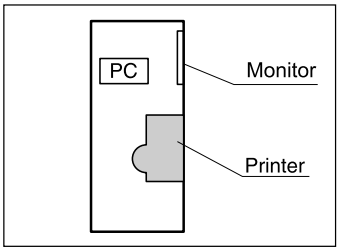
EU-T400 Series

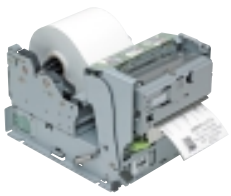
M/BA-T500 Series

Lottery Machine

- Quick receipt issuance
- Durable and reliable
- Low sensitive paper can be used

Typical Terminal Construction





EU-T300 Series

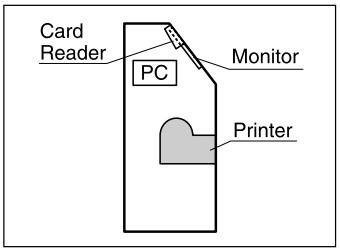
EU-T400 Series

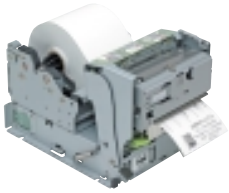
M/BA-T500 Series

Ticket Machine

- Thick paper can be used
- Low sensitive paper can be used
- Slim unit

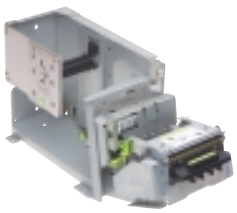
Typical Terminal Construction





EU-T300 Series

EU-T400 Series



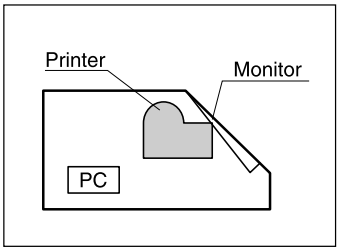
EU-T500 Series

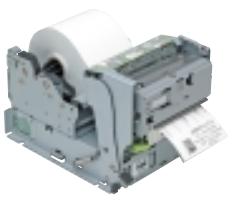
M/BA-T500 Series

Kiosk

- PC connectivity
- Quick receipt issuance
- Compact unit

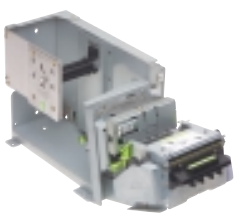
Typical Terminal Construction





EU-T300 Series

EU-T400 Series



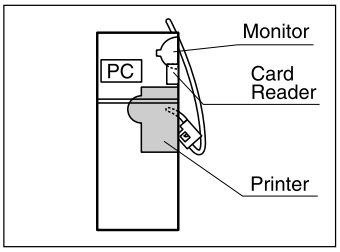
EU-T500 Series

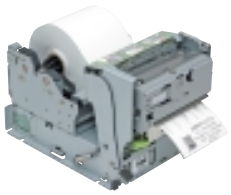
M/BA-T500 Series

Gas Pump

- Durable and reliable
- Used in heavy circumstances (Dust, ESD or Temperature)

Typical Terminal Construction





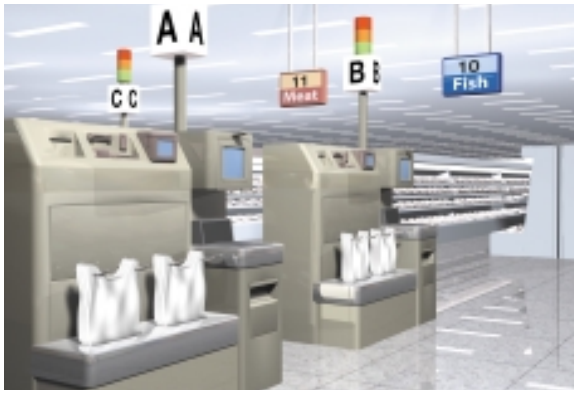
EU-T300 Series

EU-T400 Series

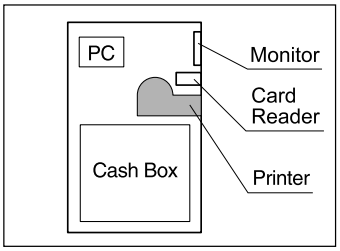
M/BA-T500 Series

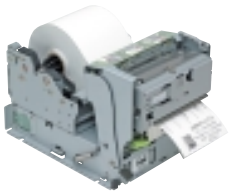
Self Checkout

- Quick receipt issuance
- Durable and reliable
- Compact unit



Typical Terminal Construction



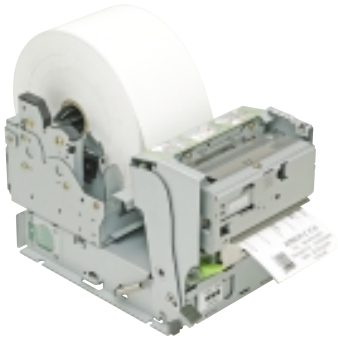


EU-T300 Series

M/BA-T500 Series

EU-T300 Series (EU-T312/T322/T332/T342)

NEW



Compact and Easy Operation

Compact

Epson uses modular components to build a Kiosk system that's perfect for your unique application. Simple components (printer module, control board module, and compact paper roll supply module) fit into various Kiosk terminals.

Selectable paper sizes

Terminal manufacturers can adjust the unit to meet their specific needs. Paper width (57.5 mm, 59.5 mm, 79.5 mm, or 82.5 mm) and paper diameter (6" or 4") can be selected as desired. And paper rolls with the print face either outside or inside can be used.

<paper diameter> <print face>

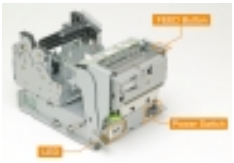
(6" type) (4" type) (outside) (inside)

Variety of autocutter functions

A durable autocutter is standard equipment and selectable from full cut type, partial cut type (1 point left uncut), or high-speed full cut type.

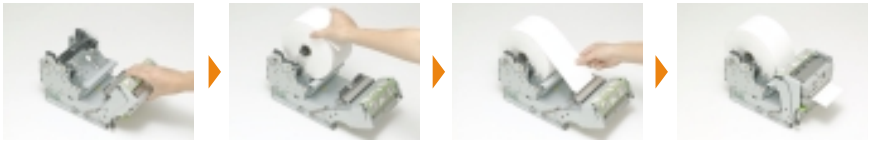
Full front operation

User-friendly full front operation enables easy paper handling and maintenance because the power switch, paper feed button, and LED are all located on the front.



Worry-free paper handling

It's simple to replace the paper roll with the EU-T300 series. You can open the printer module with one hand and insert the paper roll easily and surely using the semiautomatic loading function. These functions save recovery time and increase the speed of maintenance.



Adaptable graphics printing

Text, barcodes, logos and Windows® fonts can all be printed with ease. Embellish and emphasize with underlining, enhancement, 90° rotation, black and white reversing and enlargement.

Asian language options

Chinese (simplified and traditional), Korean, and Japanese fonts are available as factory options for local markets.

SPECIFICATIONS

	EU-T312	EU-T322	EU-T332	EU-T342
Paper Dimensions	57.5 ± 0.5 mm x dia. 152.4 mm max.	59.5 ± 0.5 mm x dia. 152.4 mm max.	79.5 ± 0.5 mm x dia. 152.4 mm max.	82.5 ± 0.5 mm x dia. 152.4 mm max.
Printing Method	Thermal line			
Paper Path	Straight			
Interface	RS-232 / IEEE 1284 Bi-directional parallel / USB			
Print Speed (Max.)	150 mm / sec.			
Paper Thickness	0.06 ~ 0.15 mm			
Power	24 VDC ± 2.4 V			
Reliability				
MCBF	Mechanism : 37,000,000 lines			
Printer life	Mechanism : 15,000,000 lines, Thermal head : 100 km (62.14 miles)			
Overall Dimensions	153 (W) x 236.4 (D) x 149.8 (H) mm (6" type)			
Mass	Approx. 2.5 kg (6" type)		Approx. 2.6 kg (6" type)	

*Please contact your Epson representative for unit configuration.

EU-T400 Series (EU-T412/T422/T432/T442)

Efficiency and versatility

Compact

Designed to fit into terminals of all sizes, compact dimensions and a small footprint make the EU-T400 series perfect for smaller terminals. And with the paper roll inside, the dimensions are almost the same.

High-speed and versatile printing

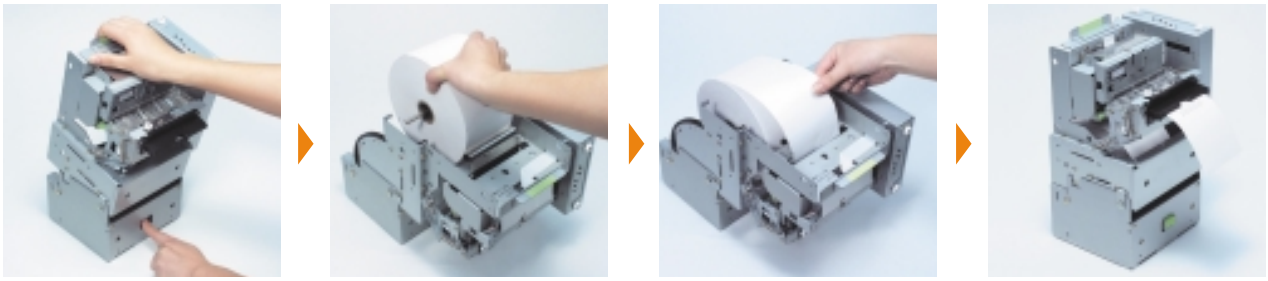
The EU-T400 series allows faster transactions for customers with the highest printing speed in its class. Text, barcodes, logos and Windows® fonts can all be printed with ease. Users can adjust the paper size by simply changing the printer and paper guide.

Front operation

Downtime is reduced with paper loading, maintenance and sensor adjustments carried out at the front.

Worry-free paper handling

It's simple to replace the paper roll with the EU-T400 series. A semiautomatic loading function saves recovery time and increases the speed of maintenance.



Highly durable

High durability reduces cost of ownership. The EU-T400 series allows printing of up to 300,000 receipts.

Asian language options

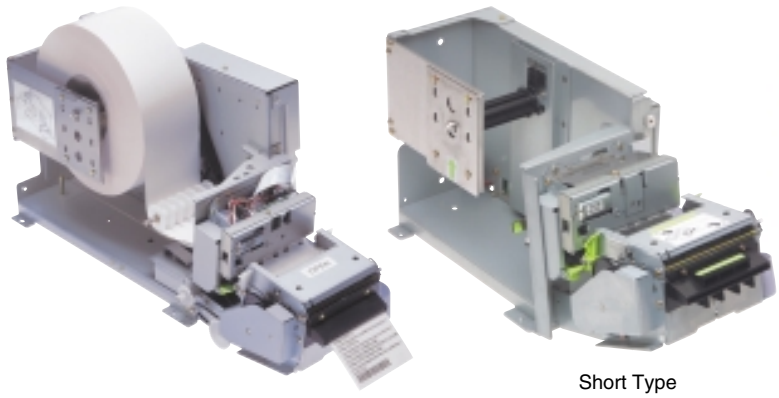
Chinese (simplified and traditional), Korean, and Japanese fonts are available as factory options for local markets.

SPECIFICATIONS

	EU-T412	EU-T422	EU-T432	EU-T442
Paper Dimensions	57.5 ± 0.5mm x dia.203mm max	59.5 ± 0.5mm x dia.203mm max	79.5 ± 0.5mm x dia.203mm max	82.5 ± 0.5mm x dia.203mm max
Printing Method	Thermal line			
Paper Path	Straight			
Interface	RS-232 / IEEE 1284 Bi-directional parallel / USB			
Print Speed	150 mm / sec.			
Paper Thickness	0.06~0.15 mm			
Power	24 VDC ± 2.4 V			
Reliability				
MCBF	Mechanism : 37,000,000 lines			
Receipt printing	300,000 times			
Printer life	Mechanism: 15,000,000 lines, Thermal head: 100 km (62.14 miles)			
Overall Dimensions	194.7 (W) x 170.6 (D) x 350 (H) mm (8" type)			
Mass	Approx. 3.9 kg (8" type)			

*Please contact your Epson representative for unit configuration.

EU-T500 Series (EU-T532/T542)



Short Type

High Reliability and Security

High reliability – MCBF: 37 million lines

Epson's superb reliability provides long-term maintenance-free operation with an MCBF of 37 million lines.

Automatic retracting function

The optional Cut Sheet Retracting Module can prevent loss of personal data and enables safer coupon and receipt issuing.

High speed printing

The EU-T500 series achieves very fast throughput. The highest printing speed is an incredible 150mm/sec., even with graphics.

Large-diameter roll paper available - up to 254 mm (10")

TCO can use 254 mm (10") diameter roll paper, which reduces the frequency of paper replacement.

Worry-free paper handling

Semi-automatic paper loading enables easy and fast replacement of paper rolls. Also, the printer module and cut sheet retracting function have opening mechanisms for easy maintenance.

Flexible module configuration

For the best self-terminal design, this offers the choice of the paper roll supply modules and the cut sheet retracting function to meet customer needs and environmental requirements.

Asian language options

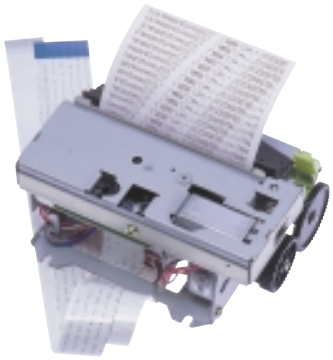
Chinese (simplified and traditional), Korean, and Japanese fonts are available as factory options for local markets.

SPECIFICATIONS

	EU-T532	EU-T542
Paper Dimensions	79.5 ± 0.5 mm x dia.254 mm max.	82.5 ± 0.5 mm x dia.254 mm max.
Printing Method	Thermal line	
Paper Path	Straight	
Interface	RS-232 / IEEE 1284 Bi-directional parallel	
Print Speed	150 mm / sec.	
Paper Thickness	0.06~0.15 mm	
Power	24 VDC ± 2.4 V	
Reliability		
MCBF	Mechanism : 37,000,000 lines	
Receipt printing	600,000 times	
Printer life	Mechanism: 15 x 10^6 lines / Thermal head: 100 km (62.14 miles)	
Overall Dimensions	176 (W) x 520.7 (D) x 231.4 (H) mm (Full modular type)	
Mass	Approx. 5.5 kg (Full modular type)	

*Please contact your Epson representative for unit configuration.

M/BA-T500 Series



RS-232 / IEEE1284 Type

USB Type

Standard high performance thermal printer

Super-fast printout

The blazingly fast M-T500 series prints up to 150 mm (5.9") per second. These printers also deliver fast throughput even in Full-Graphic Mode (uses BA-T500).

Flexible paper choice for various applications

These printers can easily handle thick paper and tickets. They can also handle large diameter paper rolls of up to 254 mm (10") with an additional feed assist mechanism.

Three types of paper path

Curved, straight and drop-in paper paths are available.

Standard autocutter

A durable autocutter is standard equipment. Sharp and reliable, the autocutter can even be used for heavy paper. There are two models of autocutter available: a full-cut model and a partial-cut (1 point left uncut) model. A high-speed cutter is also available.

Standard interface

RS-232 serial, IEEE 1284 Bi-directional and USB interfaces are also available in separate models for direct connection to standard PCs.

PS-180 available

By attaching the optional connector cable unit DC-T500, the printer works with the PS-180 power supply unit.

Asian language options

Chinese (simplified and traditional), Korean, and Japanese fonts are available as factory options for local markets.

DC12 V operation

DC 12 V operation is possible through a standard power source for PC environments by using M-T505 / BA-T505.

BA-T500 / BA-T505 SPECIFICATIONS

Supported Printer	M-T500 Series	M-T505 Series
Printing Speed	150 mm / sec. max.	100 mm / sec. max.
Printing Character	Text (Euro Symbol available), Barcode, Graphics	
Barcode Type	UPC-A, UPC-E, EAN 13(JAN), EAN 8(JAN), ITF, CODE 39, CODABAR, CODE 93 and CODE 128, Two-dimentional code: PDF417	
Interface	RS-232 / USB / IEEE 1284 Bi-directional parallel	RS-232 / IEEE 1284 Bi-directional parallel
Operating Temperature	0 to 55 °C	
Driver	Windows® 2000, XP, Linux®	
Operating voltage	24 VDC ± 10%	10~16 VDC
Other Function		
HEX dump	User can use Hexadecimal dump print for debugging	
Self-test	Configuration printout and test pattern	
Download	Flash ROM (graphics)	

SPECIFICATIONS

	M-T511A*	M-T512A*	M-T513A*	M-T521A*	M-T522A*	M-T523A*	M-T531A*	M-T532A*	M-T532HF*	M-T537A*	M-T533A*	M-T541A*	M-T542A*	M-T542HF*
Paper Width	57.5 ± 0.5 mm			59.5 ± 0.5 mm			79.5 ± 0.5 mm					82.5 ± 0.5 mm		
Paper path	Curve	Straight	Drop in	Curve	Straight	Drop in	Curve	Straight	Straight	Straight	Drop in	Curve	Straight	Straight

Note: Autocutter is selectable as follows; AF: full cut type, AP: partial cut type HF: High Speed Cutter (full cut only)

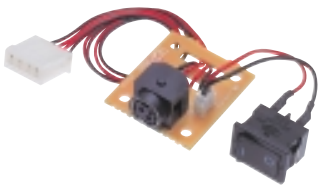
See the specifications on page 23 for details.

OPTIONS

Connector Cable Unit

DC-T500

The DC-T500 enables the printer to use power supply unit PS-180. By attaching the connector cable unit DC-T500, you can use the Epson standard power supply unit PS-180. This means that you do not have to design a new power supply unit for the EU and BA series by yourself.



Paper Near End Sensor Unit

NE-T500

Paper Near End Sensor Available

Paper near-end sensor unit connects to the EU-T500 series and EU-T400 series and BA-T500.

Low Paper Supply Detection Function

This highly efficient microswitch informs you when the paper roll is about to run out.

Mini Printer Mechanism
[Impact & Thermal]

Epson confidently offers the most appropriate printer mechanisms for customers' products; they are made through over 30 years experiences with customers in the world. Printing technologies are also well-prepared as the lineup which can be match customers demands.

Calculator

- Compact size
- High speed printing

ECR/POS

- Compact size
- High speed printing
- Ease of use

CAT/EFT

- Compact size
- Light weight
- Low power consumption

Taxi meters

- Compact size
- Durable and reliable
- Used in heavy circumstances

Measuring Instruments

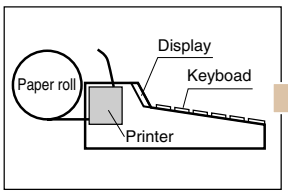
- Durable and reliable
- Used in heavy circumstances

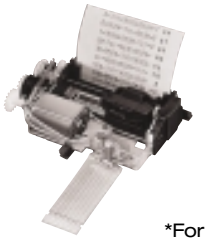
Panel printers

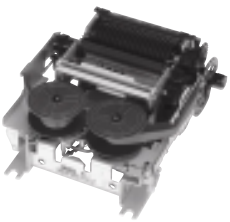
- Compact size
- Durable and reliable
- Used in heavy circumstances

Solution proposal from Epson

Typical Terminal Construction

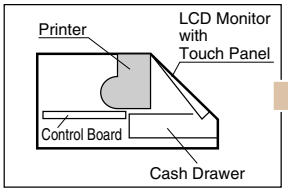


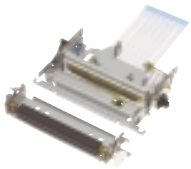




*For detail, please contact your Epson representative

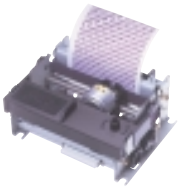
Typical Terminal Construction



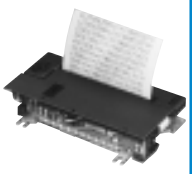


M-T53II

M-T207A

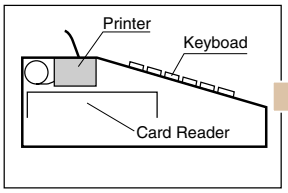


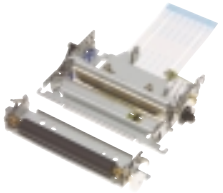
M-U110II



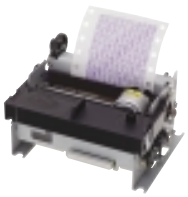
M-190G

Typical Terminal Construction

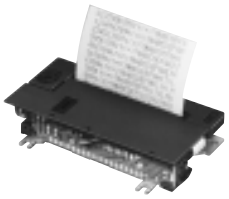




M-T123

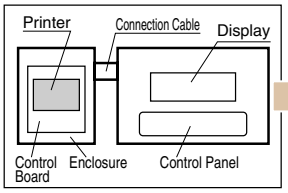


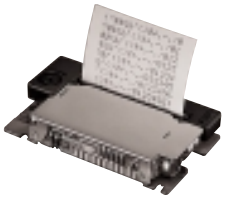
M-U111SII



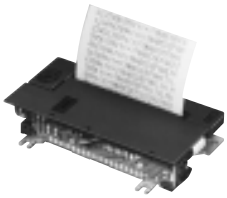
M-190G

Typical Terminal Construction

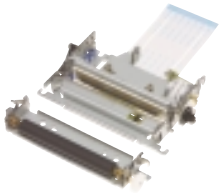




M-150II

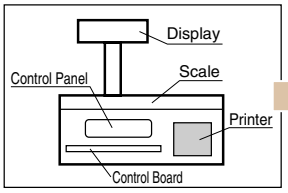


M-190G

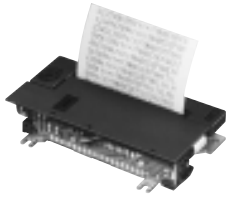


M-T123

Typical Terminal Construction

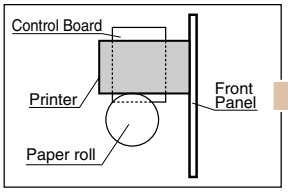


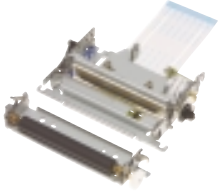
M-T102



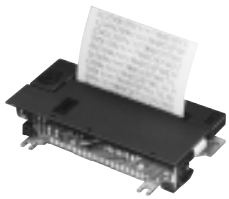
M-190G

Typical Terminal Construction





M-T123



M-190G

Thermal Printers

Thermal printers feature quiet operation and high throughput. Excellent for high-resolution graphics, our thermal printers render beautifully crisp, clear logo marks and barcodes. The simplicity of the paper path mechanism makes paper refills and maintenance easy. Epson offers a wide variety of thermal printers. You're sure to find one for your application needs.

1-STATION PRINTER

Thermal Line

M-T200 Series

M-T203

M-T207A

Best fit for ECR

Well fitted for ECR application

Through over 30 years experiences in ECR application of mini-printers, M-T203 and T207A are designed to fit ECR usage. Print speed of 100 mm/sec. (M-T207A) is high enough for receipt issuance. Durability of metal frame have ECR's quite reliable.

Drop in, but ease of design

M-T203 and T207A have drop-in paper set mechanism with hinge. Users do not have to be worry about designing drop-in paper set by themselves, you can have best matching in design of paper loading mechanism totally.

Ultra thin autocutter (M-T207A only)

Epson's new autocutter is extremely thin, only 6 mm. It keeps mechanism height as without. Durability of the autocutter is 0.6 million cuts.

SPECIFICATIONS

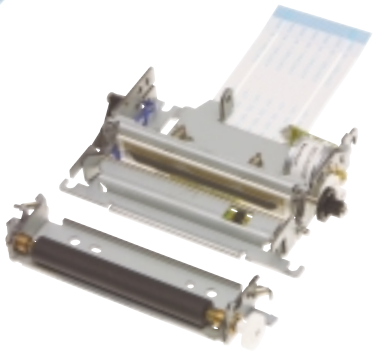
	M-T203	M-T207A
Paper Width	57.5 ± 0.5 mm	
Resolution	8 dots / mm	
Printing Speed	80 mm / sec. max. (at 24 V)	100 mm / sec. max. (at 24 V)
Voltage	24 VDC ± 2.4 V	
Reliability (MCBF)	15,000,000 lines	
Overall Dimensions	76.9 (W) x 174.5 (D) x 164.8 (H) mm	84.3 (W) x 196.3 (D) x 113.8 (H) mm
Mass	Approx. 350 g (Take-up Paper Holder)	Approx. 410 g (Paper Holder)

1-STATION PRINTER

Thermal Line

M-T51II
M-T53II/T123
LA-T51

M-T51II



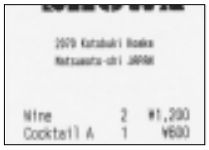
M-T53II / T123

LA-T51

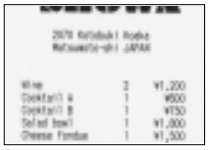
Compact Thermal Printer

Easy-to-read printing

Compared to other thermal printers using the same font, text printed with the M-T51II / T53II is larger - and receipts easier for customers to read.



M-T51II print sample



Other Thermal Printers print sample

Effective use of existing resources

With the installation position the same as Epson's best selling printer mechanism, the M-190 series*, there's little need for extensive changes to the terminal casing design.

*Mounting Attachment (factory option) is needed

Sharing of some fonts with the M-190 series is possible (ask your local Epson sales company for details).

Improved lineup

Users have the benefit of a wide range of paper paths, all designed with usability in mind. The drop in mechanism is more convenient than ever before.

SPECIFICATIONS (with LSI)

	LA-T51
Power	5 V ± 0.25 V (VD), 5 V ~ 7.5 V (VP)
Character	Font A : 12 x24, Font B : 9 x17
Printing	95 Alphanumeric, 37 International, 128 x 3 Graphic
Dimensions	QFP 100 pin
Interface	Parallel Centronics, Serial RS-232C
Support Models	M-T51II / T53II

SPECIFICATIONS

	M-T51II	M-T53II	M-T123
Paper Width	57.5 ± 0.5 mm		
Resolution	6 dots / mm		8 dots / mm
Printing Speed	52 mm / sec. max. (at 7.5 V)	50 mm / sec. max. (at 7.5 V)	
Voltage	5.0 to 8.0 VDC		
Reliability (MCBF)	15,000,000 lines		
Overall Dimensions	69.15 (W) x 51.2 (D) x 17.3 (H) mm	82.4 (W) x 50.2 (D) x 14 (H) mm	
Mass	Approx. 70 g	Approx. 65 g	

1-STATION PRINTER

Thermal Line

M/BA-T100 Series

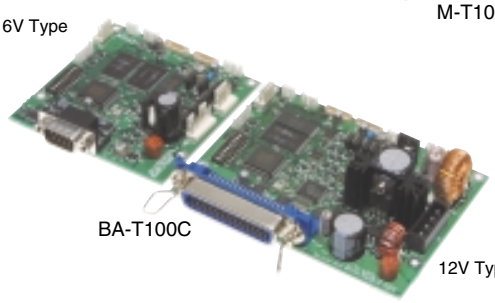
Control LSI for M-T100 Series

LA-T101

M-T102

M-T102A

6V Type



BA-T100C

12V Type

Compact 5 V Thermal Line Printer

Choice of paper path

Both curved and straight paper paths are available, enabling the printer to be laid out in either configuration.

High reliability in a small package

Withstands heavy usage due to its sturdy steel frame. The exceptionally quiet thermal head quickly produces quality text.

Mount-compatible with M-190

Mount-compatible (fixing points), with optional attachment.

5 V autocutter available

Available with a 5 V autocutter option (M-T102A / T103A).

Controls the entire M-T100 series.

The BA-T100C controls the M-T102, T102A, T103 or T103A without changing hardware. Two types of driving voltage (6 V or 12VDC) are available to match market requirements.

Printer driver-ready

The printer driver of the BA-T100C enables users to print barcodes, graphics and text quite easily from the Windows® OS.

Multi-language type ready

In addition to the to Alphanumeric standard character set, Japanese (including Kanji), Simplified Chinese and Traditional Chinese are available as factory options.

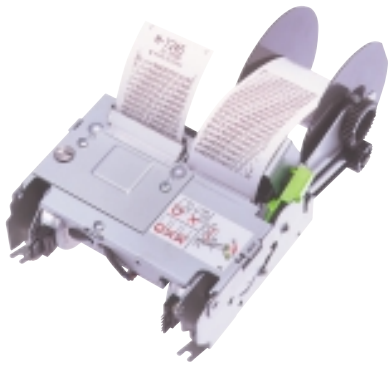
DC12 V operation

DC 12 V operation is possible through a standard power source for PC environments by using BA-T100C.

2-STATION PRINTER

Thermal Line

M-T245



Standard thermal printer for receipts

High print quality and high speed

This printer incorporates a high-density line thermal head (8 dots/mm) that ensures high quality printing. It prints faster than dot-matrix printers and makes less operating noise.

Easy paper removal and print head cleaning

The M-T245's print head-lifting mechanism makes both removal of jammed paper and cleaning easy.

Extensive selection of options

Select from an extensive number of options, including an autocutter, to customize the printer for your needs.

See the specifications on page 24 for details.

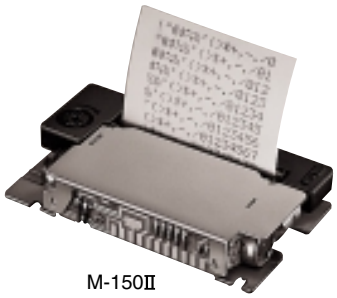
Impact Printers

High speed, simultaneous printing of multiple copies, low running costs, easy maintenance: these are just some of the features of impact printers. Impact printers are especially suited to check endorsement and validation applications. With an extensive impact printer product line, Epson can offer you the best model for your application.

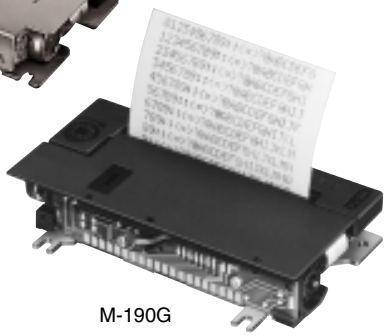
1-STATION PRINTER

Shuttle Impact Dot

M-150/190 Series
190G Series
LA-190G



M-150Ⅱ



M-190G

LA-190G

Model	Options
M-150	—
M-190 Series	Manual feed knob
M-190G Series	Manual feed knob

M-150II : Smallest shuttle dot printer in the world

Ultra-compact, yet highly reliable

The M-150II of impact dot matrix printers is the world's most compact. They weigh approx. 60 g yet offer extremely high performance.

Perfect for compact devices

Because they are so compact and require so little power, the M-150II is ideal for numerous printing applications, from handy terminals to laptop computers and compact measuring instruments.

Battery operation

This battery-operated printer runs on extremely low power.

M-190 : Best-selling shuttle dot printers

Faster, stronger

The M-190 series offers even better performance than the M-150 series. A dramatic improvement in printing speed brings new advances to applications such as CAT/EFT and measuring instruments.

High reliability

These printers also offer outstanding reliability for peace of mind.

Compact, lightweight

The series provides high performance in an ultra-compact, lightweight body and support for a wide variety of applications.

M-190G : upgrade from the M-190 series

Clear and speedy printouts

The M-190G series has a higher printing speed than the earlier M-190 series. This impact dot-matrix printer delivers crisp printouts.

Improved handling of poor-quality paper

Handles poor-quality paper well.

Capable of accepting ERC-40 long-life ribbon

The M-190G Series accepts the new ERC-40 long-life ribbon, which is capable of printing two million characters.

SPECIFICATIONS

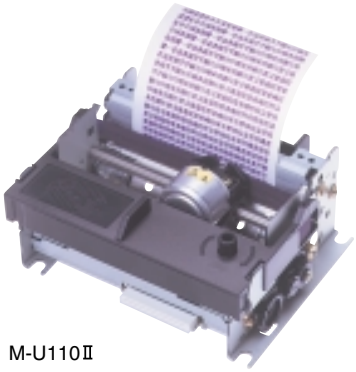
	LA-190G
Power	2.7 to 5.8 V (Topr = -15 to 85˚C)
Character	5 x 7 font (alphanumerics, extended graphics, international characters)
Package	LQFP 64 pin
Interface	Serial, Parallel
Support Models	M-150Ⅱ, M-190 / 191 / 192 / 195, M-190G / 192G

See the specifications on page 25 for details.

M-150	**M-150Ⅱ**			
M-190 Series	**M-190**	**M-191**	**M-192**	**M-195**
M-190G Series	**M-190G**	**M-192G**		

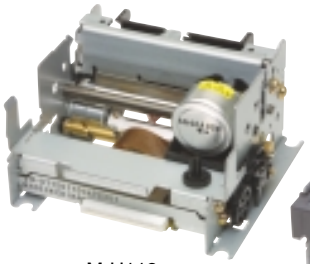
1-STATION PRINTER

Serial Impact Dot
M-U110 Series

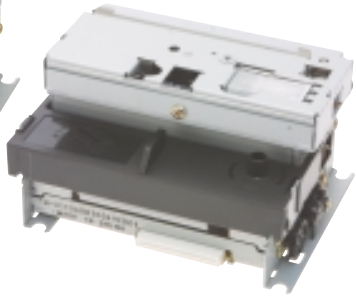


M-U110Ⅱ

M-U111SⅡ



M-U112



M-U110A

High-performance printer for ECR and CAT applications

Fast printing
Bi-directional and logic-seeking control are capable of delivering high-speed output of 5.6 lines per second (lps) for 30 columns (58mm) or 4.4 lps for 42 columns (76mm).

Reliability
Boasts superb reliability: MCBF: 9 million lines.

Installed Black Mark detector
The M-U110II has Black Mark detector as standard with variable resistance to perform best Black Mark detection.

Variation of- paper stock
The M-U110 series supports various type of paper stock.
M-U110II can handle two paper widths: 58 mm and 76mm.
M-U112 is for 58 mm width paper only but has a smaller footprint. M-U111SII is for the very popular sprocket type paper.

Multiple Copy Capability
The M-U110II has the capability to provide one original with one precise copies.

SPECIFICATIONS

	M-U110Ⅱ	M-U112	M-U110A	M-U111SⅡ
Paper Type		Friction		Sprocket
Paper Width	76.2 ± 0.7 mm / 57.5 ± 0.5 mm	57.5 ± 0.5 mm	76.2 ± 0.7 mm / 57.5 ± 0.5 mm	76.2 ± 0.7 mm
Column Capacity	42 columns (76 mm) / 30 columns (58 mm)	30 columns	42 columns (76 mm) / 30 columns (58 mm)	36 columns (76 mm)
Font	7 x 9			
Printing Speed	4.4 lines / sec. (76 mm) / 5.6 lines / sec. (58 mm)	4.2 lines / sec.	3.3 lines / sec. (76 mm) / 4.2 lines / sec. (58 mm)	5 lines / sec. (76 mm)
Voltage	24 ± 2.4 VDC			
MCBF	9,000,000 lines	5,000,000 lines		8,000,000 lines
Overall Dimensions	127 (W) x 96 (D) x 53 (H) mm	108 (W) x 96 (D) x 53 (H) mm	128.6 (W) x 98.8 (D) x 77.3 (H) mm 127.6 (W) x 98.8 (D) x 77.3 (H) mm	127 (W) x 96 (D) x 61 (H) mm
Mass	Approx. 470 g	Approx. 400 g	Approx. 700 g	Approx. 490 g

2-STATION PRINTER

Serial Impact Dot
M-780

Options
Validation sensor Near-end sensor Autocutter

Fastest two-station printer

The fastest printing in the two-station printer class

The highly reliable M-780 is the fastest printer in the two-station printer class.

Saves end-user's running cost

Helps save end-user running costs by using inexpensive 38-mm roll paper.

Convenient design

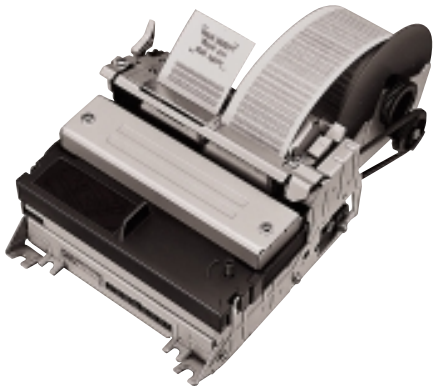
Designed with a paper-holding mechanism that prevents paper jams.

SPECIFICATIONS

Paper Width	Roll paper: 37.5 ± 0.5 mm
	Validation : 134 mm or more (W) x 70 mm or more (H)
Column Capacity	18 columns x 2, Validation: 42 columns
Printing Speed	3.3 lines / sec. (at 24 VDC)
Voltage	24 VDC $\pm^{5\%}_{10\%}$
MCBF	3,000,000 lines
Overall Dimensions	135 (W) x 227.7 (D) x 150.5 (H) mm
Mass	Approx. 1.0 kg

2-STATION PRINTER

Serial Impact Dot
M-U420 Series



Options
Validation sensor Near-end sensor (R / J) Autocutter Taiwan Mark Sensor (M-U420B)

(R / J): Receipt / Journal

Industry-wide Standard For ECR/POS Applications

Easy operating design

The clamshell design makes it easier for the operator to insert paper and remove jammed paper.

Excellent cost-performance ratio

The M-U420 provides the highest cost-performance ratio to customers.

Taiwan "Mark Sensor" available with the M-U420B

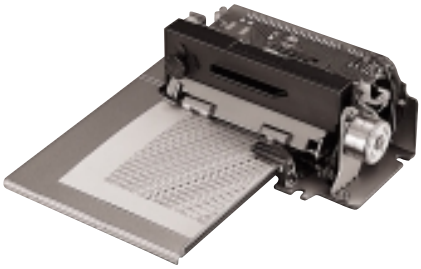
Users can set up the ECR/POS to fit special requirements for the Taiwanese market.

SPECIFICATIONS

Paper Width	Roll paper : 44.5 ± 0.5 mm
	Validation : 135 to 210 (W) x 70 (H) mm minimum
Column Capacity	Receipt : 24 columns Journal : 24 columns Validation : 55 columns
Printing Speed	3 lines / sec. (at 24 VDC)
Voltage	24 VDC $^{+5\%}_{-10\%}$
MCBF	4,000,000 lines
Overall Dimensions	150.7 (W) x 251.5 (D) x 103.5 (H) mm
Mass	Approx. 1.0 kg

SLIP PRINTER

Shuttle Impact Dot
M-290



World's smallest slip printer

Easy terminal design
The M-290 is smaller and thinner than any other slip printer in the world. For terminal designers, this means greater ease and freedom of design and superior product innovation.

Beautiful print quality
The high-quality print is extremely clear and legible every time. And in the full graphic mode, up to 42 separate columns can be formatted.

No limit to slip design
The slip can be designed in limitless ways thanks to the use of a stepping motor and numerous advanced features such as forward and reverse paper feed, 25-line fast feed and single-dot feed. Create precisely the slip design that best suits your product.

SPECIFICATIONS

Paper Width	80 (W) x 80 (L) mm minimum to 182 (W) x 257 (L) mm maximum
Column Capacity	42 columns
Printing Speed	2.3 lines / sec.(at 26.4 VDC)
Voltage	24 VDC ± 10%
MCBF	1,500,000 lines
Overall Dimensions	138.0 (W) x 70.5 (D) x 59.5 (H) mm
Mass	Approx. 550 g

Options
Mechanical form stopper, TOF sensor BOF sensor, Document table, PC board insulation cover

AUTOCUTTER

Versatile Autocutter
AU-100 Series

The AU-100 series detects the position of the cutter blade by means of a mechanical contact and controls the rotating direction of the motor. This allows the AU-100/AU-110 to achieve both partial and full cutting of paper.

SPECIFICATIONS

	AU-100	AU-110
Paper Type	Normal Paper, Recommended Thermal Paper	
Width	37.5 to 89.5 mm	
Thickness	Normal Paper: 0.06 to 0.085 mm, Thermal Paper: 0.065 mm	
Reliability (MCBF)	300,000 cuts (incl. full & partial)	
Voltage	12 VDC ± 10 %	24 VDC ± 10 %
Peak Current	Approx. 3 A	Approx. 2 A
Mean Current	Approx. 800 mA	Approx. 500 mA
Ambient temperature	0 to 50˚C	
Dimensions	103.0 (W) x 71.5 (D) x 21.5 (H) mm	
Mass	Approx. 400 g	

SPECIFICATIONS

Item \ Model	Embedded Unit		
	EU-T300	**EU-T400**	**EU-T532 / T542**
Printing Method	Thermal line		
Paper Path	Straight		
Print Font			
Font	Font A : 12 x 24 / Font B : 9 x 17 / Kanji : 24 x 24		
Column capacity	Font A : 48 columns / Font B : 64 columns / kanji 24 columns (When paper width is 79.5 mm)		
Character size	1.25 (W) x 3.0 (H) mm (Font A) / 0.88 (W) x 2.13 (H) mm (Font B)		
Character set	95 Alphanumeric, 37 International, 128 x 11 Graphic		
Interface	RS-232 / IEEE 1284 Bi-directional parallel / USB		RS-232 / IEEE 1284 Bi-directional parallel
Data buffer	4KB		
Print Speed (Max.)	150 mm / sec.		
Paper Dimensions	57.5 / 59.5 / 79.5 / 82.5 ± 0.5 mm x dia. 152.4 mm max.	57.5 / 59.5 / 79.5 / 82.5 ± 0.5 mm x dia. 203 mm max.	79.5 / 82.5 ± 0.5 mm x dia. 254 mm max.
Paper Thickness	0.06~0.15 mm		
Power	24 VDC ± 2.4 V		
Power consumption	Approx. 2.1 A (print duty 25%)		
Operating Temperature	0 to 55˚C	0 to 50˚C	
Reliability			
MCBF	Mechanism : 37,000,000 lines		
Receipt printing		300,000 times	600,000 times
Printer life	Mechanism : 15,000,000 lines, Thermal head : 100 km (62.14 miles)		
Overall Dimensions	153 (W) x 236.4 (D) x 149.8 (H) mm (6" type)	194.7 (W) x 170.6 (D) x 350 (H) mm (8" type)	176 (W) x 520.7 (D) x 231.4 (H) mm (Paper Roll Equipped Model)
Mass	Approx. 2.5 / 2.6 kg (6" type)	Approx. 3.9 kg (8" type)	Approx. 5.5 kg (Full modular type)
Power Supply (option)	PS-180		
Factory Options	Multilingual Font Set	Loop Guide (for 600 mm Receipt issuance), Paper Supply Spacer, Multilingual Font Set, Paper Near-end Sensor	Cut Sheet retracting function Multilingual Font Set DC-T500

*Please contact your Epson representative for unit configuration.

Item \ Model	Embedded Unit				
	M/BA-T500 Series				
	M-T510 Series	**M-T520 Series**	**M-T530 Series**	**M-T540 Series**	**M-T537A**
Printing Method	Thermal line				
Paper Path	Curve or Straight or Drop in			Curve or Straight	Straight
Print Font					
Font	Font A : 12 x 24 / Font B : 9 x 17 / Kanji : 24 x 24				
Column capacity	Font A : 36 columns	Font A : 37 columns	Font A : 48 columns	Font A : 53 columns	Font A : 48 columns
Character size	1.25 (W) x 3.0 (H) mm (Font A) / 0.88 (W) x 2.13 (H) mm (Font B)				
Character set	95 Alphanumeric, 37 International, 128 x 11 Graphic				
Interface	RS-232 / IEEE 1284 Bi-directional parallel, USB				← (without USB)
Data buffer	4KB				
Print Speed (Max.)	150 mm / sec.				100 mm / sec.
Paper Dimensions	57.5 ± 0.5 mm x dia. 254 mm max.	59.5 ± 0.5 mm x dia. 254 mm max.	79.5 ± 0.5 mm x dia. 254 mm max.	82.5 ± 0.5 mm x dia. 254 mm max.	79.5 ± 0.5 mm x dia. 254 mm max.
Paper Thickness	0.06~0.15 mm (~ 0.18 mm for HF)				
Power	24 VDC ± 2.4 V				10 ~ 16 VDC
Power consumption	Approx. 1.25 A (print duty 25%)		Approx. 1.75 A (print duty 25%)		Approx. 1.5 A (print duty 25%)
Operating Temperature	-15 to 70˚C (without BA-T500 Series)				
Reliability					
MCBF	37,000,000 lines				
Receipt printing	–				
Printer life	Mechanism : 15,000,000 lines, Thermal head : 100 km (62.14 miles)				
Overall Dimensions	102.9 (W) x 91.9 (D) x 57.5 (H) mm		126.9 (W) x 91.9 (D) x 57.5 (H) mm		
Mass	Approx. 460 g		Approx. 550 g		
Power Supply (option)	PS-180				–
Factory Options	Mark sensor, Autocutter Type				

SPECIFICATIONS

Item \ Model	1 Station Printer			
	M-T203	**M-T207A**	**M-T102**	**M-T51Ⅱ**
Printing Method	Thermal line	Thermal line	Thermal line	Thermal line
Number of total dots	432 dots / line	432 dots / line	384 dots / line	288 dots / line
Resolution	8 dots / mm	8 dots / mm	8 dots / mm	6 dots / mm
Printing width	54 mm	54 mm	48 mm	48 mm
Printing Speed	80 mm / sec. max. (at 24 V)	100 mm / sec. max. (at 24 V)	60 mm / sec. max. (at 7.0 V)	52 mm / sec. max. (at 7.5 V)
Paper feeding pitch	0.063 mm	0.063 mm	0.0625 mm	0.087 mm
Paper feeding speed	80 mm / sec. max. (at 24 V)	100 mm / sec. max. (at 24 V)	60 mm / sec. max. (at 7.0 V)	52 mm / sec. max. (at 7.5 V)
Sensor				
Paper end	Photosensor	Photosensor	Photosensor	Photosensor
Printhead temperature	Thermistor	Thermistor	Thermistor	Thermistor
Printhead unload	Microswitch	Microswitch	Microswitch	Microswitch
Power Supply Voltage				
Printhead & Motors	24 VDC ± 2.4 V	24 VDC ± 2.4 V	5.0 to 7.5 VDC	5.0 to 8.0 VDC
Printhead control & sensor	5 ± 0.25 VDC	5 ± 0.25 VDC	5 ± 0.25 VDC	5 ± 0.25 VDC
Connector				
Printhead	FFC	FFC / 4-pin connector (cutter motor)	Pin connector	FFC
Motor				
Paper Dimensions	57.5 ± 0.5 mm (W) x dia.83 mm	57.5 ± 0.5 mm (W) x dia.83 mm	57.5 ± 0.5 mm (W) x dia. 127 mm	57.5 ± 0.5 mm (W) x dia. 80 mm
Paper Thickness	60 ~ 75 μm	60 ~ 75 μm	–	–
Operating Temperature	0 to 50˚C	0 to 50˚C	0 to 50˚C	0 to 50˚C
Reliability				
Print head Life	50 km, 50,000,000 pulses		50 km, 100,000,000 pulses	–
MCBF	15,000,000 lines			
Printer life	6,000,000 lines			
Overall Dimensions	76.9 (W) x 174.5 (D) x 164.8 (H) mm	84.3 (W) x 196.3 (D) x 113.8 (H) mm	69.15 (W) x 51.2 (D) x 20 (H) mm	69.15 (W) x 51.2 (D) x 17.3 (H) mm
Mass	Approx. 350 g (Take-up Paper Holder)	Approx. 410 g (Paper Holder)	Approx. 85 g	Approx. 70 g
Connector (A/C sensor)	–	–	–	–
A/C life	–	600,000 cuts	–	–
A/C method	–	Scissors type	–	–
A/C duration	–	Approx. 400 ms	–	–

Item \ Model	1 Station Printer		2 Station Printer
	M-T53Ⅱ	**M-T123**	**M-T245**
Printing Method	Thermal line	Thermal line	Thermal line
Number of total dots	288 dots / line	384 dots / line	R / J : 288 dots / line
Resolution	6 dots / mm	8 dots / mm	8 dots / mm
Printing width	48 mm	48 mm	R / J : 36 mm
Printing Speed	50 mm / sec. max. (at 7.5 V)	50 mm / sec. max. (at 7.5 V)	Approx. 50 mm / sec.
Paper feeding pitch	0.083 mm	0.0637 mm	0.125 mm
Paper feeding speed	50 mm / sec. max. (at 7.5 V)	50 mm / sec. max. (at 7.5 V)	Approx. 50 mm / sec.
Sensor			
Paper end	Photosensor	Photosensor	Photosensor
Printhead temperature	Thermistor	Thermistor	Thermistor
Printhead unload	Microswitch	Microswitch	Micro switch
Power Supply Voltage			
Printhead & Motors	5.0 to 8.0 VDC	5.0 to 8.0 VDC	24 VDC ± 7 %
Printhead control & sensor	5 ± 0.25 VDC	5 ± 0.25 VDC	5 ± 0.25 VDC
Connector			
Printhead	FFC	FFC	FFC connector
Motor			Pin connector
Paper Dimensions	57.5 ± 0.5 mm (W) x dia.80 mm	57.5 ± 0.5 mm (W) x dia.80 mm	44.5 ± 0.5 mm (W) x dia. 83 mm max.
Operating Temperature	0 to 50˚C	0 to 50˚C	0 to 40˚C
Reliability			
Print head Life	–	50 km, 100,000,000 pulses	–
MCBF	15,000,000 lines		5,000,000 lines
Printer life	6,000,000 lines		10,000,000 lines
Overall Dimensions	82.4 (W) x 50.2 (D) x 14 (H) mm	82.4 (W) x 50.2 (D) x 14 (H) mm	144 (W) x 213.1 (D) x 159.2 (H) mm (with full options)
Mass	Approx. 65 g	Approx. 65 g	Approx. 920 g (without options)

(*) (R / J) : Receipt / Journal

Item \ Model	1 Station Printer				
	M-150Ⅱ	M-190 Series			
		M-190	M-191	M-192	M-195
Printing Method	Shuttle impact dot matrix				
Printing Format					
Font	5 x 7				
Column capacity	16 columns	24 columns	32 columns	40 columns	18 columns
Character size	1.8 (W) x 2.5 (H) mm	1.7 (W) x 2.6 (H) mm	1.3 (W) x 2.6 (H) mm	1.1 (W) x 2.6 (H) mm	1.7 (W) x 2.6 (H) mm
Line spacing	* 3.5 mm	3.7 mm (In case of 5 x 7 font and 3 dots / line paper feed)			
Column spacing	2.1 mm	2.0 mm	1.5 mm	1.2 mm	2.0 mm
Number of total dots	96 dots / line	144 dots / line	192 dots / line	240 dots / line	108 dots / line
Printing Speed	1.0 line / sec. (at 4.5 VDC)	2.5 lines / sec. (at 4.8 VDC)	1.9 lines / sec. (at 4.8 VDC)	1.5 lines / sec. (at 4.8 VDC)	2.5 lines / sec. (at 4.8 VDC)
Print head					
Voltage	3.3 to 5.0 VDC	3.3 to 5.2 VDC			
Peak current	Approx. 3 A / solenoid (at 4.5 VDC)	Approx. 2.5 A / solenoid (at 4.8 VDC)			
Motor					
Voltage	3.8 to 5.0 VDC	3.8 to 5.2 VDC			
Mean current	Approx. 0.17 A (at 4.5 VDC)	Approx. 0.35 A (at 4.8 VDC)			
Paper	Roll paper				
Dimensions	44.5 ± 0.5 mm (W) x dia. 50 mm max.	57.5 ± 0.5 mm (W) x dia. 83 mm max.			44.5 ± 0.5 mm (W)
Total Thickness	0.07 mm	0.06 to 0.085 mm			
Copy Capability	Original and one copy				
Ribbon Cassette	ERC-05	ERC-09 / 22			
Operating Temperature	0 to 50˚C				
Reliability					
Print head Life	–				
MCBF	500,000 lines	1,500,000 lines	1,100,000 lines	900,000 lines	1,500,000 lines
Printer Life	–	2,250,000 lines	1,650,000 lines	1,350,000 lines	2,250,000 lines
Overall Dimensions	73.2 (W) x 42.6 (D) x 12.8 (H) mm	91.0 (W) x 46.9 (D) x 15.8 (H) mm			
Mass (without options)	Approx. 60 g	Approx. 100 g			

(*) For a 5 x 7 font and 3 dots per line paper feed.

Item \ Model	1 Station Printer		Slip Printer
	M-190G Series		M-290
	M-190G	M-192G	
Printing Method	Shuttle impact dot matrix		Shuttle impact dot matrix
Printing Format			
Font	5 x 7		7 x 7
Column capacity	24 columns	40 columns	42 columns
Character size	1.7 (W) x 2.6 (H) mm	1.1 (W) x 2.6 (H) mm	1.3 (W) x 2.9 (H) mm
Line spacing	3.7 mm (In case of 5 x 7 font and 3 dots / line paper feed)		4.2 mm
Column spacing	2.0 mm	1.2 mm	1.6 mm
Number of total dots	144 dots / line	240 dots / line	210 dots / line
Printing Speed	2.7 lines / sec. ± 20%	1.8 lines / sec. ± 20%	2.3 lines / sec. (at 26.4 VDC)
Print head			
Voltage	5.0 ± 0.5 VDC		24 VDC ± 10%
Peak current	Approx. 2.5 A / solenoid (at 5 VDC)		Approx. 1.6 A / solenoid (at 24 VDC)
Motor			
Voltage	5.0 ± 0.5 VDC		24 VDC ± 10%
Mean current	Approx. 0.35 A (at 5 VDC)		Approx. 0.15 A (at 24 VDC, P.F. motor), Approx. 0.15 A (at 24 VDC, CR motor)
Paper	Roll paper		Slip paper
Dimensions	57.5 ± 0.5 mm (W) x dia 83 mm max.		80 (W) x 80 (L) mm mini. to 182 (W) x 257 (L) mm max.
Total Thickness	0.06 to 0.085 mm		0.09 to 0.35 mm
Copy Capability	Original and one copy		Max : Original and four copies (at 25˚C)
Ribbon Cassette	ERC-09 / ERC-22 / ERC-40		ERC-27
Operating Temperature	-10 to 50˚C (using ERC-22, ERC-40)		0 to 50˚C
Reliability			
Print head Life	–		100,000,000 strokes / wire
MCBF	1,500,000 lines	1,000,000 lines	1,500,000 lines
Printer Life	2,250,000 lines	1,500,000 lines	–
Overall Dimensions	91.0 (W) x 46.9 (D) x 15.8 (H) mm		138.0 (W) x 70.5 (D) x 59.5 (H) mm
Mass (without options)	Approx. 100 g		Approx. 550 g

UL478, CSA220 recognized products are available on request.
(Safety Standards)

SPECIFICATIONS

Item \ Model	1 Station Printer		
	M-U110 Series		
	M-U110Ⅱ	M-U112	M-U110A
Printing Method	Serial impact dot matrix		
Printing Format			
Font	7 x 9		
Column capacity	42 columns (76 mm) / 30 columns (58 mm)	30 columns	42 columns (76 mm) / 30 columns (58 mm)
Character size	1.20 (W) x 3.1 (H) mm	1.24 (W) x 3.1 (H) mm	1.24 (W) x 3.1 (H) mm
Line spacing	Approx. 4.2 mm		Approx. 4.23 mm (24 step)
Column spacing	Approx. 1.5 mm	Approx. 1.6 mm	Approx. 1.6 mm
Number of total dots	210 dots (420 positions) / line (76 mm) / 150 dots (300 positions) / line (58 mm)	150 dots (300 positions) / line	210 dots (420 positions) / line (76mm) / 150 dots (300positions) / line (58mm)
Printing Speed	4.4 lines / sec. (76 mm) / 5.6 lines / sec. (58 mm)	4.2 lines / sec.	3.3 lines / sec. (76 mm) / 4.2 lines / sec. (58 mm)
Print head			
Voltage	24 ± 2.4 VDC		
Peak current	Approx. 11.7 A (at 24 VDC)	Approx. 8.6 A (at 24 VDC)	Approx. 8.6 A (at 24 VDC)
Motor			
Voltage	24 ± 2.4 VDC		
Mean current	0.35A / phase (CR motor) / 0.3A / phase (P.F.motor)		
Paper	Roll paper	Roll paper	Roll paper
Dimensions	Roll paper : 76.2 ± 0.7 mm (W) / 57.5 ± 0.5 mm (W) x dia. 83 mm max.	Roll paper : 57.5 ± 0.5 mm (W) x dia. 83 mm max.	Roll paper : 76.2 ± 0.7 mm (W) / 57.5 ± 0.5 mm (W) dia. 83 mm max
Total Thickness	Roll paper : 0.06 to 0.14mm	Roll paper : 0.06 to 0.2mm	Roll paper : 0.06 to 0.14 mm
Copy Capability	Original and one copy	Original and two copies	Original and one copy
Ribbon Cassette	ERC-39 (P)	ERC-42 (P)	ERC-39 (P)
Operating Temperature	0 to 50˚C		
Reliability			
Print head Life	150,000,000 characters		
MCBF	9,000,000 lines	5,000,000 lines	
Printer Life	9,000,000 lines	8,000,000 lines	
Overall Dimensions	127.0 (W) x 96.0 (D) x 53.0 (H) mm	108.0 (W) x 96.0 (D) x 53.0 (H) mm	128.6 (W) x 98.8 (D) x 77.3 (H) mm (76 mm) 127.6 (W) x 98.8 (D) x 77.3 (H) mm (58 mm)
Mass (without options)	Approx. 470 g	Approx. 400 g	Approx. 700 g
Autocutter			
Autocutter life	–		1,000,000 cuts
Cutting method	–		Scissors
Operating duration	–		Approximately 350 ms (at 24 VDC)

Item \ Model	Sprocket Printer	2 Station Printer	
	M-U110 Series	M-780	M-U420 Series
	M-U111SⅡ		
Printing Method	Serial impact dot matrix	Serial impact dot matrix	Serial impact dot matrix
Printing Format			
Font	7 x 9	7 x 9	7 x 9
Column capacity	36 columns (76 mm)	18 columns x 2, Validation: 42 columns	Receipt : 24 columns Journal : 24 columns Validation : 55 columns
Character size	1.2 (W) x 3.1 (H) mm (76 mm)	1.3 (W) x 3.1 (H) mm	1.32 (W) x 3.1 (H) mm
Line spacing	Approx. 4.2 mm	4.7 mm	4.3 mm
Column spacing	Approx. 1.5 mm (76 mm)	1.53 mm	1.54 mm
Number of total dots	180 dots (360 positions) / line	R / J : 81 dots (162 positions) / line / Validation: 189 dots (378 positions) / line	R / J : 108 dots (216 positions) / line Validation : 247 dots (495 positions) / line
Printing Speed	5 lines / sec. (76 mm)	Approximately 3.3 lines / sec. (at 24 VDC)	Approximately 3 lines / sec. (at 24 VDC)
Print head			
Voltage	24 ± 2.4 VDC	24 VDC $\pm^{5\%}_{10\%}$	24 VDC $^{+5\%}_{-10\%}$
Peak current	Approx. 11.7 A (at 24 VDC)	Approx. 10.8 A (at 24 VDC)	Approx. 8.6 A (at 24 VDC)
Motor			
Voltage	24 ± 2.4 VDC	24 VDC $\pm^{5\%}_{10\%}$	24 VDC $^{+5\%}_{-10\%}$
Mean current	0.35A / phase (CR motor) / 0.3A / phase (P.F.motor)	Approx. 0.25 A (at 24 VDC)	Approx. 0.2 A (at 24 VDC)
Paper	Sprocket paper	Roll paper / Validation paper	Roll paper / Validation paper
Dimensions	76.2 ± 0.7 mm (W) x 127 to 254 mm (H) (between perforations)	Roll paper : 37.5 ± 0.5 mm (W) x dia. 83 mm max. Validation : 134 mm or more (W) x 70 mm or more (H)	Roll paper : 44.5 ± 0.5 mm (W) x dia. 83 mm max. Validation : 135 to 210 (W) x 70 (H) mm mini.
Total Thickness	0.1 to 0.2 mm	Roll paper : 0.06 to 0.09 mm, Validation : 0.07 to 0.2 mm	Roll paper : 0.06 to 0.09 mm / Validation : 0.07 to 0.14 mm
Copy Capability	Original and two copies	Original and two copies (Validation)	Original and one copy (Validation)
Ribbon Cassette	ERC-39 (P)	ERC-37 (P)	ERC-32 (P)
Operating Temperature	0 to 50˚C	0 to 50˚C	0 to 50˚C
Reliability			
Print head Life	150,000,000 characters	100,000,000 characters	150,000,000 characters
MCBF	8,000,000 lines	3,000,000 lines	4,000,000 lines
Printer Life	8,000,000 lines	5,000,000 lines	8,000,000 lines
Overall Dimensions	127.0 (W) x 96.0 (D) x 61.0 (H) mm	135 (W) x 227.7 (D) x 150.5 (H) mm	150.7 (W) x 251.5 (D) x 103.5 (H) mm
Mass (without options)	Approx. 490 g	Approx. 1.0 kg (1.1 kg with autocutter)	Approx. 1.0 kg (1.1 kg with autocutter)

Printing Product Guide

2005 - 2006

EPSON

SEIKO EPSON CORPORATION

Epson Global site
http://www.epson.com

0A03091 0507A Printed in Japan