Hitachi Industrial Equipment Systems Europe

INKJET PRINTER
UX2 Series



HITACHI

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.



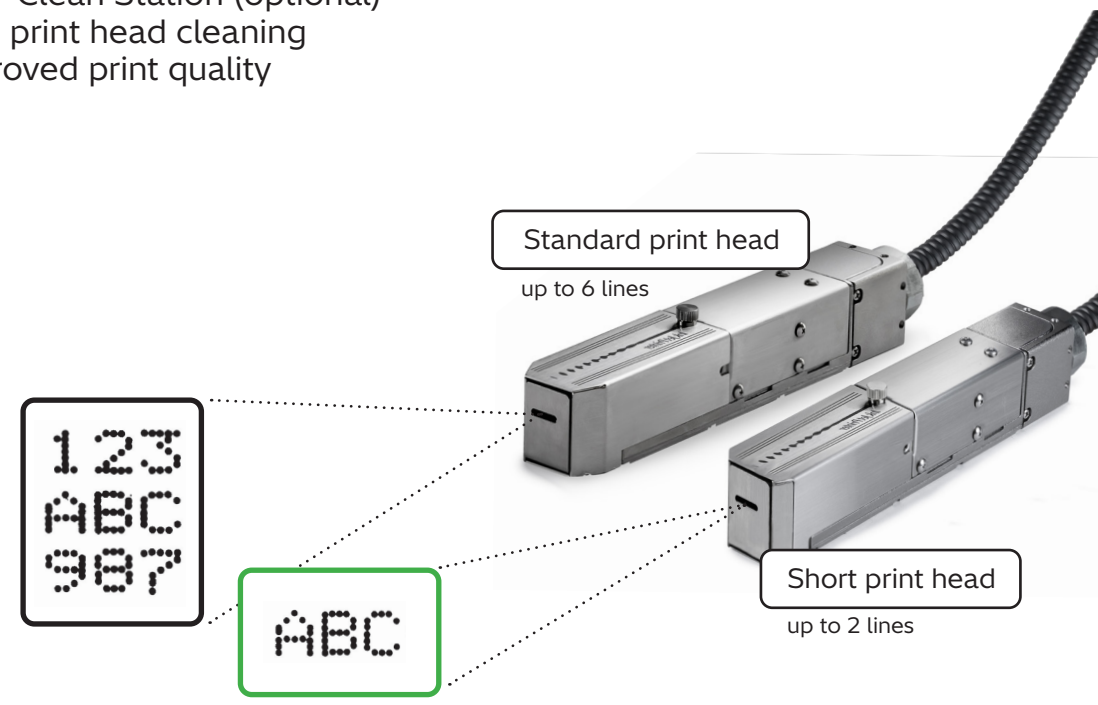
Invest in a Sustainable Coding Future

Overview of UX2

Reliability	Efficiency	Ease of Use
Highly reliable design and superior construction	Environmentally friendly with low operational costs	Simple touchscreen operation with video-based guidance

Key Highlights

- Intuitive HMI
- Video Guidance onboard
- Safe-Clean Station (optional)
- Less print head cleaning
- Improved print quality



Learn more about the UX2

*[1] Standard print head of 40µm (UX2-D140W): up to 4 lines
*[2] No optional shorter print head for 40µm

Newly Designed To Stay Cleaner, Longer

Increased Production – Less Downtime

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.

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*[1]

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.



*[1] Ink guard not not equipped in UX2-D140W
*[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*[1]

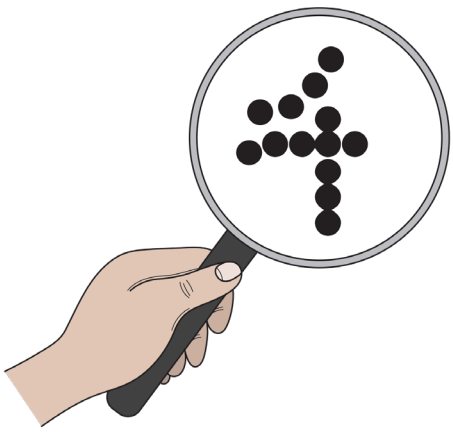


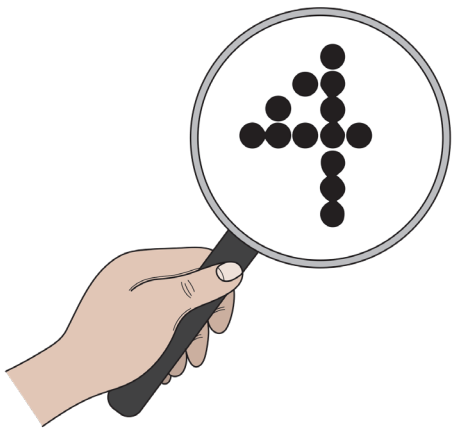
Three-Line Printing
Now 45% FASTER*[1]



Available with Two Head Sizes to Optimize Print Quality

Our standard head produces crisp code quality from 1 to 6 lines*[2] 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.*[3]



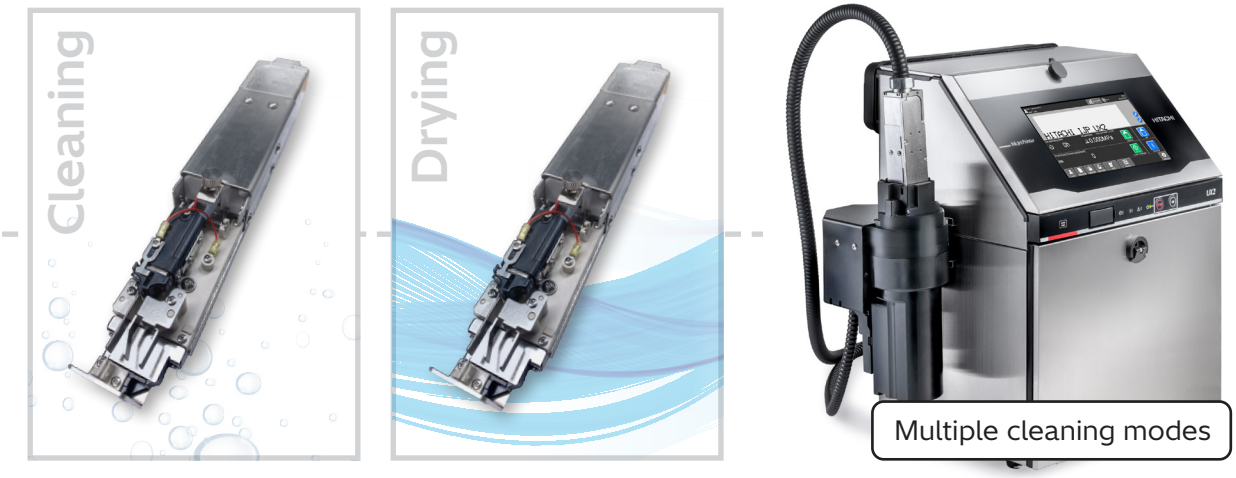


*[1] with high frequency compatible inks
*[2] up to 4 lines with 40µm print head
*[3] only 2-line printing possible

Safe-Cleaning Printhead

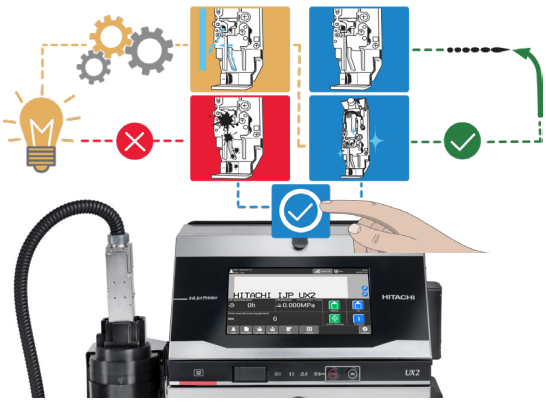
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Self-diagnosis by new Smart Start function

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 Changeover and Digital Network

Video on Board, for Preventative Maintenance and Recovery

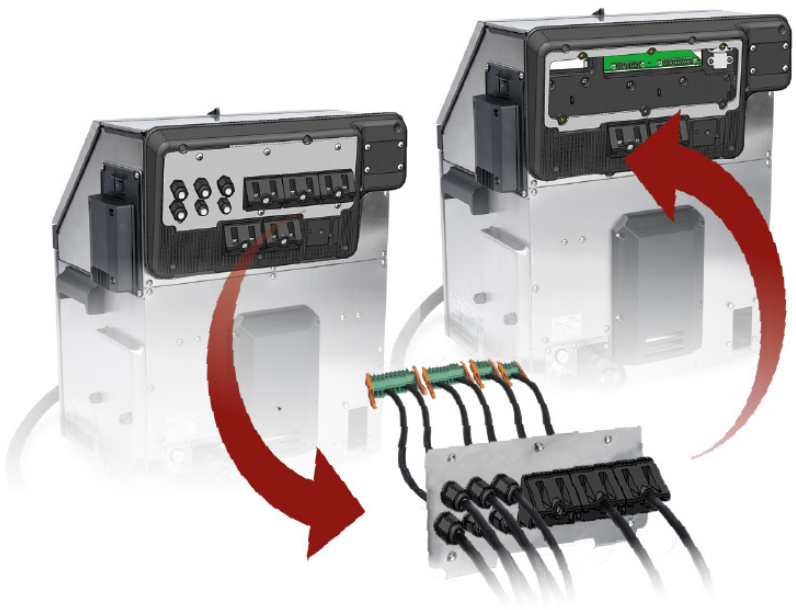
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Move Printers with Ease

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 support

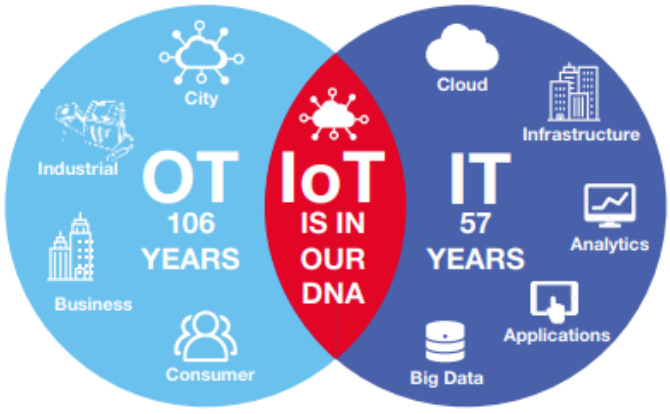
Modern Communication Protocols

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 Support

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

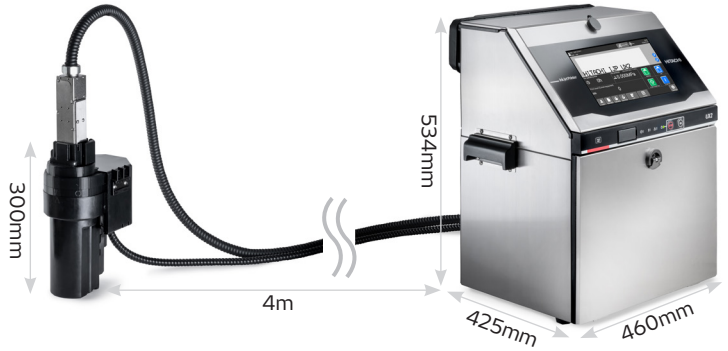
Thanks to the pump design, the power consumption of the printer when printing is already one of the lowest at 73VA. However, the Hitachi UX2 series also incorporates a selectable power save mode that either dims or turns off the touch screen after 3 minutes when it's not being programmed, further reducing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

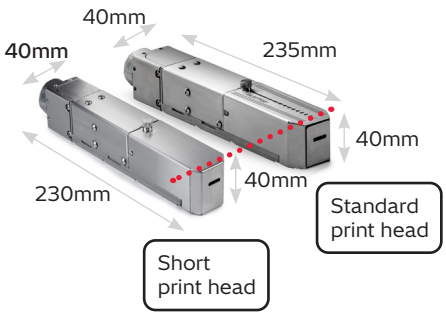
Find out more about Hitachi's global environment and initiatives.

Technical Specifications

		UX2-D160W	UX2-D160W
Nozzle size		65μm	40μm
Max. number of print lines		up to 6 lines	up to 4 lines
Max. number of print characters		240 characters (option: up to 1,000 characters)	up to 4 lines
Font (Horizontal × Vertical)	4x5	1 to 6 lines (Short printhead option: up to 2 lines)	up to 4 lines
	5x5	1 to 6 lines (Short printhead option: up to 2 lines)	up to 4 lines
	5x8/5x7	1 to 4 lines (Short printhead option: up to 2 lines)	up to 4 lines
	9x8/9x7	1 to 4 lines (Short printhead option: up to 2 lines)	up to 4 lines
	7x10	1 to 3 lines (Short printhead option: 1 line)	1 to 3 lines
	10x12	1 to 2 lines (Short printhead option: 1 line)	1 to 2 lines
	12x16	1 to 2 lines (Short printhead option: 1 line)	1 to 2 lines
	18x24	1 line	1 line
	24x32	1 line	1 line
	30x40	1 line	-
	36x48	1 line	-
Character height (based on 1072K Ink)		2-10mm (optional short print head: 2.0-6.5mm)	0.6 - 6mm
Input device & display		WYSWYG design, Display: 10.1“ color TFT LCD, WSVGA(1024×600) Input device: Touch panel, input sound provided	
Languages		English, Italian, Dutch, Spanish, German, French, Swedish, Russian, Greece, Czech, Danish, Portuguese, Polish, Serbian, Turkish, Hungarian, Bulgarian, Catalan, Rumanian, Finnish, Norwegian, Slovenian, Croatian, Hebrew, Ukrainian, Thai, Arabic, Vietnamese, Burmese, Bengali, Korean, Special Kanji (Simplified Chinese), Traditional SP Kanji (Traditional Chinese)	
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)	Up to 3,030
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, EAN-13, EAN-8, Code128/EAN128 (GS1-128), UPC-A, UPC-E, GS-1 Databar, EAN-13 Add-on 5	
2D code printing		Data Matrix (GS1-DM, Alphabet: 49 characters/Numericals: 98 characters), QR code (GS1-QR, Alphabetical characters only: 90, Numbers only: 149), Micro-QR code (Alphabetical characters only: 11, Numbers only: 18), DotCode	
Print functions		Calendar, Count, (Option: Shift code)	
Message storage capacity		300 messages (option: up to 2000 messages)	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 / 6m (optional), (in-line/90 degrees)	4m (in-line/90 degrees)
Operating temperature range		0~50°C (1067K Ink)	0~35°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)	

Font (horizontal x vertical)				
5 x 5	0123456789ABCDEFGH 0123456789	0123456789 ABCDEFGHI	0123456789 ABCDEFGHI JKLMNOPQR	
5 x 7	0123456789ABC 0123456	012345678 ABCDEFGHI	012345678 ABCDEFGHI JKLMNOPQR	012345678 ABCDEFGHI JKLMNOPQR STUVWXYZA
7 x10	0123456789 012345	01234567 ABCDEFGH	0123456789013456 ABCDEFGHIJKLNOPQ TUVWXYZABCDEGHIJ	
10 x 12	0123456789ABC 0123456789	01234567890 ABCDEFGHIJK		
12 x 16	0123456789ABC 0123456 01	012 ABC		
18 x 24	0123456789 0123456ABC			
24 x 32	012345ABCD			
30 x 40	012345ABCDEF			
36 x 48	012345ABCD			





*[1] No optional shorter print head for 40µm
*[2] Dimensions of 40µm print head: 40mm x 40mm x 218,2mm (height x width x length)

HITACHI

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