SATO

CL4NX & CL6NX

NX Series

NEXT GENERATION 4" & 6" INDUSTRIAL THERMAL PRINTERS

AEP APPLICATION ENABLED PRINTING

NX Series

Beyond Expectations

Run All-in-One functions anywhere at anytime...

The NX Series represents SATO's next generation of thermal printers with advanced support for barcode symbologies, character sets and RFID encoding. A product of SATO's global R&D network the NX Series incorporates value-added features in a world-class design to deliver a printing solution that goes beyond expectations.

Simple-to-Operate

Plug-and-Play

All-in-One

Application Enabled Printing

Optimise asset management, increase supply visibility and expand operational ability with SATO's next generation printing solution.

Application Enabled Printing

- AEP is a powerful on-board intelligence which enables customisation of the printer operation to significantly simplify labelling processes and reduce business costs.
- It also allows the direct connection of common peripherals such as numeric keypads, qwerty keyboards, scanners & weighscales. Plus automatic fetch of network or cloud data. Reduces up-front costs as a PC is not essential for printing.
- AEP solutions are highly flexible and are easily implemented.

Intuitive Operation & On-screen Video Guidance

- LED indicator and colour displays alert operator to the printer status.
- Pre-installed guidance videos assist in error resolution and printer maintenance.
- Capability to upload customised start-up screen and videos.
- Advanced user interface for full operational control of print, application, I/F, and system settings via the front panel display.
- Customisable GUI content and security enabled menu access allows administrators to personalise the operator experience.
- Best in class 60° print head opening, tension damper, and coreless ribbon system facilitate easy media setup.
- Coloured operator touch points ensure safe operation and interactions with movable parts.

High Performance & Sustainable Innovations

- Head check function to ensure barcode printing accuracy.
- High speed data processing equals faster first label out and print job throughput.
- Label and Ribbon Near-End & End sensors.
- Coreless ribbon take up with One-touch release.
- Energy Star power efficiency certification.
- Optional linerless media kit eliminates the waste associated with conventional label production.
- 10 preset darkness levels with finite adjustment between presets for optimal print performance setting.
- UHF and HF RFID* options support a wide variety of tags and include adjustable antenna system for optimal inlay encoding.

Dynamic Integration

- Serial, parallel, LAN, USB and Bluetooth combo interface covers all legacy and modern systems requirements. Optional WLAN available.
- SZPL, SIPL, SDPL, STCL SEPL command emulations enable direct replacement of printers in legacy applications.
- Auto-switching interface setting and media auto-calibration to adjust sensor levels for faster setup time between print jobs.
- 30+ display languages, 40+ print character sets, and 15 SATO resident fonts, additional user downloadable space provide universal format coverage.
- All major agency approvals permit global deployment for large enterprises or future expansion potential for growing startups.
- NFC chip enables fast configuration and printer status checking.

Industrial Durability

- Metal casing including front panel and side covers protects against any industrial environment.
- Die-cast Aluminium frame, print and ribbon mechanism provide solid stability to ensure print quality and printer durability.
- 1 year global warranty for printer including installed options. Long lasting 30 kilometre guaranteed print head and platen roller.

Functional Benefits

- Bi-fold cover allows compact design and reduces workspace requirement.
- Supports internal, external, clockwise and counter-clockwise rotational media types. Adjustable label holder for increased internal roll capacity.
- Field installable options, snap in print head, and tool-less platen replacement minimise downtime.
- External media inlets, mounting fixtures, and cable hook.

Model Lineup

Cutter
- Front mount guillotine cutter unit
- Single item or batch print job cut settings
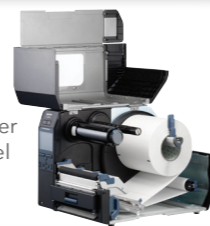- Long lasting blade life

Standard
- Tear-off bar for manual media separation
- Label holder adjustable to support up to 10" OD media rolls
- External media slots for rear or bottom feed applications

Dispenser
- Dispenser unit including peel bar for liner separation
- Additional internal liner take-up for active peel applications

Options

Linerless *
- Puretech™Linerless modified cutter unit with on demand sensor
- Anti-adhesive Puretech™ platen roller, media path and sensor cover
- Pureline™ visible wear indicator

Barcode Checker
- Simple and inexpensive option
- Confirms that the barcode content is correct.
- Void marks and reprints the label if necessary

Wireless LAN
- 802.11 a/b/g/n
- 2.4/5GHz dual-band switching
- Wi-Fi Direct and CCX Cisco certified

Real Time Clock
- Time and date tracking RTC
- Enable timestamp labelling

RFID Encoder *
- UHF ISO/IEC 18000-6 or HF ISO/IEC 15693 & 14443
- PJM 100% accuracy & close stack tagging
- Short pitch encoding support

* Only available on CL4NX

TECHNICAL INFORMATION

PRINTING SPECIFICATION		CL4NX			CL6NX	
Printing Method		Direct Thermal / Thermal Transfer				
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		10 ips 254 mm/sec	8 ips 203 mm/sec	6ips 152 mm/sec	10 ips 254 mm/sec	8 ips 203 mm/sec
Max. Print Area	Width, mm (inch)	104mm (4.1")			167.5mm (6.5"")	
	Length, mm (inch)	2500mm (98.43")	1500mm (59.1")	400mm (15.7")	2500mm (98.43")	1500mm (59.1")
Processor		Dual CPU & Dual OS: CPU 1: 2GB ROM, 256MB RAM for Linux OS, CPU 2: 4MB ROM, 64 MB RAM for ITRON OS				
Printer Memory		2GB ROM, 256MB RAM				

CONSUMABLES SPECIFICATION (Recommended to use printer supplies manufactured or certified 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			0.06- 0.26mm (0.002" - 0.01")			0.08 - 0.268mm (0.003" - 0.01")	
Label Shape	Roll Diameter		Maximum 220mm (8.6") on 25mm (1") - 76mm (3") core diameter	Optional 254mm (10") setting				
	Wind Direction		Face In / Face Out. No Setting Change Required				
Label Size	Continuous	Width	22 - 128mm .87"- 5.0"	22 -128mm 0.87"- 5.0"	22 -128mm 0.87"- 5.0"	47-177mm 1.27"-6.96"	47-177mm 1.27"-6.96"
		Length	6-2497mm 0.24"- 98.3"	6-1497mm 0.24"- 58.9"	6-397mm 0.24"- 15.6"	16-2500mm 0.63"-98.4"	16-1500mm 0.63"-59.1"
	Tear-Off	Width	22-128mm 0.87"- 5.0"	22-128mm 0.87"- 5.0"	22-128mm 0.87"- 5.0"	47-177mm 1.27"-6.96"	47-177mm 1.27"-6.96"
		Length	17-2497mm .67"-98.3"	17-1497mm .67"- 58.9"	17-397mm .67"- 15.6"	17-2500mm 0.67"- 98.4"	17-1500mm 0.67"- 59.1"
	Cutter	Width	22-128mm 0.87"- 5.0"	22-128mm 0.87"- 5.0"	22-128mm .87"- 5.0"	47-177mm 1.27"-6.96"	47-177mm 1.27"-6.96"
		Length	17-2497mm .67"-98.3"	17-1497mm .67"-58.9"	17-397mm .67"-15.6"	17-2500mm 0.67"- 98.4"	17-1500mm 0.67"- 59.1"
	Dispenser	Width	22-128mm .87"to 5.0"	22-128mm .87"to 5.0"	22-128mm .87"to 5.0"	47-177mm 1.27"-6.96"	47-177mm 1.27"-6.96"
		Length	27-397mm 1.06"-15.6"	27-397mm 1.06"-15.6"	27-397mm 1.06"-15.6"	27-397mm 1.06"-15.6"	27-397mm 1.06"-15.6"
	Linerless	Width	60 -118mm 2.36"- 4.6"	60 -118mm 2.36"- 4.6"	60 -118mm 2.36"- 4.6"	Not available	Not available
		Length	30-120mm 1.2"- 4.9"	30-120mm 1.2"- 4.9"	30-120mm 1.2"- 4.9"	Not available	Not available
Ribbon	Size		Max. Length: 600m (1969'). 450m (1476') when ribbon width is 39.5mm. Max. Roll Diameter: 90mm (3.5"), Ribbon width : 39.5mm (1.55") to 128mm (5.04")			As CL4NX 39.5mm (1.55") to 177mm (7.0")	
	Other		Core diameter: Ø 25.4mm (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, OCR-A, OCR-B
	TTF Fonts	CG Sleek, CG Stream, Sato Gamma (Bold, Italic, Bold Italic), Sato Vica (Bold, Italic, Bold Italic), Sato Folio Bold, Sato Vica Light Condensed, Sato Alpha Bold Condensed, Sato 0 Bold Condensed, Sato Futura Medium Condensed, Sato OCR-B, Sato Symbol Set, Sato Wingbats, Sato Sans(Bold), Sato Serif(Bold), HGMLAG, Sato Beta Bold Italic, Helvetica, Universal, Universal Condensed Bold, AR Hebe Sans, AR SilverS erif, AR Hebe Sans Farsi, Other Asian True Type fonts, Optional Downloaded TrueType fonts, scalable from 8 to 72 points
	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	Code 39, Code 93, Code 128, CODABAR (NW7), EAN8/13, GS1-DatabarTM, GS1-128(UCC/EAN128), Interleaved 2/5, Industrial 2/5, JAN8/13, Matrix 2/5, MS1, Bookland, PostnetTM, UPC-A/E
	2D Symbologies	PDF417, Micro PDF, Maxi Code, GS1 Data Matrix, QR Code, Micro QR Code and Composite Symbologies
Print Direction		Character data rotation: 0º, 90º, 180º, 270º | Barcode rotation: 0º, 90º, 180º, 270º
User Downloadable Fonts, Graphics or Formats		Maximum 100MB

INTERFACE CHARACTERISTICS AND INTEGRATION

Interfaces	RS232	RS232C Standard (XON/XOFF, RTS/CTS)
	IEEE1284	IEEE1284
	USB	USB2.0 type-B, USB2.0 type-A USB Host(2 ports)
	LAN	Ethernet 10/100 Mbps / DHCP(ipv4 / ipv6), TCP/IP
	Bluetooth	Version 3.0 + EDR Class 2
	EXT IO	Amphenol D-Sub14pin female
Optional Interface		Wireless LAN (WiFi and CCX Certified), Wifi Direct, IEEE 802.11a/b/g/n, Dual band (2.4GHz, 5GHz)
Remote Maintenance		SNMP Ver. 3, HTTPs SATO Alerte
Supported printer protocols		Standard: SBPL (SATO Barcode Printer Language) Emulation Language: Auto detect - SZPL, SDPL,SIPL or STCL or SEPL

OPERATING CHARACTERISTICS

Power Requirements		AC100V~AC240V±10%, 50/60 Hz, Auto-ranging Power Supply, Energy Star – Compliant
Environment	Operating	0 – 40 ºC / 30 –80 % RH (without condensation)
	Operating Linerless	5 -35ºC / 30 - 75 % RH (without condensation)
	Storage	-20 – 60 ºC / 30 –90 % RH (without condensation)
Dimensions		CL4NX: 271mm (10.6") x 457mm (17.9") x 321mm (12.6")CL6NX: 338mm (13.3") x 457mm (17") x 321mm (12.6")
Weight		CL4NX: 15Kg (33 lbs) CL6NX: 20Kg (42 lbs)
Display Panel		TFT Full Color LCD, 3.5"(320 (RGB) *240)

MISCELLANEOUS

Standards & Agency Approvals	IEC 60950, CE Marking, EN 60950-1, EN 55022 Class A, EN 55024, R&TTE, NEMssO-GS, cMETus, UL60950-1/CSA C22.2 No. 60950-1, FCC 15 (SUB B, C), ICES-003, NMB-003, BIS, C-Tick, RCM, CCC, SRRC, KC, S-Mark(Arg), SIRIM, IDA, PTQC, NBTC
Functions – Useful features	18 User Guidance Videos on LCD with space for customized videos, Multi Language support LCD message (30 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, Label and Ribbon Near-End and End detection, Test print, Head Open detection

OPTIONS

Accessories	CL4NX	Cutter, Linerless Kit, Dispenser with Internal Backing Paper Rewinder, Real-Time Clock, Wireless LAN, Barcode Checker kit
	CL6NX	Cutter, Simple Dispenser, Dispenser with Internal Backing Paper Rewind, Real-Time Clock, Wireless LAN, Barcode Checker kit.

RFID SPECIFICATION (optional)

UHF and HF options available	Standard	UHF: ISO 18000-6 Type C HF: ISO 1569593 & ISO 14443 Type A Phase Jitter Modulation: 100% accuracy stack tags
	Frequency	868 - 960MHz and 13.56 MHz
	Protocols	EPC Gen 2 Class 1, NXP, Impinj, Alien & others
	RFID Features	Fully integrated UHF RFID Reader / Encoder Module. 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