



Versatile print engines,
designed for demanding environments

S84NX S86NX

Print Engine Series



Robustness

Robust construction to lower damage risks and prevent downtime

Hinges



Larger hinges (when compared with legacy model) to provide extra strength for securing cover.

Pressure roller



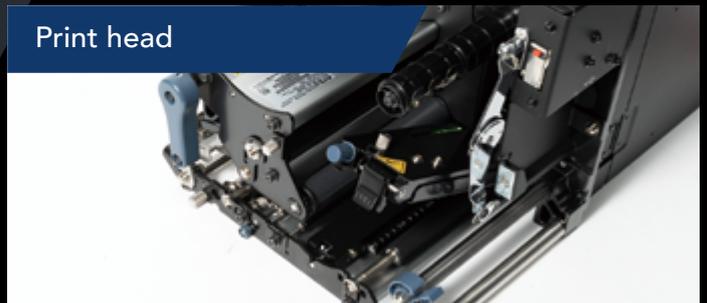
New, durable roller assembly.

I-mark/gap sensor



Enhanced sensor assembly that stays firmly in place, even under heavy use.

Print head



Print mechanism framed with aluminum extrusions (instead of welded plates) for added ruggedness.

Improved dust and splash protection

Print engine can withstand use in dusty environments or where water may be splashed.

(Note that product is not IP rated for dust or water resistance.)



S84NX S86NX

Print Engine Series

For high volume,
24/7 mission critical
print and apply
labeling operations.

/ Feature overview

3.5-inch color LCD and dual-color LED indicators

Large color display for ease of operation. LED indicators help users quickly assess printing status and identify errors even from a distance.

Standard user interface

Users familiar with SATO's CLNX printers can operate the print engine in the same way. This helps operators to quickly migrate to online printing.

Built-in video tutorials

Instructional videos guide users to perform basic operations such as media loading, parts replacement and error resolution lowering the learning curve.

Smart print head

Usage of each print head can be locally tracked and/or monitored remotely by its serial number via SOS (SATO Online Services) to enable timely replacement.

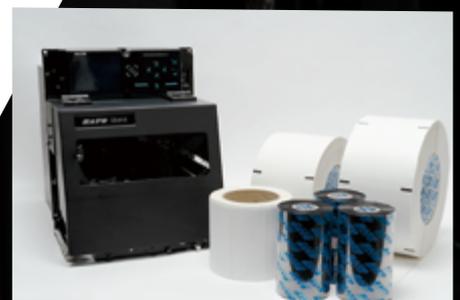
Versatile specifications to meet diverse needs

Left or right-hand orientation; 4 or 6-inch print width; Direct thermal or thermal transfer printing; 203, 305 or 609 dpi print resolution available. (609 dpi S84NX only)

RFID option (for S84NX only)

Users can use the print engine for printing and encoding UHF RFID labels/tags, configuring the necessary settings easily with SATO's All-In-One Tool (AIOT)*. RFID adoption is growing, with new requirements and mandates, aligned with improving the supply chain.

*A printer management utility that allows users to seamlessly configure SATO printers across system-wide infrastructure.



/ Usability

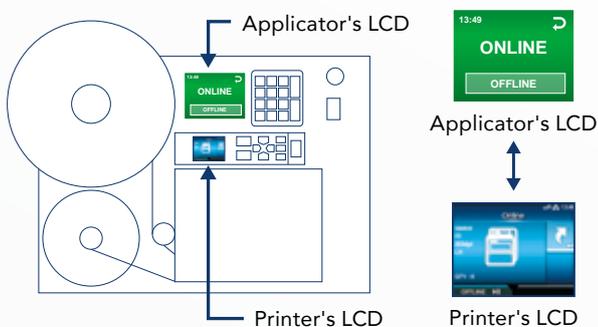
Intuitive operation and ease of use to maximize productivity

Standard emulations onboard

Support SZPL and other major printer languages, for seamless fit into existing systems.

One display concept

Enable centralized control of print engine operations from the applicator's display with a new command.



Multiple interfaces

Connect easily to different external devices. USB port added to the side for greater ease of connecting removable memory devices.



Multi-national language support

Support 31 display and 47 print languages, to meet the needs of global workforces and businesses.



Adjustable backfeed speed

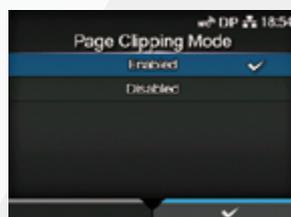
Let users choose from multiple backfeed speed options, an enhancement from legacy model.



New settings to minimize interruptions during printing

Enabling page clipping mode

Use this to clip off any remaining print data at label edge and continue printing without triggering errors.



Cover sensor disable

For higher than usual vibration environments.



/ Ease of maintenance

User-replaceable parts with easy-to-access layout for ultimate serviceability

Toolless print head replacement

No tools needed.

Easy and wide access to clean, remove and replace the printhead.



Easy roller replacement

Simply loosen one screw to remove roller from the front of the printer. For easy identification, a different line marking is used for each type of roller shaft.



Pure line visual indicator platen roller



Feed roller



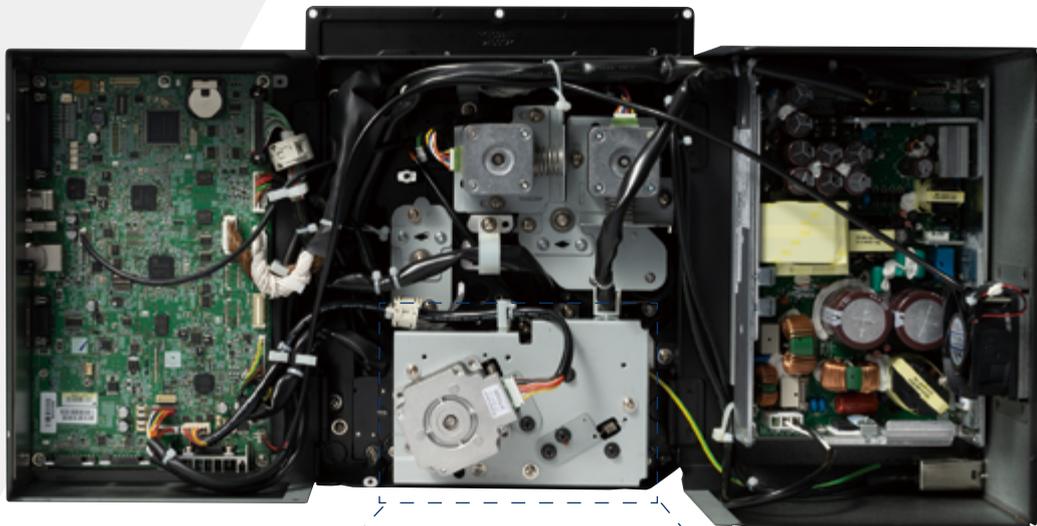
Pressure roller



Platen roller

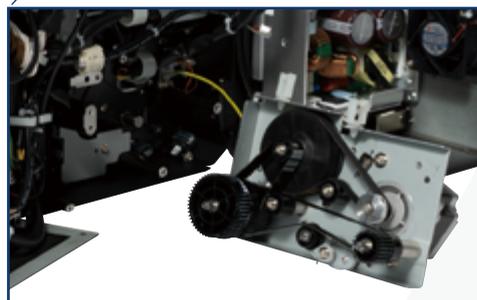
Convenient access to rear components

Rear chassis opens outward on both sides so that internal components such as mainboard, gearbox and power supply can be accessed simultaneously.



Improved gearbox design

Gearbox elements are integrated into an assembly to facilitate fast removal. The new design also makes it easier to assemble, disassemble and repair the gearbox.



-changing technologies

SOS

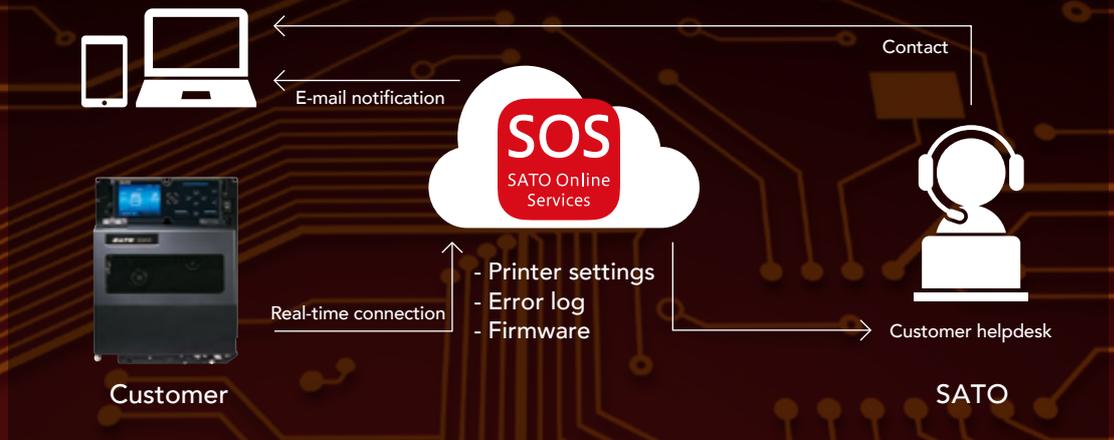
Virtual customer engineer, right on site



SOS (SATO Online Services) is a cloud-based maintenance solution that keeps printer operations running and visible.



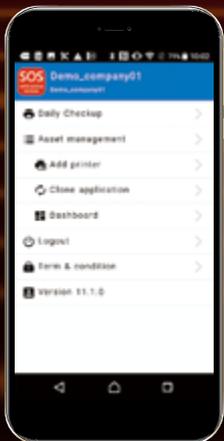
Video



Enjoy preventative maintenance and quick troubleshooting

Use SOS to monitor cloud-connected printers 24/7 using their operating data. SOS sends notifications when expendable parts need replacement, and offers prompt and effective resolution to printer errors when they occur. This helps reduce unplanned downtime by as much as 86%*.

*Based on survey conducted by SATO in Japan.



Manage printers across multiple locations efficiently

View the status of all printers at a glance using the dashboard and easily adjust print speed, print darkness, print position or network settings remotely as needed. The dashboard can be accessed via SOS Web or on the go via SOS Smart App.

New value-add with SATO's game

AEP

Intelligence inside the printer for standalone printing



SATO AEP (Application Enabled Printing) is a powerful onboard intelligence that enables customization of printer operations to simplify labeling processes and reduce business costs.

Achieve PC-less printing

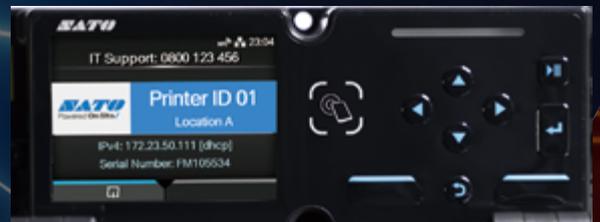
Print independently without costly computers or network connections by using data input from on-screen keyboard or via peripherals such as scanners and scales.



Video

Customize printer screen

Customize screen with company logo, helpdesk phone number, IP address, asset ID or other information based on user needs.



Video

Print directly from PLC

Use SATO AEP to easily integrate printer with devices such as programmable logic controller (PLC) for direct and more efficient printing. No need for special printer firmware or device customization.

SATO AEP also supports customization of the external signal (EXT) interface.



Video

Streamline RFID printing and encoding

Upload log files automatically to user systems for traceability after printing and encoding RFID labels/tags.



GENERAL SPECIFICATIONS | S84NX/S86NX

PRINT SPECIFICATIONS

Print Method	1) Direct thermal/Thermal transfer, 2) Direct thermal only	
Print Mode	Dispense, Continuous, Dispense & Print	
Resolution	S84NX	203 dpi (8 dots/mm), 305 dpi (12 dots/mm), 609 dpi (24 dots/mm)
	S86NX	203 dpi (8 dots/mm), 305 dpi (12 dots/mm)
Speed	S84NX	16 ips (406.4 mm/sec), 14 ips (355.6 mm/sec), 6 ips (152.4 mm/sec)
	S86NX	14 ips (355.6 mm/sec), 12 ips (304.8 mm/sec)
Print Area 1) Maximum Width	S84NX	4.1" (104.0 mm)
	S86NX	6.6" (167.5 mm)
Print Area 2) Maximum Length	S84NX	98.43" (2500.0 mm), 59.06" (1500.0 mm), 15.75" (400.0 mm)
	S86NX	98.43" (2500.0 mm), 59.06" (1500.0 mm)

MEDIA SPECIFICATIONS

Sensor Type	Adjustable transmissive sensor for gap, Adjustable reflective sensor black mark, Paper end, Ribbon near-end/end		
Media Type	Roll (Die-cut, Continuous)		
Media Size (with liner)	Width	S84NX	0.51" (13 mm) to 5.16" (131 mm)
		S86NX	2.13" (54 mm) to 7.09" (180 mm)
	Minimum length	Continuous mode	0.36" (9 mm)
		Dispense mode	0.51" (13 mm)
	Thickness	0.002" (0.05 mm) to 0.012" (0.31 mm)	

RIBBON

Width	S84NX	0.98" (25 mm) to 5.04" (128 mm)
	S86NX	2.32" (59 mm) to 6.99" (177 mm)
Length	1968.5 ft (600 m) on 1" (25.4 mm) ID core	
Wind	Face-in/Face-out, no setting change required	
SATO Genuine Consumables	For maximum print quality and optimum use, SATO recommends the use of SATO genuine consumables.	

MEMORY & PROCESSING SPECIFICATIONS

Receive Buffer	2.95 MB
Memory	Flash memory: (CPU1) 2 GB+ (CPU2) 4 MB SDRAM: (CPU1) 256 MB+(CPU2) 64 MB

USER FRIENDLY SUPPORT TOOLS

Large Status LED	Blue/Red
Display Panel	3.5" full-color LCD
Alarm Sound	Beep (4 volume settings)
Self Diagnosis	Head check, Auto sensor calibration
Simple Stand-alone Mode	Via USB; the number of printable label formats depends on USB memory size
Emulations	LCD selectable: SZPL, SDPL, SIPL
Remote Setting	Web browser, SATO All-in-One printer utilities
Remote Maintenance	SOS (SATO Online Services), SNMPv3

COMMUNICATION INTERFACES

Standard	USB 2.0 (Type B), RS232C, Ethernet (Protocol TCP/IP: LPR, FTP, SNMPv3, NTP, HTTP, DHCPv4), External signal (EXT) interface
Optional	Wireless LAN interface
External Memory	N/A

OPTIONS

Accessories	W-LAN kit, UHF RFID kit ISO18000-6, Type C (S84NX only)
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FONTS

Internal Fonts	17 bitmap SATO fonts, 30 scalable SATO fonts, Multi-national language support (47 languages/Unicode), Single and double byte fonts (Korean, Chinese, Japanese)
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BARCODE SYMBOLOGIES SPECIFICATIONS

Barcodes	Linear	Code 39, Code 93, Code 128, Codabar (NW7), EAN8/13, GS1-Databar™, GS1-128 (UCC/EAN128), Interleaved 2/5, Industrial 2/5, JAN 8/13, Matrix 2/5, MSI, Bookland, Postnet™, UPC-A/E
	2D Symbologies	PDF417, MicroPDF, MaxiCode, GS1 DataMatrix, QR Code, Micro QR Code, Composite symbologies, Aztec

OPERATING & ENVIRONMENT CHARACTERISTICS

Electrical Requirements	Universal auto-ranging power supply, 100-240 VAC+/-10%, 50/60 Hz	
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	
Environment	Operating	-5 to 40°C, 15-85% RH, Non-condensing
	Storage	-20 to 60°C, 15-90% RH, Non-condensing

PHYSICAL CHARACTERISTICS

S84NX	Dimensions	Width: 9.65" (245 mm) Depth: 16.06" (408 mm) Height: 11.81" (300 mm)
	Weight	DT/TT: 31 lbs (14.1 kg) DT only: 28 lbs (12.7 kg)
S86NX	Dimensions	Width: 9.65" (245 mm) Depth: 18.22" (463 mm) Height: 11.81" (300 mm)
	Weight	DT/TT: 34.1 lbs (15.5 kg) DT only: 30.8 lbs (14.0 kg)

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