

Beyond expectations



S84-ex S86-ex 

Industrial Print Engine

Maximise productivity for 24/7 mission critical applications

SATO, Beyond Expectations



As a pioneer, SATO's flagship print engine delivers automatic print and apply needs.

Equipped with an RFID module, SATO offers 4" and 6" solutions that can print text and barcodes on the surface of RFID tags and labels while encoding RFID data into them continuously. Printers are also capable of verifying the function of RFID tags before printing.



Print Engine Family

S84-ex and S86-ex cover the needs of 4-inch or 6-inch printing applications. Direct Thermal and Thermal Transfer models available in both Right hand /Left Hand versions. Ribbon Saver model (only for TT) also available.

UHF RFID functionality for S84-ex & S86-ex.

Ease of Operation

2 Colour LCD and LED

The 2 colour LCD and LED help operators to easily understand the status of the printer from a significant distance from the print and apply station.



Face-in /Face-out Ribbon support

No setting change required to use either face-in and face-out ribbons.



Auto Sensor Calibration Function

No sensor level setting required.

Ease of Setting, Download and Upload

Downloadable printer settings, font and firmware via SD / USB

Allows customers to set up printers easily without software tools.

Uploadable printer buffer data and operation log via SD / USB

Helps analyze print operations and trouble shooting.

Remote Printer Setting

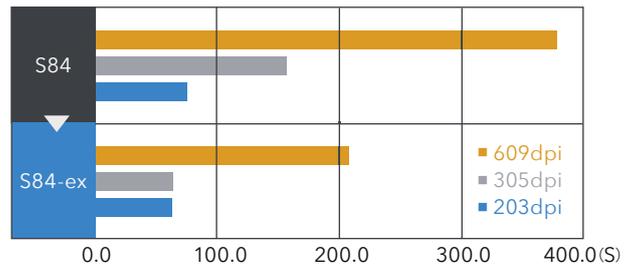
Web Browser
SATO All-In-One Utilities



Fast Throughput and Print Speed

- S84-ex/S86-ex have the best in class print speed (16 ips).
- The new PCB increases first label print speed and overall throughput.

Comparison of printing 50 labels



	S84		S84-ex
609dpi	375.6	-167.4	208.2
305dpi	156.7	-93.7	62.3
203dpi	75.6	-14.2	61.4

Simple Standalone Mode

Upgraded simple standalone mode provides independent operation via printer keys and display. Up to 99 label formats are possible.

Environmentally Friendly

Ribbon Saver Model

The ribbon saver function reduces the use of thermal transfer ribbon.

Connectivity

Increased connectivity supports both legacy and future host environments

▶ Standard Multiple Interfaces

RS232C, IEEE1284, USB and LAN

▶ Optional Interfaces

Wireless LAN IEEE 802.11 b/g/n
Bluetooth

▶ D-SUB 25 pin External Signal Interface

14pin Conversion Cable included
NPN/PNP Connection



Standard Emulations Onboard

- ▶ Support SZPL and SDPL
- ▶ LCD Selectable

Multiple Language Support

▶ Unicode

UTF8, UTF16 | WGL4

▶ Built-in Asian Font Support

Simplified Chinese | Traditional Chinese | Korean
Thai | Arabic

Ease of Maintenance

▶ Print Head Replacement

No tools required for print head replacement. Opening cable cover helps to change from both front or side.



▶ Roller Replacement

Locking slide cover allows for fast and easy replacement of rollers.

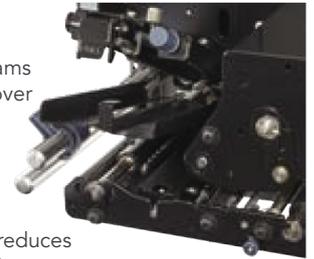


▶ Sensor Cover

Non stick surface prevents label jams and the tool-less design makes cover removal and cleaning easy.

▶ Gear Box Design

Universal, one assembly gearbox supports all print resolutions and reduces inventory and simplifies the ordering process.



Stable Operation

▶ Strong against vibration and static

Anti vibration and static design protects the power supply and main boards.
Allowing the print engine to tolerate harsh environments.

▶ Reinforced belt design

The new belt and gear design reduces the belt wear and increases durability.



▶ Rear service access

Convenient access to PCB, gears and power supply. The revised layout provides more room for easier maintenance to the back of the printer.



PRINTING SPECIFICATION		S84-ex			S86-ex	
Printing Method		Direct Thermal and Thermal Transfer or Direct Thermal Only Model				
Print Resolution		8 dots / mm (203 dpi)	12 dots / mm (305 dpi)	24 dots / mm (609 dpi)	8 dots / mm (203 dpi)	12 dots / mm (305 dpi)
Max. Print Speed		16 ips (406.4 mm/sec)	14 ips (355.6 mm/sec)	6 ips (152.4 mm/sec)	14 ips (355.6 mm/sec)	12 ips (304.8 mm/sec)
Max. Print Area	Width mm (inch)	104 mm (4.1")			167.5 mm (6.59")	
	Length mm (inch)	2500 mm (98.43")	1500 mm (59.06")	400 mm (15.75")	2500 mm (98.43")	1249 mm (49.17")
Processor		32-bit RISC-CPU 500MHz				
CONSUMABLES SPECIFICATION (Recommended to use printer supplies manufactured or certified by SATO)						
Sensor Type		I-Mark Sensor (Reflective), Label Gap Sensor (Transmissive), Paper-en, Ribbon near-end/end.				
Media Type		Roll or fan-fold die cut labels, Plain paper face stock, Synthetics and Continuous stock				
Media Thickness		0.05 ~ 0.31 mm (0.002" to 0.012")				
Label Size	Continuous	Width	13 to 131mm (0.51" to 5.16")			54 to 180 mm (2.13" to 7.09")
		Length	9 to 2503 mm (0.35" to 98.54")	9 to 1503 mm (0.35" to 59.17")	9 to 403 mm (0.35" to 15.87")	9 to 2503 mm (0.24" to 98.54") 9 to 1252 mm (0.35" to 49.29")
	Dispense	Width	13 to 131 mm (0.51" to 5.16")			54 to 180 mm (2.13" to 7.09")
		Length	Thermal Transfer Model: 13 to 359 mm (0.51" to 14.13") / Direct Thermal Model: 18 to 359 mm (0.71" to 14.13")			
Ribbon	Width	25 mm - 128 mm (0.98" to 5.04")			59 mm to 177 mm (2.32" to 6.97")	
	Length	450 m (1476.4 ft.) when width is less than 39.5 mm (1.56") 600 m (1968.5 ft.) when width is equal or more than 39.5 mm (1.55")			600 m (1968.5 ft.)	
	Roll diameter	108 mm (4.25")				
	Core	Core diameter: Ø 25.4 mm (1")				
	Wind direction	Face-in/out, No Setting Change Required				
Ribbon Saving		Factory option (S84-ex only)			None	
RFID		RFID only available on the thermal transfer model				
FONTS / SYMBOLOGIES						
Internal Fonts	Standard Bitmap	U, S, M, WB, WL, XU, XS, XM, XB, XL, OCR-A, OCR-B, Chinese (GB18030, BIG5), Korean (KSX1001)				
	TTF Fonts	CG Times, CG Triumvirate, SATOGAMMA, SATOVICA				
	Encoding	Major Latin and Pan-European Code Pages (WGL4), GB18030 (simplified Chinese), BIG5 (traditional Chinese), KSX1001 (Korean), Thai (CP874), Arabic, UTF-8 and UTF-16BE (downloaded fonts)				
Downloadable fonts support		Bitmap, True Type (1byte/2byte), Maximum 11.7 MB				
Barcode	Linear	Code 39, Code 93, Code 128, CODABAR (NW7), EAN8/13, GS1-DatabarTM, GS1-128(UCC/EAN128), Interleaved 2/5, Industrial 2/5, JAN8/13, Matrix 2/5, MSI, Bookland, POSTNETTM, Bookland, UPC-A/E Intelligent Mail Barcode				
	2D Symbolologies	PDF417, Micro PDF, Maxi Code, GS1 Data Matrix, QR Code, Micro QR Code, Security QR code, Aztec Code and Composite Symbolologies				
Print Direction		Character data rotation: 0°, 90°, 180°, 270° / Barcode rotation: 0°, 90°, 180°, 270°				
INTERFACE CHARACTERISTICS AND INTEGRATION						
Standard Interfaces	USB	USB 2.0 type-B				
	LAN	Ethernet 10/100 Mbps / DHCP / Protocol: TCP/IP, LPR, FTP, TELNET, SNMP				
	RS232C	RS232C Standard (XON/XOFF, RTS/CTS)				
	IEEE1284	IEEE1284				
	EXT (I/O)	DSUB 25 pin (female) / Amphenol 14 pin (female) conversion cable is attached				
Optional Interfaces	Wireless LAN	IEEE 802.11/b/g/n autoswitching / Security: WEP, WPA, WPA2, Dynamic WEP				
	Bluetooth	Ver.2.0+EDR Class 2 (10 m) / Profile: SPP				
External Memory	USB	USB type-A (USB Host)				
	SD card slot	SD/SDHC				
Supported printer protocols		Standard: SBPL (SATO Barcode Printer Language) / Emulation Language: SZPL, SDPL				
Remote Setting		Web Browser, SATO All-in-One Printer Utilities				
Drivers		Windows, Linux, SAP, MAC OS				
OPERATING CHARACTERISTICS						
Power Requirements		Universal Auto-ranging Power Supply, AC100V±AC240V±10±, 50/60Hz				
Dimensions		W245mm x D408mm x H300mm (9.65" x 16.06" x 11.81")			W245 mm (9.65") x D417 mm (16.42") x H300 mm (11.81")	
Weight		Thermal Transfer Model: 13.7 kg (30.20 lbs) Direct Thermal Model: 12.3 kg (27.12 lbs)			Thermal Transfer Model: 15.1 kg Direct Thermal Model: 13.6 kg	
Environment	Operating	-5° – 40 °C / 15 – 80 % RH (without condensation)				
	Storage	-20 – 60 °C / 15 – 90 % RH (without condensation)				
Display Panel		Graphic LCD (Horizontal 128 dots x Vertical 64 dots) with backlight (White/Orange switchable)				
MISCELLANEOUS						
Standards & Agency Approvals		IEC 60950, CE Marking, NEMKO-GS, cMETus, UL60950-1, CSA C22.2, EN 60950-1, FCC, ICES-003, NMB-003, RCM, CCC, SRRC, KC, ROHS compliant				
Functions – Useful features		Simple Standalone Mode, Multi Language support LCD message (7 Languages), USB Memory or SD card for data copy, Status return				
Functions – Self Diagnosis Checking		Thermal head check, Ribbon end detection, Test print, Head Lift detection, Auto Sensor Calibration				
RFID		For more information about qualified RFID labels / inlay combinations please contact SATO				
OPTIONS (EUROPE ONLY)						
Accessories		WLAN Kit, Bluetooth Kit, Ribbon Saver (factory option, S84-ex only), UHF RFID S84-ex and S86-ex; Standard: ISO 18000-6 Type C, Frequency: 868 – 960Mhz, Protocols: EPC Gen 2 Class 1				