SATO
Powered On Site /



PW4NX Series

Fast and Reliable
4-Inch Mobile Thermal Printer

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Key features

- Cloud printing enabled using on-board client technologies
- Consistent 6ips (152mm/s) printing with desktop speed equivalence
- Enhanced durability and reliability
- 2.4" Color Display and 80° viewing angles
- Remote management with SOTI and SATO SOS
- Connectivity for Apple iOS, Linux, Android and Windows
- Fast release peeler bar for peel and present
- Tear bar for linerless and receipt applications
- Quick pairing with NFC enabled devices
- Dual CPUs with a 1 GHz processor
- 802.11 a/b/g/n/ac with Bluetooth® 5.0

Fast and Reliable - 4 inch Mobile Thermal Printer

Functionality



High Speed, high quality

- Maximum print speed of 6ips (152 mm/sec) takes the stress out of labelling operations
- High quality printing even when battery level is low
- Emulation Languages: SZPL, SCPL, SIPL, SDPL and STPL

PC-less printing

- AEP (Application Enabled Printing) platform allows for standalone printing
- Connect a barcode scanner* directly to PW4NX

* Scanner must have host mode connection

Durability

Tough against drops, dust and water

- Robust design withstands drop from 7 feet (2.14 meters)*
- IP54 rated. Keeps printer safe from harmful dust that interferes with printer operation
- Splashproof against water from all directions



* Drop test at SATO. Dropping a printer on one side onto a concrete surface from a height of over 2 meters.

Maintainability



Self maintenance

- Easy replacement of wearable parts maximising productivity

Printer monitoring service via cloud*

- Battery asset management
- Device call function
- Visualisation of temperature status
- Remote updates



* SOS (SATO Online Services) contract required.

Usability



A 2.4 inch colour display for higher operability

- Tutorial videos showing how to load labels, replace parts etc

Optional DC/DC Adapter available

Printer can be powered from Fork Lift or Mobile Cart using optional SATO adaptor





Compact in size, POWERFUL in performance



High Functionality

Outperforms other printers in its class

High speed

Print as fast as desktop printers, achieving a maximum print speed of 6 ips (152mm/s).

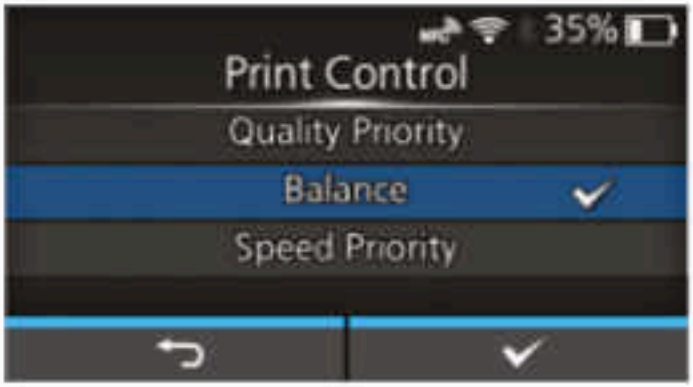


Save approx. 1,000 hours every year*

*Based on a printing volume of 10 million labels (118 mm/ 4.6 inches in length), when compared with legacy models.

High quality

Deliver consistent print quality, with printer settings that users can change to maintain quality when battery is running low.



Added functionality with SATO software/service

SATO Cloud Printing

SATO's Application Enabled printing connects directly to the cloud for simple and efficient printing - no PCs, middleware, and other devices needed. Over and above speed and other features, its unique selling points is its ability to integrate applications into the printer.



SATO App Storage

A cloud-based service for users to centrally manage and distribute label data and printing applications. This streamlines data management and ensures that all labels are printed with up-to-date data anytime, anywhere.



Durability

Engineered for demanding environments

Drop-resistant

The PW4NX meets the drop test standard - as performed by SATO* - offering robust quality when on site.



*Printer functions normally after being dropped on concrete from over 2 meters / 7 feet.

IP54-rated for dust protection

The PW4NX offers great resistance to dust due to its excellent design where it automatically protects against dust ingress to prevent operational interference.



IP54-rated for liquid protection

The PW4NX is designed by our experts to offer first-rate protection against water from any angle.



Flexibility

Ease of use with intuitive operation

2.4" colour display LCD

The PW4NX is equipped with a wide and clear 2.4-inch colour display for easy reading. For instance, when a printer error occurs, the screen turns red to alert users, providing troubleshooting instructions. On-screen video tutorials are also available to guide users clearly with basic printer error messages, such as how to load a label correctly or replace a part.



Error message



Video tutorial

Compact footprint and portability

Optional accessories can be purchased, enabling users to either save space with a vertical mount stand or use it as a portable device by attaching a hand strap.



Printer stand

Media loading possible while printer is propped up on stand.



Hand strap

No need to detach printer stand when carrying unit by hand.

Flexible power delivery

Optional DC adapter* is also available to enable printer to draw power from forklifts or other electric vehicles.





*For indoor use only. Cable for connecting adapter to vehicle battery not included.

Ease of Maintenance

Easy to maintain with less downtime

Easy to maintain with less downtime. No need for complex training for users servicing their own printers

Designed with user-replaceable parts* to simplify and speed up printer maintenance.

*Toolless replacement possible for printhead.



IoT-based maintenance service

SOS (SATO Online Services)*

A cloud-based service that monitors label printers 24/7 remotely to ensure their stable operation. Besides supporting preventative maintenance by alerting users when a part or battery is nearing replacement, SOS now offers new functions for enhanced reassurance and convenience.



- Battery asset management
- Device call function
- Visualisation of temperature status
- Remote updates

Enabling a wide array of applications across industries



Material handling equipment

Mount printer to different material handling equipment for on-the-go printing in the warehouse.

This saves users the hassle of traveling back and forth to print stations and allows them to label goods at the point of activity, contributing to higher warehouse productivity and labelling accuracy.



Picking cart



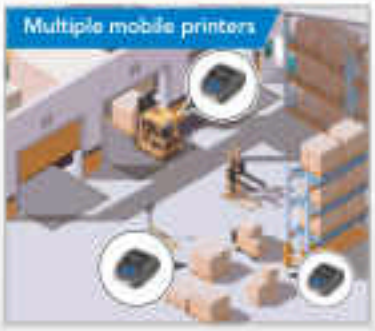
Forklift



Roll cage

Transition to a distributed printing environment





Distribute print jobs among multiple mobile printers used at the point of label application, instead of relying on stationary printing from a single location.

This not only saves time and reduces errors but also allows workers to switch to other printers when one is unavailable.

On-demand printing outdoors or near water fixtures

Meet business needs in diverse environments with the printer's IP54 dust and water-resistance rating (without case).



For outdoor ticketing, on-the-spot food labelling (in mobile kitchens), mobile point-of-sale receipt printing and couponing, and more.



At loading/unloading docks or other worksites where some rain may enter.



For printing on the road, to label parcels during unplanned pickups or deliveries. This mobility helps delivery drivers avoid delays and prevent mislabelling.



For wet area applications at back-of-house locations such as kitchens.

PW4NX Technical Specification

Printer Specification		
Printing Method		Direct Thermal
Print Mode		Continuous, Tear-off, Dispenser, Linerless (Linerless Model Only)
Print Resolution		8 dots/mm (203 dpi)
Print Speed		Continuous, Tear-off: 2 to 6ips (51 to 152mm/s)
		Linerless, Dispenser: 2 to 4ips (51 to 102mm/s)
Max. Print Area		Width: 104mm (4 inches)
		Length: 1000mm (39 inches)
Processor		Dual CPUs with a 1 GHz
Printer Memory		8GB ROM, 1GB RAM , Receive Buffer: 2.95MB
Battery		14.4 V / 2500 mAh (36.00 Wh)
Consumables Specification (Recommended to use printer supplies manufactured or certified by SATO)		
Sensor Type		Transmissive Sensor for Gap, Reflective Sensor for Linerless
Media Type		Roll media (face-out wound), Fan-fold media
Media Thickness		58 to 190.5 µm (0.058 to 0.1905 mm)
Roll Diameter		Maximum Outside Diameter: 67 mm (2.6 inches) Inner Roll (Core) Diameter: 19.05 mm (0.75 inches): 1-inch media
Label Size	Continuous	Width: 38 to 111mm (1.5" to 4.4") / 41 to 114 mm (1.6" to 4.5") including liner
		Length: 13 to 305 mm (0.5" to 12") / 16 to 308 mm (0.6" to 12.1") including liner
	Tear-Off	Width: 38 to 111mm (1.5" to 4.4") / 41 to 114 mm (1.6" to 4.5") including liner
		Length: 16 to 305 mm (0.6" to 12") / 19 to 308 mm (0.7" to 12.1") including liner
	Dispenser	Width: 38 to 111mm (1.5" to 4.4") / 41 to 114 mm (1.6" to 4.5") including liner
		Length: 16 to 254 mm (0.6" to 10") / 19 to 257 mm (0.7" to 10.1") including liner
	Linerless (Linerless Model Only)	Width: 38 to 114 mm (1.5" to 4.5")
		Length: 16 to 257 mm (0.6" to 10.1")
Fonts / Symbologies		
Internal Fonts	Standard Bitmap	U, S, M, WB, WL, XU, XS, XM, XB, XL, OCR-A, OCR-B
	Scalable Fonts	SATO CG Sleek, SATO CG Stream, 13 SATO Fonts, Multi-national Language Support (47 Languages / Unicode), Single and Double Byte Fonts (Korean, Chinese, Japanese)
	Encoding	Major Latin and Pan-European Code Pages (WGL4), GB18030 (Simplified), KSX1001 (Korean), BIG5 (Traditional), JIS, SHIFT-JIS, UTF-8 and UTF-16BE
Barcode	Linear	Code 39, Code 93, Code 128, CODABAR (NW7), EAN/JAN8/13, GS1-Databar™, GS1-128 (UCC/EAN128), Interleaved 2/5, Industrial 2/5, Matrix 2/5, MSI, Bookland, Postnet™, UPC-A/E
	2D Symbologies	PDF417, Micro PDF, Maxi Code, GS1 Data Matrix, Aztec, QR Code, Micro QR Code and Composite Symbologies
Interface Characteristics and Integration		
Standard Interfaces		USB 2.0 High Speed type B mini connector, Bluetooth® Ver.5.0 BLE, NFC, 802.11a/b/g/n/ac Dual Band WLAN (2.4 GHz, 5 GHz), Fast Roaming
Remote Settings		SNMPv3, HTTP (Web Interface)
Supported Printer Protocols		Standard: SBPL (SATO Barcode Printer Language) , Emulation Languages: SZPL, SCPL, SIPL, SDPL and STPL
Operating Characteristics		
Power Requirements		AC100V~AC240V, 50/60 Hz (AC Adapter) ; Output: DC 19V ±5% 2.37A
Environment	Operating	-15 to 50°C/10 to 90% RH (Without Condensation)
	Storage	-25 to 60°C/10 to 90% RH (Without Condensation)
Dimensions (W x D x H)		W 180 x D 195 x H 85 (mm) / W 7" x D 7.67" x H 3.35") - excluding protrusion
Weight		1,440g (3.17lbs) including battery weight , excluding media
Display Panel		TFT colour LCD 2.4 inches 240 x 320
Miscellaneous		
Standards & Agency Approvals		Please contact your nearest SATO sales representative regarding agency approvals for your region
Functions – Useful features		Consistent High Speed 6ips, IP54, SATO AEP (Application Enabled Printing), SATO Online Services, Tutorial Videos on LCD, Multi Language Support LCD Message (31 Languages), Energy Saving, Large Status LED, USB Memory for Data Copy, Status Return, Alarm Sound, setup after language, Multi Language setup, Tumble (including battery and label) NM: 0.5, 1000 times (closed)
Functions – Self Diagnosis Checking		Thermal Head Check, Paper End Detection, Test Print, Cover Open Detection, Auto Power Off
Accessories		
Included in Package		Lithium-ion Smart Battery, Belt Clip
Optional		1-Bay Charging Cradle, 1-CH/ 4-CH Battery Charger, AC Adapter, DC Adapter, Cigarette-lighter Adapter, Hand Strap, Belt Loop, Shoulder Strap, Carrying Case, Printer Stand, 1-inch media guide cores (2)

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