

HX CARTRO



From Carton to Metal, Consistent
and Reliable Printing

Coding & Marking Solution

—| Production and Sales of Inkjet Printers |—

—| Consumables and After-Sales Services |—



SUBAR TECH

► HX Cartro

HX Cartro is an industrial inkjet printer with DOD technology that, due to its compact design and lightweight construction, is an ideal option for factories with limited space. This printer is designed for high-quality printing on various surfaces and primary, secondary, and tertiary packaging such as paper, cardboard, laminated packaging, metal, shrink film, and industrial materials, and is widely used in manufacturing, packaging, and logistics industries.

A Lightweight and Practical Printer for Printing on Various Products!

- High-resolution printing on cartons, laminates, shrink film, labels, and even metal
- Fast and without technical complexities
- Using DOD technology

From Simple to Industrial Printing with Various Types of Inks

- Use of Oil-Based and Solvent-Based inks
- No use of carcinogenic and hazardous MEK solvents

Ease of Use

- No need for a specialist for setup and maintenance
- Easy to use with basic initial training

Cost-Effective Printing Without Hidden Costs

- Use of solvent and spray only for device maintenance
- Reduced printing waste
- No need for spare parts, MEK, or ink
- No expensive consumables or hard-to-find parts
- Separate Power Supply – Protects the device against power fluctuations
- No concern about damage or device downtime during power outages
- Quick and easy replacement of parts in case of current fluctuations

Custom Barcodes, a Smart Solution for Carton Tracking

- Large Print Size with High Resolution (up to 7 cm)
- Printing custom barcodes with package Track & Trace capability
- Barcode readability for fast and error-free tracking throughout all logistics stages

Health Check System! Always One Step Ahead of Errors

- Health Check system for checking potential issues
- Monitoring and reporting the status of the device and software
- Being informed of potential issues in the shortest possible time

Ability to Connect to Weighing Scale, Load Cell, PC, IPC, PLC, and Other Industrial Controllers

- No production line downtime during ink bulk system replacement
- Automatic Ink Supply System (AIS)
- Smart Ink Supply with AIS
- Equipped with an Ink Bulk System



**HX
Cartro**



**One Device
Endless Materials**

We Address Production Challenges with HX Cartro



Production Manager

Challenge ◀

- ▶ High maintenance and periodic service costs
- ▶ Lack of awareness of potential device issues
- ▶ Unexpected production line downtime due to technical issues
- ▶ Product waste caused by printing errors on cartons
- ▶ Lack of printing statistics
- ▶ Quick print design changes for different orders (SKUs) for export packaging
- ▶ High ink consumption in high-volume, high-speed carton printing
- ▶ Need to synchronize the printer with case sealers or strapping machines
- ▶ Controlling printer performance in dusty environments or environments with carton fibers
- ▶ Managing printing across multiple production sites

Solution ◀

- ▶ Industrial design with durable components and easy operator training to reduce the need for servicing
- ▶ Health Check system for fast and accurate fault detection
- ▶ Automatic diagnostics with alerts before complete shutdown
- ▶ Accurate printing with software control and reduced printing errors
- ▶ Real-time reporting (Hourly/Daily Report) of print counts
- ▶ Ability to save and quickly select different messages through a powerful software interface
- ▶ Ink consumption optimization system based on surface type
- ▶ Software and hardware integration with production line equipment
- ▶ Dust- and moisture-resistant design for reliable printing
- ▶ Remote control and monitoring of printers via HX Console software

Quality Control Manager

Challenge ◀

- ▶ Unreadable barcodes or text and printing errors
- ▶ Ink spreading on cartons
- ▶ Contamination of the printed surface due to contact between the printer and the carton
- ▶ Decline in print quality in high-temperature or humid environments
- ▶ Need for an operator to apply the QC stamp on cartons
- ▶ Print quality control at high volumes
- ▶ Controlling ink durability in humid warehouses or cold storage

Solution ◀

- ▶ High-resolution printing with controlled accuracy
- ▶ Precise control of ink jetting and optimal printhead distance
- ▶ Non-contact printing on the product
- ▶ Moisture- and dust-resistant design
- ▶ Converting the QC stamp into a digital barcode
- ▶ Print Fault Mode system for detecting and preventing printing errors
- ▶ Use of durable and traceable ink

Warehouse, Logistics & Procurement

Challenge ◀

- ▶ High cost of purchasing spare parts
- ▶ Need for large storage space for waste cartons
- ▶ Risk of ignition of hazardous solvents such as MEK
- ▶ Integration of printing with WMS and ERP systems for automatic package tracking
- ▶ Need to print variable warehouse information (pallet, bill of lading, batch number) on cartons
- ▶ Track the Batch Number across multiple surfaces (carton, shrink film, pallet)

Solution ◀

- ▶ Simple design with durable components and available after-sales services
- ▶ Reduced waste through accurate and error-free printing
- ▶ No use of flammable and carcinogenic solvents
- ▶ Direct connection of the printer to warehouse management systems for automatic data recording
- ▶ Real-time information printing through management software
- ▶ Multi-surface printing for complete product traceability

Production Line Operator & Supervisor

Challenge ◀

- ▶ Frequent stops to refill or replace the cartridge
- ▶ Low efficiency on production lines with variable speeds
- ▶ Difficulty using the printing software
- ▶ Increased human error when designing or changing messages
- ▶ Equal access to device settings for all users
- ▶ Human error in label application
- ▶ Need to print at multiple positions or on both sides of the carton
- ▶ Managing print data on a large scale

Solution ◀

- ▶ Cartridge-free system with continuous ink supply
- ▶ Automatic print speed adjustment based on line speed
- ▶ Simple, easy-to-learn user interface for operators
- ▶ Use of ready-made and saved templates for messages
- ▶ Defining user access levels (User Access Level)
- ▶ Direct printing on cartons, eliminating the need for labels
- ▶ Ability to print at multiple positions with a single setup
- ▶ HX Console software for managing thousands of prints per hour

CEO & Factory Manager

Challenge ◀

- ▶ High total cost of ownership and maintenance of the devices (TCO)
- ▶ Reduced productivity due to unexpected downtime
- ▶ Lack of data integration between the printer and management systems
- ▶ High initial cost of purchasing the device
- ▶ Need to control the performance of multiple printers from a central location
- ▶ Need for complete print traceability to prevent counterfeiting or errors

Solution ◀

- ▶ Cost reduction through a low-wear, low-consumption design for long-term use
- ▶ Increased production line reliability with preventive Health Check alerts
- ▶ Direct connection to ERP and PLC for automatic data transfer
- ▶ Need to control the performance of multiple printers from a central location
- ▶ HX Console software for centralized monitoring
- ▶ Custom barcode printing and digital recording of all printing operations

HX Cartro Applications

Primary Packaging

- ▶ Yogurt, Dough, Milk, Juice; Pouches, Chocolate and Food Products; Food Packaging Films
- ▶ Pharmaceutical Tubes, Medicine Bottles, Medicine Containers, Soap and Shampoo Packaging
- ▶ PET Bottles and Glass Bottles for Soft Drinks, Water, Bleach, etc.
- ▶ Small Paint Cans, Adhesive Packaging, Single-Use Industrial Detergent Packaging
- ▶ Metal and Electronic Components
- ▶ Direct Printing on PVC, PE, or Propylene Pipes
- ▶ Ductile Iron and Galvanized Steel
- ▶ Direct Printing on Film, Laminate, and Shrink Film
- ▶ Direct Printing on Packages or Barcoded Cartons
- ▶ Direct Printing of Information on Bottles, Films, or Primary Packaging
- ▶ Electronics Packaging, Herbal Medicine Packaging, Cigarette or Tobacco Wrappers

Secondary Packaging

- ▶ Multi-Pack Carton Boxes for Consumer Products
- ▶ Multi-Pack Box Packaging for Pharmaceutical and Hygiene Products
- ▶ Cardboard Boxes for Multiple Beverage Bottles
- ▶ Small Packaging Boxes for Multiple Industrial Units
- ▶ Bundled or Multi-Layer Packaging for Storage or Shipping
- ▶ Printed Boxes for Various Products
- ▶ Coded Boxes for Product Traceability
- ▶ Direct Printing on Boxes or Shrink Film Instead of Labels
- ▶ Carton Boxes for Small Packages

Tertiary Packaging

- ▶ Master Cartons, Shrink-Wrapped Multi-Box Packs
- ▶ Master Cartons and Palletized Hygiene Products
- ▶ Shrink-Wrapped or Palletized Multiple Cartons of Bottles
- ▶ Palletized Packaging or Master Cartons for Transportation
- ▶ Pallets and Bulk Packaging of Pipes for Transportation
- ▶ Large Packages for Printing and Shipping
- ▶ Pallets and Multi-Pack Packages with Direct Information Printing
- ▶ Printing on Master Cartons or Pallets Without the Need for Labels
- ▶ Large Packages in Transportation and Warehousing

Industry

- ▶ Food and Consumer Goods Packaging
- ▶ Pharmaceutical, Cosmetics and Personal Care
- ▶ Beverages and PET & Glass Bottles
- ▶ Rigid and Industrial Packaging
- ▶ Pipe Manufacturing Industries (Water, Wastewater and Industrial)
- ▶ Printing and Packaging Companies
- ▶ Logistics and Warehousing Companies
- ▶ Companies Seeking to Eliminate Labels
- ▶ Other Industries with Specialized Primary Packaging



HX Cartro

The Choice Is Yours! Subar Software or Integration with Your Internal Systems You Have Two Options for Viewing, Managing, and Editing Print Data:

1. Using Subar's Proprietary Software

Using the web-based HX Manager and HX Console platforms, without the need to install an application, you can control devices in real time through a web browser, view reports, and make the necessary adjustments to processes when required. These software platforms are also equipped with intelligent BI (Business Intelligence) and BA (Business Analytics) tools; meaning you can both see what has happened and make and implement decisions for future optimization.

2. Accessing the API and Connecting to Your Internal Software

If you prefer the data to be transferred directly into your own management or production systems (CRM, ERP, or production software), you can use Subar's proprietary API. This feature allows you to view and analyze inkjet printer reports and data alongside your other business information—all in one window, without the need to switch between systems.

Introducing HX Manager

HX Manager is a platform for controlling and monitoring your printer's printing process. This platform operates specifically for a single inkjet printer and provides you with all the tools needed to control and monitor the device. It can be accessed through any smart device, such as a mobile phone, tablet, or computer, connected to the same network.

HX Manager consists of five main sections:

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



HX Manager Features:

Message Design Modes	1. Simple Message 2. Advanced Message Editor 3. Auto Pilot Editor
Message Design	Design and editing of fixed and variable messages including date, time, batch number, shift, barcode, QR code, logo, text, external data, counters, authenticity barcode, etc.
Message Management	Ability to design, monitor, and control messages through a web browser
Remote Upgrade	Without the need for an on-site specialist
Ink Consumption Management	Economy Mode to reduce ink consumption by up to 50%
Reporting	Hourly and daily production monitoring
Health Check	Real-time printer status monitoring to prevent production line downtime
Send to Many	Designing a message on one device and sending it to other devices for printing
Auto Notify	Receiving notifications related to print completion, received online data, and ink level
Roller Date	Ability to set the date based on work shifts and global time
CustomDate	Ability to change the date format (right-to-left, left-to-right, and other formats)
Auto Print	Automatic message printing based on the barcode read by the Barcode Reader, without the need for manual settings
Print Job	Ability to configure messages based on production quantity. (For example, setting the message so that 8 products in a box have a price and 4 products have no price.) Ability to change part of the message for each product and select print termination after all messages are completed
BCD Interface	PLC-categorized messages and printing on the product based on messages sent by the PLC
Field Upgrade	Use of the latest software updates without the need for a specialist or complex update procedures
Font Recovery	Fonts are stored in two locations, allowing the use of a backup font in case of potential issues
Supported Languages	English, Persian, German, French, Japanese, Portuguese, Spanish, Thai, Turkish, Hindi, Arabic, Chinese (other languages upon customer request)
Static IP Address	Yes
External Database Connection	Yes

Introducing HX Console

HX Console is a platform designed for CEOs and senior managers, enabling them to monitor, control, analyze, and manage a network of inkjet printers simultaneously and centrally. The software enables two-way data communication, receiving information from printers and sending data to them. It also provides features such as designing and sending common messages to a group of devices, sending customized messages, and sending XML requests to receive responses from the devices.

Business Intelligence Business Analytics

- ▶ Providing print reports by hour and day
- ▶ Monitoring print counts, the number of devices, and their performance
- ▶ Monitoring messages and modifying them when necessary
- ▶ Monitoring remaining print counts, device health status, and device issues

Remote Printer Control and Connectivity

- ▶ Managing and controlling printers via Wi-Fi connection
- ▶ No need for physical presence beside the device
- ▶ Connection to network, ERP, production software, or CRM
- ▶ API Connectivity

Multiple Printer Support

- ▶ Ability to simultaneously manage and control multiple printers from a central panel

Supported Languages

- ▶ English



Even if you have purchased multiple inkjet printers from Subar, you can connect them together and manage the printing process without the need for installation, complex training, or major changes. The platform used across our devices is the same, and this can help you with the following:

- ▶ Control of All Inkjet Printers
- ▶ Human Resource Management (Reassigning Personnel Across Production Lines and Training New Staff)
- ▶ Saving Time and Costs



Device Specifications

► Controller

Specification	Description
Display	Optional 7- or 10-inch HMI with anti-theft lock
Message Editing	1. Simple Message Editor 2. Advanced Message Editor
Message Capacity	Unlimited (with HMI or Windows PC software)
Print Start and Stop	Immediate
Password Protection	Yes
Alarm	Built-in warning light, OLED display with 128×64-pixel resolution, buzzer
Compressed Air Required	Not Required
Number of Printheads	18 mm – 1 Head / 36 mm – 2 Heads
System Languages	English, Persian, German, French, Japanese, Portuguese, Spanish, Thai, Turkish, Hindi, Arabic, Chinese (Other Languages upon Customer Request)
Product Certification	CE

► Printing Capabilities

Specification	Description
Print Resolution	180 dpi
Maximum Print Speed	40 meters per minute
Logo Printing	Yes
Barcode Printing	All types of barcodes, including QR Code
Number of Print Lines	Up to 9 lines (for 18 mm printhead) / Up to 18 lines (for 36 mm printhead)
Fonts	All Windows Fonts
Print Height	Up to 18 mm (0.7 inch) / Up to 36 mm (1.4 inch)
Date Format	Various Date Formats
Counters	Print Counter, Message Counter, User Counter

► Connectivity and Ink System

Specification	Description
Connectivity	Easy connection via RS232, Wi-Fi, isolated interface, and USB cable
Power Supply	110 to 230 V AC
Encoder	Optional
Two- or Three-Color Warning Light	Optional
Print Sensor	Two Built-in Sensors (Left and Right) / Optional External Sensor
Mounting Stand	Stainless Steel T-Bracket or Tripod
Ink Type	Standard Ink Cassette
Ink Color	Black, Blue, Red (Oil-Based)
Ink Cassette Dimensions	163 × 103.5 × 39 mm
Ink Throw Distance	Up to 8 mm
Ink Detection	Automatic

► Advanced Features

Feature	Description
Automatic Notifications	Automatic alerts for events such as low ink level, print completion, or receipt of online data through selected channels such as RS232, Wi-Fi, HTTP, or USB for quick response to situations
AUTO PILOT	Allows an external device to control and monitor the printer. Any third-party device (such as a PLC or other system) can send commands to the printer.
Daily Production Report	Daily print report from the printer to display the overall production status
Economy Mode	Reduces ink consumption by up to 50% while maintaining print quality
External Data	Easy integration with external devices such as PLCs or scales for variable data printing
Ink Estimation Calculator	Provides an estimate of the number of prints based on the message and other parameters
Printer Health Check	Identifies warnings to prevent failures or unexpected downtime
Print Scheduling	Easy setting of time and date according to company requirements
Interlock Signal Connection	Easy connection of the printer to the main system for sending immediate signals such as Error, Busy (Printing), or Ready

► Inks

Ink Name	Ink Type	رنگ / حجم	Suitable Surface	Application
Sovereign	Oil-Based	Black, Red, Blue / 160 ml	Porous Surfaces	Paper, Cardboard, Wood, Carton
Rapid Plus	Solvent-Based	Black / M140	Porous Surfaces Non-Porous or Coated Surfaces	Kraft Carton, Shrink Film, Laminated Carton, Plastic Containers, Bottles, Iron, PVC, PE, Polypropylene, Ductile Iron, and Galvanized Steel

HX Cartro

Engineered
to Print on Everything.





For more information and product inquiries,
you can contact us through the following channels.

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