SATO
Powered On Site /

S84NX / S86NX Series

The most versatile thermal print engines yet

satoeurope.com

With improved flexibility, usability, connectivity and reliability, our flagship print engines are now equipped with next level SATO innovation, eclipsing all previous expectations.

Designed for the most demanding environments, the series is available in both 4" and 6", direct thermal/thermal transfer and direct thermal solutions. Ideal for printing **text data**, **barcodes**, **RFID tags** and **labels**. Its unrivalled versatility in performance is due to its excellent capabilities in emulation, PC-Less printing through Simple Stand Alone Mode or more complex AEP autonomous applications, alongside fast throughput and print speed.

Advanced intelligence

AEP

Application Enabled Printing can swiftly transform and simplify printing operations to reduce business costs. It enables the printer to be used without a PC by connecting to peripheral devices to easily print labels and tags, while maximising productivity by integrating with PLC's, eliminating the need for additional external devices, neither PCs, or any type of special software. It also features useable built-in memory for additional AEP software applications like AEP Utility and AEP Works.

EMULATION

Auto detection of major emulation languages enable seamless switching from SATO legacy models or other brands. These include:

- **Standard SBPL and programmable AEP**
  - **SZPL • SDPL • SIPL**
  - **STCPL • PDF Direct Printing**

Improved Usability

BUILT-IN VIDEO

Users can understand how to operate the device in minutes by watching short videos on the printer's 3.5-inch colour display screen, significantly reducing the learning curve. In addition, users can add supplementary images and videos, making it fully customisable to their environment.

REGISTERED SHORTCUTS

Create custom shortcuts to limit access to select parameters only and prevent accidental changes to operations.

EASE OF MAINTENANCE

With no tools required, print head replacement is quick and easy, while a non-stick surface prevents labels from getting jammed. A universal gearbox – that supports all print resolutions – is also used to ensure it can be replaced quickly, while reducing inventory space and time.

High Reliability & Accuracy

RFID-READY

Providing supreme accuracy, SATO printers are designed with high-speed data rates and right-first time tagging capabilities to meet the needs of the most complex business environment.

SOS

By monitoring printers 24/7 via cloud, SATO Online Services enables proactive preventative maintenance and helps reduce downtime by up to 86%*.

*based on survey conducted by SATO in Japan

More Great Features

MULTIPLE INTERFACES

Support both legacy and future host environments with standard RS232C, USB, LAN and NFC interfaces, with network speeds up to 100Mbps. Optional interfaces include Wireless LAN (IEEE 802.11 ac standard) with WEP, WPA, and WPA2 security protocols.

ONE-DISPLAY

Users can take control of print engine operations easily with the built-in virtual display functionality that shows the display in any other device.

IMPROVED STABILITY

Larger hinges are now used to provide extra strength for securing the printer cover, alongside aluminium extrusions to replace the original welded plates for added robustness.

PRINTING SPECIFICATION			S84NX			S86NX	
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			Dual CPU & Dual OS: CPU1: 800MHz for Linux OS, CPU2: 800MHz for ITRON OS				
Printer Memory			CPU1: 2GB ROM, 256MB RAM, CPU2: 4MB ROM, 64MB RAM				

CONSUMABLES SPECIFICATION (Recommended to use printer supplies manufactured or certified by SATO)							
Sensor Type			I-Mark Sensor (Reflective), Label Gap Sensor (Transmissive), Paper-end, 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 1503 mm (0.35" to 59.17")
	Dispenser	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	Length/Width		Width: 25mm to 128 mm (0.98" to 5.04") 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")			Width: 59 mm to 177 mm (2.32" to 6.97") Length: 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 others			Electronic Ribbon Tension Control System				

FONTS / SYMBOLOGIES		
Internal Fonts	Standard Bitmap	U, S, M, WB, WL, XU, XS, XM, XB, XL, OCR-A, OCR-B
	TTF Fonts	30 scalable SATO fonts, Multi-national language support (47 languages/Unicode), Single- and double-byte font support (Korean, Chinese, Japanese)
	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)
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, Postnet TM, Bookland, UPC-A/E Intelligent Mail Barcode
	2D Symbologies	PDF417, Micro PDF, Maxi Code, GS1 Data Matrix, QR Code, Micro QR Code, Security QR code, Aztec Code and Composite Symbologies
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 / 2 x USB 2.0 Type-A (host) One in the front, one in the rear (Connect scanners and keyboards)
	LAN	Ethernet 10/100 Mbps / DHCP / Protocol: TCP/IP, LPR, FTP, TELNET, SNTP
	RS232C	RS232C Standard (XON/XOFF, RTS/CTS)
	EXT (I/O)	DSUB 25 pin (female) / Amphenol 14 pin (female, optional adapter) Now also AEP Controlled
Optional Interfaces	Wireless LAN	Wireless LAN, WiFi Certified, WiFi Direct, IEEE 802.11 a/b/g/n/ac Dual Band (2.4GHz, 5GHz), Security: WEP, WPA, WPA2, Dynamic WEP, DHCP Option 81.
External Memory	USB	USB type-A (USB Host)
Supported printer protocols		Standard SATO: SBPL and programable AEP / Emulation Languages auto detect: SZPL, SDPL, SIPL / Others: XML
Remote Setting		Web Browser, SATO All-in-One Printer Utilities, SOS, SNMPv3
Drivers		Windows, Linux, SAP, MAC OS

OPERATING CHARACTERISTICS			
Power Requirements		Universal Auto-ranging Power Supply, AC 100V AC240V ± 10%, 50/60Hz	
Dimensions		W245mm (9.65") x D408mm (16.06") x H300mm (11.81")	W245 mm (9.65") x D417 mm (16.42") x H300 mm(11.81")
Weight		Thermal Transfer Model: 14.1 kg (31 lbs) Direct Thermal Model: 12.7 kg (28 lbs)	Thermal Transfer Model 15.5 kg (34.1 lbs) Direct Thermal Model: 14.0 kg (30,8 lbs)
Environment	Operating	-5° to 40 °C / 15 – 85 % RH (without condensation)	
	Storage	-20 to 60 °C / 15 – 90 % RH (without condensation)	
Display Panel		LCD 3,5 full color display, 9 buttons control keys, Sound beep (4 volume settings), two color LED lighting bars	

MISCELLANEOUS	
Standards & Agency Approvals	EN 62368-1, CE Marking, NEMKO-GS, cMETus, UL60950-1, CSA C22.2, FCC, ICES-003, NMB-003, RCM, CCC, SRRC, KC, ROHS compliant
Functions – Useful features	Simple Standalone Mode, Multi Language support LCD message (31 Languages), USB Memory, clone functionality and firmware updates, Status return, Micro Label Printing, User guidance videos in display, Custom videos, Energy saving, SOS (SATO Online-services), Direct PDF printing, SOTI and SAS.
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, RFID: UHF RFID S84NX Dual antenna and S86NX single antenna configuration; Standard: ISO 18000-6 Type C, Frequency: 868 – 960Mhz, Protocols: EPC Gen 2 Class 1

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222422

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