

**SATO**  
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Further Beyond  
Expectations

# CL4NX Plus

Best-in-class 4"  
Thermal Industrial Printer

[satoeurope.com](http://satoeurope.com)

# CL4NX Plus

## Designed for Track & Trace Operations Globally

The rise of Internet of Things is driving digital transformation across industries. Increasingly, businesses use data to gain traceability, enhance productivity and improve customer satisfaction. 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.

### KEY APPLICATIONS:

#### Manufacturing

Raw material to product labelling for greater traceability

Built for tough industrial use, CL4NX Plus helps manufacturers gain clear visibility and traceability from raw materials to finished products which is especially helpful in the event of product defect.

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.



PCB component label



Part label



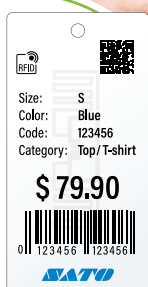
#### Retail

Backyard to in-store labelling 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



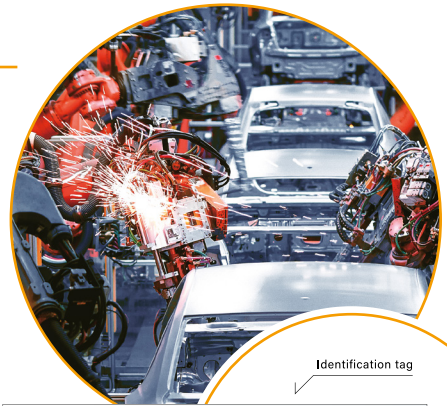


## Automotive

### 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.



Identification tag

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



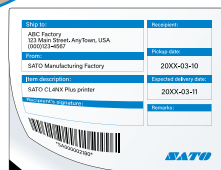
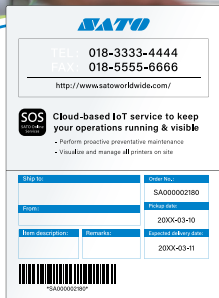
## Transport & Logistics

### Supply chain labelling for enhanced agility and visibility

Suitable for labelling across the supply chain, from goods receiving, inventory management to shipping, user can save various label templates in CL4NX Plus for easy selection and setup.

Choose from our wide label selection including special types such as 3-layer labels suitable for shipping and return of goods.

3-layer shipping/return label

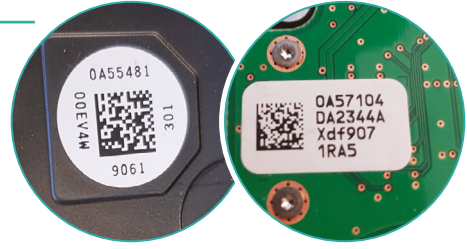


# We meet all your printing needs with one complete solution

## 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.

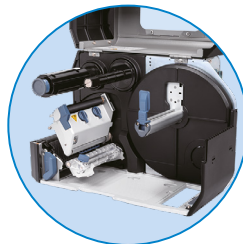


## Durable & Functional Design

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



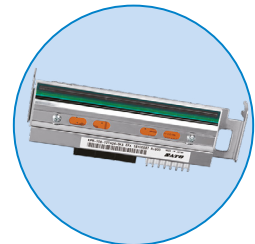
95 mm



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 & Maintenance

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



# We speak your language & integrate seamlessly into your business.

## 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 needing a PC.



# Multiple Interfaces

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



# Easy Configuration

Easy to pair with android/iphone app.





# Expand the scope of your label printing applications

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.





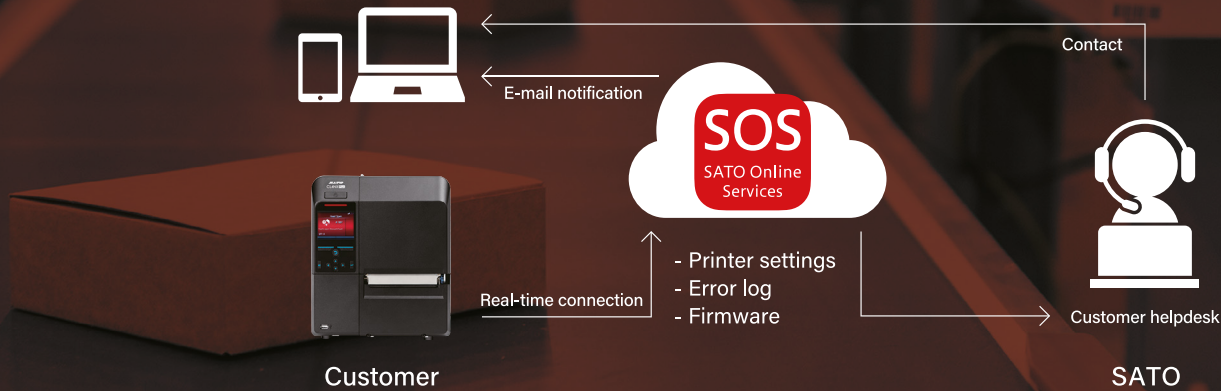
# IoT solution to keep your operations running & visible

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%.

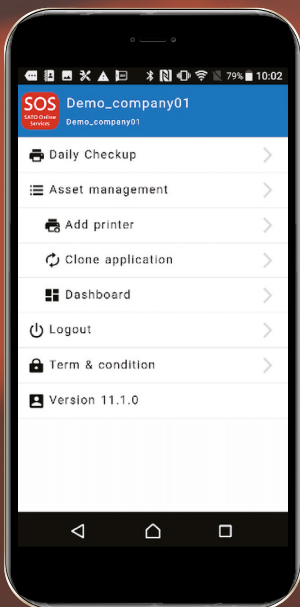
\*based on survey conducted by SATO in Japan



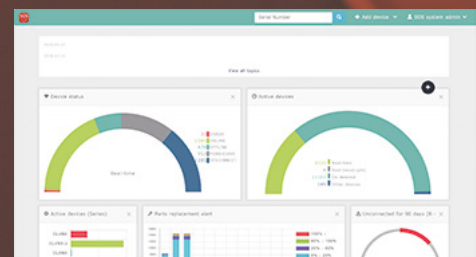
## Proactive Preventative Maintenance

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

SOS Smart App



Series	Last connection date	Country	Status	Model name	Life counter (k)	Prints need usage ratio (%)	Next service setting date
CLARK	2019-02-21 13:39:22	Thailand	ONLINE	CLARK 3050G	39.8 km	1.4 %	2022-10
CLARK	2019-02-21 13:31:32	China	ONLINE	CLARK 3050G	0.3 km	0.7 %	2019-04
CLARK	2019-02-21 13:37:42	China	ONLINE	CLARK 3050G	0.3 km	20.4 %	2019-07
CLARK	2019-02-21 13:35:07	Haiti	ONLINE	CLARK 3050G	93.0 km	79.3 %	2019-03
CLARK	2019-02-21 13:31:59	Thailand	ONLINE	CLARK 3050G	25.4 km	24.4 %	2020-03
CLARK	2019-02-21 13:40:12	Viet Nam	ONLINE	CLARK 3050G	2.2 km	6.8 %	2020-01
CLARK	2019-02-21 13:37:16	Viet Nam	ONLINE	CLARK 3050G	20.0 km	20.8 %	2019-11
CLARK	2019-02-21 13:37:28	Haiti	ONLINE	CLARK 3050G	55.4 km	100.0 %	2019-01
CLARK	2019-02-21 13:37:14	Viet Nam	ONLINE	CLARK 3050G	1.6 km	3.4 %	2019-04
CLARK	2019-02-21 13:33:14	China	ONLINE	CLARK 3050G	10.3 km	0.1 %	2019-03
CLARK	2019-02-21 13:38:31	Haiti	OFFLINE	CLARK 3050G	1.3 km	2.7 %	2019-07



## 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.

# CL4NX Plus Technical Specifications

PRINTING SPECIFICATION			
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)
Max. Print Speed		14 ips (355 mm/sec)	6 ips (152 mm/sec)
Max. Print Area	Width	104 mm (4.09")	
	Length	2500 mm (98.42")	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		Fan-fold or roll die-cut labels, plain paper, synthetic paper or continuous paper	
Media Thickness		0.060 - 0.268 mm (0.0024" - 0.011")	
Label Shape	Diameter	Max. 265mm (10.43"), Chuck diameter: Ø76mm (3.0"), Ø101mm (4.0")	
	Wind Direction	Face In / Face Out. No Setting Change Required	
Label Size (Without Liner)	Continuous	Length	6 - 2497mm (0.24" - 98.30")
		Width	22 - 128 mm (0.87" - 5.04")
	Tear-off/Cutter	Length	17 - 2497mm (0.67" - 98.30")
		Width	22 - 128 mm (0.87" - 5.04")
	Dispenser	Length	10 - 397mm (0.39" - 15.63") <sup>1</sup>
		Width	22 - 128 mm (0.87" - 5.04")
	Linerless	Length	30 - 120 mm (1.18" - 4.72")
		Width	60 - 118 mm (2.36" - 4.65")
Ribbon	Size	Max. Length: 600 m (1968.5'). 450 m (1476.4') when ribbon width is 39.5 mm (1.55") Max. Roll Diameter: 90 mm (3.5"), Ribbon width: 39.5 mm (1.55") to 128 mm (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	
	Encoding	Majour Latin and Pan-European Code Pages (WGL4), GB18030 (simplified), KSX1001 (Korean), BIG5 (traditional), JIS, SHIFT-JIS, Unicode 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: 0°, 90°, 180°, 270°	
User Downloadable Fonts, Graphics or Formats		Maximum 100MB	
INTERFACE CHARACTERISTICS AND INTEGRATION			
Interfaces and protocols		USB 2.0 (Type A & B), RS232C, IEEE1284, EXT, NFC, Ethernet (IPv4/v6) supporting:TCP/IP, LPR, FTP, SNMPv3, NTP, HTTP, DHCPv4, wired 802.1x, Stateless Auto Configuration, Stateful Auto Configuration (DHCPv6)	
Optional Interface		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. Bluetooth Ver. 3.0	
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		271 mm (10.67") × 457 mm (18.00") × 321 mm (12.64")	
Weight		15.1kg (33.28 lbs)	
Display Panel		TFT Full Color LCD, 3.5"(320 x 240 RGB)	
MISCELLANEOUS			
Standards & Agency Approvals		Printers are globally certified	
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, PDF Direct Printing, SFPL, 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 (AC), Barcode Checker, External Rewinder, External Cover, RFID UHF & HF, Rotary Cutter	

