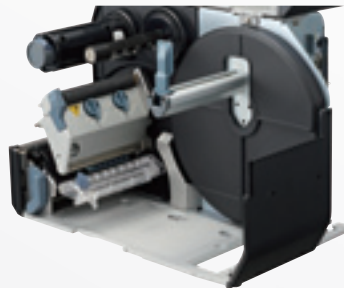**Industrial Thermal Printer**

# CL4NX

# Run All-in-One functions anywhere at any time.

# SATO, Beyond Expectations

SATO's First Truly UNIVERSAL Industrial Label Printer
Engineered for the Most Demanding Printing Needs.

*Plug-and-Play*

## Durable Design

▶ Metal Construction, Heavy Aluminum Durability

- Built with strength to withstand the demands of industrial printing applications and environments
- Die-Cast Aluminum print head mechanism provides consistent label and ribbon movement, virtually eliminating label shift or ribbon wrinkling
- Base plate design enables the printer to be secured to raised and uneven platforms and for media to be fed from underneath
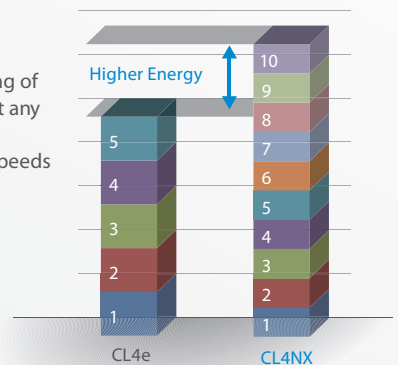
## Support for a variety of media types

▶ Inside or outside wound ribbons & labels

- New mechanism allows the use of a wide variety of media including media produced for other popular makes of industrial barcode printers
- No adjustments or accessories are required

## Superior Print Accuracy and Quality

▶ New Darkness Range for Higher Energy Settings

- Enhanced settings allow printing of challenging materials in almost any environment
- Excellent quality print at high speeds

Higher Energy

CL4e

CL4NX

## Space Saving Design

▶ Bi-fold Side Cover

- Reduces overall area required for operation by 54%
- The CL4NX has a reduced horizontal footprint and requires less headroom in under-table applications

## LTDS (Label Tension Damper System)

- The innovative LTDS system enables the use of large label rolls
- LTDS provides a controlled backfeed tension and label tracking to ensure top quality print and accuracy
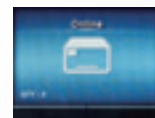
## User Friendly Operation

▶ **Easy to Use**
- Ultimate User-friendly icons and multi-national language support on the full-colour display
- Highly prominent power-on button and status indicator
- Password facility to avoid unintentional adjustment

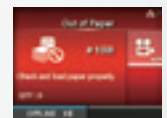▶ **Full Color Interactive LCD Display**
- Assembly of on-display video tutorials show the operation of the CL4NX and valuable instruction to new operators
- Under error conditions, comprehensive messages are displayed and help videos guide the corrective action needed
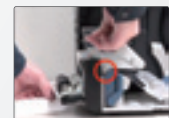
*Simple-to-Operate*

*All-in-One*

On-line       Setting       Error

## Multiple on-board interfaces as standard
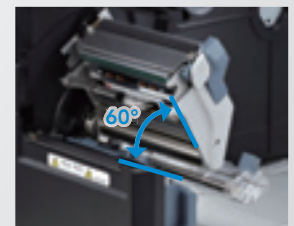
▶ **Includes built-in LAN**
- New design allows for multiple communication port connection with auto-selection
- Support for Internet Protocol version 6
- Simplifies installation in both legacy and new applications using a single printer model
- USB ports at front and rear for printing and downloading fonts, firmware, emulations and the copying of printer settings
- Send print data from external devices such as tablets via the Bluetooth interface using SATO AEP

**WiFi CERTIFIED**    **CISCO Compatible**

## Standard Emulations on-board
- Auto-detect function provides straightforward switching from SATO legacy models or other popular makes of barcode printers
- Supports SBPL, SDPL, SZPL, STCL, and SIPL

## Multi-National Language Support

▶ **30 Display & 47 Print Languages Support**
- All major world languages covered
- Remote maintenance capabilities allow users to control and monitor printers anywhere in the world regardless of language setting

## Easy Set-up and Maintenance

▶ **Industry best design of high-lift printhead mechanism**
- Best in class printhead opening of 60° (across the full width) for easy access, fast maintenance and media loading
- Fully tool-less printhead and platen system for quick and easy replacement

60°

## High Speed Processing and Throughput

▶ **Industry Leading Throughput**
- 100MB user accessible memory allows for storage of formats, large graphics, custom fonts and other downloads allowing for faster throughput

Print time for 100 graphic items        ▬ CL4NX    ▬ CL4e

| | CL4NX | CL4e |
|---|---|---|
| 609dpi | 185.0 | |
| 305dpi | 90.0 | 226.9 |
| 203dpi | 72.0 | 159.0 |

# TECHNICAL INFORMATION

| PRINTING SPECIFICATION | | CL4NX | | |
|---|---|---|---|---|
| Printing Method | | Direct Thermal / Thermal Transfer | | |
| Print Resolution | | 8 dots / mm (203 dpi) | 12 dots / mm (305 dpi) | 24 dots / mm (609 dpi) |
| Max. Print Speed | | 10 ips (254 mm/sec) | 8 ips (203 mm/sec) | 6ips (152 mm/sec) |
| Max. Print Area | Width, mm (inch) | 104mm(4.1") | | |
| | Length, mm (inch) | 2500mm(98.43") | 1500mm(59.1") | 400mm(15.7") |
| 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" to 0.01") | | |
| Label Shape | Diameter | | Maximum 220mm (8.6") on 76mm (3")  internal core diameter<br>Core diameter: Ø 76mm (3.0"), Ø 101mm (4.0") | | |
| | Wind Direction | | Face In / Face Out. No Setting Change Required | | |
| Label Size | Continuous | Width | 22 to 128mm (0.87" to 5.0") | 22 to 128mm (0.87" to 5.0") | 22 to 128mm (0.87" to 5.0") |
| | | Length | 6 to 2497mm (0.24" to 98.3") | 6 to 1497mm (0.24" to 58.9") | 6 to 397mm (0.24" to 15.6") |
| | Tear-Off | Width | 22 to 128mm (0.87" to 5.0") | 22 to 128mm (0.87" to 5.0") | 22 to 128mm (0.87" to 5.0") |
| | | Length | 17 to 2497mm (0.24" to 98.3") | 17 to 1497mm (0.24" to 58.9") | 17 to 397mm (0.24" to 15.6") |
| | Cutter | Width | 22 to 128mm (0.87" to 5.0") | 22 to 128mm (0.87" to 5.0") | 22 to 128mm (0.87" to 5.0") |
| | | Length | 17 to 2497mm (0.24" to 98.3") | 17 to 1497mm (0.24" to 58.9") | 17 to 397mm (0.24" to 15.6") |
| | Dispenser | Width | 22 to 128mm (0.87" to 5.0") | 22 to 128mm (0.87" to 5.0") | 22 to 128mm (0.87" to 5.0") |
| | | Length | 27 to 397mm (0.67" to 15.6") | 27 to 397mm (0.67" to 15.6") | 27 to 397mm (0.67" to 15.6") |
| | Linerless | Width | 32 to 128mm (1.3" to 5.0") | 32 to 128mm (1.3" to 5.0") | 32 to 128mm (1.3" to 5.0") |
| | | Length | 30 to 120mm (1.2" to 4.9") | 30 to 120mm (1.2" to 4.9") | 30 to 120mm (1.2" to 4.9") |
| Ribbon | Size | | Max. Length: 600m(1969') Max. Length will be 450m (1476') when ribbon width is 39.5mm.<br>Max. Roll Diameter: 90mm(3.5"), Ribbon width : 39.5mm(1.55") to 128mm(5.04") | | |
| | 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 Times, CG Triumvirate, 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 | UPC-A/E, JAN/EAN-8/13, Code 39, Code 128, GS1-128 (UCC /EAN128), Codabar (NW–7), Industrial 2 of 5, Bookland |
| 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 | | 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 | USB Device type B connector 2.0 High Speed, USB Device type A (2 ports) |
| | LAN | Ethernet 10/100 Mbps / DHCP(ipv4 / ipv6), TCP/IP |
| | Bluetooth | Version 3.0 + EDR Class 2 |
| | EXT | Amphenol D-Sub14pin female |
| Optional Interface | | Wireless LAN (WiFi and CCX Certified), IEEE 802.11a/b/g/n, Dual band (2.4GHz, 5GHz) |
| Remote Maintenance | | SNMP Ver. 3, HTTPs |
| Supported printer protocols | | Standard: SBPL (SATO Barcode Printer Language) Emulation Language: Auto detect - SZPL, SDPL,SIPL or STCL |

## 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) |
| | Storage | -20 – 60 ºC / 30 – 90 % RH (without condensation) |
| Display Panel | | TFT Full Color LCD, 3.5"(320 (RGB) *240) |
| Dimensions | | 271mm (10.6") x 457mm (17.9") x 321mm (12.6") |
| Weight | | 15Kg (33 lbs) |

## MISCELLANEOUS

| Certifications | CE, UL, TUV, cMETus (USA/Canada), CCC(China), KC (Korea), C-Tick (New Zealand/Australia), S-Mark (Argentina), ROHS compliant |
|---|---|
| Regulatory Approvals | Noise: Emission –EN55022 Class A, EN55024 |
| Functions – Useful features | Guidance Video on LCD, 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, Paper end detection, Ribbon end detection, Test print, Head Lift detection |

## OPTIONS

| Accessories | Cutter, Dispenser with Internal Backing Paper Rewinder, Linerless kit, Real-Time Clock, UHF RFID, SATO Label Gallery™ |
|---|---|

## RFID SPECIFICATION (optional)

| UHF | Standard | ISO18000-6  Type C |
|---|---|---|
| | Frequency | 868 – 920MHz |
| | Protocols | EPC Gen 2 Class 1, NXP, Impinj, Alien |
| | RFID Features | Fully integrated UHF RFID Reader / Encoder Module, RFID calibration function for optimal transponder performance, 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 to use short pitch labels down to 4 mm, PWP function allows flexible inlay positions, TID reading and printing as text and barcode |
| | Gen2 Memory | Expanded EPC (496bit), User Memory (512bit), TID (96bit), Access password, Kill password, Lock |