

Smart Printers, Affordable Solutions, No Problems.



Plastic Card Printers

Creation of Value for the Future

NiSCA's Continuing Challenge

We give our customers what they want in R&D and in quality assurance.

NiSCA constantly strives to transform market demands into new technologies. No matter how satisfying a project may be to our engineers, it is the market that ultimately passes judgment on its value. It is precisely for this reason that we are ready to boldly challenge the perceived limits of current engineering when it may yield what our customers need. This stance of ours will not change. NiSCA is working to further raise the level of professionalism of each of its engineers, with the goal of one achievement per person.

NiSCA Corporation was established in 1960 and today has over 830 employees in four locations. Our motto of "creation of value for the future" is evident in our investments for future success.

In January 1995, NiSCA received ISO 9001 certification, an international standard for quality assurance. Our quality assurance program has received recognition on an international level. We strive to offer products which will satisfy all our customers with reliable quality from the initial design through after-sale service.

This irreplaceable world in which we live is now undergoing environmental turmoil, even as science and technology continue to surge forward. With an environmentally conscience view, NiSCA recognizes this through its ISO 14001 certification. As a corporation contributing to society with the motto of "creation of value for the future," NiSCA received international ISO 14001 certification for our environmental management system in September 1999. Specifically, we have begun making efforts to use power and water more efficiently, appropriately reducing such waste such as building materials and scrap paper, and other similar activities. All of us at NiSCA are committed to working together in



the same spirit of accepting challenges that has served us well in R&D to grapple with this problem.

NiSCA Corporation offers a broad product line ranging from plastic card printers to paper handling systems for the photocopier industry. The company's ability to manufacture many of its required components is critical to our success in controlling quality and reliability in our product offering.

Since the NiSCA plastic card printer's introduction into the marketplace in 1994, NiSCA printers have been producing high quality full color plastic cards for corporations, education, and government organizations. With thousands of hard-working printers and hundreds of loyal Dealers, VAR's,

and System Integrators around the world, NiSCA continues to be the leader in the plastic card printing market place.

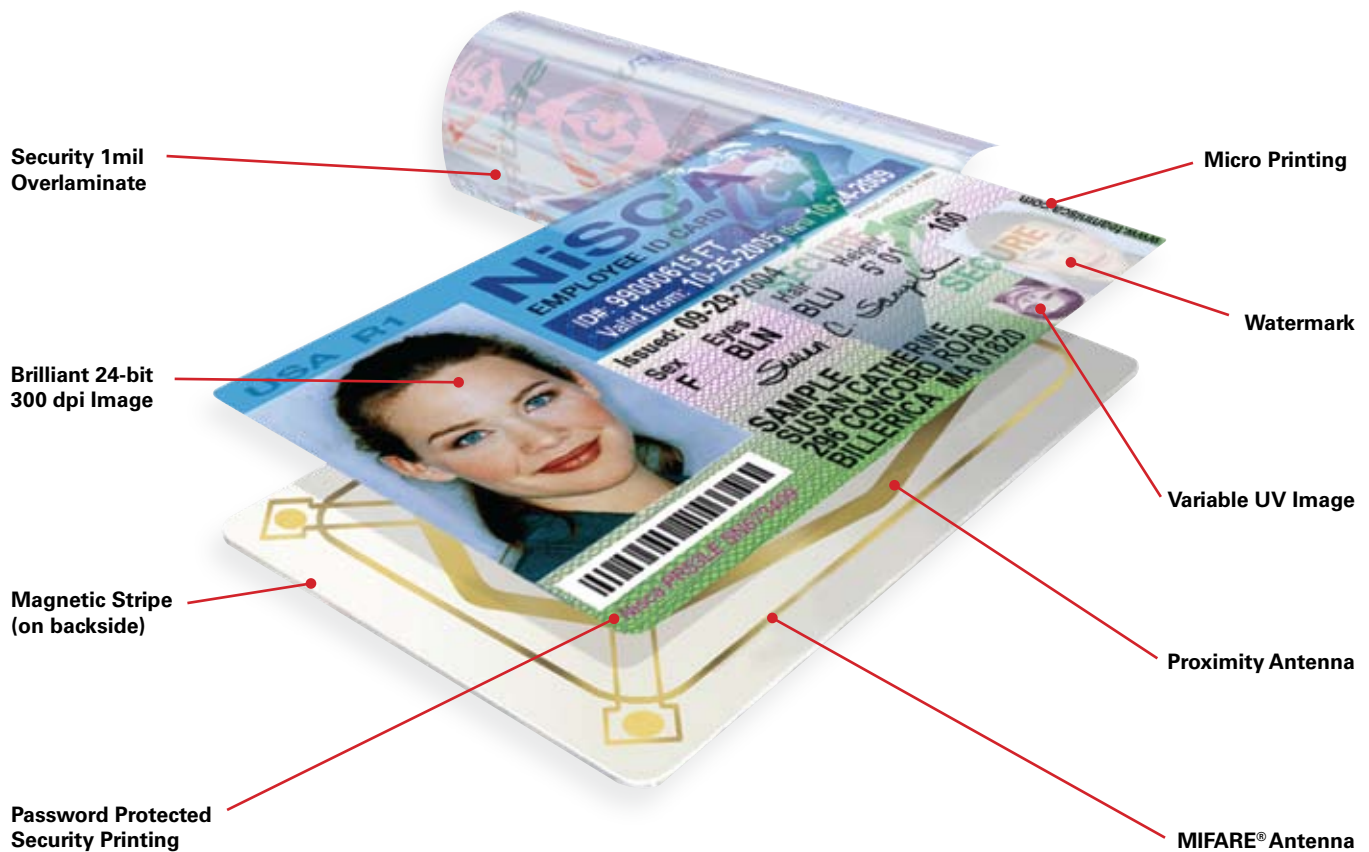
NiSCA technological leadership is obvious market wide:

1. Delivered the first dual sided printer, 1994
2. Delivered the first easily changeable ribbon cassette, 1994
3. Delivered the first self-aligning print head, 1996
4. Delivered the first modular lamination unit, 1996
5. Delivered the smallest dual printing and laminating system, 2000
6. Delivered the fastest dual sided printer, 2004

NiSCA plastic card printers are sold through the Team NiSCA sales organization, located in Somerset, NJ, USA. The facility in Somerset provides sales, stocking, and warranty services for NiSCA products sold globally.

In July 2008, NiSCA Corporation became the wholly-owned subsidiary of Canon Finetech Inc.





The most common security features on today's plastic cards are custom and generic holographic overlaminates, pre-printed micro- or nano-text on cards, and embedded holographic images on the card surfaces. Experts in security printing all agree that the more security features in a document, the less likely the document will be counterfeited. In an ideal situation, every plastic card printed would have at least three security features.

The NiSCA plastic card printers provide one of the most versatile printing foundations on the market. With the newest security features added, vast combinations are endless.

With the easy installation of a NiSCA laminator to an existing printer installation, you can upgrade your system to increase security in a matter of minutes.

The PR53XX Series provides support for a multitude of security features which include:

- UV printing of static or variable images
- Micro text printing
- Full 1mil security overlaminate with various holographic and ink options
- Magstripe encoding on track 1, 2, and 3 in high- or low-coercivity
- Password protected variable resin or UV printing allowing the automated printing of the printer's serial number, printer's model number, date of printing, and variable demographic data.
- Smart Card features include Contact IC Chip and RFID from HID, MIFARE and Legic technologies.

NiSCA PR53XX

The PR53XX Printer third generation series offers brilliant images printed on CR80 and CR79 PVC cards with thicknesses ranging from 10 to 50 mils. The PR53XX series provides a well priced full-featured printer, offering the following industry leading specification highlights:

Print Quality:

- Full color edge-to-edge printing
- 300 dpi dye-sublimation printing technology
- 24-bit color continuous tone printing
- 256 grayscale bitmap in all color mode



PR5310 SMART CARD

- Variable UV printing
- 100 cards per hour printing speed*
- Dual sided printing
- Dual sided lamination with alternating patch options
- USB 2.0

Provides support for:

- HID Corporation's Prox and iCLASS™ Smart Card technology
- Philips Corporation's MIFARE® Smart Card technology

All modules are integrated into the printer for seamless printing/reading/encoding functions.

A software development kit is available from Team NiSCA at no-charge to allow for easy integration of the necessary commands.

Optional Accessories:

Security Overlamination w/PR5302

- Hardcoat (patch style)
- Thinfilm (Softcoat)
- 86 cards per hour printing speed (Single sided)
- 80 cards per hour printing speed (Dual sided)

Encoding

- Magstripe
- Contactless Smart
- IC Contact*

Cleaning Kits:

- Fully accessorized 10,000 print kits

Reliability:

- Mean Time Between Failure (MTBF)100,000 cards*
- Standard 2-year warranty
- ISO 9001 Certification

Printer/PC Communication:

- NiSCA print driver continuously maintains 2-way communication between the software application and the printer at all time
- Windows and Mac compatible drivers
- Printer status information available in the NiSCA Print Spooler Window
- Remote status and diagnostics of printer is available via Badging Applications



PR5350 HIGH SPEED

High-speed printing:

- Variable UV printing
- 164 cards per hour printing speed*
- Dual sided printing
- Dual sided lamination with alternating patch options
- USB 2.0

Provides support for:

- HID Corporation's Prox and iCLASS™ Smart Card technology
- Philips Corporation's MIFARE® Smart Card technology

All modules are integrated into the printer for seamless printing/reading/encoding functions.

A software development kit is available from Team NiSCA at no-charge to allow for easy integration of the necessary commands.

Optional Accessories:

Security Overlamination w/PR5302

- Hardcoat (patch style)
- Thinfilm (Softcoat)
- 132 cards per hour printing speed (Single sided)
- 112 cards per hour printing speed (Dual sided)
- Magstripe
- Contactless Smart
- IC Contact*

Cleaning Kits:

- Fully accessorized 10,000 print kits

* Please contact Team NiSCA for more information.

Printer Series

Modular Systems:

- Modular inline encoding capability – field installable and interchangeable magstripe and Smart Card encoding modules: Contact Chip, HID, iClass™, MIFARE® (PR5310 and PR5350)
- Optional single or dual lamination systems depending on site requirements

Environmentally Friendly

NiSCA is committed to the protection of human health and prevention of pollution by taking into consideration the complex and interconnected relationship of our ecosystem.

The company maintains management systems designed to ensure compliance and support integration of Environmental, Health, and Safety (EHS) considerations into its business process. NiSCA's dedication to and leadership in meeting the EHS government requirements are evident in the recent renewal of its ISO 14001 Environmental Management System (EMS) Standard certification.

Today, the printers sell on their strong reliability, excellent price point, and brilliant image reproduction. They feature a two-year warranty, assuring a safe investment for your plastic card printing needs.



PR5350/PR5302 PRINTER / LAMINATOR

High-speed security lamination:

- 132 cards per hour YMC / K / Lamination
- 90 cards per hour YMC / K / Lamination / Lamination

Provides support for:

- 1mil holographic patch material
- .5mil holographic patch material
- 1mil clear patch material
- .5mil clear patch material
- Overlay / Thinfilm / Softcoat edge-to-edge material

Additional support for:

- IC chip cut-out patch material (1mil / .5mil)
- ¾ magnetic stripe cut-out patch material (1mil / .5mil)
- Alternating patch material (i.e. full patch front and ¾ patch back)



PR5350/PR5302 PRINTER / DUAL LAMINATOR

High-speed security lamination:

- 112 cards per hour YMC / K / Lamination / Lamination

Provides support for:

- 1mil holographic patch material
- .5mil holographic patch material
- 1mil clear patch material
- .5mil clear patch material
- Overlay / Thinfilm / Softcoat edge-to-edge material
- Optional edge-to-edge overlay with 1mil patch

Additional support for:

- IC chip cut-out patch material (1mil / .5mil)
- ¾ magnetic stripe cut-out patch material (1mil / .5mil)

NiSCA PR-C101

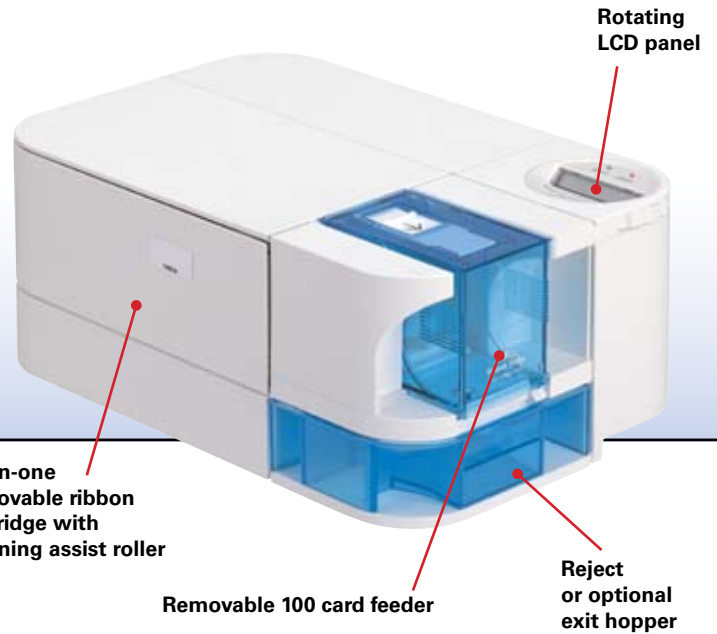
Out-of-the-Box Solution

NiSCA's quality and reliability in an entry-level printer.

The PR-C101 single sided printer provides a simple and affordable out-of-the-box solution for high quality, high durability, plastic cards with low maintenance requirements.

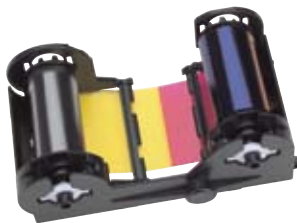
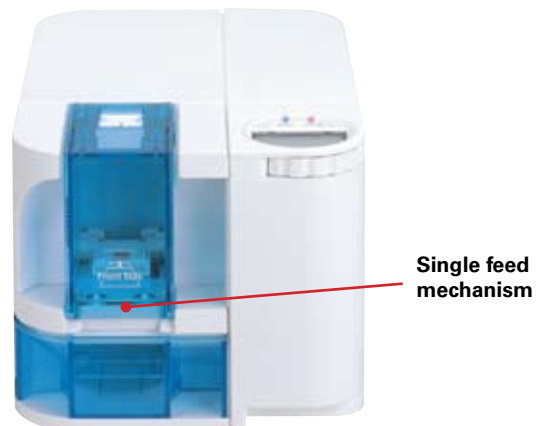
The printer is small enough to fit into an office overhead bin or under a counter. Offering the first ever rotating LCD panel and optional front or back exit, the PR-C101 can be placed in any orientation to fit your office environment perfectly. The printer's ribbon cartridge with cleaning assist roller unit is disposable.

The PR-C101 comes packaged with an entry-level badging software application. This basic professional solution is great for every small organization, including police, libraries, schools, clubs, casinos, and more.

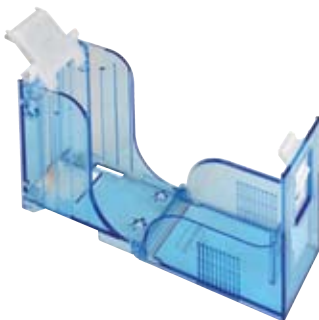


PR-C101 BASIC SOLUTION

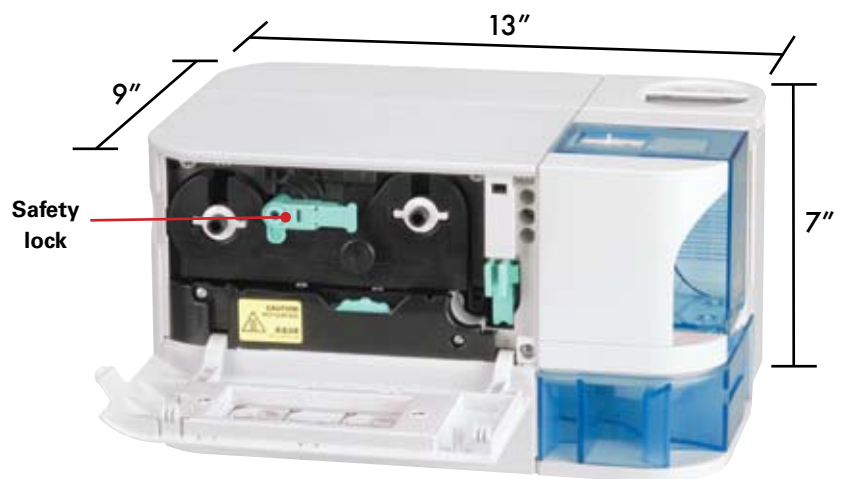
- Brilliant 24-bit color, 300 dpi edge-to-edge image
- Media thickness 10 and 30 mil
- 171 cards per hour printing speed*
- Extremely small foot print and light weight (14lbs)
- Removable 100 card feeder
- First ever rotating LCD panel to fit any office environment
- All-in-one ribbon cartridge with cleaning assist roller
- Includes entry-level software
- 2-Year hands-free warranty*
- 50,000 cards mean time between failure (MTBF)*
- USB 2.0 output
- Windows and Mac compatibility
- Other models available with contactless Smart Card encoder



All-in-one removable ribbon cartridge



Removable 100 card feeder



* Please contact Team NiSCA for more information.

NiSCA

Smart Card Printer

A Smart Card ID is a plastic card with a built-in microprocessor and/or memory chip carrying personal identification data. When inserted into a reader, it transfers data to and from a central computer.

There are two categories of Smart Cards. The first is a Contactless Smart Card. It has no visible module and communicates by means of a radio frequency signal. Physical contact between the card and a reader is not needed. This type of technology is also known as RFID (radio frequency identification). The second category is known as a Contact Smart Card. It operates by physical contact between the reader and the Smart Card's contacts.

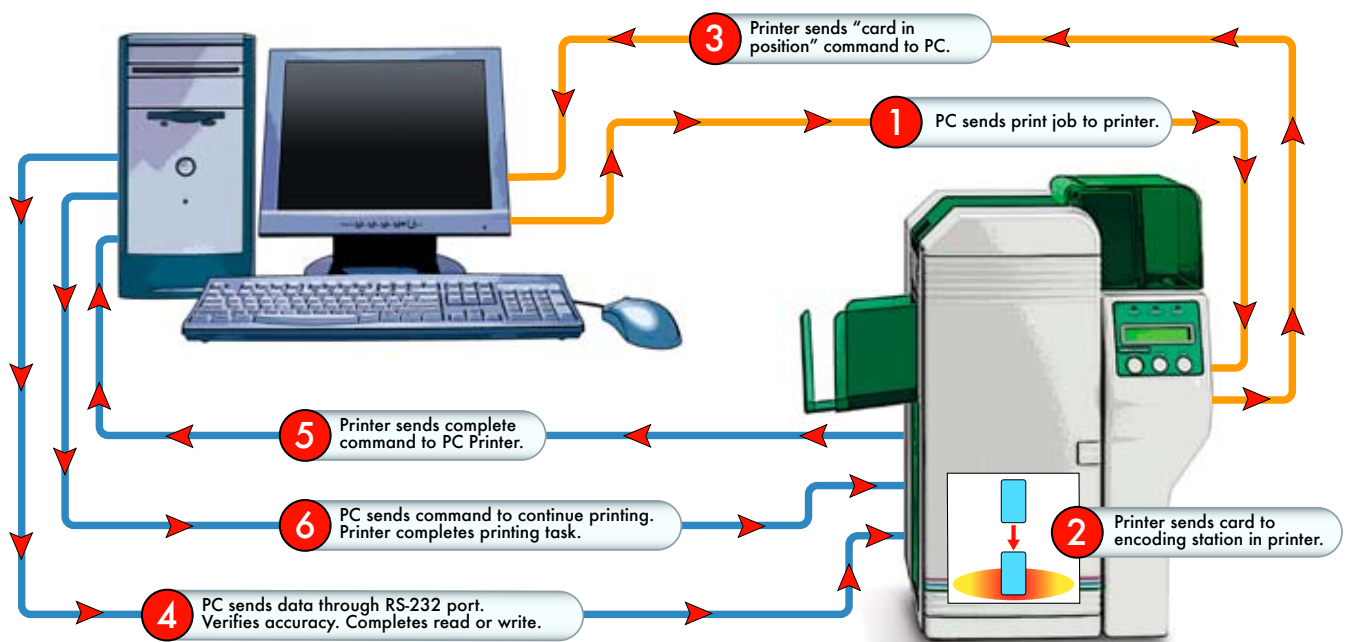
There are advantages and disadvantages in both categories and the choice between which technology to make your investment will greatly depend on your particular application, card usage, reader, and networking technology available.

Currently, the majority of Smart Cards are either programmed (written) or read manually after the printing process has occurred. This process is time consuming, as a person has to manually insert a card into another device, identify each card in the system, and write to or read from it. In addition, there are occurrences of bad chips, meaning that the chip being written to or read from is faulty. In this case, you printed on a card that is not usable, thus wasting the ink ribbon.

NiSCA has developed a process for integrating Smart Card technology into the ID card printing process. We have invented an in-line process that saves time and money by programming and/or reading the card in the printer before the printing starts.

What makes the NiSCA process extremely unique is that the printer always knows the position of the card during the process. This is critical when programming or reading Smart Cards to ensure correct programming or reading is occurring to the correct card.

ENCODING STEPS



NiSCA



In 1998, NiSCA was the first company to offer the modular laminating unit attached to the printer. Today, that same design has proven its effectiveness by laminating many millions of cards at thousands of locations.

The secret to the design is inside the orange roller – a halogen heat lamp. This specially designed “heat roller” offers extremely quick heat-up and cool-down times - you can begin to print and laminate in less than 2 minutes. In addition, the heat roller offers an extremely long life and is more energy efficient than common heating elements used in other systems.

The modular design is optimal for field upgrades. No tools are required to add a laminator to an existing NiSCA printer. When the laminator is attached to the printer, the printer automatically configures the laminator. This is ideal for serviceability and ease of integration.

PR5302 HEAT ROLLER

The PR5302 Heat Roller (laminator) is designed to easily attach and operate with the NiSCA dual sided PR53XX series printers. The unit offers high-speed lamination for standard CR-80 cards. A state of the art RS-422 high-speed communication port interfaces with the printer, allowing the printer’s firmware and driver to optimally configure the unit for a variety of laminate materials.

Additionally, two PR5302s can be attached together and configured with one PR5300, PR5310 or PR5350 printer to apply different types of laminate materials to a card. This solution offers the utmost in security and protection for your applications.

- High speed lamination – from 8 to 50 seconds per card
- Hardcoat 1mil or .5 mil patch lamination – registered and wallpaper formats, model PR5302A
- Thinfilm lamination – registered and wallpaper formats, model PR5302D
- Dual sided lamination – same patch or alternating front/back patches, two PR5302s as shown below
- High speed dual sided lamination – using two lamination units

NiSCA offers two types of laminators, the PR5302A and the PR5302D. Both types have support for either 110 Volt or 220 Volt power. There is no auto-switching; therefore, the power requirements must be specified at time of purchase.



Easy Laminate Change



Field Upgradable

With one PR5302 Heat Roller, the user can laminate a single side – front or back – by configuring the hardware in the NiSCA driver. In addition, it is possible to laminate both sides of the card with one laminator, which can be configured in the driver as well. As there is only one supply of laminate material in one Heat Roller unit, you are limited in laminating both sides of the card with the same laminate material, unless you have purchased “Alternating Patch” material. NiSCA’s alternating patch material gives the user the option to laminate both sides of the card with two different laminate designs.

In most cases, users request a hologram on the front of the card and a clear material on the back of the card to protect a bar code or other critical data. The alternating patch material is commonly used for Smart Card applications where there is a contact IC chip on the front of the card and a magnetic stripe on the back of the card. In this case, the alternating patch material will have a die cut out for the IC chip on the front and a $\frac{3}{4}$ patch on the back of the card so the magnetic stripe does not interfere with it.

Dual lamination with two PR5302 units attached can successfully be used in many applications where the customer requires lamination on both sides of the card with different laminate material, and also requires higher throughput.

Operating a system configured with two Heat Roller units increases printing speed greatly over a single lamination system using alternating patch material. Adding two PR5302 units to your printer is simple, but does require a special Y-cable and ROM for the second laminator (part number: 3885cable/rom), so, please instruct your reseller that this is the desired configuration and specify the cable on your order.

Security Lamination

NiSCA offers a variety of laminate materials in two categories, Hardcoat (patch style) and thinfilm (or Softcoat). Hardcoat lamination assures superior protection against color fading and scratching. NiSCA's 1mil Hardcoat material stands up to the rigorous durability testing regularly performed by driving license authorities globally. Hardcoat material is available in a standard 1mil (.001 inch) or custom .5 mil (.0005 inch) thickness.

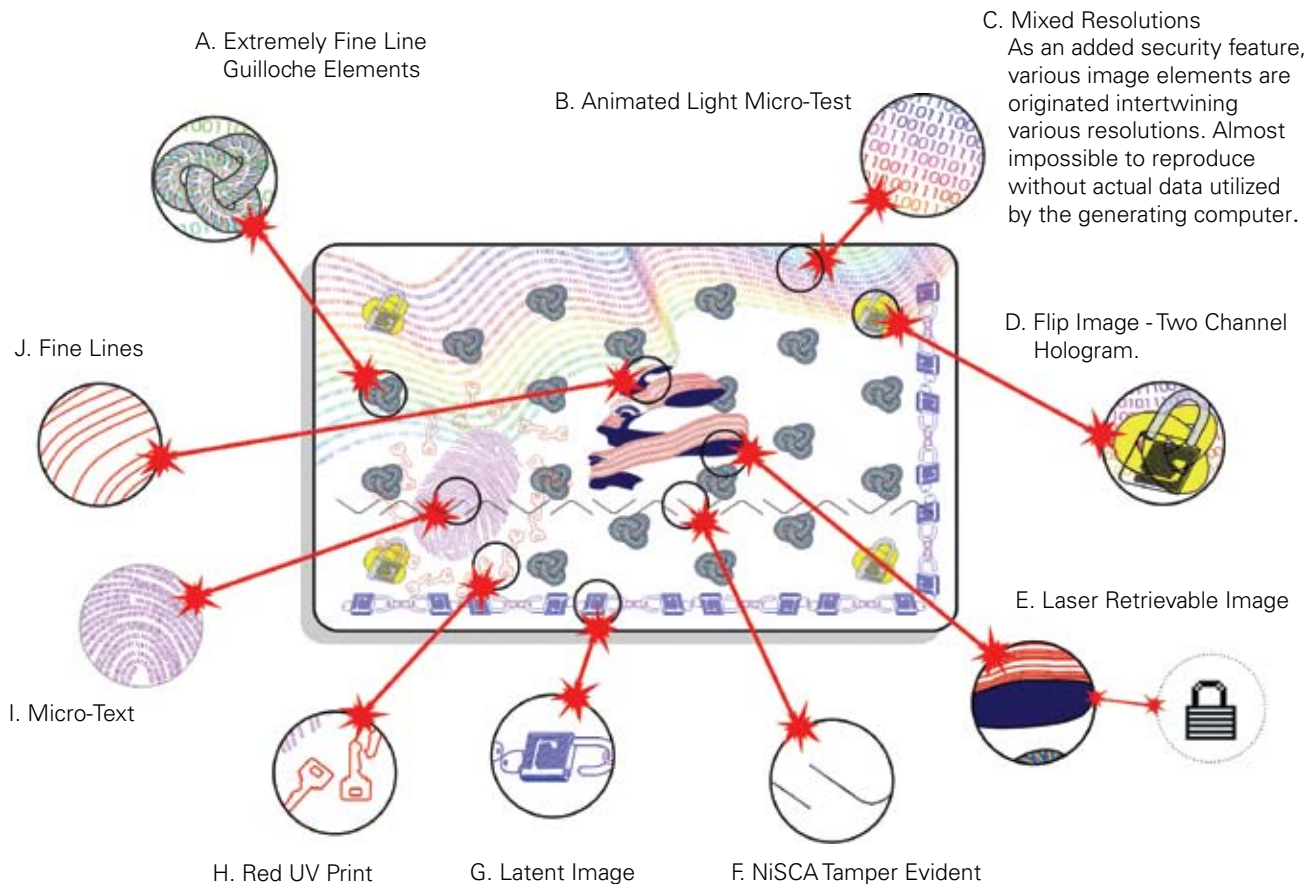
NiSCA's thinfilm laminate is unique because it is the only material on the market designed to adhere to the ribbon's overlay panel applied by the print head. Therefore, it provides enhanced dye migration and fading protection. The Softcoat material can be applied edge-to-edge and offers up to 500 images per roll versus the Hardcoat's 255 images per roll.



Adding lamination to the application will increase the card's life, secure the data on the cards, and increase the security of your offices. NiSCA stocks several types of generic security hologram material and clear (no hologram) laminate material with no minimum order requirements. Many customers opt for the convenience of a generic material, whereas others prefer the enhanced security of a custom laminate. NiSCA is always pleased to offer consultation on security lamination designed for your needs.

NiSCA Lamination Security Features

Custom security features can be designed into both Hardcoat and Softcoat material and are common for clients interested in using their cards as visual security passes – sometime called "flash passes". Below are examples of the 10 most common features integrated into laminate material.

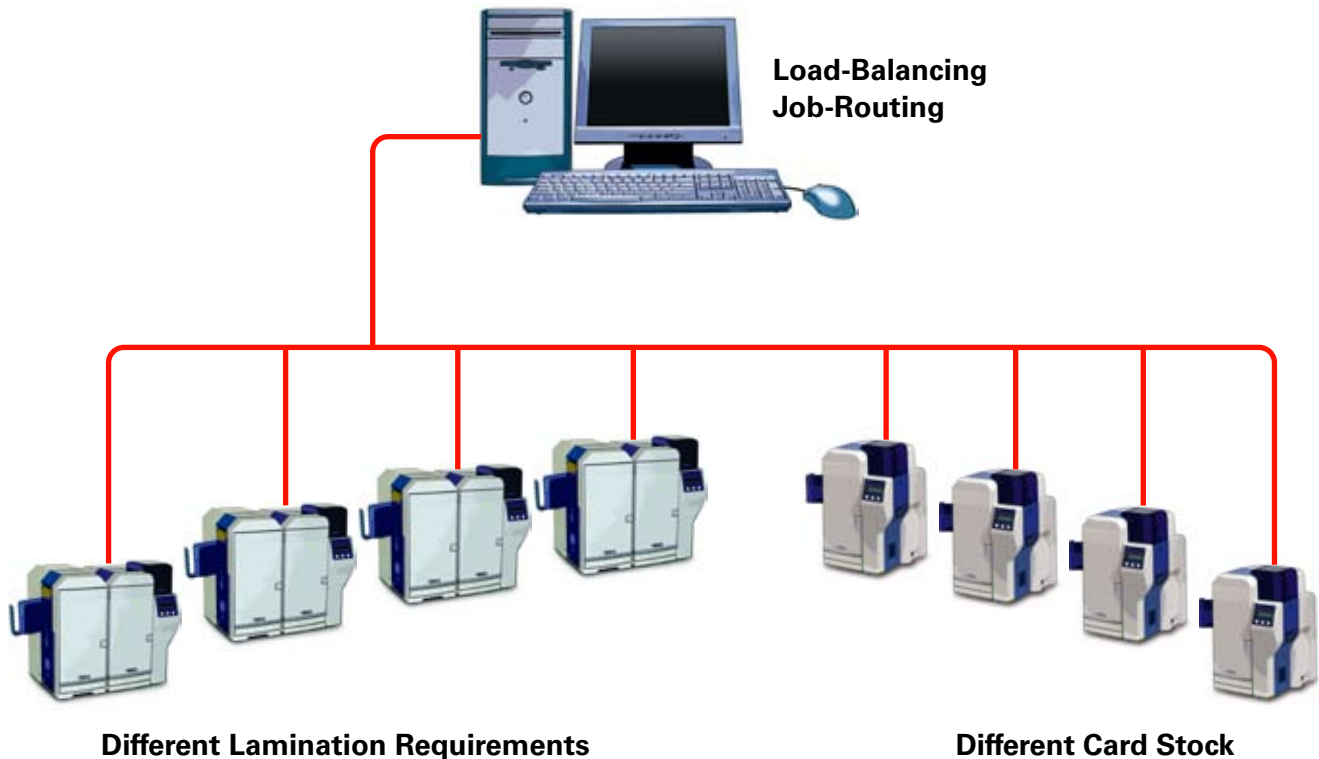


NiSCA CPS

Central Production Solutions

SERVICE BUREAU APPLICATION

8 USB Printers on 1 PC



Module solutions have always been a staple for the NiSCA line of desktop card printers. Since our inception in 1994, the PR5002 printer offered modular flip-turn stations, encode stations, and lamination stations. Today, our product line has evolved, but not varied from this fundamental concept.

The NiSCA module concept is a perfect fit for large-scale production or central issuance of secure credentials. If one printer or laminator goes down, the remaining units continue to function while a replacement module is easily set in its place - production never stops. Numerous US Government Agencies, seven US States driver's license programs, four countries, and thousands of companies have adopted the NiSCA modular solution.

Our latest advancement in the modular concept comes with the introduction of the PR5300 and PR5350 printers with USB 2.0 bus protocol. NiSCA's USB printer firmware and drivers act in the same manner as SCSI device in which each printer is individually addressable,

controlled, and monitored. NiSCA's firmware and driver can independently communicate with and manage up to 8 NiSCA printers on a single computer.

Eight printers on a single computer provide extremely high throughput for card printing. Add-on the lamination module to provide layered security; and add the in-line Smart Card encoding (available in the PR5350 and PR5310) and you have a highly precise and intelligent production solution for high value cards and massive projects.

Summary of NiSCA CPS:

High-speed printing (Based on 8 PR5350 printers)*:

- 1320 cards per hour - YMCO
- 1040 cards per hour - YMCKO
- 840 cards per hour - YMCKO / K (Dual sided print)
- 760 cards per hour - YMCKK / K / Laminate (Dual sided print/single side lamination)

* Please contact Team NiSCA for more information.

Features:

- Automatic cleaning, the industry's first ribbon cassette, quick-change print head and, as always, NiSCA's simple to read and use 2-line LCD display.
- RoHS (Restrictions of the use of certain Hazardous Substances) Compliance. The RoHS directive requires producers of electronic equipment to reduce the concentration of hazardous materials to acceptable levels. NiSCA achieved RoHS compliance for all featured models.

Easy Print Head Replacement



Easy Cleaning



Easy Change Ribbon Cassette



Specifications

	PR5310	PR5350	PR-C101
300 dpi, 24-bit continuous tone printing	Yes	Yes	Yes
Dye-sublimation printing	Yes	Yes	Yes
Dual sided printing	Yes	Yes	No
Edge-to-edge printing	Yes	Yes	Yes
Inline encoding options	Mag/Contactless Smart/IC Contact*	Mag/Contactless Smart/IC Contact*	Contactless Smart
Separate image and function memory	Yes	Yes	Yes
Extended image memory, MB	Yes, 8	Yes, 16	Yes, 8
Separate memory modes	Yes, 5	Yes, 5	No
Parallel processing	Yes	Yes	Yes
Printing speed YMCKO*, cards/hour	75	133	150
Printing speed resin, cards/hour	327	600	643
Printing speed single sided lamination, cards/hour	86	132	N/A
Printing speed dual sided lamination, cards/hour	80	112	N/A
Ultraviolet printing capability	Yes	Yes	No
Micro printing capability	Yes	Yes	Yes
Interface	USB	USB	USB
Card size	CR79 & CR80	CR79 & CR80	CR80
Card thickness, mil	20 to 50	20 to 50	30
Card input/output hopper	100/100	100/100	100/30
Windows® 2000/XP*	Yes	Yes	Yes
Mac compatible driver	Yes	Yes	Yes
Security overlamine add-on module	Yes	Yes	No
Warranty	2 Years	2 Years	2 Years
Years of service	Since 2004	Since 2004	Since 2007
Special order 10 mil	No	Yes	Yes

*Please contact Team NiSCA for more information.



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