

NEW

HITACHI
Inspire the Next

Marking & Coding Solutions

Inkjet Printer

UX2 Series



Invest in a
Sustainable
Coding Future

RELIABILITY

Highly reliable design and superior construction

EFFICIENCY

Environmentally friendly with low operational costs

EASE OF USE

Simple touchscreen operation with video-based guidance

For over 45 years, Hitachi has developed and produced **high-performance inkjet printers** based on the **well-proven Continuous Inkjet (CIJ)** principle for **industrial marking**.

Hitachi Industrial IJ printers are **high-speed printers** adopting a **non-contact printing method**, ideal for a **wide range of applications**. They are capable of applying best-before dates, logos, barcodes, lot numbers and data matrix codes, which makes the **new UX2 Series the perfect solution** for both complex and standard applications.

Highly Reliable

Hitachi products are renowned for being **extremely reliable** in harsh environments. All functionally **critical parts** are **manufactured in-house**. The use of Hitachi's own components reinforces the **high quality levels, reliability and excellent value for money**.

Cost-Effective

The new, **economical ink recovery technique** achieves industry-leading levels of solvent consumption and the **very low maintenance costs** **minimize the total cost of ownership**.

Global Sales & Service Network

Are you looking for a **global company** that can work with you at a **local level**? Hitachi offers a **global sales and service network** when marking, coding and traceability challenges demand a **coordinated answer**. For each of your locations, and across your entire organization, we will **champion your goals** by providing international consistency, a global perspective, broad expertise and coordinated services provided by dedicated contacts. Our **global team** applies its **worldwide technical expertise** to your **unique challenges** in a consistent way. Tangible deliverables and proven solutions are the results of our business analysis and project implementation. In addition, we offer **cross-border project management and coordination** between suppliers, OEMs and end-users. **You gain more visibility and save time and money.**

Overview of UX2

INTUITIVE HMI

VIDEO GUIDANCE
ONBOARD

SAFE-CLEAN
STATION
(OPTIONAL)

LESS PRINT
HEAD
CLEANING

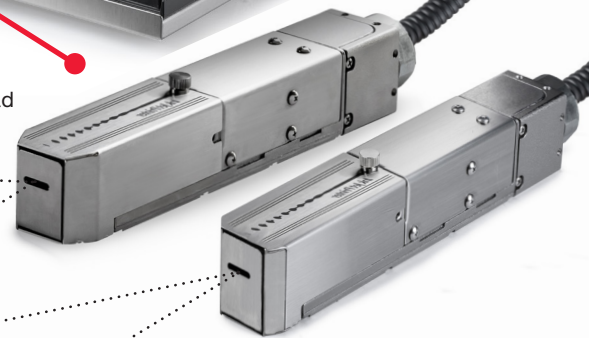
IMPROVED
PRINT
QUALITY



Standard print head
(up to 6 lines)



Short print head
(up to 2 lines)



Newly Designed To Stay Cleaner, Longer

Increased Production – Less Downtime

Conventional Printers

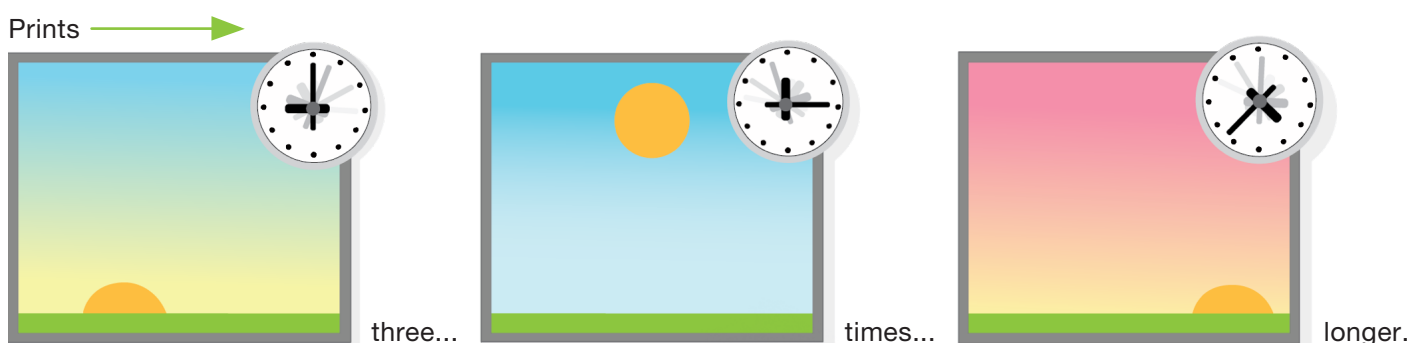
With **conventional print heads**, ink mists*¹ are deposited onto components that control the inkjet. Over time, the build-up of ink can result in **downtime leading to lost production.**

*¹ Ink mist build-up may vary depending on operating conditions.

Prints 3 Times Longer with Ink Guard

UX2 printers can print for **3 times longer** than previous generations*² due to a **unique print head design**. The ink guard feature attracts the ink mist to a collection area away from the sensitive printing components. The result is **fewer print quality issues and less frequent print head cleaning**. Keeping your production running while maintaining a **clean production environment.**

*² Results refer to the same test environment and test conditions compared with UX Standard.



Clearer Codes

Clear, **Precise Codes** at the Most Demanding Speeds

Using improved dot control algorithms, our newly designed UX2 printer is capable of producing clearly legible codes at the most demanding production speeds.

Dual Line Printing

Now **40% FASTER*** →



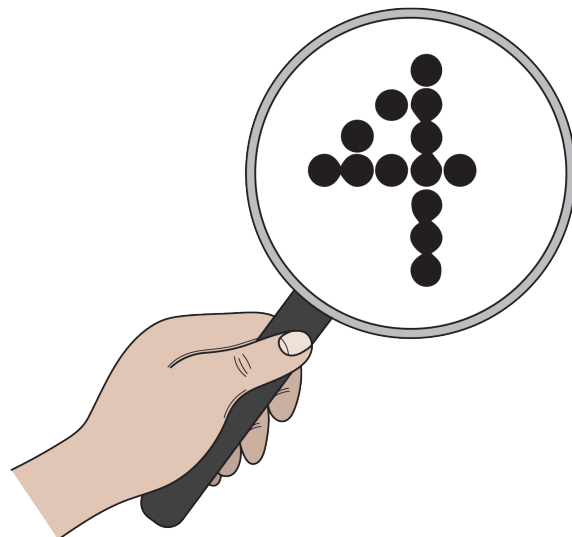
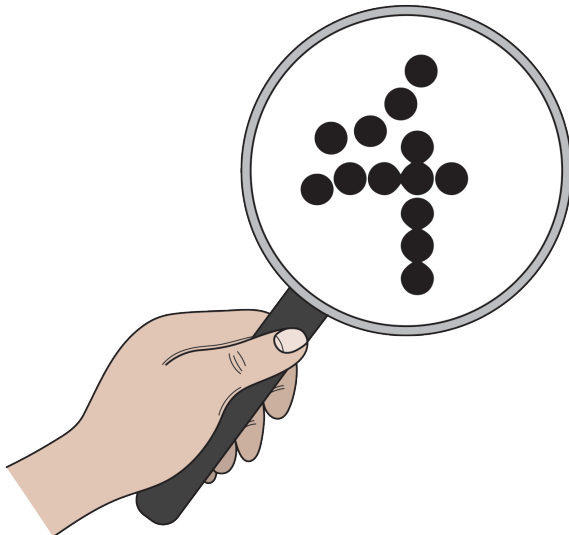
Three-Line Printing

Now **45% FASTER*** →



Available with Two Head Sizes to Optimize Print Quality

Our standard head produces crisp code quality from 1 to 6 lines of print. A field configurable “short” print head option focuses on the most demanding print speed applications that require 1 or 2 lines of print.**



* with high frequency compatible inks

** only 2-line printing possible

Safe-Cleaning Printhead

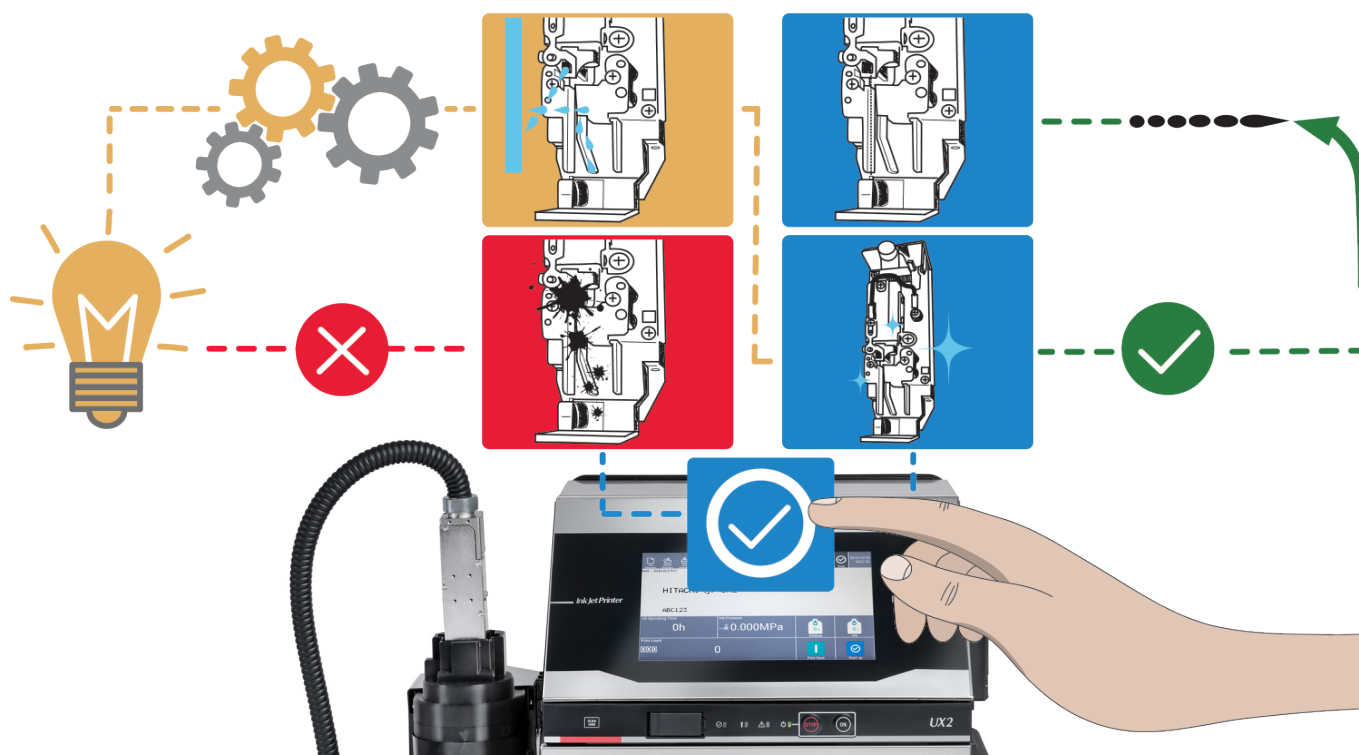
Added Convenience and Safety

The sealed Safe-Clean Station thoroughly cleans and dries in one simple operation. Eliminate the need for open solvents when cleaning the print head. As the solvent volatilized during drying is sucked out by the air pump and discharged through the exhaust duct, the operator is not exposed to the solvent gas. All used make-up cleaning solvent is captured in a sealed reservoir - for safe disposal.



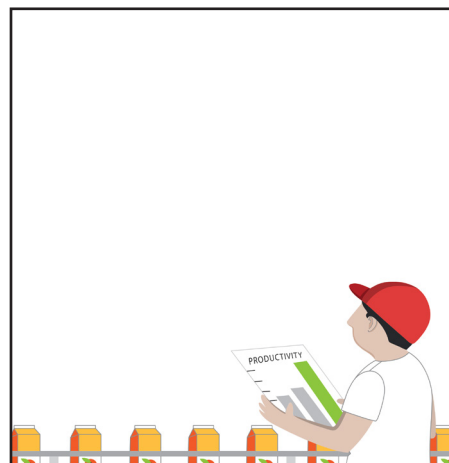
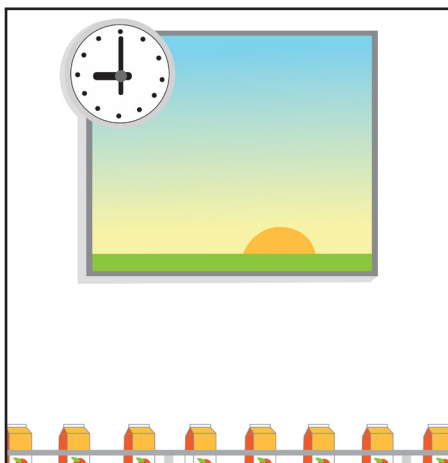
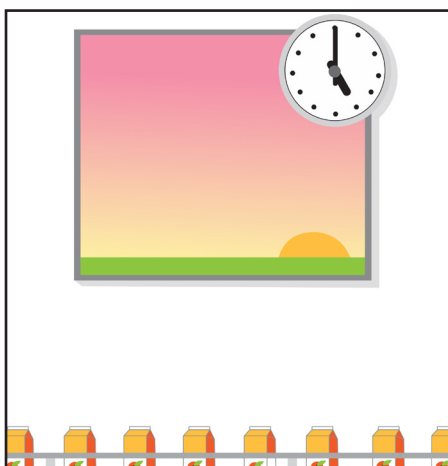
Self-diagnosis by new Smart Start function

Most of the downtime associated with inkjet printers is a result of a dirty nozzle. The self-diagnosis start-up with Safe clean station can be used to automatically clean the nozzle by reversing the flow of solvent when necessary, which helps ensure that IJP restarts smoothly.



Always ready to print

Even after long periods of inactivity, the cleaning station eliminates build-up of dried ink by periodically running an automatic nozzle-rinse according to a pre-programmed schedule. This means that the printer is always ready to print and will not need any manual cleaning at start of production.

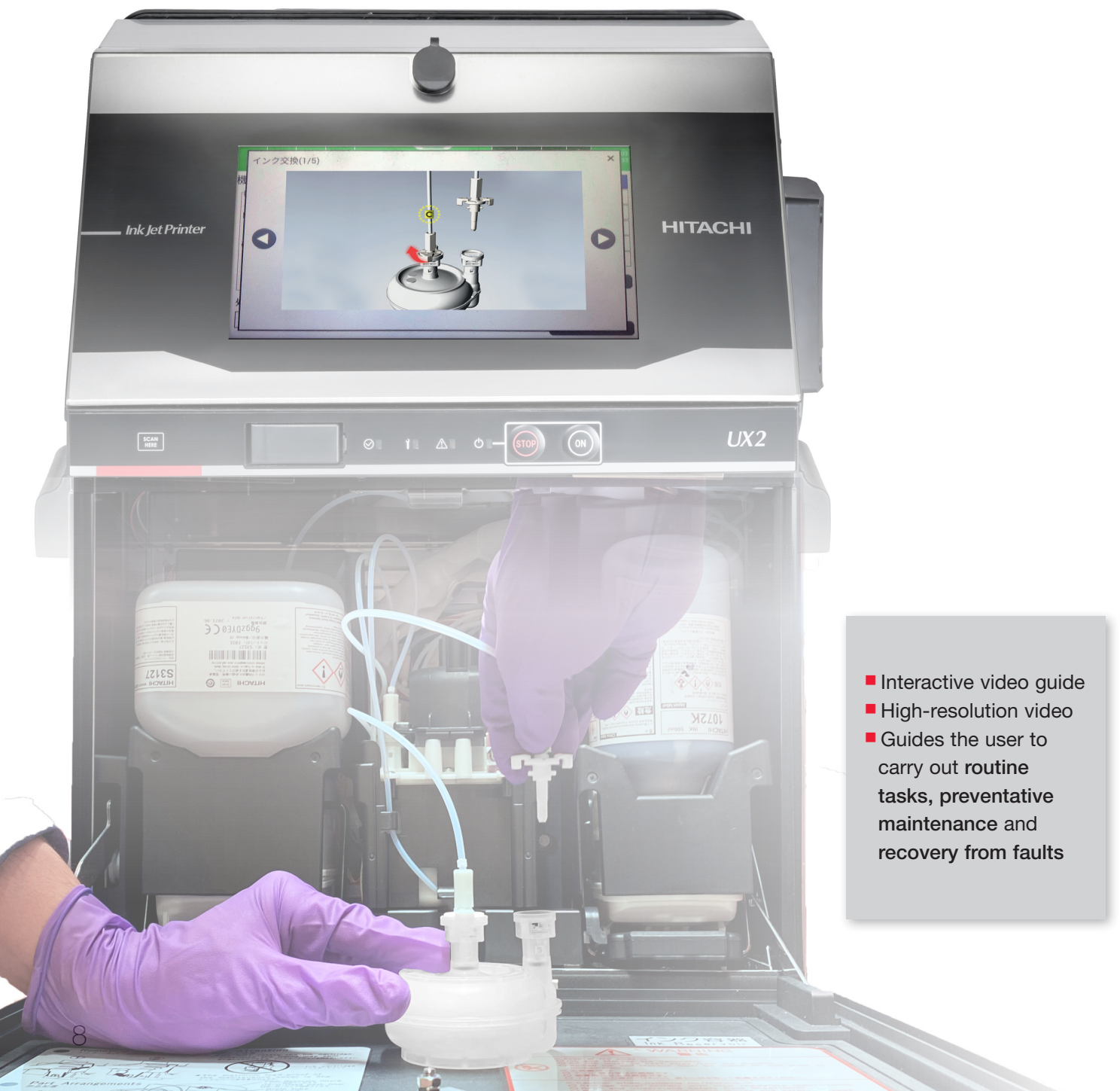


Built-In Troubleshooting

Video on Board, for Preventative Maintenance and Recovery

An interactive video on the printer screen guides users to carry out routine tasks, preventative maintenance activities and even recover the printer from a fault condition. It's so intuitive, even untrained users can easily follow the on board video guidance.

As a result, daily interaction with the UX2 is instinctive with no surprises. When needed, users will be guided by the video to clean the print head and add fluids.



- Interactive video guide
- High-resolution video
- Guides the user to carry out routine tasks, preventative maintenance and recovery from faults

Intuitive Display & Simplified Printer Setup

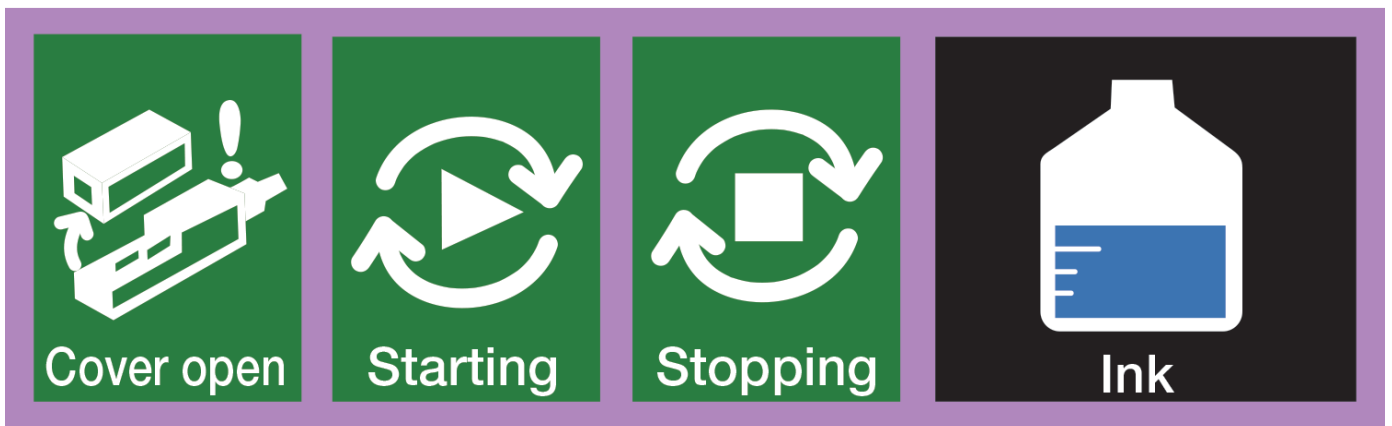
Flexibility to Meet Your Needs

The printer screen is designed with flexibility in mind. With a configurable home screen, you can choose what information is critical to display to operators.

- Choose the information critical to your production needs.

Icon-Based Display

An intuitive screen with icon based indicators allowing users to quickly identify machine status, and ink levels.



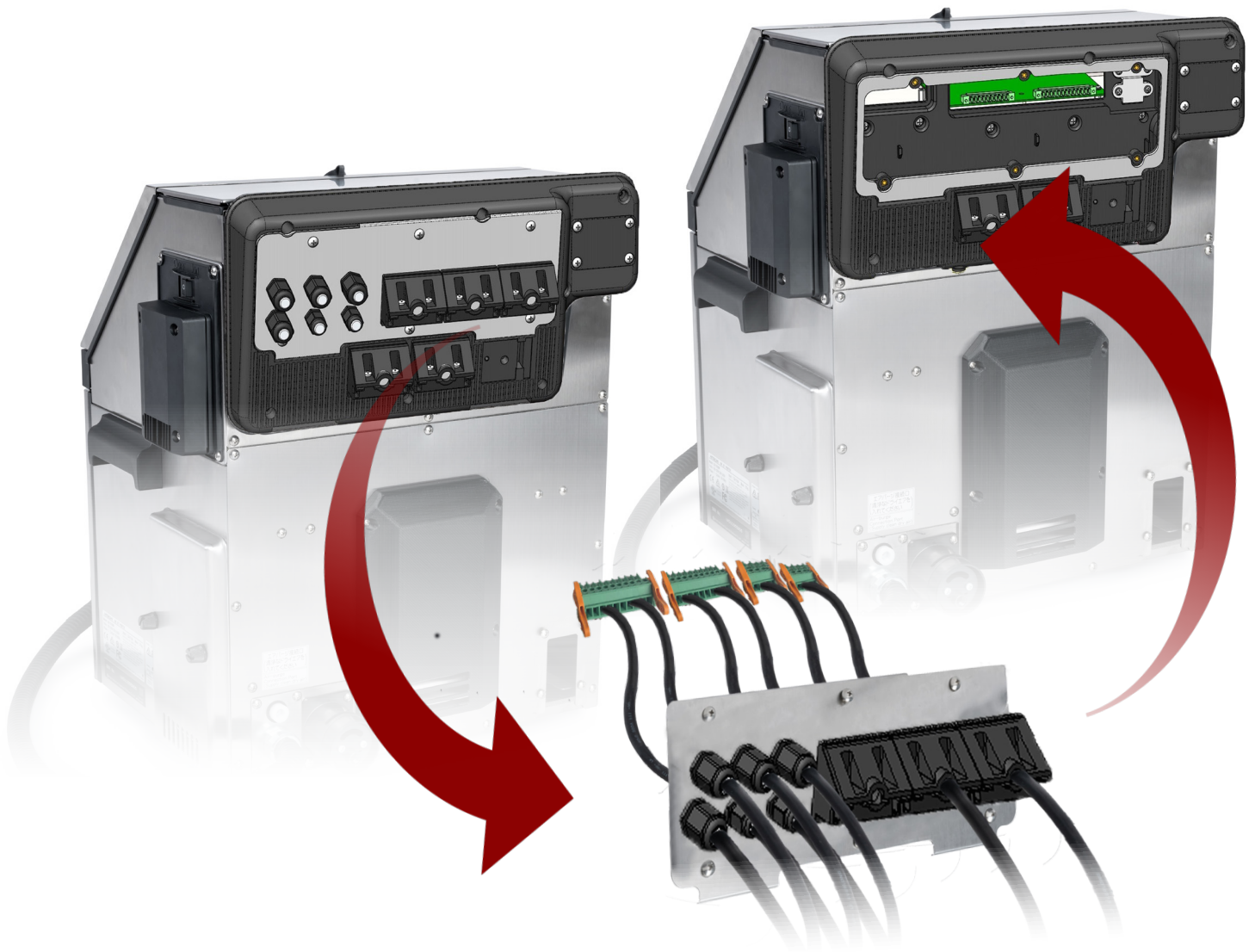
Familiar tablet-style touch screen allows swipe functionality similar to smartphones and tablets.

Quick Line Changeovers

Move Printers with **Ease**

Our quick-change I/O connectors enable printers to quickly move from line to line.

Eliminate time-consuming mistakes by preconfiguring the I/O routing in advance.



Integration with modern industrial protocols

Modern Communication Protocols

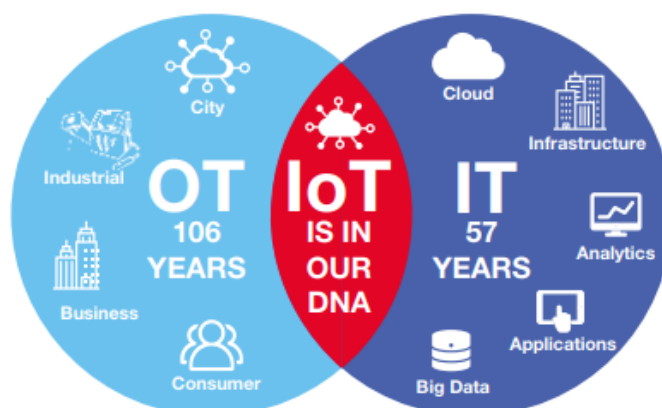
By employing modern open protocols such as OPC-UA, Hitachi's printers are ready for the upcoming Industry 4.0/IoT revolution. This open-style data connectivity enables our printers to be compatible with virtually any networked platform, regardless of OS. In addition, the latest UX printers come equipped with Ethernet/IP, OPC-UA, Modbus and Serial RS-232. Hitachi is currently the first CIJ manufacturer to gain ODVA* approval for Ethernet/IP.

* ODVA is a trade and standards development organisation, based in Michigan, USA.



Improve Operations, Quality and Transformation with IoT Analytics

Hitachi is one of the few companies in the world with decades of experience and deep expertise in both OT (operational technology) and IT. In the industrial arena, we're developing data-driven smart manufacturing and maintenance solutions that are rapidly displacing traditional processes.



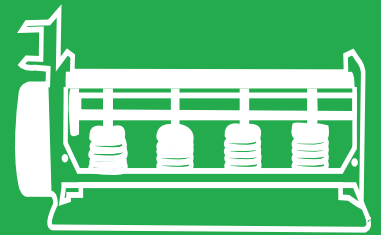
Invest in a Sustainable Coding Future

Hitachi's vision is to be a **climate change innovator**. Our mission is to resolve environmental issues and achieve a **higher quality of life** through a more **sustainable society**.

Sustainable Design

The UX2 series employs innovative and sustainable pump technology that not only ensures high reliability and lower operating cost, it also reduces VOC* emissions by restricting the amount of air being sucked into the ink circuit at the printhead.

*VOC Volatile organic compounds are found in inks and make up



MEK Free Inks

Hitachi's MEK-Free inks are designed to operate with UX2 series printers. They offer a sustainable alternative to standard inks that can reduce the frequency of refills and level of emissions. It will cut your cartridge waste by up to a third.



We are committed to creating resource efficient **eco-friendly** coding and marking solutions.



Safe-Clean Station

A safe operating environment is important for all manufacturing employees. Hitachi has created an innovative automated printhead cleaning station, that not only keeps operators free from fluid contamination, but also professionally cleans the printhead using the minimum amount of fluid. This means significant time savings and reduction of waste liquid.



Power Save Mode

Thanks to the pump design, the power consumption of the printer when printing is already one of the lowest at 73VA. However, the Hitachi UX2 series also incorporates a selectable power save mode that either dims or turns off the touch screen after 3 minutes when it's not being programmed, further reducing your energy bills and carbon footprint.

Find out more about Hitachi's global environment and initiatives.



Printer Specifications

		UX2 UX2-D160W
Nozzle size		65µm
Max. number of print lines		up to 6 lines
Max. number of print characters		240 characters (option: up to 1,000 characters)
Font (Horizontal × Vertical)	4x5	1 to 6 lines (Short printhead option : up to 2 lines)
	5x5	1 to 6 lines (Short printhead option : up to 2 lines)
	5x8 or 5x7	1 to 4 lines (Short printhead option : up to 2 lines)
	9x8 or 9x7	1 to 4 lines (Short printhead option : up to 2 lines)
	7x10	1 to 3 lines (Short printhead option : 1 line)
	10x12	1 to 2 lines (Short printhead option : 1 line)
	12x16	1 to 2 lines (Short printhead option : 1 line)
	18x24	1 line
	24x32	1 line
	30x40	1 line
36x48	1 line	
Character height		2-10mm (optional short print head: 2.0-6.5mm)
Input device & display		WYSWYG design Display: 10.1" color TFT LCD, WSVGA(1024×600) Input device: Touch panel, input sound provided
Maximum print rate (character per second) (Font 4×5, space 1 dot, 1 line, 76.9kHz)		Up to 1,538 (option: up to 3,076)
Standard characters		Alphanumeric(A-Z, a-z,0-9), symbols(27) and space: Total 90
User pattern		200 patterns each for dot matrix (50 patterns for Free size)
Barcode print		code39, ITF, NW-7, JAN-13, JAN-8, code128/EAN128, UPC-A, UPC-E, GS-1 Databar
2D code printing		Data Matrix (Alphabet: 49 characters/Numericals: 98 characters), QR code (Alphabetical characters only: 61, Numbers only: 101), Micro-QR code (Alphabetical characters only: 11, Numbers only: 18)
Print functions		Calendar, Count, (Option: Shift code)
Message storage capacity		300 messages (option: up to 2000 messages)
Input signal		Print target detection, Printing stop, Rotary encoder pulse, Reciprocative printing, Remote control (Run, Stop, High-voltage ON/OFF, Reset), (NPN/PNP selectable)
Output signal		Print in progress or Print complete, Online (NPN/PNP selectable), Print ready, Fault, Warning (NPN only)
Customizable screen		✓
Animation guidance		✓
Safe-Clean-Station		Optional
Data interface		USB/RS-232 Converters at baud rates selectable up to 115,200bps
Ethernet communication		Modbus, EtherNet/IP, OPC-UA
Print head cable length / angle		4m (in-line/90 degrees)
Operating temperature range		0-50°C (1067K Ink)
Operating humidity range		30-90%RH (no condensation)
International protection		IP65
Power supply (Automatic voltage selection)		AC100-120/200-240V±10%, 50/60Hz
Dimension		460×425×534mm (Width×Depth×Height)
Approximate weight		27 kg (60 lbs)

EtherNet/IP™

OPC UA®



Modbus

ODVA™

Font (horizontal x vertical)							
5 x 5	1 LINE 0123456789ABCDEFGH 012345678	2 LINE 012345678 ABCDEFGHI	3 LINE 012345678 ABCDEFGHI JKLMNOPQR	6 LINE 0123456789 ABCDEFGHIJKL MNOPQRST UVWXYZ [Special Characters]			
5 x 7	1 LINE 0123456789ABC 0123456	2 LINE 012345678 ABCDEFGHI	3 LINE 012345678 ABCDEFGHI JKLMNOPQR	4 LINE 0123456789 ABCDEFGHIJKL MNOPQRST UVWXYZ			
7 x 10	1 LINE 0123456789 012345	2 LINE 01234567 ABCDEFGH	3 LINE 01234567890123456 ABCDEFGHIJKLNO PQRSTUVWXYZ				
10 x 12	1 LINE 0123456789ABC 0123456789		2 LINE 01234567890 ABCDEFGHIJK				
12 x 16	1 LINE 0123456789ABC 0123456		01 [QR]	2 LINE 012 ABC [QR]			
18 x 24	1 LINE 0123456789 0123456ABC						
24 x 32	1 LINE 012345ABC						
30 x 40	1 LINE 012345ABCDEF						
36 x 48	1 LINE 012345ABC						



Sales Offices

America

Hitachi Industrial Equipment & Solutions America, LLC
Phone: +1 866 583 0048
www.hitachi-iesa.com/marking
Marking.Info@hitachi-iesa.com

Asia

Hitachi Asia Ltd.
Phone: +65 6305 7400
www.hitachi.com.sg/ice

China

Hitachi Industrial Equipment Systems (China) Co., Ltd.
Phone: +86 21 5489 2378
www.hitachi-iec.cn

Europe

Hitachi Europe GmbH
Phone: +49 211 5283 0
www.hitachi-industrial.eu
info@hitachicoding.com

Oceania

Hitachi Australia Pty Ltd.
Phone: +61 2 9888 4100
www.hitachi.com.au/products



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