

## Technical Information

PRINTING SPECIFICATION		CL4NX 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)	
Max. Print Speed	14 ips (355 mm/sec)	14 ips (355 mm/sec)	6 ips (152 mm/sec)	
Max. Print Area	Width, mm (inch)	104mm (4.09")		
	Length, mm (inch)	2500mm (98.42")	1500mm (59.05")	400mm (15.75")
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")
		Length	6 - 2497mm (0.24" - 98.30")	6 - 1497mm (0.24" - 58.94")	6 - 397mm (0.24" - 15.63")
	Tear-off / Cutter	Width	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")
		Length	17 - 2497mm (0.67" - 98.30")	17 - 1497mm (0.67" - 58.94")	17 - 397mm (0.67" - 15.63")
	Dispenser	Width	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")	22 - 128mm (0.87" - 5.04")
		Length	10 - 397mm (0.39" - 15.63") <sup>1</sup>	10 - 397mm (0.39" - 15.63") <sup>1</sup>	10 - 397mm (0.39" - 15.63") <sup>1</sup>
	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")			
	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
Barcode	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
	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
Barcode	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: 0°, 90°, 180°, 270°
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, Bluetooth Ver. 3.0 <sup>2</sup> , NFC
Optional Interface	Wireless LAN, WiFi Certified, WiFi Direct, IEEE 802.11 a/b/g/n Dual Band (2.4GHz, 5GHz)
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 - 40°C / 30 - 80% RH (Without Condensation)
	Operating Linerless	5 - 35°C / 30 - 75% RH (Without Condensation)
	Storage	-20 - 60°C / 30 - 90% RH (Without Condensation)
Dimensions	271mm (10.67") x 457mm (18.00") x 321mm (12.64")	
Weight	15.1kg (33.28 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	Cutter, Linerless Cutter, Dispenser with Internal Liner Rewinder, Real-Time Clock, Wireless LAN, Barcode Checker Stand, External Rewinder, External Cover, UHF RFID kit, HF RFID kit, Rotary Cutter

RFID SPECIFICATION (Optional)		
UHF and HF <sup>2</sup> 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

**SATO**  
Powered On Site /

## Further Beyond Expectations



# CL4NX Plus

Best-in-class Thermal Industrial Printer



www.sato-global.com



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

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Product specifications are subject to change without notice.  
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www.sato-global.com



# 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 CL4NX Plus.

The industry's leading 4-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 labor, 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 pharmaceuticals.

CL4NX 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 Analyze (SRA) function UHF

Optimize 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, CL4NX 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 CL4NX Plus for high precision printing of micro PCB labels for their electronic products that are getting ever smaller.

#### Developing Unit

PART NO: A12ER72733



Quantity: 1  
Date: 18/08/20XX

Part label



SATO0310

PCB component label



### Automotive

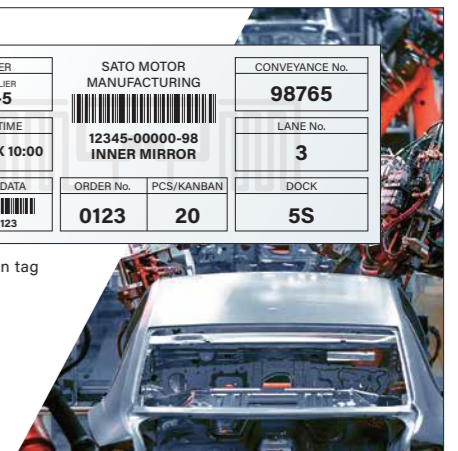
#### Effective identification tagging for productivity boost

CL4NX 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.

SUPPLIER ABC SUPPLIER 1234-5	SATO MOTOR MANUFACTURING 12345-00000-98 INNER MIRROR	CONVEYANCE No. 98765
ARRIVAL TIME 10-03-20XX 10:00	ORDER No. 0123	LANE No. 3
SUPPLIER DATA 1234567-123	PCS/KANBAN 20	DOCK 5S

Identification tag

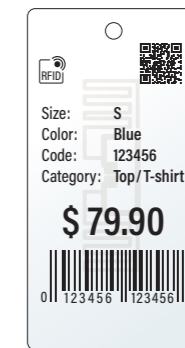


### Retail / Apparel

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

Ideal for high-volume distribution label printing, CL4NX 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.



RFID price tag



### 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 NX 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.



3-layer shipping/return label



# 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% faster print speed than other industrial printers even at high resolution.



14 ips at 305 dpi

## Continuous Usage

### 30% more media

More media per roll and longer ribbon mean lesser downtime for media replenishment.

### 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.



95mm



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 CL4NX 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.

### Multiple interfaces

Connect via multiple interfaces including bluetooth, serial, parallel, LAN and USB. WLAN optional kit 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 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 printer, independent of host software.

CL4NX 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 CL4NX 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 CL4NX 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

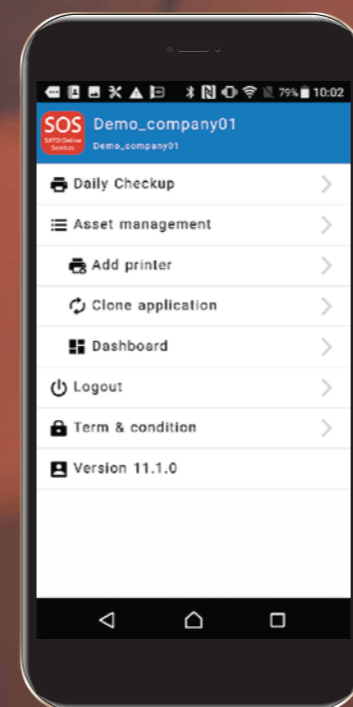


By monitoring your printers 24/7 via cloud, SATO Online Services enables proactive preventative maintenance and helps you reduce printer downtime by as much as 86%.

\*Based on survey conducted by SATO in Japan

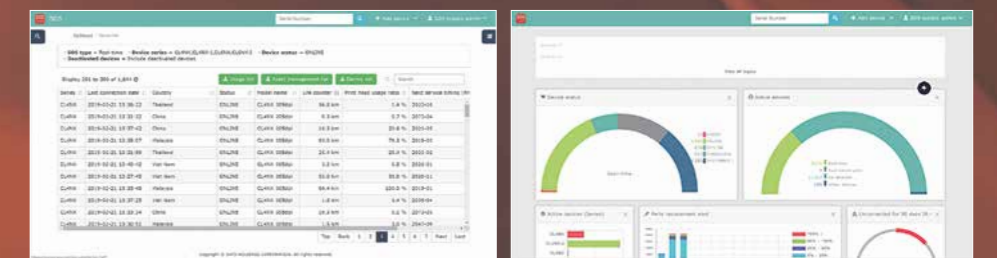


### SOS Smart App



### 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.

## Point of Sale & Barcode Solutions

POSMarket specialises in providing point of sale (POS), barcode and mobile data solutions for smart businesses. We service all industries including retail and hospitality, transport and logistics, government, healthcare, manufacturing and warehousing. Our expert team can provide solutions that can save your business money today.

## Shop By Department

### Barcode Scanners



- Barcode Readers
- Barcode Software
- Data Collectors



### Mobile Computers

- Mobile Computers
- Data Collectors
- Vehicle Computers



### Label Printers

- Desktop Printers
- Industrial Printers
- Mobile Printers



### Point of Sale

- POS Systems
- Receipt Printers
- Scales



### ID Card Printing

- ID Card Printers
- ID Software
- Card Printer Supplies



### Media & Accessories

- Labels
- Ribbons
- Paper Rolls



### Software

- Inventory Software
- Asset Tracking
- Barcode Software



### Wireless

- Wifi Systems
- Pager Systems
- Site Surveys



### RFID

- RFID Printers
- RFID Readers
- RFID Tags

## Shop By Industry



### Education/Libraries

Timesaving printing solutions to meet all your staff, student & asset identification needs. Need **Labels and Printers**? From **scanners to receipt printers**, whatever your needs, we are here to help.



### Retail Stores

Keep customers coming back and keep stock from running out. Check out our range of **scanners, cash drawers, receipt printers and cash registers**.



### Cafes/Restaurants

We can help you to decrease lines for your customers, complete tableside transactions, or reward patrons with **loyalty cards**. From cash registers to touch screen systems we can assist.



### Warehouse Management

Our superior **warehousing solutions** will allow your business to provide comprehensive, up-to-date information and streamline your processes to improve efficiency.



### Construction

Keep track of your inventory and stop inventory shrinkage. Our inventory tracking software allows you to easily keep control of your stock.



### Hospitals/Healthcare

Improve patient care with the accurate identification of patients, medications, samples, treatments, lab results & records. We have a huge range of **label printers, consumables & scanners**.



### Transport & Logistics

Track materials through your facility or through your supply chain using **labels, barcode scanners and portable data terminals**. Optimize your production and information flows.



### Government

We can supply you with all your needs, from **receipt printers and cash drawers, to barcode scanners and label printers**. Less paperwork, data entry and time spent looking up records.



### Mining

Rugged identification solutions help manage assets from the ground up. From **portable data terminals and scanners to software and printers**, we can find a solution to meet your needs.

## Shop By Brand

