Technical Information

PRINTING SPECIFICATION			CL4NX Plus			CL6NX Plus	
Printing Method			Direct Thermal / Thermal Transfer				
Print Mode			Continuous, Tear-off, Cutter, Dispenser, Linerless				
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			14 ips (355 mm/sec)	14 ips (355 mm/sec)	6 ips (152 mm/sec)	10 ips (254 mm/sec)	8 ips (203 mm/sec)
Max. Print Area	Width, mm (inch)		104mm (4.09")			Standard 152mm(5.98")/ Extension 167.5mm(6.60")	Standard 165.33mm(6.51")/ Extension 167.5mm(6.60")
	Length, mm (inch)		2500mm (98.42")	1500mm (59.05")	400mm (15.75")	2500mm (98.42")	1500mm (59.05")
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				
CONSUMABLE SPECIFICATION (Recommended to use consumables manufactured or supplied by SATO)							
Sensor Type			I-mark Sensor (Reflective), Label Gap Sensor (Transmissive)				
Media Type			Roll or fan-fold die cut labels, Plain paper face stock, Synthetics and Continuous stock				
Media Thickness			0.060 - 0.268mm (0.0024" - 0.011")				
Label Shape	Diameter		Maximum 265mm (10.43") Core diameter: Ø76mm (3.0"), Ø101mm (4.0")				
	Wind Direction		Face In / Face Out. No Setting Change Required				
Label Size (Without Liner)	Continuous	Width	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")	47 - 177mm (1.85" - 6.97")	47 - 177mm (1.85" - 6.97")
		Length	6 - 2497mm (0.24" - 98.30")	6 - 1497mm (0.24" - 58.94")	6 - 397mm (0.24" - 15.63")	6 - 2497mm (0.24" - 98.30")	6 - 1497mm (0.24" - 58.94")
	Tear-Off / Cutter	Width	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")	47 - 177mm (1.85" - 6.97")	47 - 177mm (1.85" - 6.97")
		Length	17 - 2497mm (0.67" - 98.30")	17 - 1497mm (0.67" - 58.94")	17 - 397mm (0.67" - 15.63")	17 - 2497mm (0.67" - 98.30")	17 - 1497mm (0.67" - 58.94")
	Dispenser	Width	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")	47 - 177mm (1.85" - 6.97")	47 - 177mm (1.85" - 6.97")
		Length	10 - 397mm (0.39" - 15.63")*1	10 - 397mm (0.39" - 15.63")*1	10 - 397mm (0.39" - 15.63")*1	10 - 397mm (0.39" - 15.63")*1	10 - 397mm (0.39" - 15.63")*1
	Linerless	Width	60 - 118mm (2.36" - 4.65")	60 - 118mm (2.36" - 4.65")	60 - 118mm (2.36" - 4.65")	–	
		Length	30 - 120mm (1.18" - 4.72")	30 - 120mm (1.18" - 4.72")	30 - 120mm (1.18" - 4.72")	–	
Ribbon	Size		Max. Length: 600m (1968.5'), 450m (1476.4') when ribbon width is 39.5mm (1.55") Max. Roll Diameter: 90mm (3.5"), Ribbon width: 39.5mm (1.55") to 128mm (5.04")			Max. Length: 600m (1968.5'), Max. Roll Diameter: 90mm (3.5"), Ribbon width: 59mm (2.32") to 177mm (6.97")	
	Other		Core diameter: Ø25.4mm (1"), Wind direction : Face In/ Face Out, No Setting Change Required				
FONTS / SYMBOLOGIES							
Internal Fonts	Standard Bitmap		U, S, M, WB, WL, XS, XU, XM, XB, XL, X20, X21, X22, X23, X24, OCR-A, OCR-B				
	Scalable Fonts		30 SATO Fonts, 2 Outline Fonts				
	Encoding		Major Latin and Pan-European Code Pages (WGL4), GB18030 (simplified), KSX1001 (Korean), BIG5 (traditional), JIS, SHIFT-JIS, UTF-8 and UTF-16BE also supported				
Barcode	Linear		UPC-A/UPC-E, JAN/EAN-13/8, CODE39, CODE93, CODE128, GS1-128(UCC/EAN128), CODABAR(NW-7), ITF, Industrial 2 of 5, Matrix 2 of 5, MSI, POSTNET, UPC add-on code, BOOKLAND, USPS code, GS1 DataBar Omnidirectional, GS1 DataBar Truncated, GS1 DataBar Stacked, GS1 DataBar Stacked Omnidirectional, GS1 DataBar Limited, GS1 DataBar Expanded, GS1 DataBar Expanded Stacked				
	2D Symbologies		QR Code, Micro QR Code, PDF417, Micro PDF, Maxi Code, GS1 Data Matrix, Data Matrix (ECC200), Aztec Code, GS1QR Code and Composite Symbologies				
Print Direction			Character data rotation: 0º, 90º, 180º, 270º				
User Downloadable Fonts, Graphics or Formats			Maximum 100MB				
INTERFACE CHARACTERISTICS AND INTEGRATION							
Standard Interfaces			USB 2.0 (Type A & B), Ethernet (IPv4/v6), RS232C, IEEE1284, EXT, NFC				
Optional Interface			Wireless LAN, WiFi Certified, WiFi Direct, IEEE 802.11 a/b/g/n Dual Band (2.4GHz, 5GHz), Bluetooth Ver. 3.0*2				
Remote Access			SNMP Ver.3, HTTPs				
Supported printer protocols			Standard: SBPL (SATO Barcode Printer Language), Emulation Language: Auto detect - SZPL, SDPL, SIPL, STCL, SEPL				
OPERATING CHARACTERISTICS							
Power Requirements			AC100V ~ AC240V±10%, 50/60 Hz, Auto-ranging Power Supply				
Environment	Operating		0 - 40ºC / 30 - 80% RH (without condensation)				
	Operating Linerless		5 - 35ºC / 30 - 75% RH (without condensation)			–	
	Storage		-20 - 60ºC / 30 - 90% RH (without condensation)				
Dimensions			271mm (10.67") × 457mm (18.00") × 321mm (12.64")			338mm (13.30") × 478mm (18.00") × 321mm (12.64")	
Weight			15.1kg (33.28 lbs)			21.4kg (47.18 lbs)	
Display Panel			TFT Full Color LCD, 3.5"(320 x 240 RGB)				
MISCELLANEOUS							
Standards & Agency Approvals			Please contact your nearest SATO sales representative regarding agency approvals for your region				
Functions – Useful features			Micro Label Printing, SATO Application Enabled Printing, SATO Online Services, 18 User Guidance Videos on LCD, Space for Customized Videos, Multi Language Support LCD Message (31 Languages), Energy Saving, Large Status LED, Multiple Interfaces-Auto-Switching, USB Memory for Data Copy, Status Return, Alarm Sound				
Functions – Self Diagnosis Checking			Thermal head check, Paper end detection, Ribbon end detection, Test print, Head lift detection				
OPTIONS							
Accessories	CL4NX Plus		Cutter, Linerless Cutter, Dispenser with Internal Liner Rewinder, Real-Time Clock, Wireless LAN, Bluetooth, Barcode Checker Stand, External Rewinder, External Cover, UHF RFID kit, HF RFID kit, Rotary Cutter				
	CL6NX Plus		Cutter, Dispenser with Internal Liner Rewinder, Real-Time Clock, Wireless LAN, Bluetooth, Barcode Checker Stand, External Rewinder, External Cover, UHF RFID kit				
RFID SPECIFICATION (Optional)							
UHF and HF options available	Standard		UHF: ISO/IEC 18000-6 Type C HF: ISO/IEC 15693 & ISO/IEC 14443 Type A Phase Jitter Modulation: 100% accuracy stack tags				
	Frequency		868 - 960MHz and 13.56MHz				
	Protocols		EPC Gen 2 Class 1, NXP, Impinj, Alien & others				
	RFID Features		Fully integrated UHF RFID Reader / Encoder Module. SRA(SATO RF Analyze) installed. Void marking of damaged or unreadable transponders, RFID data verification after programming. Multiple RFID power settings allow users to use individual transponder sizes, DIP (Direct Inlay Printing) allows use of short pitch labels. PWP allows flexible inlay positions, TID reading and printing as text and barcode				
	Gen2 Memory		Expanded EPC, User Memory, TID (96bit), Access password, Kill password, Lock				

*1 Length of 10 to 27mm is only available for Thermal Transfer mode
*2 Please contact your nearest SATO sales representative for availability

sato-oceania.com

SATO AUSTRALIA PTY LTD.
6 Federation Way, Chifley Business Park,
Mentone VIC 3194 Australia

SATO NEW ZEALAND LTD.
30 Apollo Drive, Mairangi Bay,
Auckland 0632, New Zealand

Contact Us

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Further Beyond Expectations

CL4NX Plus
CL6NX Plus

Best-in-class Thermal Industrial Printer

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RAIN RFID

Designed for track and trace operations globally

With our extensive experience in providing solutions to serve customers' on-site needs, we are proud to introduce CL4/6NX Plus.
The industry's leading 4-inch and 6-inch industrial thermal printer designed to meet the requirements of mid-range to high-end label printing environments.

The printer model to optimise your RFID applications

Businesses can save labour, speed up their operations, and enjoy many advantages from using the RFID technology. RFID tags/labels can be read in bulk, without making contact, and their data be rewritten as often as needed. They can be used widely, for apparel tagging or asset tracking, and at factories or hospitals to manage products and work processes or medical devices and

CL4/6NX Plus is an RFID model that can print text and barcodes on UHF, HF and NFC tags/labels, and at the same time, encode data in their embedded chips. Besides being equipped with on-screen menus that save users the trouble of adjusting antenna position manually, the printer is also capable of checking RFID chips prior to encoding to verify their readiness for use and prevent subsequent failures.

Rich in RFID capabilities and features

SATO RF Analyse (SRA) function UHF

Optimise antenna and inlay settings automatically for fast and stable encoding. Users can find the best settings to encode RFID tags/labels when their attributes vary randomly due to lot differences or adjust write/read conditions as needed when encoding errors occur.

Function for registering commonly used settings UHF HF NFC

Save write/read conditions for up to ten RFID tag/label types. Users can easily select and load these profiles to encode multiple media with the same printer.

Compatibility with specialty RFID tags/labels UHF

Support the encoding of various RFID tag/label types including tags used with metals or for other special applications, with a special encoder antenna that provides output power up to 30dBm.

*Some media types may require prior testing; please contact your nearest SATO office to find out more.

Key Applications

Manufacturing

Raw material to product labelling for greater traceability

Built for tough industrial use, CL4/6NX Plus helps manufacturers achieve traceability from raw materials to finished products, which is important when recalls become necessary. The printer also serves as a key component in RFID systems for managing returnable transport items (RTIs) and other factory assets.

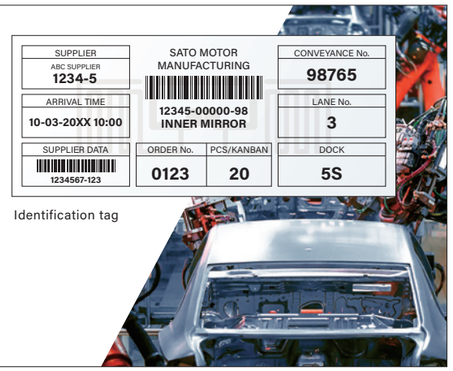
Electronic manufacturers can leverage SATO's heat resistant labels and CL4/6NX Plus for high precision printing of micro PCB labels for their electronic products that are getting ever smaller.

Automotive

Effective identification tagging for productivity boost

CL4/6NX Plus is ideal for automobiles and parts makers to boost efficiency and productivity.

With AEP and PDF Direct Printing, printer processes data in PDF format from PC to print, cut and sort ID tags automatically without worker intervention at high accuracy. User can also print directly from PLC to printer and easily implement same printing application at any manufacturing plants.



Retail / Apparel

Back room to in-store visibility for higher sales and customer satisfaction

Ideal for high-volume distribution label printing, CL4/6NX Plus helps prevent incorrect deliveries of goods from warehouses to stores.

Retailers can also achieve more efficient stocktaking & visibility of store inventory by re-labelling products from factories with RFID. A wide range of labels, tags, tickets for various needs from markdown to anti-tampering are available.

Transport & Logistics

Supply chain labelling for enhanced agility and visibility

Suitable for labelling across the supply chain, from goods receiving to inventory management and shipping, user can save various label templates in CL4/6NX Plus for easy selection and setup.

Printer is compatible with a wide range of labels (including special types such as 3-layer labels) used for the shipping and return of goods. It also supports high speed and volume printing to meet the demands of rising e-commerce orders.

We meet all your printing needs with one complete solution

Speed & Precision

High print speed & precision

Offers high print precision ideal for micro label applications and 16%

14 ips at 305 dpi

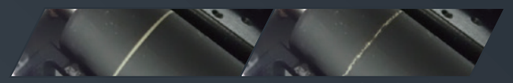
Continuous Usage

30% more media

More media per roll and longer ribbon mean lesser downtime for

Minimal downtime

View status of all printers at a glance and perform proactive preventative maintenance before error occurs. PureLine™ platen roller provides visual indication of the degree of wear to enable preventative maintenance.

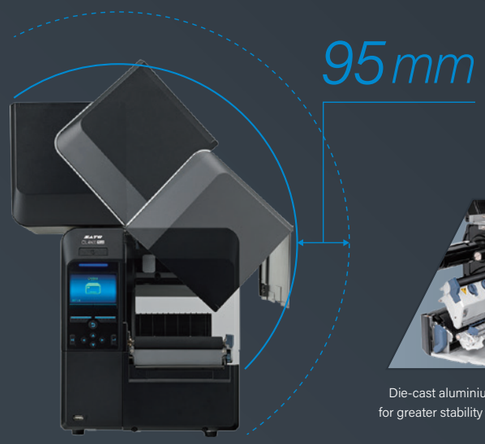


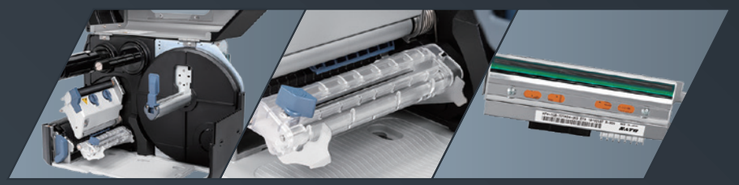
White line indicator on PureLine™ platen roller before use.

White line starts to fade when platen roller starts to wear out.

Durable & functional design

Metal casing with bi-fold cover makes printer suitable for use in industrial environments with limited space.





Die-cast aluminium construction for greater stability and durability.

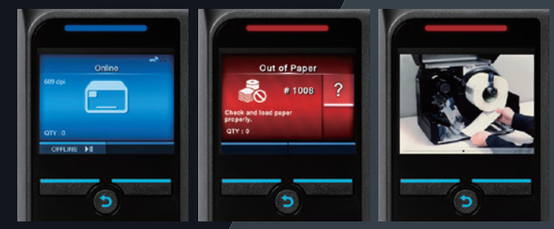
Stainless steel is used for the paper transport route. Printing position does not shift due to resin shaving.

Highly durable thermal head enables long-term high-quality printing.

Usability

Intuitive operation

Enable prompt response by easily detecting operation errors with red / blue LED indicator lights. Speed up maintenance and error resolution with video guidance on full colour LCD screen.



Easy setup and maintenance

Field installable parts, snap-in print head and tool-less platen replacement simplifies setup and maintenance.

Flexibility & Connectivity

Pre-installed emulation languages

Auto detection of major emulation languages enable seamless switching from SATO legacy models or other brands to CL4/6NX Plus.

SBPL / SZPL / SDPL / SIPL / STCL / SEPL

Multilingual support

Supports 47 print and 31 display languages making this model suitable for global use.

Direct connectivity to peripheral devices

AEP* enables user to directly connect printer to keyboards, weight scales, barcode scanners and more for simplified printing without need for a PC.

*AEP stands for Application Enabled Printing.

Multiple interfaces

Connect via multiple interfaces including serial, parallel, LAN and USB. WLAN and ***Bluetooth***® optional kits also available.

We speak your language and integrate seamlessly into your business

Expand the scope of your label printing applications

AEP

Video

Application Enabled Printing (AEP) is a powerful printing intelligence that enables customisation of printer operations to achieve wider scope of printing applications, simplify labelling processes and reduce business costs.

Custom applications

With AEP, we can create custom standalone applications to cater to your on-site operational needs. Application can be run directly on the

CL4/6NX Plus prints labels and displays instructions on LCD screen for operators to sort (left or right) the printed labels for further processing.

PC-less printing

Connect CL4/6NX Plus directly to barcode scanners, indicator lights, weight scales, keyboards, etc. for a wider variety of printing applications, without the need for a PC.

Input data directly using barcode scanner and numeric keypads to simplify label printing.

Direct printing from PLC

With AEP, user can easily integrate CL4/6NX Plus with other devices such as Programmable Logic Controller (PLC) to streamline label printing by eliminating the need for device customisation or special printer firmware.

IoT solution to keep your operations running & visible

SOS

Video

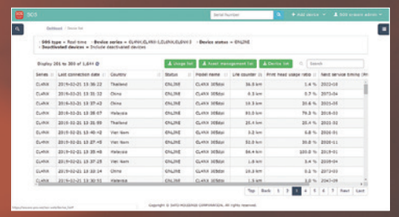
By monitoring your printers 24/7 via cloud, SATO Online Services (SOS) enables proactive preventative maintenance and helps you reduce printer downtime by as much as 86%.

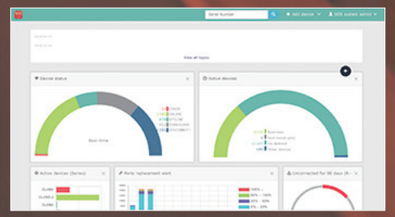
*Based on survey conducted by SATO in Japan

SOS Smart App

Proactive preventative maintenance

Monitor printers centrally (view operation status, print mileage, expected replacement required for expendable parts, etc.) at a glance and perform preventative maintenance before issues occur. SOS send notification via email according to the situation of your printer and resolve errors immediately.





Manage printers at multiple locations

Manage printer fleet such as view and change print speed, print darkness, print position and network settings efficiently from anywhere at anytime.