

DNP



CARD PRINTERS

For protect & ensure your identification



**HIGHEST
QUALITY:
600 DPI**



DNP CX-D80 SERIES

- **CX-D80HS** (600 dpi, double sided printer)
- **CX-D80DS** (300 dpi, double sided printer)
- **CX-D80SRS** (300 dpi, single sided printer)

As the latest in the CX Series, the printer delivers the maximum impact and ease-of-use with glossy photo, real edge-to-edge printing, remains free of head-damage and offers real versatility all with an extreme smaller body design. DNP CX-D80HS/CX-D80DS/CX-D80SRS have a thermal retransfer printing engine of which quality and reliability are acclaimed by users worldwide.

Usage

DNP CX series have been supplied for:

- National ID cards
- Driving licenses
- Ministry officer ID cards

CX-D80HS

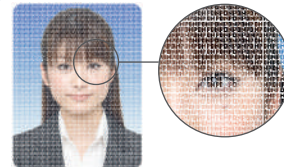
600 dpi high resolution

300 DPI

600 DPI

Colors, logos and fine characters, which are difficult to print by conventional card printers, can be printed clearly

Micro text capacity



The high resolution of 600 dpi allows printing crisp, tiny characters.



Security Features

IP Sec

IP Sec prevents stealing information of printed data via network connection.

Security Erase



It makes the personal info hard to read and makes disposal of used ribbon easily. Besides YMCK, Security Erase is now available at YMCKK and YMCKUv ink ribbon.

Dye-Sub UV ink



UV ink makes complete invisible print by flat print portion compared to resin UV. It enhances protection of forged cards.

Security Lock



Self type lock for card hopper and front door set via Status Monitor is equipped. And what's more, Kensington lock is equipped to guard your printer.

Specifications

Dimension

343 x 322 x 335 mm (w x d x h)

Weight

- 13.0 kg (Single side without optional unit)
- 15.5 kg (Dual side with all optional units installed)

Power supply

- Maximum 3.5A (100 to 120V)
- Maximum 1.6A (220 to 240V)

Operating conditions

Temperature 15° to 30°;

Humidity 35% to 70% non condensing

Printing method

Dye sublimation / resin thermal retransfer

Resolution

- 600dpi - CX-D80HS
- 300dpi - CX-D80SRS (Single sided printing)
- 300dpi - CX-D80DS (Double sided printing)

Printable area

Full bleed (Real edge-to-edge)

Print speed

About 30 sec: YMCK with transfer

Interface

- USB (Ver2.0) Full-Speed (12Mbps) / Hi-Speed (480Mbps)
- 10BASE-T/100BASE-TX ethernet

Card

Size: CR-80 ISO 7810 (54.0 mm x 85.6 mm)

Type: PVC, Composite PVC, PET-G,

Polycarbonate (Note: firmware installation is required)

Input & output capacity

100 cards each (0.76 mm)

Supported platform

Windows 2000 Professional (SP4), XP (SP3), Vista (SP2), Windows 7 (SP1), Windows 8/8.1, Windows 10, Windows Server 2003 (R2 SP2), Server 2008, Server 2012

Ink ribbon

- YMCK (1,000 images), YMCKK (750 images)
- YMCKUV (750 images), YMCKPO (750 images)

Traceable functions

In the new models of printers and ribbons traceable functions are added to improve maintenance quality. Following these changes, it may not work properly if the distribution route of the printers and the ribbons are different.

Options

- Magnetic stripe encoding (HiCo/LoCo)
- Contact chip encoding (case & reader/writer)
- Contactless encoding
- Bend remedy unit
- Lamination unit (CL-600S/D)

Safety regulations

FCC, CE, UL, VCCI-B, FCC Class B, EN Class B, RoHS, CCC

Warranty

600 dpi version: 1 year on the printer and 1 year on the print head or 120,000 passes (30,000 cards printed with 4-panel ribbon)

300 dpi version: 2 years on the printer and 2 years on the print head or 120,000 passes (30,000 cards printed with 4-panel ribbon)

DNP CL-600 LAMINATOR

- **CL-600S** (single sided laminator)
- **CL-600D** (double sided laminator)

The CL-600 Laminator provides you definite durability and security on a card printed by a DNP CX-D80 series. This is essential for any ID card everywhere, such as governmental applications, corporate & student IDs and even for various membership cards.

Easy to connect



Adopting infrared communication with the CX-D80, no cable is needed. Through the CX-D80 Status Monitor, all the settings are consolidated.

Picture: the CL-600 Laminator on the left, combined with the CX-D80 card printer on the right.



DNP Lamination Film Line up

DNP's unique holographic products:

LED Hologram Patch



Covert image appears by exposing to LED point light. Easy authentication by LED on mobile phones.

Lippmann Hologram Patch



A very clear 3D effect can be observed when it is tilted vertically and horizontally.

Clear patch film and Generic holographic overlay



The clear patch film and overlay film are available for this model. We can also provide your own custom hologram Patch and Overlay film for higher security laminate.

Specifications

Dimension

210 x 333 x 360 mm (w x d x h)

Weight

- CL-600S - single side, less than 6.5 kg
- CL-600D - dual side, less than 8.0 kg

Operating conditions

Temperature 15° to 30°;

Humidity 35% to 70% non condensing

Power supply

- Maximum 3A (100 to 120V)
- Maximum 1.5A (220 to 240V)

Laminating method

Thermal roller transfer

Laminating side

Single sided (CL-600S), double sided (CL-600D)

Laminating speed

16 - 36 sec per card: single and double sided

Connection

Infrared communication with CX-D80

Heat roller temperature

90 °C to 180 °C (adjustable on 5 °C basis)

Speed configuration

3 mm/sec - 12 mm/sec (adjustable on 0.5 mm/sec basis)

Laminating media

1.0/0.6 mil patch, 1.0/0.6 mil smart card patch, overlay foil (clear or holographic selectable for all the media)

Media line up

- DNP Generic Hologram Overlay 1,000 images/roll
- Clear 1.0 or 0.6 mil patch 600 images/roll
- Clear 1.0 or 0.6 mil patch with IC chip cut 600 images/roll
- Customized hologram patch
- LED hologram patch
- Lippmann hologram patch

Other features

- To guard your laminator and media, security lock (front door) and slot (back side) are equipped
- Patch-positioning adjustment is available

Safety regulations

FCC, CE, UL, VCCI-B, FCC Class B, EN Class B, RoHS, CCC

Warranty

12 months

PRODUCTS FOR HIGHER SECURITY

DNP is supplying products that enhance your cards' security level to meet increasing demands for high secured ID card issuance.

1. COUNTER FALSIFICATION BY CUSTOM HOLOGRAM

DNP's advantage as hologram manufacturer.

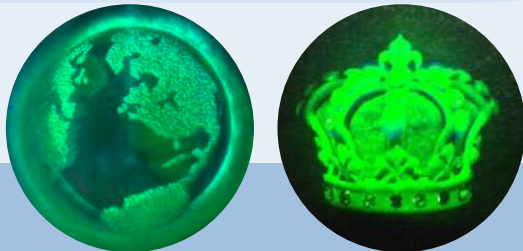
Advantage 1: DNP's achievement

DNP is a pioneer that has developed holograms for more than 40 years.

- DNP's hologram is widely adopted in wide range of anticounterfeiting efforts for ID cards, credit cards, certificates, security packages, etc.
- DNP provides two types of hologram as below.

Lippmann Hologram(Volume hologram)

- Green color
- Vertical & horizontal 3D effect
- Extremely a few suppliers in the world
- In-house materials & equipment
- World's first transferable Lippmann hologram
- Level 1 through Level 4 security features can be included



Embossed Hologram

- Rainbow color
- Representing 3D shape by using 3D computer graphics and E-beam lithography
- In-house materials & equipment
- Large production at low cost
- Level 1 through Level 4 security features can be included



Advantage 2: Wide range of security features

Available security features

Level 1

- Guilloche(Fine Line Pattern)
- Morphing Pattern
- Micro-text

Level 2

- Flipping Images
- Nano-text
- Contrast reversal by rotating (90°)

Level 3

- Laser reconstruction (1image)
- Hidden LED Pattern
- Laser reconstruction (2image)
- Contrast reversal by rotating (180°)

Level 4

- Full Color 3D-CG Object
- 3D-CG Object
- 3D-Micro-text (CG)
- Hidden Micro-text (CG)



Advantage 3: Highly secured control and all process within DNP Group
DNP can complete all required processes for manufacturing hologram unlike other manufacturer.

**Design &
Data creation**

**Origination:
Master plate
making**

**Special
Material
production**

**Mass production
:Hologram Duplication
and Post-process
(Adhesive coating,
Slitting, Metallizing,
Roll winding, inspection etc.)**

Security Holograms

High design hologram can work as effective remedy for falsification. As hologram manufacturer, DNP can supply custom hologram film products with your original design. Your original design can protect printed cards strongly from forgery.

Case 1 : Custom emboss hologram lamination

3D image with security features can make it difficult to copy. DNP can apply advanced features e.g. LED readable text, nano text and others to hologram.



Case 2 : Lippmann hologram lamination film :DNP's exclusive

Lippmann hologram
Outstanding 3D can give anti-counterfeiting method function to the cards in addition to higher creativity.



Case 3: (Under development) Holographic Re-transfer INTM

It is an INTM with holographic image. If it is used, holographic image is transferred to cards during printing process. It enables holographic cards easier.



2. PRINTING ABILITY ON POLYCARBONATE CARDS



Difficulty to print on polycarbonate.

PC has nature of low fixity for ink. Many card printers on the market can't print on PC with regular ink-ribbon. Dedicated ink-ribbon with heat seal panels is required for these printers. It makes printing cost higher and makes efficiency lower.

CX-D80 printers solved the problem to print on polycarbonate.

DNP developed new firmware to print PC to meet growing demands for PC ID cards. It enables our printer to print on PC with existing ink-ribbon. This is cost-effective.

Print durability was verified

by testing with criteria of ISO/IEC 7810, ISO/IEC 10373-1 and sever criteria that national project may require.

MEDIA

Ink ribbon & retransfer film for CX-D80 Series

DNP, known as the world famous dye sublimation ink ribbon manufacturer, has developed the ink ribbon for the DNP CX Series card printer. An unique and lateral card-conveyor system makes the ink ribbon's capacity largest in its class. In addition, RFID tag installed in the ribbon enables you to check the status such as ribbon type and remaining amount on Status Monitor at sight.

YMCK (1,000 images/set)

Regular-type ink ribbon. To be supplied with retransfer film anytime as a set.

YMCKK (750 images/roll)

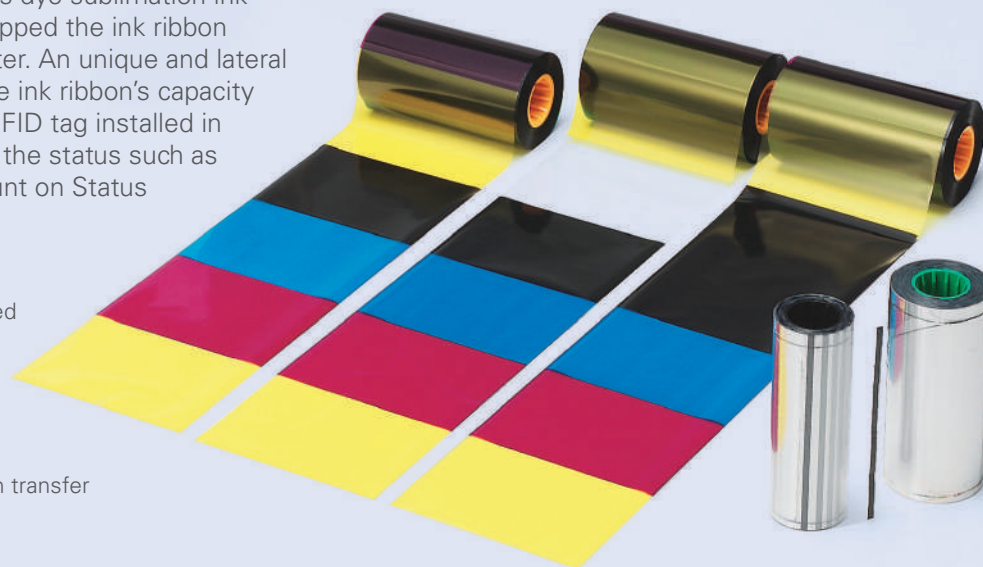
Front: YMCK + Back: K.

YMCKPo (750 images/roll)

Peel off panel to be used to avoid film transfer on and around magnetic stripe area.

YMCKUv (750 images/roll)

Dye diffusion invisible UV printing for security purpose. MAC address is printed.



Retransfer film (1.000 images/roll)

Pet film to be used with any ink ribbon.

Patch & overlay for the CL-600S/D

1.0/0.6 mil Clear Patch (600 images/roll)

To protect image from abrasion, UV, etc.

1.0/0.6 mil Smart card Clear Patch (600 images/roll)

To protect image (for IC chip card).

DNP Generic Hologram Overlay (1.000 images/roll)

Heat transfer to decorate with the hologram.

Customized hologram Patch/Overlay

Custom fabricated film for higher security laminate.



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