

ades

automatic data entry and
identification systems

DATAMAX[®]

A DOVER COMPANY



CLASSTM

X-Series

Product Overview

The Datamax H-Class thermal printer takes printing into the next era of high performance and reliability. Combined with true RFID integration, the new Datamax H-class features leading edge technology to provide the most flexible and capable label print system in the industry.

Top 10 Reasons to the H-Class....

1 Superior Performance

- Fastest time to first label-out and up to twice as fast in total throughput
- Great print quality
- Powered full-roll rewind for batch printing

2 Rugged and Reliable

- Heavy duty design to support 24x7 mission-critical applications
- Solid cast metal chassis with a durable steel cabinet

3 Integrated RFID Design

- Designed for RFID from the start
- Strategically placed antenna provides optimum performance and accuracy with flexibility to support future standards
- Quick and easy calibration of tags for precise print positioning and encoding
- RFID-Ready version with pre-installed antenna for future RFID upgrade

4 Easy to support Competitive Printer Replacement

- Popular printer command language emulation
- Other competitive printer languages to be announced
- Automatically supports both coated side in and coated side out ribbon to support use of existing ribbons

5 Large Programmable LCD Display

- Easy to read status alerts and menu selections with the large graphics display
- Personalize the large display with marketing messages and/or logo's



6 IntelliSEAQ® Print head

- Enhanced technology to improve print quality and provide longer print life
- High-tech heat control with statistics history in flash memory and analysis software application for service analytics
- Less frequent replacement results in reduced down time
- Lower cost of printing due to longer printhead life

7 Best Warranty

- Two year, unlimited-inch warranty
- Great value for the end-user through lower cost of support

8 Lowest Total Cost of Ownership

- All gear driven - no belts to wear out, decreasing down time
- Easy to sell additional options that can quickly and easily be installed in the field

9 Expanded Communications

- Equipped with the broadest selection of communication ports
- Ethernet, parallel, serial and USB all standard on the main electronics

10 Fast and Easy Media Loading

- Minimize down time and user training with open paper path and visible media routing arrows
- Red LED top of form orientation light beam for easy media alignment

External Features



1 Industrial Metal Cabinet

- Rugged corrosion resistant steel enclosure
- Easy to clean surface
- Anti-corrosive, for harsh environments

2 240 x 320 Graphics LCD

- Detailed on-screen messages
- Easier to read
- Non-Latin fonts display
- Customizable with reseller information and end-user logos
- Enhanced Graphics

3 Operator Control Panel

- Sealed for protection from harsh environments
- Simplified User and advanced menu selection
- Navigational and multi-function "soft" keys

4 SDIO & USB Host Ports

- **SDIO Card Slot**
Easily add or transport graphics, fonts, and label formats to your printer.
- **USB Slots**
Two USB slots allows for any USB attachments such as keyboards or memory thumbdrives.

5 Large Side Window

- Continuously monitor media & ribbon supply
- View internal rewind capacity
- Minimize down-time with anticipated media replacement

Connectivity Features



1 Parallel Port

- 36 Pin Centronics Connector
- IEEE 1284 Bi-directional support

2 Ethernet Port

- 10/100 BaseT Ethernet Connection
- DHCP Support
- Internal Web Pages for printer control
- SNMP Network Support

3 USB Port (Rear Panel)

- USB 1.1 and 2.0 compatible
- Plug N' Play Ready

4 Serial Port

- 9-Pin Serial Connector
- Configurable for RS-232, 422, and 485
- Supports Baud Speeds up to 115Kbps

5 Power Connection

- Auto-ranging Power Supply, supports voltage ranges from 90 to 132 and 180 to 264 VAC @ 47 - 63 Hz.

6 USB Port (Front Panel)

- 2 USB Ports
- Supports keyboards, scales, flash based thumbdrives, and other peripheral devices



Connectivity Options



1 GPIO/Applicator Card

The General Purpose Input Output (GPIO) is a user's interface to control the start of print (INPUT) and monitor the status (OUTPUT) of a label in the printer. GPIO is used mostly for applicators to control when to print a label and to know the status of when a label has completed printing to signal the applicator to pick it up.

- The GPIO Card consists of 10 inputs, 13 outputs, and 2 serial ports.
- Inputs and Outputs can be used to control and drive external devices such as:
 - Fault/Warning Lights
 - Light Trees
 - Conveyer systems
 - Applicator Gates
 - Box Dividers
 - Photocell and Position Sensors
- The GPIO Card in conjunction with MCL can replace expensive Programmable Logic Controllers (PLC) in a wide range of industrial applications.

2 DMXrfNet^{II} 802.11b Wireless Card

A high-performance 802.11b, WiFi compatible, network interface card that enables the printer to communicate in a wireless network environment. Some of the features are listed below:

- 802.11b wireless LAN (Wi-Fi) standards-based technology
- Highly integrated module includes radio and dedicated processor
- Built-in TCP/IP and UDP features provide flexible LAN connectivity options
- Built-in Web server enables drop-in LAN and Internet connectivity
- Built in WEP, WPA/PSK, and LEAP security protocols
- Runs on Cisco Access Points
- Fully integrated with printer's menu system
- On-screen graphical diagnostics displays signal strength and status

Hardware/Software Options

1 Thermal Transfer DPO78-2613-01



A printing method that uses ribbon to produce exceptional image clarity, as compared to most direct thermal media types. The 4 section split-hub design allows for lower torque on narrow ribbons. This option can be used with either 'coated side in' ribbons or 'coated side out' ribbons.

2 Standard Peel & Present DPO78-2655-01



A simple "plate" style design that automatically separates most printed labels from the backing material and allows subsequent printing to occur only after the removal of a previously printed label. Minimum label length is 1.5 inches (38 mm).

3 Heavy Duty Peel & Present DPO78-2617-01



An internally "overdriven" design for heavy duty requirements using aggressive adhesive or polyester type media. Minimum label length is 1.5 inches (38 mm).

4 Cutter DPO78-2618-01



Plug and Play. Attach the option and it is auto detected during power up. The cutter is a rotary type mechanism capable of cutting media from .0025" to .0100" (.0635mm - .254mm) thick, and the cutter life is designed to exceed 500,000 cuts.

5 Self-Powered Internal Rewind DPO78-2667-01



A heavy-duty 8" label rewind option using a dedicated DC motor to tightly rewind a full 8" roll of labels and backing onto a 3" diameter core.

6 Present Sensor DPO78-2619-01



An output control device that allows subsequent printing to occur only after the removal of a previously printed label.

7 Linear Scanner DPO78-2629-01



This new design provides 100% check on every barcode label. If unreadable it will automatically void the labels containing failed bar codes. Supports picket style bar codes.

8 MCL



A MCL-enabled Datamax printer becomes an intelligent printer with the ability to accept input from devices such as scanners, scales, keyboards, or other peripherals. The printer-resident MCL application can then process received data and performs any number of resulting functions.

9 RFID-Ready Printer



Factory installed antenna and wiring, for use with future RFID module purchase.

10 RFID-Ready Upgrade Kit DPO-78-2667-01



UHF RFID Upgrade Kit for use with RFID Ready printers. The kit contains a multi-protocol; EPCglobal and Gen2 compatible, w/power RFID module.

11 RFID-Built



The RFID option demonstrates the flexibility and protection against obsolescence provided by the modular design of Datamax H-Class printers. Based on "from the ground up" design, the RFID antenna is located inside the paper path to give a more precise read.

12 ILPC Fonts



An expandable international language font to support broader printing needs.

- > CG-Times (western European) Scalable font
- > Kanji Gothic B Scalable font
- > Simplified Chinese GB Scalable font
- > Korean Hangul font

13 DMXWare XML



XML parsing to accommodate ERP and RFID label requirements from companies including SAP and Oracle.



H-4212X and H-4310X

Standard Features

- Thermal transfer and direct thermal printing of bar codes, text, and graphics on demand and batch printing
- Thin film printhead with IntelliSEAQ™ (Sequential Energy Adjustment for Quality)
- Die-cast aluminum frame
- Datamax Programming Language (DPL)
- 32bit multitasking 200Mhz DragonBall® Processor
- 16 MB RAM memory
- 8 MB Flash downloadable program memory (firmware)
- Serial RS-232 port, Parallel, USB, Ethernet Interfaces
- IEEE 1284 compliant bi-directional parallel port
- Gap, notch and reflective top of form media sensing
- 5 button 240 x 320 LCD Graphical back-lit LCD display
- Configuration settings via front LCD panel menu,
- No dipswitches.
- Menus in English, French, Italian, German and Spanish
- Configuration label makes set-up easy to understand
- Simple ribbon and media loading
- Rotating media hub for 3.0" supply rolls
- Clear window in media cover -- easy to view supplies.
- Media tear bar
- Fan-fold media handling from bottom or rear of printer
- AGFA font engine with CG Triumvirate™ Scalable font
- Datamax printer driver for Windows 98 and above desktop operating systems
- 2 USB front panel connectors
- SDIO support up to 2GB
- Ethernet Connectivity

Printing Specifications

- 203 dpi print resolution (8 dots/mm); *H-4212X*
300 dpi print resolution (12 dots/mm); *H4310X*
- Nominal Printhead Dot Size:
.0043" (.11mm) W x .0052" (.13mm) L; *H-4212X*
.0027" (.07mm) W x .0043" (.11mm) L; *H-4310X*
- Print Speeds:
Programmable from 2" (51mm)/sec through 12" (305mm)/sec in ½" (12mm) increments; *H-4212X*
Programmable from 2" (51mm)/sec through 10" (254mm)/sec in ½" (12mm) increments; *H-4310X*
- Print length range: .25" to 99.99" programmable

Media Specifications

- Maximum print width: 4.10" (104mm)
- Maximum label length: 99.99" (2.54m)
- Maximum media width (label plus liner): 4.65" (118mm)
- Media Width Range: 1" (25mm) to 4.65" (118mm)
- Media Core ID Range: 1.5" (38mm) - 3.0" (76.2mm)
- Minimum label length:
 - Tear off mode: .25" (6.35mm)
 - Peel mode: 1.00 (25mm)
 - Rewind mode: .25" (6.35mm)
 - Cutter mode: 1.00 (25mm)
- Media thickness (label & liner): .0025" to .010" (.06mm to .25mm)
- Maximum full-width media thickness for cutter: .010" (.25mm)
- Maximum media roll size: 8.0" (203mm)
- Fan fold media: loads through rear or bottom of printer
- Gap and notch sensing standards:
 - Gap between labels: 2mm minimum
 - Sensing notch: .20" (5.1mm) W x .12" (3mm) L
 - Sensing hole: 0.08" (2.0mm) diameter
 - Black Mark on back of label: minimum length of 2mm (0.08") long and 12mm (.047") wide.

Ribbon Specifications

- Ribbon width range: 1" (25m) to 4.5" (114mm)
- Standard ribbon lengths: 300m (984'), 450m (1476') and 600m (1969')
- Standard ribbon wound coated side in and ribbons wound coated side out.

Communications Specifications

- One EIA RS-232/DB-25 serial connector. 2400, 4800, 9600, 19.2K and 38.4K baud supported.
- One IEEE 1284 Compliant Parallel interface port
- One internal connector for use with an external media cutter and present sensor
- SNMP Internal Ethernet Adapter supporting 10/100 mbps transfer rate with 10-Base-T connector
- USB interface

Internal Font Sets

- Nine Bit-Mapped Fonts, rotatable 0, 90 180, 270 degrees
- CG-Triumvirate™ Scalable Font
- CG Triumvirate™ Condensed Bold Scalable Font

Specifications are provided for reference and are based on printer tests using Datamax brand ribbons and labels. Results may vary in actual application settings or when using other than recommended supplies. Specifications to change without notice.

Bar Code Symbologies & Specifications

- Bar Code Modulus: 5 mil to 110 mil "X" dimension in picket-fence or ladder orientations
- All printed barcodes meet the requirements of ANSI Document X3A1-3, Guideline for Barcode Print Quality, Grade A
- Supported Barcode Symbologies include Code 39 (used to produce industry standards such as AIAG, HIBC, LOGMARS), Interleaved 2 of 5, Code 128 (Subsets A,B,C), Codabar, LOGMARS, UPC-A, UPC-E, UPC2&5 digit addendums, EAN-8, EAN-13, EAN 2&5 digit addendums, UPC random weight, Code 93, Plessey, Universal Shipping Container Symbology, Code 128 MOD 43, Postnet, USS/EAN-128 random weight, Telepen, UPS MaxiCode (Mode 2 & 3), QR Code, PDF417, Datamatrix, EAN 128 support (with function character support, ITF support)

Electrical Specifications

- 90-132 or 180-264 VAC @ 47-63 Hz, auto ranging.
- Power consumption: typical operating: 90 Watts / Standby: 10 watts

Physical Specifications

- Height: 16.48" (418.6mm)
- Width: 12.64" (321.0mm)
- Depth: 19.25" (488.9mm)
- Max Weight: 46.6 lbs (20.5kg)

Environmental Specifications

- Operating Temperature: 32° - 100° F (0° to 38° C)
- Storage Temperature: 0° to 140°F (-17° to 60° C)
- Humidity: 10% - 95% non-condensing
- Dust: Non-conducting, non-corrosive
- Electromagnetic Radiation: Moderate RF fields can be tolerated.
- WEEE Compliant - EU Directive 2002/96/EC
- ROHS Compliant - EU Directive 2002/95/EC

Agency Listings

- UL 60950-1:2003, First Edition, CSA.C22.2 No. 60950-1-03, First Edition, EN60950-1:2001, GOST-R
- Complies with FCC CFR 47 Part 15 Class A
- CE Mark: EN55022 Class B, EN50024
- Meets Energy Star guidelines for energy efficiency

RFID Specifications

- EPCGlobal Spec
- UHF and HF supported
 - GEN2 compliant
 - ISO15693

