

# Peripheral Dynamics Inc.

## AUTO IDENTIFICATION PRODUCTS CATALOG

Peripheral Dynamics Inc.

5150 Campus Drive

Plymouth Meeting, PA 19462-1123

Toll-Free: 800-523-0253

Phone: 610-825-7090 Fax: 610-834-7708

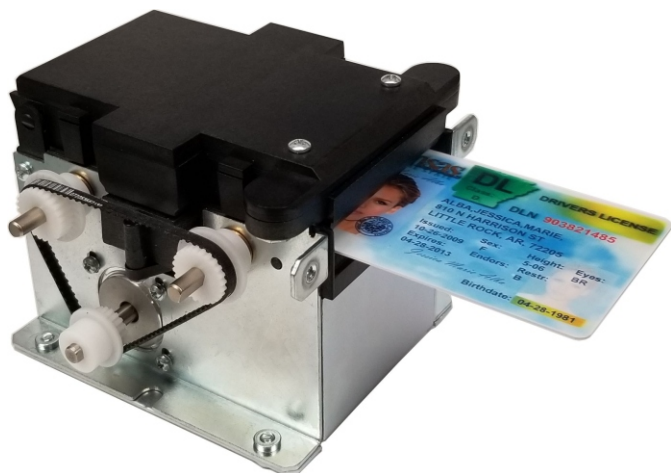
Email: [sales@pdiscan.com](mailto:sales@pdiscan.com) Internet: [www.pdiscan.com](http://www.pdiscan.com)

Quality Images that Give **YOU** the Competitive Edge!

# DriversScan

***Scans Driver's Licenses and ID Cards at 300/600 DPI  
Full Color in Duplex Mode***

**IMAGE CAPTURE  
1D, 2D & PDF 417 BARCODES  
MRZ OCR**



- Duplex mode scans front and back of document in one pass.
- Hinged card path for easy cleaning.
- Downloadable firmware allowing for field updates.
- Accepts driver's licenses, credit cards and other Cr80 (2.125" x 3.75") sized ID Cards.
- Output image is selectable: Full Color, IR, and Monochrome.
- Decode - ICAO compliant documents: MRZ Optical character recognition available with PDI software.
- Decode Barcodes - 1D, 2D including PDF 417 with PDI software.
- Size 3.125" H x 3.960" W x 4.035" L.
- Standard 300/600 DPI resolution.
- Windows and Linux compatible.

**For The Full Story On DriversScan, Contact Us Today.**

# DriversScan

## The Versatile High Speed Image Scanner

### SPECIFICATIONS

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#### DC POWER REQUIREMENTS

+24VDC  $\pm 5\%$  @ 24W

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#### WEIGHT

The total weight of the scanner, including mechanism and PC assemblies, is approximately 1.2 lbs.

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#### SIZE

3.125" H x 3.960" W x 4.035" L

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#### DATA DETECTION / SCAN HEAD

Scan head array contains 12/24 dpm (305/610 dpi). Full color scanning.

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#### SCAN SPEED

Transport scanning speed: 305 dpi, 15 ips  $\pm 1\%$  in monochrome & 5 ips in color.  
610 dpi, 9 ips in monochrome & 3 ips in color.

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#### IMAGE TYPE

Full 24 bit Color, IR, 8 bit Monochrome or a combination of any of these in one pass.

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#### TEMPERATURE

Operating: +0°C to +50°C  
Storage: -25°C to +60°C

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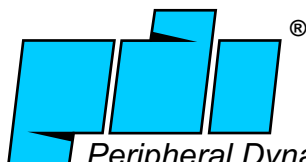
#### HUMIDITY

Operating: 10 to 85% RH non-condensing  
Storage: 10 to 90% RH non-condensing

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### APPLICATIONS ENGINEERING ASSISTANCE

If you have specific requirements,  
call and challenge us. We make  
custom solutions our business.



SCANNING NEW HORIZONS IN DATA ENTRY

#### RELATED PDI EQUIPMENT

- *Image Document Scanners including OMR-OCR-BCR*
- *Optical Mark Sense Scanners with Optional Printers*
- *Driver's License Scanners*
- *ID Card Scanners*
- *Document Scanning Software*
- *Color Card Printers*
- *Passport Scanners*
- *Cell Phone Magnetic/Smart Card Readers*
- *PCI Compliant Read Heads bringing anti-skimming to the source*
- *Magnetic Stripe Readers and Writers*
- *Smart Card Reader/Writers*
- *Magnetic and Smart Card Dispensers*
- *RFID Contactless Reader/Writers*
- *Paper Ticket Printer/Dispensers*

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## OSMOND full featured Passport scanner

**Data reading and verification capabilities, technical values and compliances.**

### Imaging

Active Scan Area	129 mm × 89 mm
Illumination Sources	LED visible white, IR (B900), UVA
Image Resolution	700 PPI
Sensor	12M pixel
Provided Images	Visible, IR, UV (UVA), OVD image, glare-free image – oblique (edge light)
Image Formats	BMP, JPG, JPG2000 and PNG
Image Color Depth	24 bits/pixels [RGB, 8 bits/pixels (IR image)]
Automatic Image Enhancement	YES – Hardware-accelerated
Automatic Document Detection (ADD)	YES
Reflection Removal (RR)	YES
Adaptive Light Control (ALC)	YES

### Programming & Interfaces

Supported Operating Systems	USB mode: Windows & Linux
Software Development Kit (SDK)	USB mode: Complete SDK including DLLs and demo programs
Programming Languages	USB mode: C/C++, C#, Visual Basic 6.0, Delphi, VB.NET, Java
General Interfaces	In USB mode: ARH native, Twain, PC/SC and BioAPI 2.0, Acuant AssureIDTM In network mode: HTTP/HTTPS for accessing the reader, WS, WSS, FTP, SFTP, FTPS, SMB, SMTP, WebDav, Local Database for result upload
RFID hardware	Adaptive Recognition RFID hardware (latest generation)
RFID functions	ICAO Doc. 9303 LDS 1.7, ISO 18013 (Driver License) PKI 1.1, BAC, EAC, EAC2.0, PACE, PACE-CAM, AA, PA, TA, CA, BAP, EAP
Authentication included in standard SDK	Authentication included in standard SDK - data consistency checks (MRZ, barcode, RFID), IR B900 ink and UV dull paper check.
VIZ OCR data reading option	VIZ and non-ICAO document reading
VIZ OCR + Authentication software module option	Automated verification based on document specific security features in visible white, IR and UVA
PC Connection	USB 3.0 (USB 3.1 Gen 1)
Status indicators	OLED graphical display
Firmware Upgrade	USB - optionally via network

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## Reading Capability

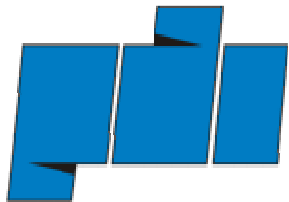
ICAO MRZ Reading	ICAO compliant documents per ICAO 9303 specification Part 1, Part 1 v1 Part 2, Part 3 and Part 3v3 for Type ID-1, ID-2 and ID-3 MRZ Optical Character Recognition
VIZ Reading Option	Available with Adaptive Recognition VIZ OCR software
Barcode Reading	1D: UPC-A, EAN8, EAN13, Code39, Code128, ITF, 2D: PDF 417, Data Matrix, QR Code, Aztec Code, Interlaced 2 of 5 (ITF), AAMVA compliant PDF417 and IATA BCBP
Contactless IC (RFID) and Contact Smart CardOption	Reading and writing contactless ICs according to: ISO 14443 Type A & B, BSI TR-03105All standardized rates up to 848 Kbps Contact Smart Card: according to ISO 7816 and EMV 4.2/4.3, ETSI TS 102 221, supports Class A, AB and C smart cards T=0, T=1 protocol support

## Mechanical Data

Internal processor	Multi-core processor
Size (width × depth × height) / Weight	178mm × 203mm × 157mm / 2.25 kg
Power supply	Universal external power supply, 100-240 V AC, 50/60 Hz
Case	Sturdy ABS-PC plastic & Aluminum
Security	Kensington® security slot
Maintenance	Maintenance-free operation
Warranty	3-year warranty (can be extended)
Operating temperature	5 °C to 40 °C (45 °F to 113 °F) Operating humidity 0-90 % (non-condensing)



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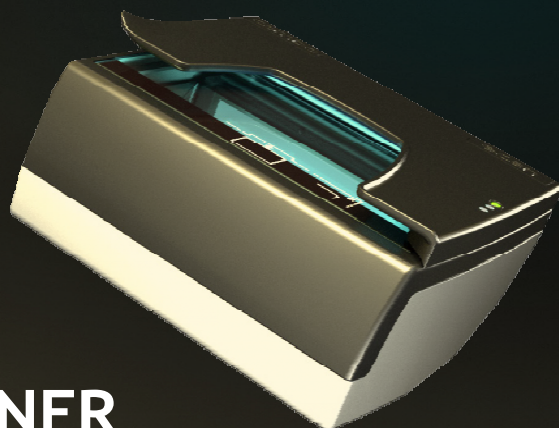


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PASSPORT READERS & ID

## COMBO SCAN ULTRA COMPACT ID SCANNER



Size of your palm, but types ~150x faster  
Forget manual typing and focus more on your customers



Imagine a solution that scans and reads IDs, including driver's licenses and passports within a blink of an eye. Suits perfectly to front-desk applications like hotel check-in, car rental, casinos, retail stores and visitor management systems. This is Combo Scan which can save up to 3-4 minutes per guest and reads accurately international IDs too.

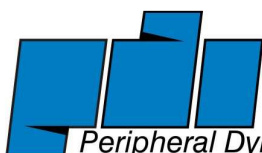
Combo Scan is perfect for age verification, client registration and visitor management applications. It provides a secure and super-fast method of ID scanning and reading.

Utilize Combo Scan to provide a fully digitalized solution where scanned data remains secure and inaccessible. Operates from a single USB connection, thus it is highly portable.

Seamless integration into any IT environment is ensured by the provided SDK package.

### Main benefits

- Accurate data entry within seconds, without typos
- Forget the headache when trying to read foreigner IDs
- Be compliant to privacy and security regulations
- Have more time to focus on your clients not on typing
- Looks great. Fits well to any front-office application.



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# Specifications

• MRZ OCR reading of ID-1/ID-2/ID-3 documents • 1D and 2D barcode reading • 500 PPI glare-free imaging • compact & USB-powered • various OCR engines available to read foreign characters • no moving parts, maintenance-free operation

## Imaging

Active Scan Area	125 mm × 55 mm (4.92" × 2.17")
Illumination Sources	LED visible white, IR (B900)
Image Resolution	500 PPI
Provided Images	Visible, IR, OVD image, glare-free image
Image Formats	BMP, <b>JPG</b> , <b>JPG2000</b> and PNG
Image Color Depth	24 bits/pixels [RGB, 8 bits/pixels (IR image)]

## Reading Capability

Automatic Document Detection (ADD)	YES
Reflection Removal (RR)	YES
Adaptive Light Control	YES
ICAO MRZ Reading	ICAO compliant documents per ICAO 9303 specification Part 1, Part 1v2, Part 2, Part 3 and Part 3 <sub>v2</sub> for Type ID-1, ID-2 and ID-3 MRZ Optical Character Recognition
VIZ Reading	Available with VIZ OCR software for ID-1 size documents
Barcode Reading	1D: UPC-A, EAN8, EAN13, Code39, Code128 and ITF 2D: PDF 417, Data Matrix, QR Code, Aztec CodeFrom paper-based documents AAMVA compliant PDF417 and IATA BCBP
Contactless IC (RFID) option*	Reading and writing contactless ICs according to: ISO 14443 Type A & B, BSI TR-03105 All standardized rates up to 848 Kbps

## Programming & Interfaces

Supported Operating Systems	Windows 7, 8, 8.1, 10 + Linux (ask for details)
Software Development Kit (SDK)	Complete SDK including DLLs and demo programs
Programming Languages	C/C++, C#, Visual Basic 6.0, Delphi, VB.NET, Java
General Interfaces	ARH native and Twain, Acuant AssureID™
Advanced Document Authentication Module	Data consistency checks: MRZ, VIZ, RFID, barcodes etc., vs. IR B900 check
PC Connection	USB 2.0 high speed (USB 3.0 compatible)
Status indicators	Three programmable status LEDs (yellow, red, green)
Internal Memory	Storing factory calibration
Firmware Upgrade	Automatic, via USB

## Mechanical & Other Data

Size (width × depth × height)	152 mm × 130 mm × 82 mm (5.98" × 5.12" × 3.23")
Weight	0.6 kg (1.32 lbs.)
Operating Temperature	5 °C to 45 °C (45 °F to 113 °F)
Operating Humidity	0-95 % (non-condensing)
Power supply	From USB with no external power supply is required
L-frame for coverless design	Optionally available
Case	Sturdy ABS-PC plastic
Security	Kensington® security slot
Window glass	4 mm (0.16") tempered glass
Compliances	FCC, CE, WEEE, RoHS
Maintenance	No moving parts, maintenance-free operation
Warranty	3-year warranty, upgradeable

Technical specifications are subject to change without prior notice. This document does not constitute an offer.

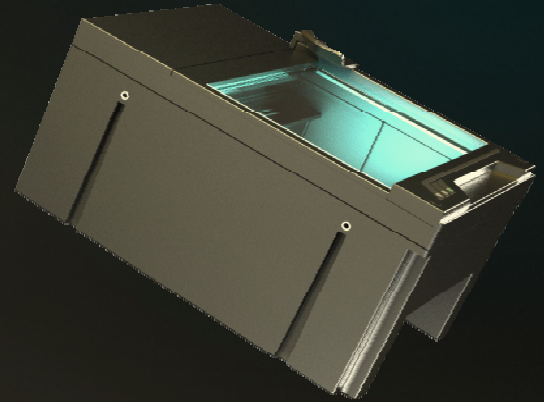
\* available in type 'R' models



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PASSPORT READERS & ID SCANNERS



## COMBO SMART KIOSK FULL-PAGE, OEM E-PASSPORT READER

**Low profile and simple shape e-passport reader, ideal for integration**



Automated Border Control (ABC) gates at airports, self-service kiosks at railways and cruise terminals, virtual teller machines need a reliable e-passport reader that can be seamlessly integrated both physically and into the workflow. In the core foundation, there must be a passport reader which lets people gain access to their route while protects borders efficiently.

Combo Smart Kiosk complies to all these requirements. It is designed to image and inspect identity documents including electronic travel documents and 1D and 2D barcodes used by the airline industry on boarding passes and cell phones.

Integration is easy thanks to the low profile and simple shape design accompanied by mounting points. Users benefit from the intuitive design. The reader does not just capture the data but offers full spectrum authentication too. All of this happens in a blink of an eye – for managing continuous and fast passenger flow even at the largest travel hubs worldwide.



### Main benefits

- Profit from accurate data entry and verification
- OEM design for ABC gates and self-service kiosks
- Intuitive design helps infrequent passengers
- Automated passenger screening, 24/7 operation
- Reads & verifies every IDs including electronic travel documents



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## Specifications

## Combo Smart

• true color, high-quality images • full-page scanning up to ID-3 size • wide range of models to match all business needs • single step reading of printed & RFID data • visible white, IR, UV illumination • OVD visualization & Reflection Removal

### Imaging

Active scan area	129 x 89 mm
Illumination sources	LED: visible white, IR (B900), UVA
Provided images	Visible, IR, OVD image, glare-free image, UV image
Image formats	BMP, <b>JPG</b> , <b>JPG2000</b> , PNG
Image color depth	24 bits/pixels [RGB, 8 bits/pixels (IR image)]

### Reading Capabilities

Automatic Document Detection (ADD)	YES
Reflection Removal (RR)	YES
Adaptive Light Control	YES
ICAO MRZ reading	ICAO compliant documents per ICAO 9303 specification Part 1, Part 1v2, Part 2, Part 3 and Part 3v2 for Type ID-1, ID-2 and ID-3 MRZ Optical Character Recognition
VIZ reading	Available with ARH VIZ OCR software
Barcode reading	1D: UPC-A, EAN8, EAN13, Code39, Code128, ITF 2D: PDF 417, Data Matrix, QR Code, Aztec Code From paper-based documents and mobile devices AAMVA compliant PDF417 and IATA BCBP
RFID reading**	Reading and writing contactless ICs according to: ISO 14443 Type A & B, BSI TR-03105 All standardized rates up to 848 Kbps

### Programming & Interfaces

Supported Operating Systems	Windows 7, 8, 8.1, 10 + Linux (ask for details)
Software Development Kit (SDK)	Complete SDK including DLLs and demo programs
Programming languages	C/C++, C#, Visual Basic 6.0, Delphi, VB.NET, Java
General interfaces	AR native, Twain and Acuant AssureID
RFID functions (where applicable)**	ICAO Doc. 9303 LDS 1.7, ISO 18013 (Driver License) PKI 1.1, BAC, EAC, EAC2.0, PACE, PACE-CAM, AA, PA, TA, CA, BAP, EAP
Status indicators	Four programmable status LEDs (blue, green, yellow, red)
Advanced Document Authentication (included in standard SDK)	Data consistency checks: MRZ, RFID**R B900 and UV dull paper check*, Bearer's printed photo vs. RFID DG2**
Additional Authentication Options (available as optional SDK)	VIZ and non-ICAO document reading Automated verification based on document specific security features in visible white, IR and UVA*
PC connection	USB 2.0 high speed (USB 3.0 compatible)
Firmware upgrade	Automatic, via USB

### Mechanical & Other Data

Size with passport fixer	150 mm x 195 mm x 117 mm (5.90" x 7.67" x 4.60")
Size without passport fixer	150 mm x 195 mm x 108 mm (5.90" x 7.67" x 4.25")
Weight	1.01 kg (2.15 lbs.)
Operating temperature	5 °C to 45 °C (45 °F to 113 °F)
Operating humidity	0-90 % (non-condensing)
Power supply (VDC)	12 V DC
Max. power consumption	0.8 A / 9.6 W
Case housing	Sturdy ABS-PC plastic
Window glass	5.5 mm (0.22") normal glass
Programmable status LEDs	3
Compliances	FCC, CE, WEEE, RoHS
Maintenance	No moving parts, maintenance-free operation
Warranty	3-year warranty, upgradeable
** available in type 'R' models	
Technical specifications are subject to change without prior notice. This document does not constitute an offer.	

# NUVIA (New Model)

## Lock In A More Secure Card Printing Solution It Fits Your Space, Your Needs and Your Budget

**Starting at \$649**

**5 Yr Warranty**

**3 Yr Hot Swap**

You can simplify your card printing without giving up quality and security. The NUVIA direct-to-card printer produces vibrant color, edge to edge printing and security features to issue professional looking cards instantly.

Dual Hopper

High Security

Manual Feeding

Light & Compact



Single Hopper



Dual Hopper

### FEATURES



MIS



IC/RF



WIFI



Dual Side



Mobile APP

**Ideal For** Access Control Cards, ID Badges, Bank Cards, Gift Cards, Loyalty Cards, Membership Cards

#### **Locked Enclosures**

Protect unauthorized access with multiple locks and Kensington lock slot.

#### **Secure Encoding**

Magnetic stripe (ISO and non-ISO), contact smart card encoding (EMV, ISO 7816), and contactless smart card encoding (ISO and Mifare).

#### **Fast Print Speed**

190 cards/hour (full-color, single-sided) or 19 secs. and up to 140 cards/hour (full-color, dual-sided) or 26 secs.

#### **Compact**

Lightweight design with a small footprint which allows you to operate the Nuvia card printer where you need it most.

#### **User-Friendly**

Simplicity is built into the design, operation and user interface.

#### **Flexible Feeding Options**

Innovative dual hopper lets you load up to 200 cards or 2 different types of cards to avoid reloading.

#### **Mobile Access**

Design and print right from your smartphone or tablet with the mobile app.

#### **Ready To Run**

Your Nuvia comes loaded with Card Designer™ software and printer driver already installed.

#### **Common Verticals**

Identification, Access, Retail, Hospitality, Control, Financial, Government, Services and Education.

#### **Reliable**

Nuvia offers unmatched protection, with a 5 year warranty on the printer and 3 years on the printhead.

Nuvia is a reliable and easy to use card printer that delivers a secure card printing solution. Contact PDI to purchase the Nuvia card printer now.



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# NUVIA CARD PRINTER

N 10

N 20 / N 30



Single-Sided  
Manual Feeding



Single-Sided  
Manual Feeding  
Card Stacker  
Dual Sided (Optional)



Single Hopper



Dual Hopper (Optional)

## PRINTER

Direct-to-Card Dye-Sublimation/ Resin Thermal Transfer  
Single or Dual Sided Printing  
Additional hopper for the 2<sup>nd</sup> type of card or to increase hopper card capacity  
Edge-to-Edge printing  
Full Color and Monochrome printing capability  
300 dpi (11.8 dpm), 16.7 Million Colors  
128 MB memory

## OPTIONAL ENCODING

- Magnetic Stripe Encoding
- ISO7811 (Track 1,2,3), Coercivity (HiCo & LoCo)
  - JIS II \*Non-ISO mag stripe encoding upon request
    - Contact Smart Card Encoding - ISO7816
    - EMV Level 1 (PC/SC, serial)
  - Contactless Smart Card Encoding
  - ISO14443A/B, ISO15693, Mifare
- \* Other types upon request

## CERTIFICATION

FCC Class A  
CE (EN 55022 Class A, EN 55024), CCC, KCC  
Energy Star  
RoHs



## CARD

Card Type: PVC and Composite PVC Cards  
Card Thickness: 15 mil ~ 40 mil card  
Card Format: ISO CR80 – ISO 7810  
(3.370 in. x 2.125 in.)

## Capacity

- Input Hopper: 100 cards (30 mil)
  - Up too 200 cards with dual hopper option
  - Output hopper: 60 cards (30 mil)
  - Manual single feed: 1 card input
- \* Input/Output hopper is not available for N10

## INTERFACE

USB2.0 (High Speed)  
Built in 10/100 Ethernet IP  
Port (optional)  
WIFI (optional)

## POWER

Input  
AC 100V~240V, 50/60 HZ  
Output  
DC 24V, 2.5A

## SECURITY

Kensington Physical  
Lock Slot  
Hopper Lock  
(N20/N30)  
Optional  
Top Cover Lock  
Ribbon Lock  
(optional)

## PRINTER DIMENSIONS & WEIGHT

Dimensions  
N10: 12.03 (L) x 7.24 (W) x 8.98 (H) in.  
N20/N30: 14.40 (L) x 7.24 (W) x 8.98 (H) in.  
Weight  
N10 – 8.1 lbs  
N20/N30 – 9.9 lbs

## CONSUMABLE (Ribbon)

YMCKO: 200 prints/roll  
YMCKO-K: 170 prints/roll  
Half YMCKO: 400 prints/roll  
KO: 500 prints/roll  
Monochrome Ribbon: 1000 prints/roll  
Automatic identification or ribbon type and set up  
Monochrome Ribbon Type  
(Blue, Red, Green, White, Metallic Gold, Metallic Silver)

\* Strongly recommended for optimal printing quality, proper printer performance and longest lifespan of your print head

## DRIVER & SOFTWARE

Operating System  
Windows Vista, Windows 7, 8 & 10,  
Windows 2003/2008 Server  
Software Package  
Card Designer™ for Easy Printing  
Font: True Type Fonts via Windows Drivers

## PACKAGING CONTENT

Printer  
Quick Start Manual  
CD-ROM (Driver, Software & User Manual)  
USB Printer Cable  
Cleaning Roller and Card (CR-80)  
Power Supply and Cord

## PRINTING SPEED \*Under specific conditions

- Full-Color Printing
- Single Side: 180 ~ 200 cards / hour
  - Dual Side: YMCKOK 140 / hour
    - YMCKO 95 / hour
  - Monochrome Printing
  - 800 cards / hour

## OPERATING ENVIRONMENT

Min/Max Operating Temperature: (5~40° C),  
(41~104° F)  
Humidity: 20% to 65% non-condensing  
Min/Max Storage Temperature: (10~60° C),  
(14~140° F)  
Storage Humidity: 20% to 70% non-condensing

## CLEANING KIT (Sold Separately)

Standard Kit  
T-Card 2 pcs, CR-80 Cleaning Card 2 pcs,  
Alcohol Swab 3 pcs  
Advanced Kit  
T-Card 3 pcs, CR-80 Cleaning Card 5 pcs, Alcohol  
Swab 7 pcs, Thermal Cleaning Pen 1 pc



## DISPLAY

4-Line White LCD Indicates Status of Printer  
LEDs Notifications of Empty/Low Level Ribbon,  
Empty Input Hopper, Error

## WARRANTY

Printer 5 years  
Printer Head 3 years  
\* Under Specific Conditions

# Hybrid Reader

## ED1 - 9800 Series

### Overview:

A manual insertion type of MS & IC card reader that reads up to three tracks of MS data and reads/writes IC card. It can be easily programmed & configured to match application and communication requirements from customers. It combines MS & IC card reading capabilities into a compact solution and will be your ideal choice for demanding OEM applications.

### Features:

- ❖ Triple DES Encryption
- ❖ Mag Stripe Card Read
- ❖ IC Contact Card Read/Write
- ❖ T=0, T=1 Protocol
- ❖ Easy to Upgrade Firmware
- ❖ USB Interface & USB Powered (5V)
- ❖ LED Indicators
- ❖ Solenoid Locking
- ❖ EMV Level 1

### Applications:

- ATM / Cash Dispenser
- Vending Machine
- Kiosk (information & payment)
- POS System



### Technical Specifications:

Card Standard	Magnetic - ISO-7810, 7811; IC - ISO-7816
Power	DC 5V $\pm$ 5%
Communication	TTL / RS-232C / USB
Life Time	Mag Head: Min. 500,000 cycles; IC Contacts: Min. 700,000 contacts
Environment	Operation: 5 ~ 50°C / 0 ~ 90% RH; Storage: -20 ~ 70°C / 0 ~ 90% RH
Dimensions	99 x 73 x 120 mm

# Manual Insert Mag, IC & RF Card Reader ED1F-9880S

## Overview:

ED1F-9880S is an all in one manual insertion type magnetic, IC & RFID card reader for POS terminal, access control, ATM, vending machines, Kiosks, etc. The various RFID card type support will be added continuously.

## Features:

- ❖ Mag. stripe card reader
- ❖ IC card read/write
- ❖ T=0, T=1 protocol
- ❖ Mifare 1K, 4K, ISO 14443 A/B
- ❖ EMV level 1 compatible
- ❖ High reliability & durability
- ❖ USB & RS-232C interface
- ❖ LED indicators
- ❖ Solenoid lock
- ❖ Triple DES Encryption
- ❖ Easy to upgrade firmware



## Specifications:

	Specification	Remark
Card Standard	ISO-7811, ISO-7816, ISO 14443 A/B	
Communication	RS-232C , USB	
Power	DC 5V $\pm$ 5%	
Life-time	Head: Min. 500,000 cycles IC Contact: Min. 700,000 contacts	
Environment	Operation: 0~50°C / 20~90%RH Storage: -20~70°C / 0~95%RH	No condensing
Dimensions	85 (W) x 41 (H) x 145 (D) (mm)	



# IC/Magnetic Card Reader/Writer

## KDR/KDM - 9800 Series

### Overview:

A manual insertion type of MS & IC card reader that reads up to three tracks of MS data and reads/writes IC card. It can be easily programmed & configured to match application and communication requirements from customers. It combines MS & IC card reading capabilities into a compact solution and will be your ideal choice for demanding OEM applications.

### Features:

- ❖ Mag Stripe Card Read
- ❖ IC Contact Card Read/Write
- ❖ Easy to Upgrade Firmware
- ❖ USB Interface & USB Powered (5V)
- ❖ LED Indicators
- ❖ Solenoid Locking
- ❖ EMV 3.1.1



### Applications:

- ATM / Cash Dispenser
- Vending Machine
- Kiosk (information & payment)
- POS System

### Technical Specifications:

Card Standard	Magnetic - ISO-7816; IC - ISO-7811 (option)
Power	+ 5V DC $\pm$ 5%
Communication	TTL / RS-232C / USB
Life Time	Mag Head: Min. 500,000 cycles; IC Contacts: Min. 350,000 contacts
Environment	Operation: 0°C ~ 50°C / 20 ~ 90% RH; Storage: -20 ~ 70°C / 0 ~ 95% RH
Dimensions	92.0 (L) x 85 (W) x 32.5 (H) mm

# Hybrid Reader

## ED1 - 9600 Series

### Overview:

A hybrid insertion type card reader that decodes up to three tracks of magnetic data as well as reads/writes to smart cards. This industry standard footprint reader is used throughout the world in self-service, payphone and banking applications for more than a decade. This reader has the lower power consumption compared to the solenoid locking system and provides reliability and durability in any self-service application.

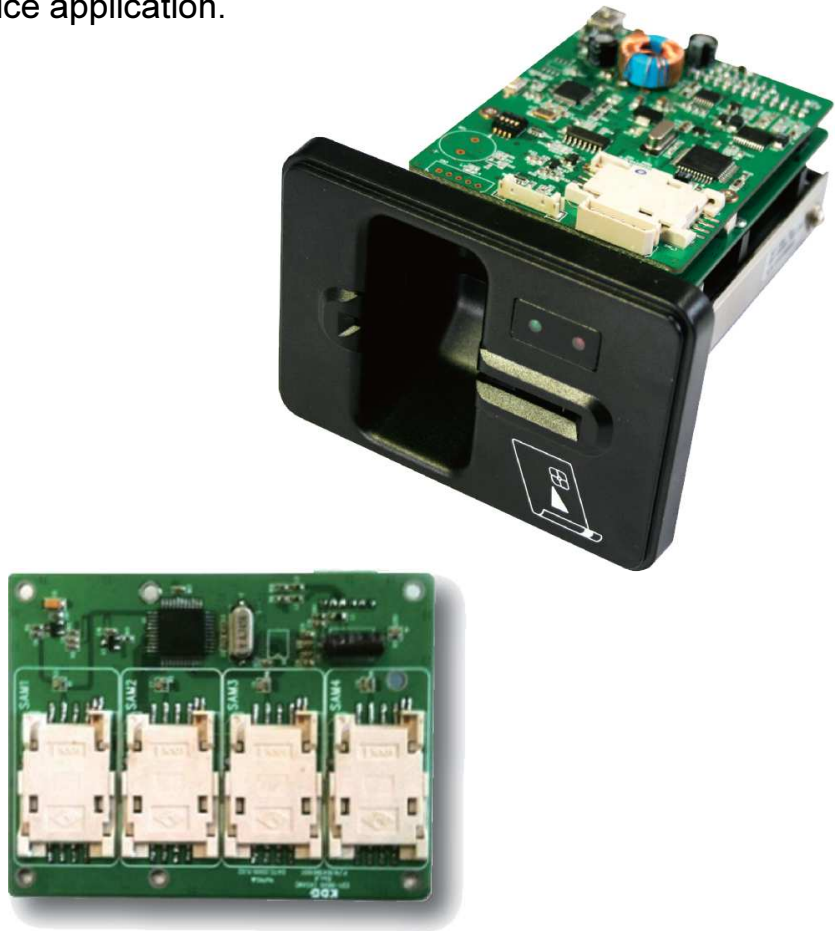
### Features:

- ❖ Triple DES Encryption
- ❖ Mag Stripe Card Read
- ❖ IC Contact Card Read/Write
- ❖ T=0, T=1 Protocol
- ❖ Easy to Upgrade Firmware
- ❖ 1 x SAM / 4 x SAM module (option)
- ❖ LED Indicators
- ❖ Motor Locking
- ❖ EMV Level 1

### Applications:

- ATM / Cash Dispenser
- Vending Machine
- Kiosk (information & payment)
- POS System

### Technical Specifications:



Card Standard	Magnetic - ISO-7810, 7811; IC - ISO-7816
Power	DC 5V $\pm$ 5%
Communication	TTL / RS-232C / USB
Life Time	Mag Head: Min. 500,000 cycles; IC Contacts: Min. 700,000 contacts
Environment	Operation: 5 ~ 50°C / 0 ~ 90% RH; Storage: -20 ~ 70°C / 0 ~ 90% RH
Dimensions	99 x 73 x 120 mm

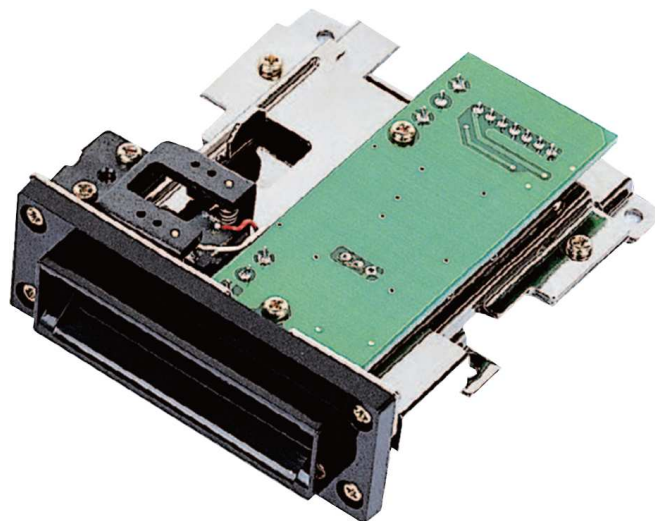
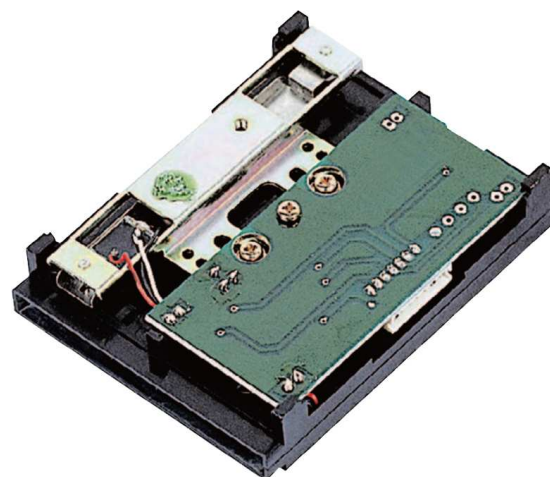
# Manual Insertion Reader KDR-3000 Series

## Overview:

Reads single or dual track magnetic stripe with ISO standards. This reader is especially useful in gaming applications and for a host of applications where space is limited. It functions reliably over a various range of operating speed and operation is extremely simple. The reader is intended to be mounted onto the front panel of the user's terminal or other equipment.

## Features:

- ❖ Proven & Tested to Last a Minimum of 1,000,000
- ❖ ISO-1,2,3 Single or Dual Track Read
- ❖ Low Power Consumption: Max. 8mA
- ❖ TTL, RS-232C and USB Interface
- ❖ GDS Protocol is Available (KDU-3907 only)
- ❖ Card Present Switch
- ❖ Power Supply: DC 5V  $\pm$  5%



## Applications:

- ATM
- Vending Machine
- Kiosk (information & payment)
- POS System

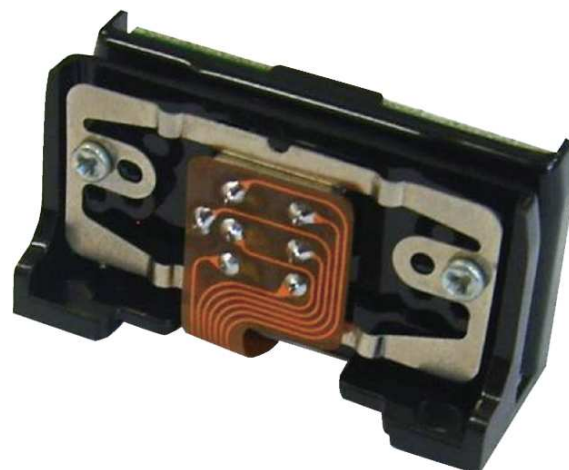
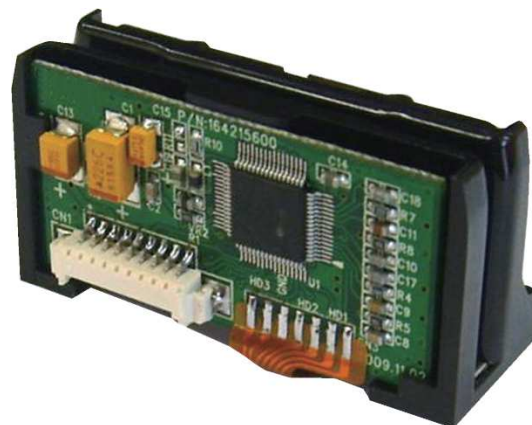
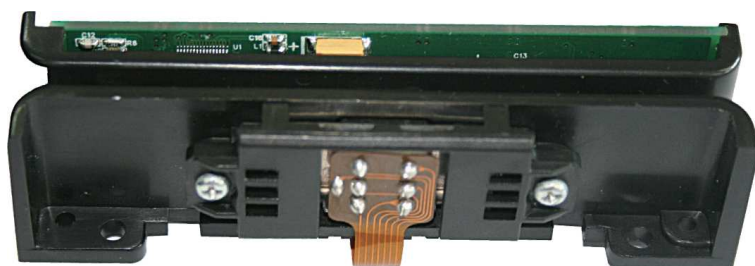
## Model Name Configuration:

KD	<input type="text"/>	-	3	<input type="text"/>	<input type="text"/>	<input type="text"/>
	R: TTL M: RS-232C U: USB			7: Metal Housing / Micro Switch 8: Plastic Housing / Micro Switch 9: Customized	1: ISO-1 track 2: ISO-2 track 3: ISO-3 track 5: ISO-1&2 track 6: ISO-2&3 track	0: Default

# Manual Swipe Reader KDR-1000 Series

## Overview:

A Magnetic Stripe Reader for OEM applications. It reads up to three tracks of data with a single swipe in bi-direction. Its various sizes and mounting options make it a perfect fit for reading magnetic stripes in any OEM application. This reader is available in custom configurations including intelligent interfaces and custom cable/connector options.



## Features:

- ❖ ISO-1,2,3 Full Track Read (Lo-Co/Hi-Co)
- ❖ Bi-directional Read Capability
- ❖ Various Sizes & Multiple Standard Footprints
- ❖ Special Custom Configurations are available
- ❖ Ivory Color is Available at Option
- ❖ Cover is Available at Option (KDR-1100 & 1300)
- ❖ RS-232C is Available at KDM-1480 only

## Applications:

- ATM
- Vending Machine
- Kiosk (information & payment)
- POS System

## Model Name Configuration:

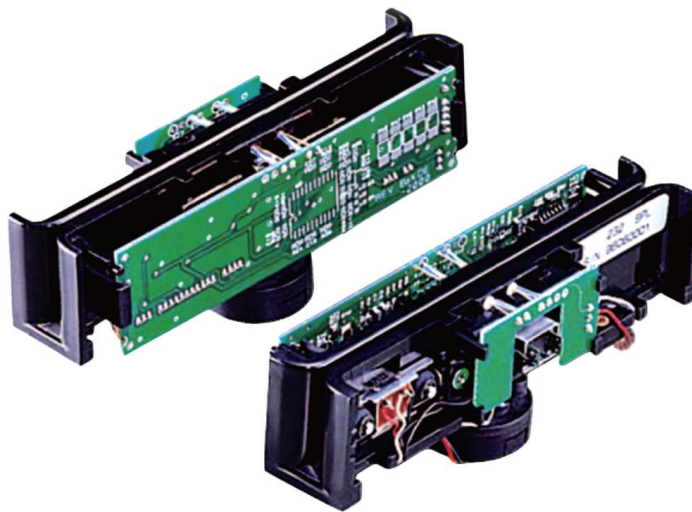
KD		-	1			
	R: TTL M: RS-232C			1: 20.5 x 99.5 x 25 mm 3: 27 x 100 x 28.5 mm 4: 21 x 90 x 24 mm 5: 23 x 43.5 x 23 mm 8: 36 x 214 x 35 mm 9: Customized	1: ISO-1 track 2: ISO-2 track 3: ISO-3 track 5: ISO-1&2 track 6: ISO-2&3 track 8: ISO-1&2&3 track	0: No option 1: With cover 2: With GND Lug



# Manual Swipe Reader/Writer KDR-2000

## Overview:

A Magnetic Stripe Reader/Writer for OEM applications. It reads/writes on a single track in ISO standard recording densities of 210bpi (ISO 1 & 3 track) and 75bpi (2 track) and writes both Lo-Co and Hi-Co cards. This reader/writer provides stability, reliability and accuracy required for ISO standards in the card reading/writing process.



## Features:

- ❖ ISO-1,2,3 Full Track Read-after-Write (Lo-Co/Hi-Co)
- ❖ JIS Standard is Applicable
- ❖ 3-Dimensional Head Mounting Design Achieves Optimal Adhesion with Minimal Wear
- ❖ Universal Head Mounting makes Switching between Tracks Quick and Easy
- ❖ Low Power Consumption Results in Optimum Circuit and System Designs
- ❖ Customized Mechanical Designs for Housing and Special Signal Interfaces are Available
- ❖ Industrial Long Lifetime Heads up to a Maximum 1 Million Passes can be Provided at Option

## Applications:

- ATM
- Vending Machine
- Kiosk (information & payment)
- POS System



# Manual Swipe Reader

## KT-1000/2000/3000 Series

### Overview:

KT-1000/2000/3000 & MKT-3000 is an intelligent, programmable magnetic stripe reader. It reads up to three tracks of information with a single swipe, has a buzzer and two-color LED indicator to signal a successful read. Data format and intelligent interface output can be programmed and configured to match application and communication requirements.

### Features:

- ❖ Keyboard Wedge / RS232C / USB Interface
- ❖ ISO-1,2,3 Full Track Read (Lo-Co / Hi-Co)
- ❖ 12Mbps High Speed Communication
- ❖ No External Power Supply Needed
- ❖ Buzzer and Two-Color LED Indicator

### Applications:

- ATM
- Vending Machine
- Kiosk (information & payment)
- POS System



### Model Name Configuration:

<input type="text"/>	KT	-	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Blank: Standard Size M: Mini Size			1: Keyboard Wedge 2: RS232C 3: USB  DU: Dual Head & Bi-Directional	2: Default 9: Customized	1: ISO-1 track 2: ISO-2 track 3: ISO-3 track 5: ISO-1&2 track 6: ISO-2&3 track 8: ISO-1&2&3 track	0: Din Type 1: Mini Din Type (Only for KT-1000) Series

# Manual Swipe Reader

## KTDU-2200

### Overview:

A Manual Swipe Type Magnetic Card Reader with USB Keyboard (USB-HID) interface and no need to install driver (PC auto detects this device). It can read up to 3 tracks of information bi-directionally and enhances the usability and adds flexibility.

### Features:

- ❖ Reads ISO-1,2,3 Tracks, Bi-directionally
- ❖ USB HID Interface (no need to install driver)
- ❖ Dual Headed and Bi-directional Swipe Type
- ❖ USB Interface & USB Powered (5V)
- ❖ LED Indicator



### Applications:

- ATM
- Vending Machine
- Kiosk (information & payment)
- POS System

### Model Name Configuration:

	KT	-				
Blank: Standard Size M: Mini Size			1: Keyboard Wedge 2: RS232C 3: USB  DU: Dual Head & Bi-Directional	2: Default 9: Customized	1: ISO-1 track 2: ISO-2 track 3: ISO-3 track 5: ISO-1&2 track 6: ISO-2&3 track 8: ISO-1&2&3 track	0: Din Type 1: Mini Din Type (Only for KT-1000) Series

# Manual Swipe Reader/Writer ZT-2000

## Overview:

ZT-2000 reads/writes data and then verifies the encoding on one of any of the 3 tracks. It reads/writes on Lo-Co cards. A customized software interface is applicable and it makes the read/write process quick, easy and verifiable. This reader/writer provides stability, reliability and accuracy required for ISO standards in the card read/write process and has a buzzer and five LED indicators to signal a successful read.



## Features:

- ❖ ISO-1 or -2 or -3 Full Track Read-after-Write (Lo-Co)
- ❖ Buzzer and Five LED Indicators
- ❖ Die Cast Housing for Stability & Operating Life
- ❖ Writes any Track Combinations of 210 and/or 75 bpi Data Density
- ❖ Operating Life Exceeds 1,000,000 Card Swipes

## Applications:

- ATM
- Vending Machine
- Kiosk (information & payment)
- POS System

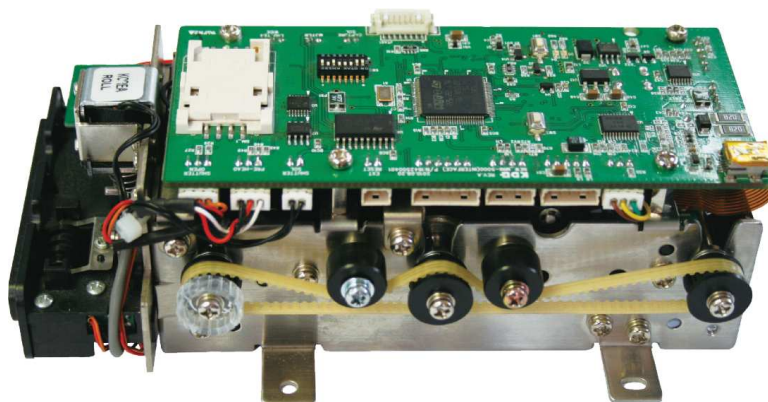
# Motorized Reader ESM-5000 Series

## Overview:

A compact sized motorized insertion type card reader which provides high reliability and its mechanism which offers accurate and efficient card reading for kiosks, payment systems, parking systems, etc. Its robust design and superior components withstand the most severe operating conditions. Various options provide high flexibility for customers applications.

## Features:

- ❖ Cycle Counting for Head, Solenoid, Flash Write
- ❖ Triple DES Encryption
- ❖ Mag Stripe Card Read
- ❖ IC Contact Card Read/Write
- ❖ T=0, T=1 Protocol (default)  
Customized Protocol available
- ❖ Easy to Upgrade Firmware
- ❖ Electric Shutter Available
- ❖ EMV Level 1 / PBOC



## Applications:

- ATM / Cash Dispenser
- Vending Machine
- Kiosk (information & payment)
- POS System

## Technical Specifications:

Card Standard	Magnetic – ISO-7810, 7811; IC – ISO/IEC-7816-3: 1997
Power	DC 24V $\pm$ 10%
Communication	TTL / RS-232C / USB
Life Time	Mag Head: Min. 500,000 cycles; IC Contacts: Min. 700,000 contacts
Feeding Speed	350 mm/sec. + 20%
Environment	Operation: 5 ~ 50°C / 20 ~ 90% RH; Storage: -20 ~ 70°C / 0 ~ 90% RH
Dimensions	90 x 66 x 163 mm

# Head Assembly Module

## KHT-1400

### Overview:

Head Assembly type module that reads magnetically encoded data from magnetic stripes that conform to ISO standards. Head Assembly type module is composed of a magnetic head assembly and circuit board attached to the head.

### Features:

- ❖ Card Standard: ISO-7810, 7811
- ❖ ISO-1,2,3 Full Track Read (LoCo / HiCo)
- ❖ F-PCB Mesh Type
- ❖ Universal Head Mounting Makes Switching Between Tracks Quick and Easy



### Technical Specifications:

	Specification
Operating Voltage	3.3V DC +/- 5%
Ripple	Less then 50 mVp-p
Power Consumption	Less then 5.0 mA
Feeding Speed	15 ~ 95 cm/sec
Head Life Time	1,000,000 passes minimum
Operating Temperature	0°C ~ 50°C, 20 ~ 90% RH
Storage Temperature	-20°C ~ 70°C, less than 95% RH
Dimensions	38 (W) x 62.55 (D) x 9 (H) (mm)



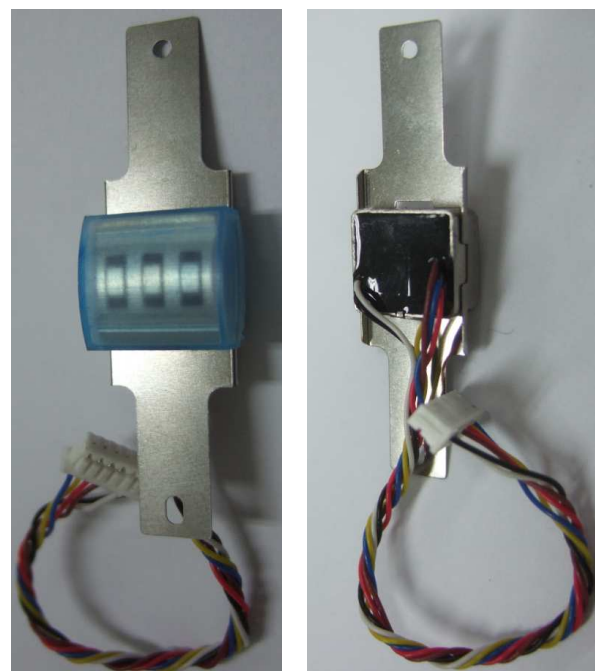
# PCI Compliant Read Head MMD-1900

## Overview:

MMD1900 integrates the magnetic card reader function with data encryption. Upon reception of the magnetic head signals, the card data is recovered, encrypted, and transferred to the external device via universal asynchronous receiver and transmitter (UART) or serial peripheral interface (SPI). It supports up to 3 track card reading at the same time. Signal processing techniques are employed to recover F2F encoded data reliably from head signals with severe fluctuation of signal amplitude, widely varying bit interval, and jittery bit position. The recovered data is encrypted with the 128 bit AES. This head can be ordered in any of our insert or swipe readers.

## Features:

- ❖ Full Three Tracks Support
- ❖ Signal Conditioning Adapted to Head Signal
- ❖ Flexible External Interface: UART or SPI
- ❖ ISO/IEC 7811 and Binary Data Format Support
- ❖ Encrypt all Track Data
- ❖ Power Down Mode for Low Power Consumption
- ❖ Wide Range of Card Swipe Speeds: from 5 to 150 cm/s
- ❖ Secure Data Transfer with 128 bit AES Encryption: CBC Mode
- ❖ **DUKPT key management** (Derived Unique Key Per Transaction)
- ❖ Digital Signal Processing for Superior Data Recovery Performance
- ❖ Development Kits Available



## Technical Specifications:

Card Standard	ISO 7810/7811 and AAMVA
Card Speed	10 ~ 120 cm/sec (4-50 inch/sec)
Head Life Time	300,000 passes minimum
Operating Temperature	-40°C ~ +70°C
Storage Temperature	-40°C ~ +70°C
Power Input	3.0 – 3.6 VDC
Interface	SPI (Option: UART)
Message Format	ASCII

# PCI Compliant Read Head

## MMD-1901/1902 – 90mm Track

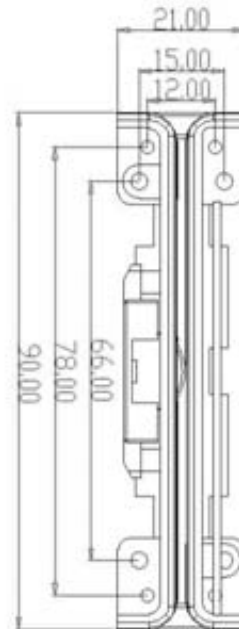
### Overview:

MMD1901/1902 integrates the magnetic card reader function with data encryption. Upon reception of the magnetic head signals, the card data is recovered, encrypted, and transferred to the external device via universal asynchronous receiver and transmitter (UART) or serial peripheral interface (SPI). It supports up to 3 track card reading at the same time. Signal processing techniques are employed to recover F2F encoded data reliably from head signals with severe fluctuation of signal amplitude, widely varying bit interval, and jittery bit position. The recovered data is encrypted with the 128 bit AES.

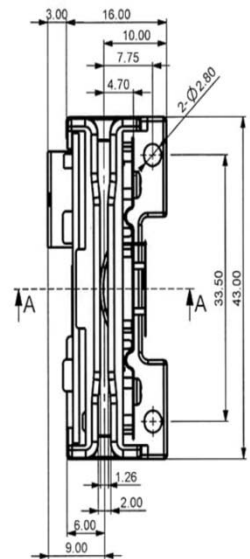
### Features:

- ❖ Wide Range of Card Swipe Speeds: from 5 to 150 cm/s
- ❖ Signal Conditioning Adapted to Head Signal
- ❖ Flexible External Interface: UART or SPI
- ❖ ISO/IEC 7811 and Binary Data Format Support
- ❖ Encrypt all Track Data
- ❖ Power Down Mode for Low Power Consumption
- ❖ Full Three Tracks Support
- ❖ Secure Data Transfer with 128 bit AES Encryption: CBC Mode
- ❖ **DUKPT key management** (Derived Unique Key Per Transaction)
- ❖ Digital Signal Processing for Superior Data Recovery Performance
- ❖ Development Kits Available

MMD-1901



MMD-1902



### Technical Specifications:

Card Standard	ISO 7810/7811 and AAMVA
Card Speed	10 ~ 120 cm/sec (4-50 inch/sec)
Head Life Time	300,000 passes minimum
Operating Temperature	-40°C ~ +70°C
Storage Temperature	-40°C ~ +70°C
Power Input	3.0 – 3.6 VDC
Interface	SPI (Option: UART)
Message Format	ASCII

# Head Assembly Module

## KDM-1900

### Overview:

KDM-1903 magnetic stripe card reader module reads up to three tracks (LoCo / HiCo) of information with a single swipe. Magnetic stripe data is output to UART TTL.

### Features:

- ❖ Card Standard: ISO-7810, 7811
- ❖ ISO-1,2,3 Full Track Read (LoCo / HiCo)
- ❖ UART TTL Level Serial Interface
- ❖ Compliance with PCI
- ❖ PCB / F-PCB Mesh Type



### Technical Specifications:

	Specifications	Remarks
Operating Voltage	3.3V DC +/- 5%	
Ripple	Less then 50 mVp-p	
Current	Less then 5.0 mA	
Feeding Speed	15 ~ 95 cm/sec	
Head Life Time	1,000,000 passes minimum	
Operating Temperature	0°C ~ +50°C, 20 ~ 90% RH	Non-Condensing
Storage Temperature	-20°C ~ 70°C, 10 ~ 90% RH	Non-Condensing
Dimensions	61 (H) x 49.3 (W) x 1.6 (D) (mm)	

# Motorized Card Encoder

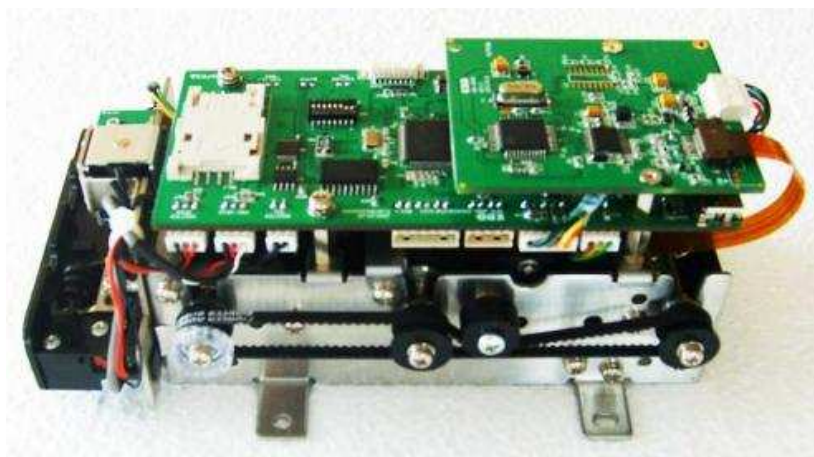
## ES1-5XXX Windows & Android Series

### Overview:

ES1-5XXX series are compact sized motorized insertion type card readers providing high reliability in a space saving device. The mechanism offers accurate and efficient mag card reader and Contact IC Read/Write for hotel keycard issuing, kiosks, payment systems, parking systems, POS, etc.

### Features:

- ❖ Magnetic Stripe Card Reader
- ❖ IC Contact Card Reader & Writer
- ❖ T=0, T=1 Protocol
- ❖ Electronic Shutter
- ❖ EMV Level 1 / PBOC
- ❖ RS-232C, USB Interface
- ❖ Triple DES Encryption
- ❖ Anti-Skimming
- ❖ Easy to Upgrade Firmware



### ❖ SDK for Windows & Linux/Android

Android Developer can expand the business field to the card reader/writer with ES1-5XXX card reader module which is equipped with Android assistance.

### Technical Specifications:

	Specification	Remarks
Card Standard	ISO-7810 ISO / 1EC7816-3:1997	ISO-1, 2 & 3 tracks
Communication	RS-232 or USB	
Power	24VDC $\pm$ 10%	
Life-Time	Mag Head: 2,000,000 cycles IC Contact: 700,000 contacts	
Environment	Operating: -10°C ~ 70°C / 0 ~ 90% RH Storage: -20°C ~ 80°C / 0 ~ 90% RH	Non-Condensing
Dimensions	163 x 90 x 66 mm	

# Motorized Reader/Writer

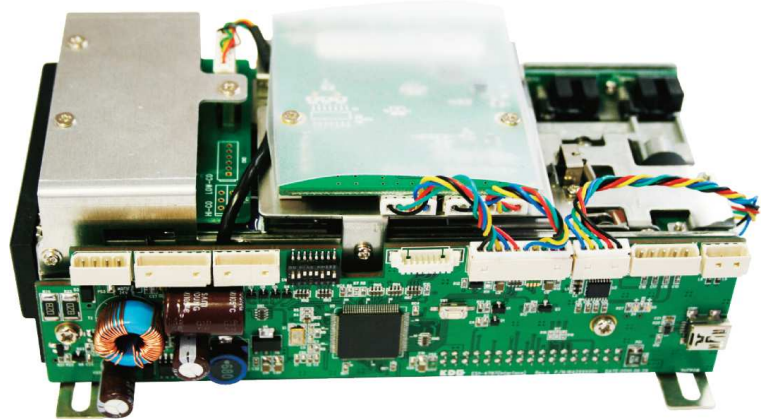
## ESM-4000 Series

### Overview:

A motorized insertion type of MS & IC card reader/writer module with RS-232C interface which encodes/decodes data on triple tracks of MS & IC card in accordance with ISO-7810, 7811/7816. This is a high reliable, durable device which offers accurate and efficient card encoding for customer business and industrial applications.

### Features:

- ❖ Triple DES Encryption
- ❖ Mag Stripe Card Read/Write
- ❖ IC Contact Card Read/Write
- ❖ RF Card Read/Write (option)
- ❖ Write LoCo / HiCo
- ❖ T=0, T=1 Protocol (default)  
Customized Protocol available
- ❖ Easy to Upgrade Firmware
- ❖ Electric or Mechanical Shutter Available
- ❖ EMV Level 1
- ❖ Slim Type



### Applications:

- ATM / Cash Dispenser
- Kiosk (information & payment)
- Door Lock System
- Parking Lot System
- Vending Machine
- POS System
- Highway Tollgate System

### Technical Specifications:

Card Standard	Magnetic – ISO-7810, 7811; IC – ISO/IEC-7816, SLE4418/28, SLE4442; RF – Mifare, ISO-14443 Type A,B
Power	DC 24V $\pm$ 10% (default) / DC 12V $\pm$ 10% (option)
Communication	TTL / RS-232C / USB
Life Time	Mag Head: Min. 2,000,000 cycles; IC Contacts: Min. 700,000 contacts
Feeding Speed	280 mm/sec. + 20%
Environment	Operation: 5 ~ 50°C / 20 ~ 90% RH; Storage: -20 ~ 70°C / 0 ~ 90% RH
Dimensions	99 x 59 x 192 mm



# Motorized Reader/Writer

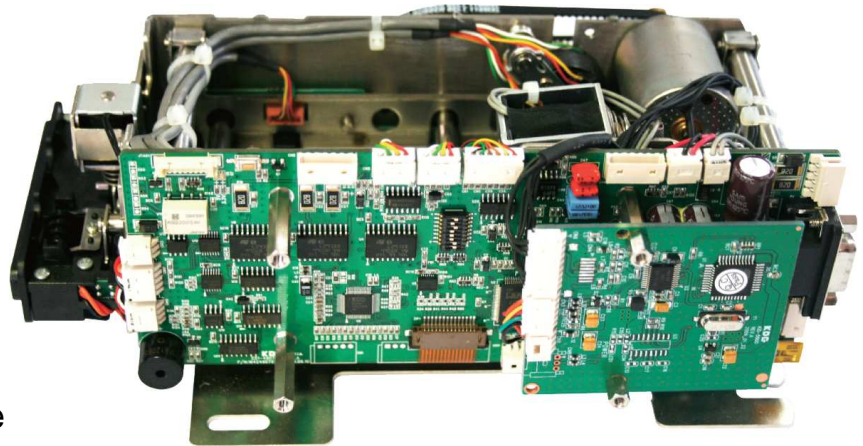
## EDM - 4000 Series

### Overview:

A motorized insertion type of MS & IC card reader/writer module with RS-232C interface which encodes/decodes data on triple tracks of MS & IC card in accordance with ISO-7810, 7811/7816. This is a high reliable, durable device which offers accurate and efficient card encoding for customer business and industrial applications.

### Features:

- ❖ Triple DES Encryption
- ❖ Mag Stripe Card Read/Write
- ❖ IC Contact Card Read/Write
- ❖ Write LoCo / HiCo
- ❖ T=0, T=1 Protocol (default)
- ❖ Customized Protocol available
- ❖ Easy to Upgrade Firmware
- ❖ 4 x SAM (option)
- ❖ Electric or Mechanical Shutter available



### Applications:

- ATM / Cash Dispenser
- Kiosk (information & payment)
- Door Lock System
- Parking Lot System
- Vending Machine
- POS System
- Highway Tollgate System

### Technical Specifications:

Card Standard	Magnetic – ISO-7810, 7811; IC – ISO/IEC-7816, SLE4418/28, SLE4442
Power	DC 24V $\pm$ 10% (default) / DC 12V $\pm$ 10% (option)
Communication	TTL / RS-232C / USB
Life Time	Mag Head: Min. 2,000,000 cycles; IC Contacts: Min. 700,000 contacts
Feeding Speed	300 mm/sec. + 10%
Environment	Operation: 5 ~ 50°C / 20 ~ 90% RH; Storage: -20 ~ 70°C / 0 ~ 90% RH
Dimensions	129 x 82 x 207 mm

# Motorized Reader/Writer Terminal ESTF-4950



## Features

- Auto Sensing Lo - Hi Co Mag
- Read / Write All 3 Tracks
- Smart Card ISO-7811/ 7816/ 1443AB
- EMV 4.0 Compliant
- RFID ISO-1443AB, Mifare

## Options

- Triple DES Encryption
- Raw or Custom Mag Data Format
- LED or LCD Indicators
- Custom Labeling

## Read and Write to 3 Card Types Inside 1 Unit

- Triple Track Mag Stripe
- Contact Smart Card
- RFID Card

## 3 Interfaces Standard

- USB
- RS-232
- Ethernet

# Motorized Reader/Writer Terminal

## ESTF-4950

### Technical Specifications:

Item	Specification	Remarks
MS	ISO-7811 Read / Write All 3 Tracks Hi-Co/Lo-Co Capable – F2F Reading Method Dip Switch Selectable 4,000,000 Pass Head	ISO - 1, 2 & 3 Track  Options: Raw or Custom Data Format
IC	ISO / IEC 7816, 7818 EMV – 4.0 Contact Landing Type	Choose your card and we will make it compatible
RFID	13.56 Mhz ISO 14443 Type A & B Mifare 1K – 4K Ultra Light Support	Choose your card and we will make it compatible
Card Feeding Speed	400mm / sec $\pm$ 10%	
Power	+ 24Vdc $\pm$ 10%, 2A + 5Vdc $\pm$ 10% Ripple: Less than 200m Vp-p (24 Vdc) Less than 100m Vp-p (5 Vdc)	
Dimensions	4.05" (W) x 9.64" (D) x 5.39" (H) 103 (W) x 245 (D) x 137 (H) mm	
Weight	4.5 lbs 2.03 kg	

# Motorized Reader/Writer

## EST-4000 Series

### Overview:

A motorized slim type MS & IC card reader/writer terminal with RS-232C & USB interface which encodes/decodes data on triple tracks of MS & IC card in accordance with ISO-7810, 7811/7816. It has a built-in power supply and LED's which indicates the status of its operation. This is a highly reliable and durable device.

### Features:

- ❖ Cycle Counting for Head, Solenoid, Flash Write
- ❖ Triple DES Encryption
- ❖ Mag Stripe Card Read/Write
- ❖ IC Contact Card Read/Write
- ❖ Write LoCo / HiCo
- ❖ T=0, T=1 Protocol (default)  
Customized Protocol available
- ❖ Easy to Upgrade Firmware
- ❖ EMV Level 1



### Applications:

- Door Lock System
- Parking Lot System
- Highway Tollgate System

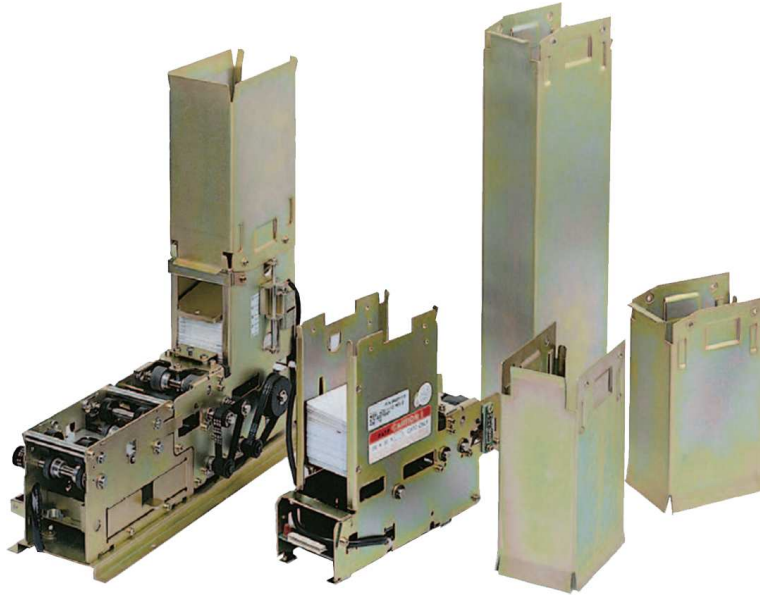
### Technical Specifications:

Card Standard	Magnetic – ISO-7810, 7811; IC – ISO/IEC-7816, SLE4418/28, SLE4442;
Power	AC 110 ~ 220V, 50 ~ 60hz
Communication	RS-232C / USB / LAN
Life Time	Mag Head: Min. 2,000,000 cycles; IC Contacts: Min. 700,000 contacts
Feeding Speed	280 mm/sec. + 20%
Environment	Operation: 5 ~ 50°C / 20 ~ 90% RH; Storage: -20 ~ 70°C / 0 ~ 90% RH
Dimensions	148 x 100 x 225 mm

# Card Issuing Module / Card Dispenser KCD-1000

## Overview:

A flexible card dispenser with many various options and is applicable to various systems such as kiosks. It can be combined with card reader/writers and has a rugged design intended for industrial applications with TTL and RS-232C interfaces.



## Features:

- ❖ Designed Against Overlapped Cards Dispensing
- ❖ Card Low Detection Signal
- ❖ Card Empty Detection
- ❖ Extension Hopper: 300 & 500 pieces
- ❖ RF Module can be Equipped at Option
- ❖ TTL and RS-232C Interface
- ❖ Various Options are Available:  
(Error Card Capture, Remaining Card Indication, etc.)

## Applications:

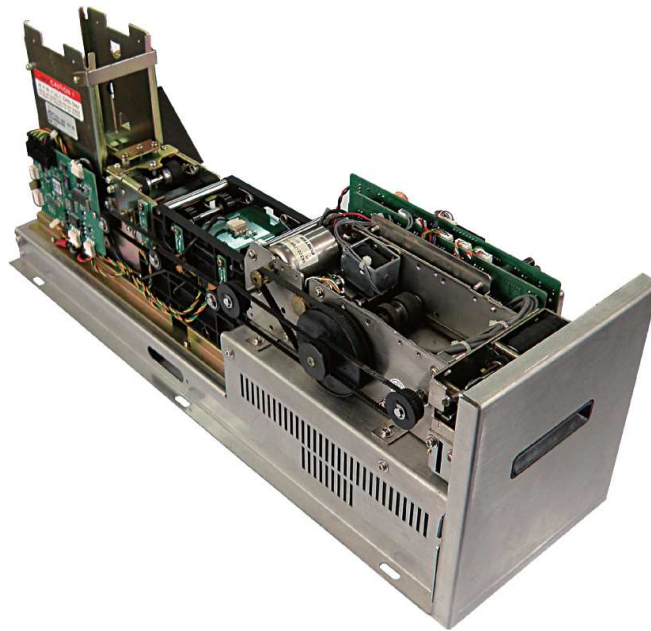
- Kiosk (information & payment)
- POS System
- Parking Lot System
- Highway Tollgate System



# Card Issuing Module / Card Dispenser CIM-4000

## Overview:

A motorized insertion type of magnetic stripe card reader / writer with RS-232C interface that can read/write data on three tracks of a magnetic stripe card in accordance with ISO-7810, 7811 and to read/write data on an IC card (T=0 / T=1 Protocol) in accordance with ISO-7816. The CIM-4000 is able to support binary code read/write.



## Features:

- ❖ Designed Against Overlapped Cards Dispensing
- ❖ Card Low Detection Signal
- ❖ Card Empty Detection
- ❖ Extension Hopper: 300 & 500 pieces
- ❖ RF Module can be Equipped at Option
- ❖ TTL and RS-232C Interface
- ❖ Various Options are Available:  
(Error Card Capture, Remaining Card Indication, etc.)

## Applications:

- Kiosk (information & payment)
- POS System
- Parking Lot System
- Highway Tollgate System

# NFC Reader/Writer SL-600

## Overview:

NFC SL600 is a HID compliant mini NFC reader/writer. This RFID model supports MIFARE™ Classic 1K, 4K, MIFARE Ultralight, MIFARE DESFire and NFC NFCIP-1 mode. The maximum working current is less than 60mA. It integrates all necessary components and antenna in the PCB.

## Features:

- ❖ USB HID Protocol Interface
- ❖ NFC
- ❖ MIFARE
- ❖ ISO-14443, ISO18092 NFCIP-1
- ❖ RF-Tag
- ❖ Current less than 60Ma@3.3V
- ❖ Operating Distance up to 50mm depending on tag



## Technical Specifications:

Tags Supported	Mifare 1k, 4k, Mifare Ultralight, Ultralight C and NTAG203
Tag Protocol	ISO14443, ISO18092 NFCIP-1 mode (text & url)
Temperature Range	Operating : -20°C ~ +55°C, Storage: -40°C ~ +75°C
Operating Frequency	13.56MHz RF
Supply Voltage	2.5 ~ 3.6 VDC Operating, I/O supports 5.0 VDC
Operating Distance	Up to 50mm, depending on tag
Size	110mm x 81mm x 26mm
Operating System	Windows 32bit/64bit and offering DLL for Windows 32bit/64bit

# NFC Reader/Writer Module

## SL-060

### Overview:

NFC Module SL060 is a mini NFC reader/writer. This RFID module supports MIFARE™ Classic 1K, 4K, MIFARE Ultralight, MIFARE DESFire and NFC NFCIP-1 mode. The maximum working current is less than 50mA. It integrates all necessary components and antenna in the PCB.

### Features:

- ❖ Built in antenna
- ❖ NFC
- ❖ MIFARE
- ❖ ISO-14443, ISO18092 NFCIP-1
- ❖ RF-Tag
- ❖ Current less than 50Ma@3.3V
- ❖ Operating Distance up to 50mm depending on tag



### Technical Specifications:

Tags Supported	Mifare 1k, 4k, Mifare Ultralight, Ultralight C and NTAG203
Tag Protocol	ISO14443, ISO18092 NFCIP-1 mode (text & url)
Temperature Range	Operating Range: -25°C ~ +70°C, Storage Range: -40°C ~ +85°C
Operating Frequency	13.56MHz RF
Supply Voltage	2.5 ~ 3.6 VDC Operating, I/O supports 5.0 VDC
Operating Distance	Up to 50mm, depending on tag
Module Size	46mm x 46mm x 3mm
Interface	UART, baud rate 9,600 ~ 115,200 bps (Default: 9600bps)

# Ticket Issuing Printer

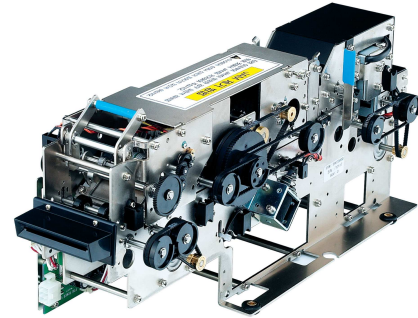
## TP - 7000

### Overview:

Ticket Printer for Railroad, Car Park, etc. with Thermal Printing on Fanfold Type Paper or PET Card.

### Features:

- ❖ 300 dpi High Quality Printing
- ❖ High Speed Issue 1.5 sec./sheet (Max)  
(Encoding & Verifying & Printing)
- ❖ Adopted 2 Magnetic Heads for Fast Processing
- ❖ Single Feed & Dual Feed (Optional)
- ❖ Fanfold & Roll Type Paper
- ❖ Front Loading Single Manual Printing
- ❖ Rugged Mechanism for Various Applications
- ❖ Read, Return Function
- ❖ Picture, Image Printing
- ❖ Barcode Printing (3 of 9, 2 of 5, KAN13, etc.)



### Technical Specifications:

Print Method	Direct Line Thermal
Print Speed	2 sec / sheet
Media	Auto, Manual Paper / Pet Card (85 mm x 54 mm)
Dot Pitch	300 dpi
TPH Life	100 km
Cutter Life Span	300,000 times (optionally 1,000,000 times)
Interface	RS-232C, USB 2.0
Counter Check	999,999 times, On-Line Connection Available
Power	AC 220V / 60 Hz
Operating Condition	5°C ~ 40°C
Dimensions	460 (H) x 195 (L) x 180 (W)

# Ticket Issuing Printer

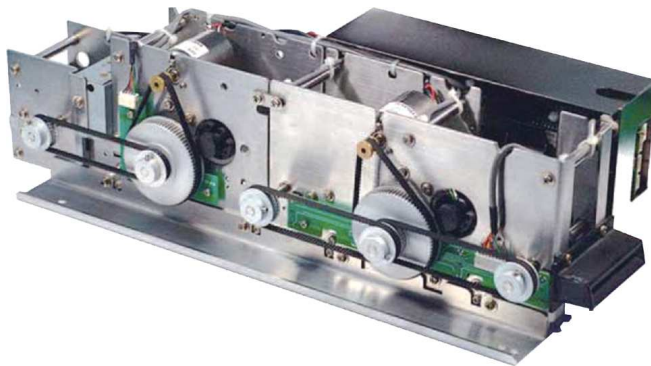
## MTI – 1000/2000

### Overview:

Ticket Printer for Car Parking, Tollgate, Access Control, Ticket Vending Machine, etc. with Thermal Printing on Continuous Paper or Card Stock.

### Features:

- ❖ 300 dpi High Quality Printing
- ❖ High Speed Issue 2.5 sec./sheet (Encoding & Verifying & Printing)
- ❖ Automatic Ticket Feeding
- ❖ Various Options Available
- ❖ IC Card Read / Write
- ❖ Error Card Capture



### Technical Specifications:

Print Method	Thermal
Print Speed	2.5 sec / sheet
Media	Auto, Manual Paper / Plastic Card (86.5 mm x 54 mm)
Dot Pitch	300 dpi
TPH Life	2,000,000 Cycle (1 Cycle = 2 Passes)
Life Span	2,000,000 Cycle (Issue)
Interface	RS-232C
Power	AC: 110/220V / 60 Hz
Operating Condition	5°C ~ 40°C
Dimensions	106 (H) x 396.3 (L) x 150 (W)