



HX Nitro

High-Speed Industrial Inkjet Printer

A coding solution for production lines that cannot afford downtime.

SUBAR TECH Coding & Marking Solution

- — | Manufacturer and supplier of industrial inkjet | — •
- — | printers, consumables, and after-sales support. | — •



SUBAR TECH

HX Nitro





Coding & Marking Solution

Key Features of

HX Nitro

Precise and Clean Printing

Even on dark and sensitive surfaces

Longest Throw Distance in TIJ Printers

Clean printing without physical contact with the product surface

Multi-Language Printing Support

Compatible with English fonts

Suitable for All Business Sizes

From small production workshops to large-scale factories

HX Nitro

is our answer to your production challenges.

Quality Control Manager

Challenges

- Unreadable or faulty prints
- Reduced print quality due to direct contact between the printer and the product
- Product waste caused by printing defects
- Decline in print quality in dusty or humid environments

Solutions

- High-resolution and high-precision printing
- Non-contact printing technology prevents product surface damage
- Print Fault Mode prevents product rejection and reduces waste
- Real-time alerts for incomplete or failed prints to maintain production control
- Stable printing performance in humid and harsh industrial environments
- Operates in up to 85% relative humidity

Benefits

- High-quality and long-lasting print results
- Reduced product waste
- Lower printing errors
- Reduced labor and operational costs

Production Manager

Challenges

- Restarting the printer after every production stop is time-consuming and requires technical support
- High maintenance and service costs
- No real-time visibility into device status or potential failures
- Product waste caused by printing errors or device malfunction
- Lack of proper print validation and traceability (track & trace)
- Need for synchronized printing with product, warehouse, and logistics data
- Inconsistent performance across different printers within the factory

Solutions

- HX Nitro restarts instantly after production stops, no specialist required
- Low-cost maintenance without complex servicing or operator training
- Equipped with Daily Report for fast device status monitoring
- HealthCheck system provides instant diagnostic reports and error alerts
- Variable data printing based on track-and-trace workflow
- Prints warehouse, logistics, and product-related data directly onto items
- Supports rapid text changes for different SKUs and production orders
- Compatible with PLC systems, industrial networks, and automation software

Benefits

- Zero-downtime printing across production lines
- Reduced printing errors with automatic control software
- Durable, high-quality print output
- Ability to print on different materials and adapt to moving conveyor lines

CEO & Plant Manager

Challenges

- High total cost of ownership (TCO) for coding and marking equipment
- Lack of real-time visibility and reporting across production lines
- No data integration between printing systems and management platforms

Solutions

- Affordable hardware with low consumable and maintenance costs
- Reduced cost per print and overall TCO
- Centralized print management software for factory-wide monitoring
- Full integration with PLC and ERP systems
- Seamless data transfer between printing software and production management systems

Benefits

- Significant reduction in total cost of ownership (TCO)
- Improved oversight and performance control across the factory

Production Line Operator & Supervisor

Challenges

- Restarting the printer after every production stop is time-consuming and costly
- Difficult and slow configuration of print speed and settings
- Complex software interfaces that require technical expertise
- Time-consuming message design and editing during production
- Non-technical operators forced to handle message creation and print setup
- Use of hazardous MEK-based inks, resulting in safety and health risks
- Troubleshooting requires on-site technical experts
- Slow and inaccurate fault detection in printers

Solutions

- Fast and effortless restart with HX Nitro after production interruptions
- Automatic print speed adjustment
- User-friendly software interface designed for non-technical operators
- Pre-designed message templates with customizable fields (User Access Level)
- MEK-free ink options to ensure operator safety and compliance
- Smart cartridge system prevents ink drying during line stoppage
- Built-in HealthCheck system for real-time diagnostics and fault detection — no technician required

Benefits

- Increased productivity on the production line
- Reduced human errors
- Reduced printing failures and downtime
- Easy for operators to use with minimal training

Warehouse, Logistics & Procurement Manager

Challenges

- High cost of purchasing spare parts
- High storage and handling costs for MEK-based inks and consumables
- Fire and safety risks associated with flammable solvents such as MEK

Solutions

- Spare parts supplied directly through SUBAR TECH after-sales service
- No MEK usage and minimal consumables required for ink storage
- Long-lasting ink supply with no expiry issues
- No flammable solvents used in the printing system

Benefits

- Reduced storage and hidden operational costs
- Reduced fire and safety risks in industrial environments
- Lower warehouse and inventory management expenses

● Why is **HX Nitro** with TIJ Technology a Smart Choice?

● **Easy Operation**

Simple to use with basic training — no technical expertise required

● **Lower Total Cost of Ownership (TCO)**

No periodic servicing, no expensive consumables, no hard-to-find spare parts

● **Zero-Downtime Production**

Stop the production line and restart the printer days later — instantly and without hassle

● **High-Resolution & Clean Printing**

Sharper than CIJ, with high-resolution output
Cleaner and longer-lasting than DOD printers



● **Software Upgrade Ready**

Keeps the printer up-to-date with regulatory coding requirements (e.g., health ministry standards)

● **Fast and Accurate**

Ideal for production lines with variable speeds

● **High-Quality Non-Contact Printing**

Prints on all materials with a print height of up to 25mm

● **Eco-Friendly**

No VOC emissions and no unpleasant odors

● **Suitable for All Environments**

Operates reliably even in dusty or humid industrial conditions

● **Long Service Life**

Designed for years of continuous use

Industrial Power in a Compact, Professional Design

HX Nitro

HX Nitro is an advanced thermal inkjet (TIJ) printer designed for high-quality printing of text, barcodes, graphics, and traceability codes on a wide range of surfaces. It can print on plastic bottles, metal cans, cardboard boxes, and many other industrial products, without being limited by material type or surface thickness. With support for multiple ink types, HX Nitro enables consistent printing across different packaging materials. In addition, the BOOST feature enhances print sharpness and clarity, delivering exceptionally crisp results at up to 600 DPI.

HX Nitro is equipped with a web-based software platform that allows users to design messages, manage multiple printers simultaneously, and control the device via IP address or Wi-Fi. This capability enables seamless integration with production line LOT systems, allowing operators to monitor multiple printers, synchronize data, and manage the printing workflow in real time. With these features, HX Nitro is not just a professional coding device — it is a smart industrial printing solution that simplifies management, improves efficiency, and enhances overall production performance.

Applications of the HX Nitro Inkjet Printer

Who is this printer ideal for?



Factories that require flexible stop-and-restart capability in production



Start-up companies and new production lines



New product launches or newly added production lines in large factories



Small and medium-sized manufacturing workshops

HXNitro

Where is this printer most commonly used?

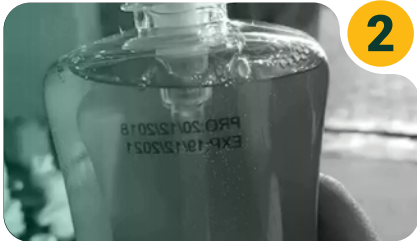


1

Food and Consumer Packaging Industry

Used for printing production dates, expiry dates, barcodes, and traceability codes on small or direct-contact food packaging such as:

- Yogurt cups, dairy products, and juice packaging
- Cake, confectionery, chocolate, and snack wrappers
- Plastic containers, metal cans, and flexible food packaging films



2

Pharmaceutical, Cosmetics & Personal Care Industry

Used for printing critical information such as batch number, lot code, expiry date, and traceability details on:

- Tubes, cream and ointment packaging
- Glass bottles and pharmaceutical containers
- Packaging for soap, shampoo, and hygiene products



3

PET and Glass Beverage Bottles

Direct printing on bottles such as:

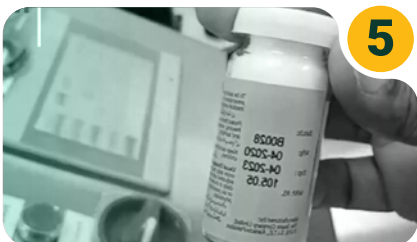
- Soft drinks
- Mineral water
- Malt beverages, energy drinks, and juice bottles



4

Small Rigid Packaging

- Small paint cans
- Single-use chemical containers
- Adhesive and glue packaging
- Small resin containers for industrial washing applications



5

Other Primary Packaging Industries

- Electronic components (printing on anti-static packaging)
- Herbal medicines and nutritional supplements
- Tobacco products (printing on cigarette wraps or small tobacco packs)

● The Choice is Yours! Use Subartech Software or Connect to Your Internal Systems

To monitor, manage, and update print data, you can choose between two integration options:

1. Using SUBAR TECH's Dedicated Software

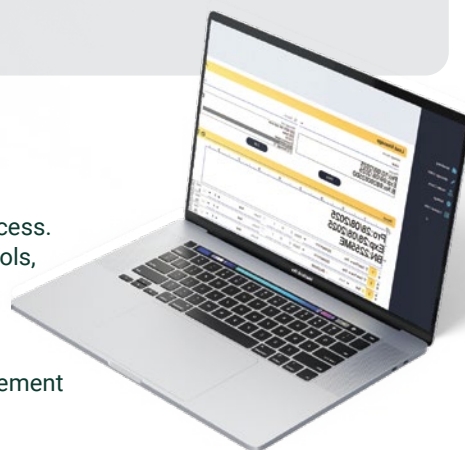
With the web-based platforms HX Console and HX Manager, you can control devices in real time, view reports, and apply necessary adjustments — all through a browser, with no software installation required.

These platforms are equipped with smart BI (Business Intelligence) and BA (Business Analytics) tools, allowing you to track what has happened and make data-driven decisions to optimize your production workflow.

2. API Integration with Your Internal Systems

If you prefer your print data to be sent directly into your existing ERP, CRM, or manufacturing software, you can use SUBAR TECH's dedicated API.

This enables you to view and analyze printer data alongside other business information — all in a single dashboard, without switching between systems.



● Introducing HX Manager

HX Manager is a dedicated platform for monitoring and controlling your printing process. Designed specifically for a single inkjet printer, it provides full access to device controls, status tracking, and performance insights. The software can be accessed from any smart device — including mobile phones, tablets, or computers — as long as it is connected to the same Wi-Fi network. HX Manager includes five main sections:

- Monitoring
- Message Editor
- Health Check
- Settings
- External Data Management

● HX Manager Features

Message Design Modes	1. Simple Message Editor	2. Advanced Message Editor	3. Auto Pilot
Message Design	Design and edit static and variable data messages including: date, time, batch number, shift code, barcode, QR code, logo, text, external database fields, counters, authenticity barcode, and more		
Message Control	Create, monitor, and manage print messages through a browser		
Remote Upgrade	No specialist required for software updates		
Economy Mode	Ink consumption reduced by up to 50%		
Daily Report	Hourly and daily production monitoring		
Health Check	Real-time printer status check to prevent production downtime		
Send to Many	Design a message once and send it to multiple printers simultaneously		
Auto Notify	Sends automatic alerts for events like print completion, online data updates, low ink level, etc. via selected channels such as Telegram or email		
Roller Date	Set date format according to shift schedule and global time		
Custom Date	Customize date formatting (RTL, LTR, and other formats)		
Auto Print	Automatically prints messages based on data scanned by barcode reader—no manual configuration needed		
Print Job	Configure messages based on production counts (e.g., print the total contents of a box without per-unit price)		
BCD Interface	Receives categorized PLC messages and prints accordingly		
Field Upgrade	Update software remotely without technician involvement		
Font Recovery	Font backup in two sections and auto-switch to alternate font in case of issues		
Languages	Thai, Spanish, Portuguese, Japanese, German, Chinese, Persian, and English		
Static IP Address	Supported		

Introduction to HXConsole

HXConsole is a platform designed for executives and senior managers, enabling the monitoring, control, analysis, and adjustment of a network of printers simultaneously and centrally. This software can send and receive data from printers in both directions. It also provides advanced features such as creating and sending unified messages to multiple printers, sending customized messages, and exchanging XML-based requests and responses with the devices.

Business Intelligence Business and Operational Analytics

- Provides detailed print reports categorized by hour and day.
- Monitors the number of active printers and their performance.
- Tracks sent messages and updates them when necessary.
- Monitors remaining print counts, device health status, and potential issues.

Remote Control Printer Management and Connectivity

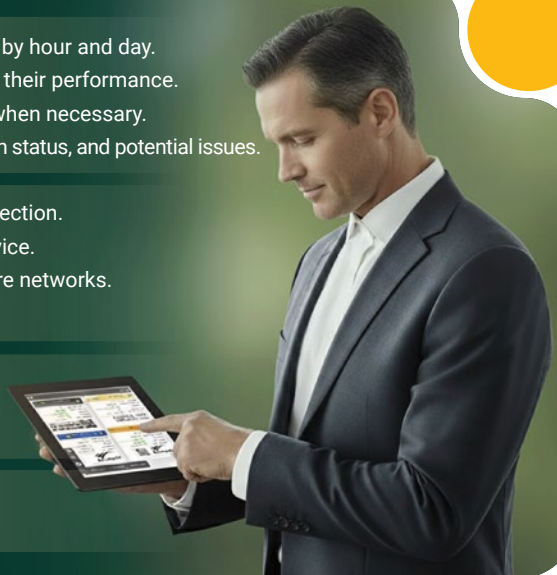
- Manage and control printers via Wi-Fi connection.
- No physical presence required near the device.
- Connect to ERP or CRM production software networks.
- Supports API-based integration.

Multi-Printer Support Centralized Control and Management

- Enables managing and controlling multiple printers simultaneously from a single central panel.

Supported Languages

- English



**No Application
Installation Required.
Monitor everything
online.**



Full control of all printers

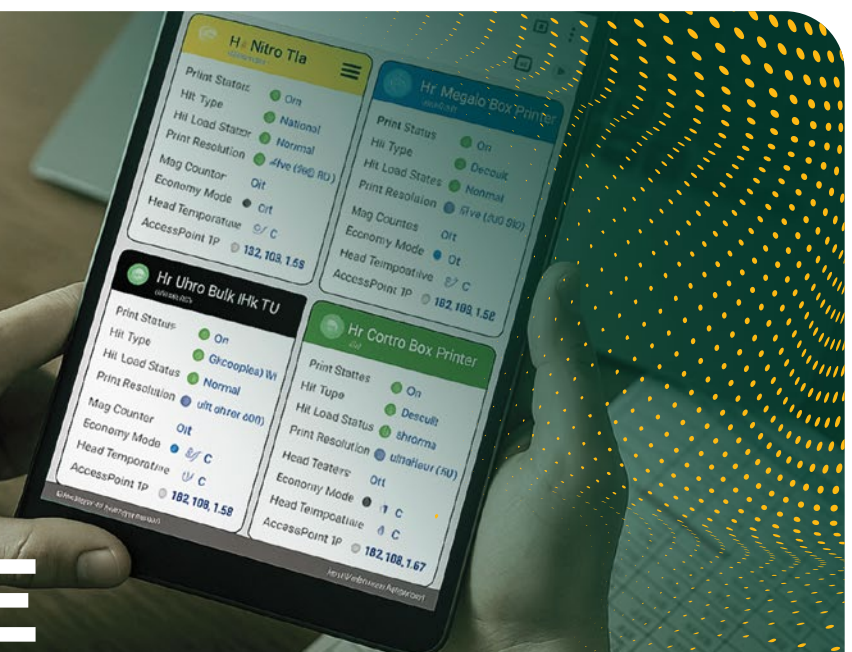
Even if you have purchased multiple printers from Subaru, you can manage them without the need for installation, complex training, or major changes. Connect them all to one unified system and monitor their status and operation. This platform is designed for uniform use across all devices and can help greatly in this regard.

Human resource management

Reducing the need for manual intervention by operators on the production line and training new staff.

Saving time and cost

HX CONSOLE



● Ink Technical Specifications

Ink Name	Ink Type	Volume/Capacity	Suitable Surface	Application
ChronplastW	Solvent	46 ml	Porous & Non-Porous	General materials, flexible packaging, food packaging
EUrex	High-Penetration Solvent	46 ml	Porous & Non-Porous	Flexible food packaging with high adhesion. Suitable for PVC, PP, PET, ABS, metal, glass, polystyrene, and polyethylene films.
Aquanix	Water-based	46 ml	Porous & Semi-Porous	Paper packaging, carton boxes, semi-coated cardboard

- 400 ml and 500 ml inks will be packaged upon customer request.
- Single-color inks will be packaged upon customer request.

● Controller Specifications

Section	Description
Message Design	Message editor under web interface and independent from device + Vanguard Create software (Windows/tablet)
Message Capacity	Unlimited (Windows/tablet)
Start/Stop Time	Instant
Password Security	Yes
Alert	Internal buzzer; OLED display, 64×128
Number of Prints	1
Product Certification	CE

● Printing Features

Section	Description
Resolution	600 dpi (standard ink throw distance)
Maximum Print Speed	240 meters per minute
Logo Printing Option	Yes
Barcode Printing	Various barcode types
Number of Print Lines	Up to 6 lines (2 mm height per line)
Character Height Range	Up to 12.7 mm (0.5 inch)
Fonts	All Windows fonts
Date Formats	Multiple formats for date, message, etc.
Counters	User-defined counters
Message Components	Text, date, time, logo, counter, line, barcode, external data, serial number, letters, and numbers

● **Connections and Communications**

Section	Description
Connection	Easy connection without additional setup; Wi-Fi (direct or via access point), RS-232 isolated (optional), USB
Power Supply	Cable
Adapter	15–24 V adapter
External Light (Beacon)	Optional connection for two or three-color beacon
External Sensor	Optional connection available
Stand & Holder	Optional connection available

● **Cartridge Specifications**

Section	Description
Technology	Funai Cartridge Technology
Compatibility	Compatible with porous and non-porous surfaces
Color	Black, Red, White
Dimensions	60 × 74 × 25.5 mm
Ink Identification	Automatic

● **Physical Specifications**

Section	Description
Controller Material	Anodized Aluminum + Stainless Steel (Anti-Corrosive)
Controller Weight	910 g
Dimensions	146 × 60 × 84 mm
Environmental Conditions	Temperature: up to 50 °C; Humidity: up to 80% (special enclosure for humid environments)

● **Cable and Adapter Specifications**

Section	Description
Input AC	100–240 VAC
Output DCV	15
Rated Current	4 A
Rated Power	Maximum 60 W
Ripple & Noise	Maximum 100 VP-P

● **Advanced Features**

Section	Description
Auto Notification	Sends automatic alerts for events such as low ink level, print completion, or online data reception through channels like USB, RS232, Wi-Fi, or HTTP — notifying your team in real time.
AUTO PILOT	Allows external control or monitoring of the printer. Each printer can receive commands from another fixed system (like PLC).
Daily Production Report	Provides daily print reports for monitoring total production status.
Economy Mode	Reduces ink consumption by up to 50% while maintaining print quality.
External Data	Enables easy integration with external devices such as PLC or scales for variable data printing.
Ink Estimation Calculation	Estimates the number of prints based on message and parameter data.
Printer Health Check	Detects and prevents errors or unexpected stoppages.
Print Scheduling	Schedules print jobs based on company shifts and work plans.
Signal Lock Connection	Enables quick connection to the main system to send instant signals such as “Error,” “Busy,” “Printing,” or “Ready.”

HX Nitro



Small Size Big Impact.



Coding & Marking Solution

For more information or to request a product demo,
you can contact us through the following channels:

 +98 021 77638772-4 |  Subar tech |  subar.technology
 www.subartech.com |  info@subartech.com