SOLID Series

SOLID-510S, SOLID-510D, SOLID-510L

User Manual





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Before returning any equipment for in-warranty or out-of warranty repair, contact an IDP Reseller or an IDP Service Center for a Return Materials Authorization (RMA) number. Repack the equipment in the original packing material and mark the RMA number clearly on the outside of the box. For more information about RMA or IDP warranty statements, refer to the Warranty booklet on the quick install guide.

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1. Introduction

1.1 Printer outside features

For the user's convenience, SOLID-510 status can be seen through LCD with LED and the printer can be controlled by two LED buttons. It takes a power via the 24V adaptor provided with the printer. Using USB and Network port, it is communicated with the user's PC

The following shows the outside functional features found on the printer.



 $\textcircled{1} \quad \textbf{Top cover open button}$

② External contactless Smartcard encoding position

- ③ Fan
- ④ Input hopper
- **(5)** LED buttons
- LCD show the process status

Figure 1 SOLID-510 front features



- ⑦ Backside card outlet
- (8) Stacker fixing Hole
- **9** Power switch
- 10 24V power connector
- 1 Network port

In case there is no network option, it is closed.

12 USB port

Figure 2 SOLID-510 rear features

There are three models in SOLID-510 card printer series such as SOLID-510S, SOLID-510D, SOLID-510L.

SOLID-510S (Figure.3) is the standard card printer. It can be printed in single side with the encoding. This manual is prepared based on SOLID-510S.

SOLID-510D (Figure.4) has a flipper which can enable to print in both sides. SOLID-510D can print the both side of the card with the encoding.

SOLID-510L (Figure.5) produces long-life cards for ID and access control with customizable security features and ability to print smart cards. To cater to expanding requirement in card security, SOLID-510L's DLW(Direct to Laminating in a Wink) technology provides the most stable & fast laminating solutions.



1.2 Printer inside features

In SOLID printer, the ribbon is installed by a ribbon cartridge which can be used semi permanently. The following shows the inside functional features found on your SOLID-510 printer.



Figure 6 SOLID-510 Inside features

① Output hopper(Stacker)

Collect the printed card and/or encoded cards. Maximum 40 cards are loaded and the extra printed/encoded card is passed out. It can be withdrawed when pulling forward.

2 Input hopper

Load the cards for printing. Maximum 100 cards are loaded when cover is closed; Maximum 200 cards are loaded when the cover is opened.

③ Card thickness control lever

Adjust the cards thickness.

④ Ribbon cartridge

Install the ribbon and the disposable cleaning roller.

(5) Thermal Print Head

This enables the cards to be printed.

(Caution!: This is very hot after printing. Do not contact the surface of the Thermal Print Head with fingers or a sharp metal object to avoid degrading print quality or damaging printer head permanently.)

1.3 Ribbon cartridge features

SOLID-510 printer uses the same ribbon cartridge as a SOLID-500's. (However, the ribbon for SOLID-510 is incompatible with SOLID-500's. The color of gear part of the ribbon for SOLID-510 is gray.)

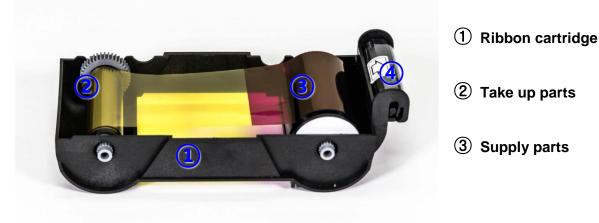


Figure 7 Ribbon cartridge features

1 Ribbon cartridge

- -. Install a ribbon and a disposable cleaning roller provided with the ribbon.
- -. This semi-permanent ribbon cartridge is a component of the printer. Printer does not operate if it is broken or damaged. In this case, please contact printer reseller.

② ③ Take up & Supply parts

-. Ribbon is wrapped to the supply parts as the Picture. It should be installed as the Figure.7

④ Disposable cleaning roller

-. It removes dust on the surface of card to improve print quality before the card is printed.

It should be changed together with the ribbon.

- -. After installing the disposable cleaning roller to the ribbon cartridge, peel off the protective film.
- -. It is provided with the ribbon.

1.4 Display and Buttons

Control panel of Printer consists of 2 lines LCD and 2 buttons. The 2 buttons have the functions as shown in the Figure 8.



Figure 8 SOLID-510 Display and Buttons

The status of SOLID-510 is 'Initializing' when boot up. It is changed to 'System Ready' if the printer is fine. It is change to 'Printing' when the printer is working. In case of sensing an error, it is changed to 'Error' status. Whenever the top cover is opened, the operation is stopped and the status is 'Top Cover Open'.

The functions of the button under each status are as below table.

Status	Left Button	Right Button
Initializing	N/A	N/A
	Ribbon Type/Balance	Sleep (Hold on 5 seconds)
	Laminating Film Type/ Balance	Initializing (When Sleep Mode)
	User Printed Counts	
	Do Test Print	Ok
System Ready	Network IP Address	
	Subnet	
	Gateway	
	Network MAC Address	
	Pulling out the card	
Printing	N/A	N/A
Error	Retry	Cancel
Top Cover Open	Move to backward a card	Move to forward a card
	Cleaning Mode (when both button	s are pushed)

2. Printer installation

2.1. Connecting a power and a USB cable

(1) SOLID-510S

Connect the power and USB cable as the below picture. Please refer to the 'Network Configuration' if you use the LAN connection.



Figure 9 SOLID-510S Connection of power and USB cable

(2) SOLID-510D

Connect the power and USB cable after turning the printer on its side as the below picture. Please refer to the 'Network Configuration' if you use the LAN connection.



Figure 10 SOLID-510D Connection of power and USB cable

(3) SOLID-510L

SOLID-510L needs two power cables. Connect powers and USB cable after turning the printer on its side as the below picture. Please refer to the 'Network Configuration' if you use the LAN connection.

SOLID-510L has two power switches so please turn on both switches.



Figure 11 SOLID-510L Connection of powers and USB cable - 1



Figure 12 SOLID-510L Connection of powers and USB cable - 2

2.2. Fitting the ribbon

Before printing, prepare the related items such as a card, a ribbon and a cleaning roller. In this section we invite you to know the proper method of installing the ribbon and the cleaning roller into the printer.

(1) Turn off the printer

(2) Open the printer top cover by pressing the top cover open button.



Figure 13 Top Cover open

(3) Take out the ribbon cartridge.



Figure 14 Take out the ribbon cartridge

(4) Install a ribbon into the ribbon cartridge as the right picture.



Figure 15 Loading the ribbon 1

(5) Insert the supply side of the ribbon to no.1 hole and press the opposite (no.2). Insert the take-up side of the ribbon same method to no.3 and no.4. After inserting, tighten the ribbon.

(Caution! If the ribbon is not tightened, a rolling up error might be happened.)



Figure 16 Loading the ribbon 2

(6) Install the disposable cleaning roller to the ribbon cartridge.



Figure 17 Installing the cleaning roller

(7) Peel the protective wrapper from the cleaning roller.

After removing the protective wrapper, the cleaning roller should be kept clean from fingerprints, dust and foreign substances to avoid contamination because it is adhesive.

(Caution! Do not use without peeling off the protective wrapper because the cleaning roller cannot perform its function.)



Figure 18 Peeling the protective wrapper

(8) Install the ribbon cartridge into the printer after installing the ribbon with a cleaning roller to the cartridge.



Figure 19 Installing the ribbon cartridge

(9) Close the top cover

(If it is not closed properly, check the installation state of the ribbon cartridge.)



Figure 20 Close Top Cover

2.3. Fitting a laminating film

In case of installation of the laminator, please fit a laminating film as below.

(1) Open the laminator cover by pressing the laminator cover open button. Take out the film cartridge.

(Caution: Laminator head is possible to be HOT. Do not touch it.)



Figure 21 Take out the film cartridge

(2) Insert the laminating film in the same way of ribbon.

(Caution! If the film is not tightened, a rolling up error might be happened.)



Figure 22 Loading the laminating film

(3) Install the film cartridge into the laminator and close the laminator cover.



Figure 23 Installing the film cartridge

2.4. Loading the cards

This section shows how to load the plastic cards.

(1) Open the input hopper cover. Adjust the card thickness with the card thickness control lever.

(Caution! If the adjustment is not correct, it will make some error. Use the type of cards in the specification of this manual. Always keep the card surface clean state.)

(2) To separate cards from each other, push a stack of cards back and forth to an angle about 45 degrees vertically.

(Static charge makes cards stuck with significant adhesive force. These cards must be physically separated from each other before inserted into the feeder. If not separated, feeding or printing problems may occur.)



Figure 24 Adjusting the card thickness lever

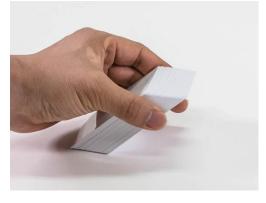


Figure 25 Preparing the card 1

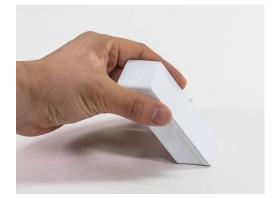


Figure 26 Preparing the card 2

(3) Stand the stack of cards vertically after separating

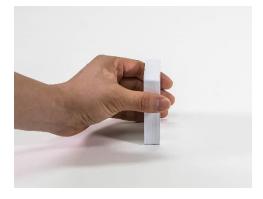


Figure 27 Loading the cards 1

(4) Load the cards on the input hopper properly and close the hopper cover.



Figure 28 Loading the cards 2

(5) When insert each one card, insert the card to the end as left picture

(Caution! If the printer has a lock device, a card can't be inserted one by one.)



Figure 29 Loading the cards 3



Figure 30 Loading the cards 4

2.5. The withdrawal of printed cards.

Printed cards are passed out to the stacker of front bottom side of printer.



Figure 31 SOLID-510 Withdrawal a card

SOLID-510's stacker can be divided as following image. so you can withdraw the printed cards easily.



Figure 32 SOLID-510 Dividing a stacker

2.6. Rear Stacker (Option)

SOLID-510 can install a rear stacker for option at the back of the printer. In case of SOLID-510S and SOLID-510L, please install into the slots at the backside. In case of SOLID-510D, please open the back cover of the printer and install it.

After that, set the value of 'Card Out' to 'Back' in the CardPrinterConfig Program.

In case of CP55 Dual, set the value of 'Flipper Cover Open' to 'Ignore' in the Configuration Program



Figure 33 SOLID-510S installation of Rear Stacker



Figure 34 SOLID-510D installation of Rear Stacker



Figure 35 SOLID-510L installation of Rear Stacker

2.7. Driver installation (Windows 7 / 8 / 10)

(1) Please insert the installation CD.

Please choose language and click "Driver Install".

(2) When "User Account Control" window is opened, click "Yes"



Figure 36 Install Win7 driver 1

User Account Control Do you want to allow th unknown publisher to m device?	
DDInstall.exe Publisher: Unknown File origin: Hard drive on this co	mputer
Show more details	
Yes	No

Figure 37 Install Win7 driver 2

(3) STEP 1:

Please turn off printer if it is connected to PC. Please click "Next".

When you click "Next", older driver will be removed automatically.

This process will take several minutes to remove older driver.

You can select the languages by selecting the combo box as shown on the left picture.

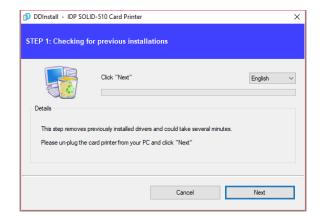


Figure 38 Install Win7 driver 3

(4) STEP 2:

(5) STEP 3: USB

When you click "Next", the driver installation will be ready.

DDInstall - IDP SOLID-510 Card Print	nter	×
STEP 2 : Installation checks		
Details The step prepares your system for dri Please click "Next"		
	Cancel Nex	đ

Figure 39 Install Win7 driver 6

DDInstall - IDP SOLI			;
Details	Local USB port	O TCP/IP Network po	rt
 This step installs the		it until installation has comp	leted.
		Cancel	Next

Figure 40 Install Win7 driver 8

(6) Please turn on the printer

Please click "Next" if printer is

If you want to install the driver for a printer connected to network, please select the "TCP/IP Network port" and select the proper printer as step (7).

connected to USB only.

(Network cable is not supplied. Please ask network administrator for more questions.)



Figure 41 Install Win7 driver 9

Ld	Select a TCP/IP Network Printer	>	<
C.Z	Please select a card printer.	Refresh	1
Details	IDP SOLID-510 Card Printer [SOLID0	1 : 192. 168. 0. 9] 🛛 🗸]
This step ins	ОК	Cancel	
Please plug			

Figure 42 Install Win7 driver 10

(7) STEP 3: Network

Please select the printer that you want to install in the list and click "OK".

(If no printer comes out on the window, please check the connection.)

(8) When driver installation is completed, please click "Close"

Ď DDInstall - IDP SOLII	0-510 Card Printer			Х
STEP 3 : Plug in you	ur card printer.			
	Local USB port	O TCP/IP Network p	ort	
Details This step installs the Please plug in & tum	printer driver. on the card printer and wai	t until installation has com	pleted.	
		Cancel	Close	

Figure 43 Install Win7 driver 11

(9) Please open "Devices and Printers" from "Hardware and Sound". Please check if "IDP SOLID-510 Card Printer" is created.

(10) Please click the right mouse button after cursor is placed on "IDP SOLID-510 Card Printer" icon. Click "Printer properties".

Devices and P	rinters			- 0	×
$\leftarrow \rightarrow \cdot \uparrow$	📆 « Documents > Device	s and Printers >	✓ ט Search D	evices and Printers	P
Add a device	Add a printer			-	0
> Multimedia	Devices (15)				^
V Printers (16)					- 1
		~ ~			
24					
CX-D80 U1	doPDF v7	Fax	IDP SOLID-510 Card Printer	Microsoft XPS Document Writer	

Figure 44 Install Win7 driver 12

n Devices and Printers		
$\leftarrow \rightarrow$ \checkmark \uparrow $\overline{\mathbf{a}}$ \Rightarrow This PC \Rightarrow Documents \Rightarrow Devices $\overleftarrow{\mathbf{a}}$	and Printers >	~
Add a device Add a printer See what's printing	Print server properties Remove device	
> Devices (8)		
> Multimedia Devices (15)		
V Printers (16)		
CX-DB0 U1 doPDF v7 Fax	See what's printing > Set as default printer IDP SOLI Card Print Printing preferences Printer properties Create shortcut © Remove device Troubleshoot Properties	ft XPS ant Writer

Figure 45 Install Win7 driver 13

(11) Please select "general" tab and click "Print test page" in "IDP SOLID-510 Card Printer Properties" window.

🖶 IDP S	OLID-510	Card P	rinter Prope	rties		×
General	Sharing	Ports	Advanced	Color Management	Security Service	
50	[IDP SOL	ID-510 Card	Printer		
<u>L</u> ocati	on:					
Comm	nent:					
Model		DP SOLI	D-510 Card	Printer		
Featu	ures or: Yes					
	ble-sider	L Ma		Paper availabl		
	ile: No	1: 140		CR80 54.0 x 8	6.0 mm	
	ed: Unkn	0.440				
	imum re		: 300 dpi			
			Pr	gferences	Print <u>T</u> est Page	
				ОК	Cancel	pply

Figure 46 Install Win7 driver 14

(12) Please check test card if it is printed properly and click "Close" if a card is printed properly.

(If card is not printed or error comes out, please refer to "Trouble Shooting".)

IDP SC	DLID-510 Card Printer X
۲	A test page has been sent to your printer
	This test page briefly demonstrates the printer's ability to print graphics and text, and it provides technical information about the printer. Use the printer troubleshooter if the test page does not print correctly. <u>Get help with printing</u>
	Close

Figure 47 Install Win7 driver 15

3. Driver configuration

3.1. Printer Properties

To check printer properties, you need to open printer driver. Please open "Devices and Printers" and right-click "IDP SOLID-510 Card Printer".

Click "Printer Properties".

(1) Printing Preferences

Please click "Preferences..." shown on the bottom of the left picture.

IDP SOLID	-510 Card Printer P	roperti	es			×
General Shar	ing Ports Advanc	ed Co	lor Managemer	t Security	Service	
\$	IDP SOLID-510 C	Card Pri	nter			
Location:						
<u>C</u> omment:						
	IDP SOLID-510 C	ard Pri	nter			
Features Color: Yes			Paper available	:		
Double-s	ded: No	[CR80 54.0 x 8	5.0 mm	~	
Staple: N)					
Speed: Ur	known					
Maximum	resolution: 300 dp	oi [\sim	
	P	Pr <u>e</u> fere	nces	Print <u>T</u> es	t Page	
	[(ОК	Cancel	Appl	y

Figure 48 Printer properties

(2) Layout

- You can select either horizontal or vertical printing direction. To apply your selection, click "OK".

🖶 IDP SOLID-510 Card Printer Printing Preferences	×
Layout Input / Output Printing Encoding	
Qrientation:	
Page O <u>r</u> der:	
Front to Back ~	
Adyanced	
OK Cancel App	y

Figure 49 Layout

(3) Input / Output

[Supply Tray]

Supply: You can select "Auto" if SOLID-510 has 1 input hopper. Please select the hopper if it has a multi hopper.

Tray : You can select "CR-80" because SOLID-510 supports CR80 cards only.

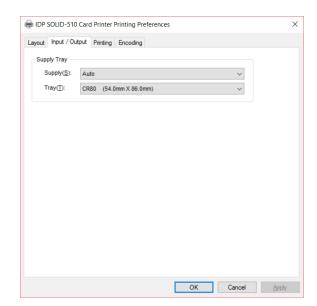


Figure 50 Input / Output

(4) Printing

Do Printing : You can select printing or not

[Print Side]

Side : Please select one side printing or both sides printing (It is possible only when you have a flipper.)

[Front / Back]

Color : You can select color or mono print.

Flip : You can flip an image

Media / Mask : You can indicate the area to print by using a predefined mask or user defined mask (white card, smartcard, Magnetic stripe card, etc.) on front or back side.

[Printing]

Ribbon : It shows the type of installed ribbon. You don't need to select this option as SOLID-510 recognizes ribbon automatically with RF Tag.

Speed : Set printing speed and quality

Mode : Set printing mode

Standard : Default print mode. Prints all area of printing

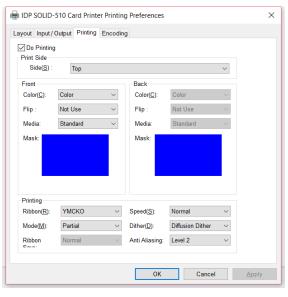


Figure 51 Printing

You can define a mask.

User defined mask uses BITMAP file (1012 X 636 pixels).

Blue (RGB(0,0,255)): Print and Overlay

Sky Blue (RGB(0,255,255)): Overlay only

Pink (RGB(255,0,255)): Print only

Yellow (RGB(255,255,0)): Florescent

Partial : Partial print mode. It is printed partially for the print area only. Printing speed can be faster than standard mode.

Dither : There are 3 possible selections, Threshold, Random, and Diffusion Dither. It is performed with K and KO ribbon only. (Please select "Diffusion Dither" for high quality.)

Ribbon Save :

K ribbon Split: You can set the both sides (Front:YMCO, Back:K) to save color ribbon(YMCKO, HYMCKO, BYMCKO). It is only activated while printing both sides option is set.

(5) Laminating

This tap will be shown only when SOLID-510L printer is connected to PC.

To set Laminator printing options.

Do Laminating : You can select laminating or not

Laminator Side : You can select not use, top side, bottom side and both sides printing

Overlay : You can select whether overlay prints or not.

Default setting is no overlay when laminating and we recommend to use the default value.

Layout Input/Output Printing Laminating Do Laminating Laminator Side Side : Top Overlay Overlay: Not Use			
Laminator Side Side : Top ~ Overlay	yout Input / Outp	ut Printing Laminating	
Side : Top ~	Do Laminating		
Overlay	Laminator Side		
	Side :	Тор	~
Overlay : Not Use 🗸	Overlay		
	Overlay :	Not Use	~
OK Cancel Apply			

Figure 52 Laminating

(6) Encoding

This tap will be shown only when Magnetic encoder is installed.

Do Encoding : You can select encoding or not

Coercivity : You can select the coercivity to encode

Loco : 300, 600 Oe.

HiCo : 2760 Oe.

SpCo : 4000 Oe.

Auto : Defined automatically

Repeat Count : You can select the retry count to encoding when encoding is failed

(7) Encoding Advanced Option

Card Stripe Side : The location of magnetic stripe [Bottom / Top]

Before Flip : Do flipping before encoding [No / Yes]

After Flip: Do flipping after encoding [No / Yes]

Track Advanced Options :

Format : Encoding format (IATA, ABA, MINS, JISII, Bits Mode)

Track 1 : (default) IATA

Track 2 : (default) ABA

Track 3 : (default) MINS

JIS II Track : (default) JIS II

Density: MS encoding density (210, 75)

Text Encoding Sentinels : Start, End Marker for text magnetic encoding

Start : Start Marker

End : End Marker

yout Input/Out	out Printing Encodi	ng		
✓ Do Encoding		[Advanced Encoding	Option
MS Encoding				, , , , , , , , , , , , , , , , , , , ,
Coercivity	LoCo	\sim		
Repeat	1	\sim		
Track Options				
Track1				1
				1
Track2				
Track3				
JIS]

Figure 53 Encoding

Aagnetic Encoding Magnetic Encoding Advanced Option Card Stripe Side Bottom ~	Before Flip No v	After Flip No v	>
Track Advanced Options Track 1 Format IATA (Track1) ~	Track 2 ABA (Track2) v	Track 3 MINS (Track3) v	JIS II Track JIS II (JIS Track) V
Option ISO Dencity 210 Text Encoding Start 11	ISO ~ 75 ~ (Default : 75) Markers Start : [2	ISO v 210 v (Default : 210) Markers Start : [3	ISO V 210 (Default : 210) Markers Start : JJ
Sentianals Start : 11 End : 1	End:	End:	End :
	ок	Cancel	

Figure 54 Magnetic Encoding Advanced Option

(8) Load/Save Option

Load Driver Setting : Load the saved driver configuration file

Save Driver Setting : Save the current driver configuration to the file

Layout	Input / Output	Printing	Laminating	Load/Save		
	d/Save Driver Se					
			Load Driver	Setting		
			Save Drive	Setting		
			Save Dive	ooung		

Figure 55 Load/Save Option

3.2. Advanced Options

To change the detailed configuration, In the 'Layout' tab shown, Please click "Advanced..." shown on the bottom of the 'Layout' tab of the 'Preferences'.

- Print Quality : To the print quality(DPI). You can select one among 300 x 300 dpi, 300 x 600 dpi and 300 x1200 dpi.
 - 300 x 300 dpi : Supported the Color & Mono printing
 - 300 x 600 dpi : Supported the Mono printing only.
 - 300 x 1200 dpi : Supported the Mono printing only.

Default is 300 x 300 dpi.

• **Reset Default Values:** Reset to default.

- Color Correction: You can correct gamma for colors. You need to use CardPrinterConfig to adjust color densities.
 - Main [-100:100] : Correct gamma for all panels
 - Yellow [-100:100] : Correct gamma for yellow panel
 - Magenta [-100:100] : Correct gamma for magenta panel
 - Cyan [-100:100] : Correct gamma for cyan panel
 - Black [-100:100] : Correct gamma for black panel
 - **Overlay [-100:100] :** Correct gamma for overlay panel
- **Position Processing:** Set criteria for resin black processing.
 - Color [-32:32]: to set the position of color panels
 - **Mono [-32:32]:** to set the position of resin or mono panel
 - **Overlay [-32:32]:** to set the position of overlay panel
- Resin Black(K) Processing: Set criteria for resin black processing.
 - **Text [0:100]:** to set density criteria for extracting black objects
 - **Dot [0:100]:** to set density criteria for extracting black dots
 - Threshold [0:100]: to set density criteria on dithering
 - Dithering Degree [0:100]: to set sharpness on dithering
 - **Resin Extraction:** You can set the method to extract resin black when you use design programs. (If you use the SmartID, you don't need to select this option.) It will be set automatically.
 - Black Object: to extract resin black automatically for text, line, box, circle, binary images, etc.
 - **Black Text**: to extract resin black for text only
 - > Black Dots: to extract resin black for all of black
 - Black Dots only: to extract resin black for all of black and not to print on color panels
 - > **Not Use**: not to extract resin black

- Extra Controls : Other options
 - **Fast Alignment [On/Off]:** to set the position of input card to the magnetic encoder or normal printing. If it is on, the printer can save the time to encode
 - **Rewritable Erase Density [0:100] :** to set Erase Density on Rewritable printer
- Wait Option:
 - Wait at Internal Module Contactless Encoding Position [On/Off]: to set whether to wait at the Internal RF encoder or not
 - > Card Side [Front/Back]: to set the direction of card when waiting
 - Wait Position [-100:100]: to set the position of card to wait from the criteria position. Unit is 0.1mm
 - > Wait Time [0:1000]: to set time to wait. Unit is second
 - Wait at External Module Contactless Encoding Position [On/Off]: to set whether to wait at the External RF encoder or not
 - > Card Side [Front/Back]: to set the direction of card when waiting
 - Wait Position [-100:100]: to set the position of card to wait from the criteria position. Unit is 0.1mm
 - > Wait Time [0:1000]: to set time to wait. Unit is second
 - Wait at Internal Module Contact Encoding Position [On/Off]: to set whether to wait at the Internal IC encoder or not
 - > Card Side [Front/Back]: to set the direction of card when waiting
 - Wait Position [-100:100]: to set the position of card to wait from the criteria position. Unit is 0.1mm
 - > Wait Time [0:1000]: to set time to wait. Unit is second

3.3. Other settings

(1) Sharing

You can share a printer with Sharing tab via Network.

Default is unchecked "Share this printer".

IDP SOLID-510 Card Printer Properties	×
General Sharing Ports Advanced Color Management Security Service	
If you share this printer, only users on your network with a username and password for this computer can print to it. The printer will not be available when the computer sleeps. To change these settings, use the <u>Network and Sharing Center</u>	
Share this printer	
S <u>h</u> are name:	
☑ Render print jobs on client computers	
Drivers If this printer is shared with users running different versions of Windows, you may want to install additional drivers, so that the users do not have to find the print driver when they connect to the shared printer.	
Additional Drivers	
OK Cancel Apply	

Figure 56 Printer sharing

(2) Ports

Port tab shows which port is connected with SOLID-510. SOLID-510 has connection with USB Virtual printer port as left picture because SOLID-510 uses USB connected to PC.

(Caution! This port is selected automatically. It is recommended to maintain default.)

IDP S	DLID-5	10 Card F	Printer Prop	erties		×
General	Sharing	Ports	Advanced	Color Manag	ement Security	Service
S			10 Card Prin			
Print to checke	d port.	Descriptio		Printer	print to the first	^
		Serial Por Serial Por				
_		Serial Por Serial Por				
	5D \	Print to Fi WSD Port WSD Port		NPIBDE1	58 (HP Color La	serJ
∠ US	B001 \	virtual pr	inter port f.	IDP SOLII	D-510 Card Prin	ter Y
A	dd Por	<u>t</u>	Del	ete Port	<u>C</u> onfigure	Port
		irectional Iter pooli				
				ОК	Cancel	Apply

Figure 57 Ports

(3) Advanced

It is available for Working Time setting, Priority order, Spool print etc. in "Advanced" tab. "Advanced" setting follows MS Windows standard. If you want to change the setting, please refer to the Window manual.

(It is recommended to maintain default.)

🖶 IDP SOLID-510 Card Printer Properties	×
General Sharing Ports Advanced Color Management Security Service	
Always available	
○ Available from 오전 12:00 📮 To 오전 12:00 🖨	
Priority: 1	
Driver: IDP SOLID-510 Card Printer V New Driver	
 Spool print documents so program finishes printing faster Start printing after last page is spooled Start printing immediately 	
○ Print <u>d</u> irectly to the printer	
☐ Hold mismatched documents ☑ Print spooled documents first	
Keep printed documents	
☑ <u>E</u> nable advanced printing features	
Printing Defaults Print Processor Separator Page	
OK Cancel Apply	

Figure 58 Advanced

(4) Color Management

In "Color management" tab, you can select color management profile fit to the printer.

SOLID-510 uses color profile to express optimal color. The driver selects color profile automatically to fit each ribbon.

(It is recommended to maintain default.)

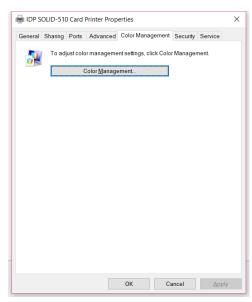


Figure 59 Color Management

(5) Security

You can set the permission to use a printer. Depend on the permission, the certain group or user can print, manage the printer/documents or not.

HIDP SOLID-510 Card Printer Properties		×
General Sharing Ports Advanced Color Mana Group or user names:	agement Securit	y Service
Everyone Everyone Account Unknown(S-1-15-3-1024-4044835139-2 CREATOR OWNER GJOH (GJOH-DESKTOP #GJOH) Administrators (GJOH-DESKTOP #Administra		973164-329287
[A <u>d</u> d	<u>R</u> emove
Permissions for Everyone	Allow	Deny
Print Manage this printer Manage documents Special permissions		
For special permissions or advanced settings, clici Advanced.	k	Ad <u>v</u> anced
ОК	Cancel	Apply

Figure 60 Security

(6) Service

You can recognize the modules to connect, printer serial, printer ID, driver version, firmware version, type of ribbon & balance and printer's status.

You can print the "technical support sheet" on a card to check printer's setup value.

To clean printer, please insert a cleaning card in a hopper and click "Clean Printer". For further details, please refer to "6.2. Cleaning Printer".

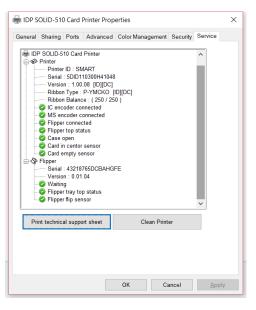


Figure 61 Service

4. Utilities

4.1. Card Printer Config

SOLID-510 is produced with optimized setting. You need to adjust setting value if required or spare parts are replaced using CardPrinterConfig in our Installation CD.

You can adjust following settings with CardPrinterConfig.

(1) Run CardPrinterConfig

Password input window is displayed when you run this program. If you input the correct password, the recorded setup value will be shown and you can change values. The password is saved to SOLID-510 printer. So if you use another PC with same printer, previous password is required to run this program. (Default password is none. Please press OK if you have not set password.)

Card Printer Config L Device IDP SOLID-510	Jtility v2.1.5.1 (2017 Card Printer [SMAR		~	Change Roo	× ot PW
Allow Networ	k Printer Flipper			Change Use	r PW
Firmware Version		Serial No. Header Re	sister		0
Calibration	Enter Password Password	t Position t Position : Cancel Pri	nt		>
Get Config.		from File e to File		Close	

When you are successful to log-in, you can set values shown as left picture.

Figure 62 CardPrinterConfig Log-in

	g Utility v2.1.5 510 Card Printer work Printer		-	~	Chang		
Card Printer Firmware Version Header Serial No.	Flipper 1.00.08 B7300267] Serial No. Header Ri		5DID 1	10300	H41048 2984
California de la construcción de la constru	Print direction	Y Star Y End Y Sca Total YMC I Black	rt Position rt Position Position le Density Density Density ay Density		-7 -6 -1 -100 -350 250 -350		>
calibra	tion		Pr	rint			
Get Config Set Config			d from File ve to File		Clos	e	
							,

Figure 63 CardPrinterConfig start

(2) Card Printer Basic Setup

1 3 4		Utility v2.1.5 10 Card Printer vork Printer Flipper 1.00.08 B7300267			esister	Chang Chang 5DID11	e Use	
5	Calibration Sh Take to reage to Parket start and and the reader to reader to the reader to reader to the reader to the reader to the reader to the reader to the reader to the reader to the reader to the reader to the rea		Y Star Y End Y.Scal Total I YMC E Black I	t Position t Position 6 Position e Density Density ay Density 8 Pr		-1 -11	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	9
10	Calibrati Get Config. Set Config.			Pr I from File re to File		Close	2	

Figure 64 CardPrinterConfig – Card Printer Basic Setup

① To show connected printers

Device: You can select a printer using pull-down menu. "IDP SOLID-510 Card Printer" is a name of printer. "SOLID1" is printer ID, "USB005" is connected port. If you connect the Network printer, please check the "Allow Network Printer" and select in the pull-down menu.

② To set administrator password and user password.

Change Root PW: To set administrator (root) password. This password is used to verify user authority for CardPrinterConfig and User Authentication. Also it is required for User password management. (Please set password for security use.)

Change User PW: To set user password for User Authentication.

- ③ Click "Card Printer" tab.(If laminator or flipper is installed, you can setup laminator or flipper setting value by "Laminator" tab or "Flipper" tab..
- ④ To show firmware version, serial number of printer and serial number, resister & type of print head.
- 5 To show print area. It shows exaggeratingly for user convenience.
- (6) To set print area. Please set it properly to print on an entire card because SOLID-510 is a direct thermal card printer. When you click "⑦ Print", a card is printed as like "④ example". Please set values properly that all circles of each corner are printed and blank spaces are 0.4mm ~ 0.5mm in the top and the bottom of a card. Please set values by following order.
 - X Start Position: Please set right and left properly by adjusting X position.
 - **Y Start Position:** Please set the start position of printed example image and blank space in the top is 0.4mm ~ 0.5mm.
 - **Y End Position:** Please set the end position of printed example image and blank space in the bottom is 0.4mm ~ 0.5mm. It is recommended to set bigger value for "Y scale" than default.

Y Scale: Please set to show circles in the bottom.

⑦ To set density. SOLID-510 enables to set different density for each color, resin black and overlay. So, please set each density for high quality. Please optimize the quality by adjusting each value. To optimize, you repeatedly adjust the density and print a Calibration card and check the print state until you get the optimum.

Total Density: To set all of the density (Color, Black and Overlay) at one time.

YMC Density: To set color density. Please maximize YMC density as you can, which enables to express range of color and vivid images. If it is too strong, green or red marks are appeared. If it is too weak, the print quality will be dull.

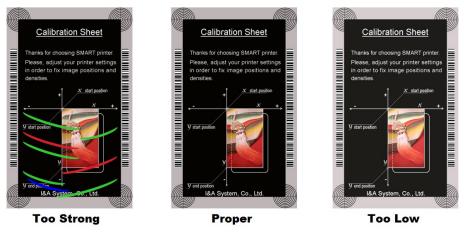


Figure 65 Color density

Black Density: To set resin black density. In the picture, barcode is printed to express density.

When density is too strong, barcode is printed too thick. When density is too weak, barcode is too thin. Please adjust resin black density to express clear barcode. Please refer to the following pictures.

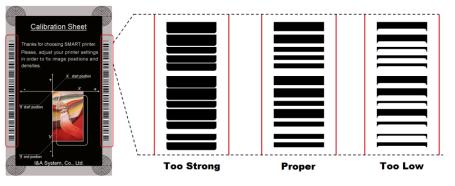


Figure 66 Resin Black density

Overlay Density: To set overlay density. Please set it when overlay is printed on surface regularly. If it is too strong, it is hazy and marks are appeared. If it is too weak, overlay panel is not printed edge areas. You can check it with printed card under the light.



Figure 67 Overlay density

- 8 To print calibration card.
- (It is recommended not to set advanced setup.)
- 10 To load or save values.

Get Config.: to get values from current printer

Set Config. : to set values to current printer

Load from File: to load values from file

Save to File : to save values to file

Load Default : to load default. Please adjust values again after load default.

Close : to close CardPrinterConfig

(3) Card Printer Advanced Setup

You can set more values.

ice	IDP SOLID	-510 Card Printe	er [SOLID : USB001]	~ Chan	ge Roo	t PW	\bigcirc	Change Prin	nter ID	Set PC	Serial
	Allow Ne	etwork Printer		Chan	ge Use	r PW	\cup	Change H	lead	Set Mag. Er	ncrypt Key
Card	d Printer	Flipper					••••••	Confiç	9		
	are Version	1.00.08	Serial No.	FDID	10200	H41048		ue Count		User Issue Count	
	r Serial No.	B7300267	Header Resister	3010	10500	2984	Total Iss	Image	39	Image	
JUCI	Senarivo.	57300207	Heddel Resister			2504	2	Magnetic	39		
	$\rightarrow x$		X Start Position	-7	•		C	-		Magnetic	L
4	Calibration	Sheet	Y Start Position	-6				IC	0	IC	
1	Thereis for phoneng o	14 partes	Y End Position	-1			8	External RF	0	External RF	L
	in order to fix image densities.		Y Scale	-11				Internal RF	0	Internal RF	
	·/_	rint.	Total Density	-100				inted Panels	171	Cleaning Count	
1	y ay pain	direc	YMC Density	-350		<	•	aning Count	0	Skipped Cleaning	
3		tion at	Black Density	250			Skip	oed Cleaning	0		
	yuenan 1		Overlay Density	-350							
1							(3)	RMP +	4000 🖨	RMP -	5000
L		V	Print		_		\odot	RMM +	7000 🖨	RMM -	6000
	calibri	-Mar	Print				Rit	bon Position	-2 🖨	Ribbon Search Mode	Normal
	calibre	ation					Pri	nt Wait Time	0	Initial Flipper Angle	
						_		Display Type	TLCD 16x2 V	Security	PC Addi. User Auth.
	Get Confi	ig.	Load from File				Displ	ay Language	English 🗸		Root Auth.
				Clo	se			DCL Mode	Not Use 🗸 🗸	SBS Only	Not Use
	Set Confi	g.	Save to File				(Saf	e Head Heat	Not Use 🗸 🗸	Cleaning Warning	
							. 🔍 🗸	e USB Serial	Not Use 🗸 🗸	Mag. Head Position	Lower
								Card Out	Front ~	Error Card Out	Front
							Auto F	ront Card In	Not Use 🗸 🗸	Auto Rear Card In	Not Use
								Dump Mode	Not Use 🗸 🗸	User Mag. Current	200
							Mag	Write Mode	L:A , H:A 🗸 🗸	Mag. Start Position	0
							Mag.	Write Speed	Normal ~	Flipper Cover Open	Ignore
							UAR	T Baud Rate	115200 ~	Card Move Speed	210
							c	ard In Speed	210 🖨	Card Eject Speed	210
								ard In Delay	0	Stability Interval	Lies

Figure 68 CardPrinterConfig – Card Printer Advanced Setup

① You can set Printer ID, PC serial, Print head and Magnetic encryption key.

Change Printer ID: When SOLID-510 is used by SDK, you can set unique ID for SOLID-510 printer regardless of whether it is connected by USB or what IP address is. It is useful to connect and use several printers. Default is "SOLID".

Set PC Serial: One of security function. You can use a printer with specific PC.

It is activated when you click "Set PC Serial" after "**PC Auth.**" of ④ is checked and rebooted. At that time, the specific information of used PC is saved to SOLID-510 printer.

Change Head: When you replace thermal print head, you must change head information for optimal quality. Please change head serial number, resistor and type of head in the Change Head Dialog window after click "Change Head".

Set Mag. Encrypt Key: One of security function. When you use SDK, you can encrypt magnetic stripe encoding data transmitted by USB. You can define and save the encryption key to SOLID-510 using "Set Mag. Encrypt Key".

- ② To show how many cards are issued with SOLID-510 printer. "Total Issue Count" is the number of issued cards from factory shipment, "User Issue Count" is the number of issued cards from replacing head. When you replace a head, please initialize the number by ticking "Reset User Issue Count".
- ③ To show ribbon motor management. SOLID-510 recognizes ribbon color automatically and controls motor by ribbon remaining. "RMP+", "RMP-", "RMM+", "RMM-" are necessary variables to control ribbon motor. Please do not change values for them as it affects card quality.

RMP+: Set the ribbon motor's max torque value while printing when the balance is max.

RMP-: Set the ribbon motor's min torque value while printing when the balance is min.

RMM+: Set the ribbon motor's max torque value while moving when the balance is max.

RMM-: Set the ribbon motor's min torque value while moving when the balance is min.

Ribbon Position: Set the ribbon arrangement position

Ribbon Search Mode: Set the ribbon Search method

Print Wait Time: Set the time from lifting down the print head to starting print

Initial Flipper Angle: Set the angle of flipper when card is out if the 'Card Out' is 'Back'

④ Please refer as below for other values.

Display Type: Set a type of LCD display module

UART Baud Rate: Set the speed of communication of Internal Serial port. It is used for the KIOSK model.

Security: There are several ways to set a security function for SOLID-510.

PC Auth.: You can use a printer with specific PC. It is activated when you click "Set PC Serial".

User/Root Auth.: You can set passwords for User and Administrator.

DCL Mode: When you use SDK and print cards with DCL mode, you don't need to install printer device driver.

SBS Only: Please enable it when you issue cards with software programed by SDK. This option disables printer device driver.

Safe Head Heat: Set not to print if the print head is overheated.

Cleaning Warning: Set to show the 'Do cleaning' message periodically

Use USB Serial: When SOLID-510 is connected to USB, it transmits the USB serial number to PC. Default is the same number used by all SOLID-510. Please set this option when you use multiple SOLID-510 printers connected to 1 PC via USB. It enables unique serial numbers for each USB.

Mag. Head Position: SOLID-510 can install the magnetic encoder on upper/lower side of a card. You can set it depending on the position of encoder.

Card Out: Set the way to eject cards.

Error Card Out: Set the way to eject error cards.

Auto Front Card In: Set to input a card automatically if the front card-in sensor detects a card. It is used for the KIOSK model.

Auto Rear Card In: Set to input a card automatically if the rear card-in sensor detects a card. It is used for the KIOSK model.

Dump Mode: It records log data to inspect the operation of printer.

User Mag. Current: The default current value when the user selects to use the defined value when magnetic encoding

Mag. Write Mode: You can order the way how to encode magnetic stripe.

"L:A, H:I": encodes 3 tracks at once for LoCo card and encodes at twice by dividing 1,3 and 2 track for HiCo card.

Magnetic Start Position: Set the start position of magnetic stripe when you encode.

Card In Speed: set the speed of inputting a card

Card Move Speed: set the speed of moving a card

Card Eject Speed: set the speed of ejecting a card

(4) Flipper Setup

This 'Flipper' tab is shown when the flipper option is installed.

	Device	IDP SOLID)-510 Card	Printer [SOL]	ID : USB001]	~	Change Root PW
		Allow N	etwork Prin	ter			Change User PW
	Card	Printer	Flipp	er			
)		Version	0.01.0	4	Flipper Seria	al No.	43218765DCBAHGFE
			tribute Speed Speed	-1 🖢	Out S	Speed	-1 ÷
		Get Conf	îg.	Loa	d from File		Close
		Set Conf	ìg.	Sa	ve to File		

Figure 69 CardPrinterConfig – Flipper Setup

① To show installed flipper

Firmware version and serial number of flipper

② To set configuration of flipper

Device Attribute: Basic attribute of flipperCard In Speed: Set the speed of inputting a card into a flipperCade Move Speed: Set the speed of moving a card in the flipperCard Eject Speed: Set the speed of ejecting a card from the flipper

(5) Laminator Basic Setup

This 'Laminator' tab is shown when the laminator option is installed.

Device	IDP SOLID-	510 Ca	rd Printer	[SO	LID : USB001]	~	Change Ro	ot PW
	Allow Net	work P	rinter				Change Us	er PW
Ca	rd Printer	Lar	ninator					
Lamir	nator Version	0.01	1.03		Laminator 5	Serial No.	5LID-H1000	1
					Lami. Head	Resister		39
- In	formation							
Film	Туре	O	LEAR 1.0M	UL.	Film Remain		250/250	
Lam	inator Code		(SM) (00) (0	0]	Film Code	(S	M][00][00]	4
Hea	ter Temperatu	re	160	÷	Laminating PPS		525 🌲	-
Lam	inating Move P	ulse	8250	Ð	Lami, Start Card I	Pos.	52 🌻	
Tor	que Laminating	MAX	600	*	Torque Laminatin	g MIN	500 🚔	>
Lam	inating width P	ulse	6225	-	Film Attribute		1 🚔	
	Get Config).		Lo	ad from File		deer	·
	Set Config			S	ave to File		Close	

Figure 70 CardPrinterConfig – Laminator Basic Setup

- ① It shows the information of installed laminator such as firm-ware version, serial number.
- 2 The fields show laminator film's type, balance, code and laminator code.

Film Type : It shows installed film's type and vendor code.
Film Remain : It shows installed film's total number and balance.
Laminator Code : It shows Laminator's code, vendor and local code.
Film Code : It shows installed film code, vendor and local code.

③ You can change the values according to the installed film type.

Heater Temperature : It is for laminating temperature.

Laminating PPS : Laminating speed.

Laminating Move Pulse : The distance of laminating movement.

Separation with Card : After laminating and removing film, the value changes the distance of card movement

Separation with Film : After laminating and removing film, the value changes the Distance of film movement.

Lami. Start Card Pos : The value is for laminating start position.

Torque Laminating Max : Maximum torque of motor while laminating.

Torque Laminating Min : Minimum torque of motor while laminating.

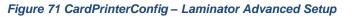
Laminating with Pulse : The value is for change laminating width.

Film Attribute : It changes film attribution.

④ It shows "Advanced Setup" window.

(6) Laminator Advanced Setup

ice	IDP SOLID-5	10 Card Printer [SOLI	D:USB001] V C	hange Root PW		Change Printer ID		Set PC Serial	
Cand	Allow Net	work Printer	d	hange User PW		Change Head Config		Set Mag. Encrypt Key	
	tor Version	0.01.03	Laminator Serial No. Lami. Head Resister	5LID-H10001	98	User Laminating Count	t Clear Count	Total Laminating Count	
Film Tr Lamina Heate Lamina Torqu	mation ype ator Code r Temperatur ating Move Pr e Laminating ating width Pr	ulse 8250 ¥ MAX 600 ¥	Film Remain Film Code [Si Laminating PPS Lami. Start Card Pos. Torque Laminating MIN Film Attribute	250/250 M][00][00] 525 4/ 52 4/ 52 4/ 500 4/ 1 4/ 4		Laminating Torque Move Max Head Motor Torque In Speed Move Speed	584 700 1000 210 210	Laminating Torque Move Min Device Attribute Out Speed	584 500 1 210
	Get Config Set Config		ad from File	Close					



- ① It shows total laminating count.
- 2 You can change other configurations of laminator

Torque Move Max: Change Maximum motor torque
Torque Move Min: Change Minimum motor torque
Head Motor Torque: Change head motor torque
Device Attribute: The attribute value of laminator
In Speed: Set the speed of inputting a card into a laminator
Out Speed: Set the speed of ejecting a card from the laminator
Move Speed: Set the speed of moving a card in the laminator

4.2. Network configuration

(1) Connecting network port

The printer which installed with network option has a port for network connection as shown in the left picture.

- 1 Power Switch
- **2** Power Supply Connector
- **③** Network Port
- **④** USB Port



Figure 72 Rear view of SOLID-510 printer 1

Please connect network cable (RJ45) to a printer.

(Network cable is not supplied. Please ask network administrator for more questions.)



Figure 73 Rear view of SOLID-510 printer 2

DHCP (Dynamic Host Configuration Protocol) which automatically assigns IP address to the SOLID-510 network printer on the same network is default for IP configuration. If you don't have DHCP server, you need to set static IP.

Please run NetAdmin.exe in the SOLID-510 installation CD to set or change network configuration.

(2) Network configuration

NetAdmin is run as the Pic.72 after turning on SOLID-510 network printer.

- Printer Connection Status Searches local network, finds and shows available network printer.
- ② Network Module Management Searches connected encoder on network module. Reboots, Resets network module. Firmware upgrade available
- ③ Printer Configuration Sets detailed system configuration.
- A Network Information
 Shows firmware version of network module

LSB port state	Reboot module	Reset to defau	ult Upgrade firmv
stem Management S	ervice Configuration	OCP Configuration	on User Configuration
	Mac Address :		
Static			
IP:			
Network Mask			
Gateway :			
WiFi (Option)			
WIFI (Option)			
WiFi Key :			
DHCP			
Static			
IP:			
Network Mask			
Gateway :			

Figure 74 Running the NetAdmin

When no printer is connected to network, there is no printer shown on the box.

Please click "Refresh".

If no printer shown, please check as below,

- **1.** Please check the printer is turned on.
- 2. Please check network cable is connected to network hub and works properly (LED lamp blinking).
- **3.** Please check if there is DHCP server in the local network. When DHCP server is not in your local network, you need to set Static IP.
- If Static IP is used, please check the IP configuration. If another device uses same IP address, it doesn't work.

				Refresh Connec
USB port state	Reboot module	Reset to	default	Upgrade firmware
System Management S	ervice Configuration	OCP Config	uration U	lser Configuration
Network				
O DHCP	Mac Address :			
IP:				
Network Mask	: .			
Gateway :				
WiFi (Option)				
WiFi ESSID :				
WiFi Key :				
DHCP				
Static IP :				
IP : Network Mask				_
Gateway :				
	Get Co	nfiguration	Se	t Configuration

Figure 75 Network printer is not found

If you are unable to find printer in local network, please connect printer by USB. You can setup network by USB.

When you click Refresh, you can find a printer connected by USB as shown in the left picture..

- You don't need to install device driver for network configuration by USB.
 Please ignore messages related to device installation.
- You can change values of "System Management" only when you connect a printer by USB. Please connect a printer by network to use all of the functions of Netadmin.exe.

Please select a proper printer and click "connect". Please enter password and click "OK".

Default password is "admin".

UCD and shake	Debesteredde	Derekte de		resh Conne
USB port state	Reboot module	Reset to de	rault Up	grade firmware
stem Management	Service Configuration	OCP Configur	ation User C	onfiguration
Network				
O DHCP	Mac Address :			
IP:				
Network Mask				
Gateway :				
WiFi (Option)				
WiFi ESSID : WiFi Key :				
DHCP				
Static				
IP:				
Network Mask	u .			
Gateway :				
		onfiguration	_	figuration

Figure 76 Connecting to USB port

	-		 Refresh Conne
USB port state	Reboot module	Reset to default	Upgrade firmware
System Management	Service Configuration	OCP Configuration	User Configuration
Network DHCP	Mac Address :		
IP : Logi	n		×
Netwo			
	(d : admin		
WiFi (C	Password :		
WiFi ESS			
WiFi Key DHCF Static	ОК	Cancel	_
IP:			
Network Mas	k: .		
Gateway :			
		nfiguration	Set Configuration

Figure 77 NetAdmin Log-in

"USB port state" shows USB device status connected on network module.

- Network module has 4 USB ports.
- Network module supports PC/SC. When you install the encoders that support PC/SC on network module, you can recognize the status of encoders.

ard Print	er [SOLID : 1	92.16	3.0.93]						×	efresh	Disconne
USB po	ort state	Re	boot mo	dule		Res	et to de	efault	t I	Upgrade	firmware
System M	lanagement	Servio	e Config	jurati	ion C	OCP C	onfigu	ratior	n User	Configu	uration
Netwo	OHCP	N	1ac Addr	ess :		D0	: 39 : 7	2:50	C:2E:	32	
	O Static IP :		192		168		0		223		
U	SB Ports										<
	PORT 0: SOLI	ID-510) Card P	rinter	r						-
		ID-510) Card P	rinter	r						
	PORT 0: SOLI PORT 1: PORT 2:	ID-510) Card P	rinter							
	PORT 0: SOLI PORT 1: PORT 2: PORT 3:	ID-510) Card P 192	rinter	168		1		9		
	PORT 0: SOLI PORT 1: PORT 2: PORT 3: DHCP Static			rinter			1 255		9		
	PORT 0: SOLI PORT 1: PORT 2: PORT 3: DHCP Static IP :		192	·	168 255	•	-		-		

Figure 78 USB port state

"Reboot module" reboots network module.

- Please click "Yes" when pop-up window comes out for reboot.
- It takes 1 minute to reboot.
- Please click "Refresh" after reboot.
 When proper printer shown, please connect printer by clicking "Connect".

				_						
USB port state	Re	boot mo	dule		Res	et to d	efault	t	Upgrade	firmware
System Management	Servio	ce Config	guration	n O	CP C	Configu	ratior	n U	ser Configu	uration
Network										
DHCP	N	1ac Add	ress :		D0	: 39 : 7	2:5	C:2	: 32	
O Static	CONFL	RM						~		
AT •	CONFI	NIVI						^		
Network Ma										
Gateway :	Do y	ou wan	t to reb	boot	prin	ter?				
Gateway :										
		ou wan II takes :								
WiFi (Optio										
WiFi (Optio WiFi ESSID :		ll takes :	several			5.		7		
WiFi (Optio WiFi ESSID : WiFi Key :			several							
WiFi (Optio WiFi ESSID : WiFi Key :		ll takes :	several			5.				
WiFi (Optio WiFi ESSID : WiFi Key :		ll takes :	several es			5.		9		
WiFi (Optio WiFi ESSID : WiFi Key : DHCP	It wil	ll takes : Ye	several es	I min	ute	No		9		
WiFi (Optio WiFi ESSID : WiFi Key : OHCP Static IP :	It wil	II takes : Ye 192	several es	I min	utes	5. No	•	-		

Figure 79 Rebooting the network module

"Reset to default" resets to default and reboot network module.

- Please click "Yes" when pop-up window comes out for reset.
- It takes 1 minute to reboot.
- Please click "Refresh" after reboot.
 When proper printer shown, please connect printer by clicking "Connect".

Card Printer [SOLID :	192,100			_						Disconnec
USB port state	Reb	oot mo	dule	R	ese	et to d	efault	:	Upgrade	firmware
System Management	Service	e Config	uration	OC	P Co	onfigu	ration	U	ser Config	uration
Network										
DHCP Static	м	ac Addr	ess :	D	0:	39:7	2:50	C : 26	: <mark>3</mark> 2	
Gateway										
WiFi (Opt WiFi ESSID WiFi Key :		akes se	to reset veral m les		1	defau No				
WiFi ESSID WiFi Key : DHCP Static		akes se	veral m (es	inute	s.	No) 			
WiFi ESSID WiFi Key :		akes se	veral m	inute	1			9		
WiFi ESSID WiFi Key : DHCP Static	It will t	akes se	veral m /es	inute	s.	No) 	9		
WiFi ESSID WiFi Key : DHCP Static IP :	It will t	akes se	veral m /es . 16 . 23	inute	s.	No) 			

Figure 80 Reset to default

"Upgrade firmware" enables to upgrade firmware of network module.

• You can choose a firmware file.

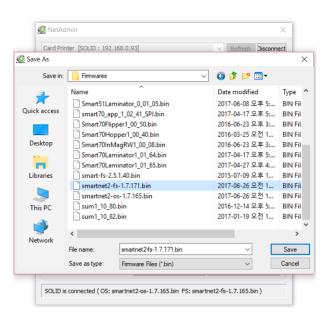


Figure 81 Upgrading the firmware 1

- Warning box will be shown during firmware upgrade for network module.
- It is recommended not to do other work during firmware upgrade for system reliability.
- Please do not turn off a printer until the upgrade is completed.

🙋 NetAdmin			×
Card Printer [SOLID : 1	192.168.0.93]		 Refresh Disconnect
USB port state	Reboot module	Reset to defa	ult Upgrade firmware
System Management	Service Configuration	OCP Configurati	on User Configuration
Network OHCP Static	Mac Address :	D0:39:72:	5C : 2E : 32
IP :	192 . 1	58.0.	223
Wił Wił	vindow will be closed af	ter the upgrade is	completed.
DHCP Static			
IP:	192 . 10	8.1.	9
Network Mas	k : 255 . 2	55 . 255 .	0
Gateway :	192 . 10	58.1.	1
	Get C	onfiguration	Set Configuration
SOLID is connected (C	S: smartnet2-os-1.7.1	65.bin FS: smartn	et2-fs-1.7.165.bin)

Figure 82 Upgrading the firmware 2

- When firmware upgrade is completed, pop-up comes out for reboot. Please click "Yes".
- It takes 1 minute to reboot.
- Please click "Refresh" after reboot.
 When proper printer shown, please connect printer by clicking "Connect".

	192.168.0.93]				Refresh	Disconnec
USB port state	Reboot module	Res	et to defa	ult	Upgrade	firmware
System Management	Service Configurat	ion OCP	Configurat	ion U	ser Configu	ration
Network			-		-	
DHCP	Mac Address :	: D0	: 39 : 72 :	5C:2	E : 32	
O Stat CC	DNFIRM			>		
IP:						
Network	irmware upgrade		ad			
Gateway	irmware upgrade	was succe	ea.		ī -	
1	This change will be	P 1				
	inis change win be	applied a	fter reboo	ot.		
WiFi (Op	-		fter reboo	ot.		
	Do you want to reb		fter reboo	ot.		
	-		fter reboo	ot.		
WiFi ESSID	Do you want to reb	poot now?		ot.		
WiFi ESSID WiFi Key :	-	poot now?	No	ot.		
WiFi ESSID WiFi Key :	Do you want to reb	poot now?		pt.		
WiFi ESSID WiFi Key : DHCP Static	Do you want to reb	boot now?				
WiFi ESSID WiFi Key : DHCP Static IP :	Do you want to reb	168 .	No 1 .	9		

Figure 83 Upgrading the firmware 3

If you setup network automatically, please choose DHCP.

- Please select DHCP or Static.
- "DHCP" is default for SOLID-510 printer.
- Please enter values for "IP", "Network Mask", and "Gateway". Click "Set Configuration".
- Static IP is recommended. DHCP server assigns IP address automatically but this IP address is temporary, so the IP address may be changed. In this case, the network error may occur in connecting to SOLID-510 network printer.
- If you are not aware of static IP, please ask network administrator for Static IP.
- We recommend using Static IP because it is more stable for using SOLID-510 network printer.

Wireless Network Configuration

- For wireless network, the WIFI option should be installed in the Network Module
- Check "WiFi (Option)" button to activate it
- Enter the ESSID value in "WiFi ESSID" to access
- Enter the Key value in "WiFi Key"
- Set the IP address as the same way of LAN network
- Click "Set Configuration" to save the configuration value and reboot the printer

	-						_		Disconne
USB port state	Reboot mo	dule		Res	et to d	efaul	t	Upgrade	firmware
ystem Management Se	rvice Config	jurat	tion (OCP (Configu	ratio	n Use	r Config	uration
Network									
DHCP	Mac Addr	ess	:	D0	: 39 : 7	2:5	C:2E	: 32	
O Static	192		168		0		223	7	
IP:					-			_	
Network Mask :	255		255		255		0		
Gateway :	192		168		0		1		
WiFi (Option)									
WiFi ESSID :	support								
WiFi Key :									
✓ DHCP									
Static									
IP:	192		168		1		9		
Network Mask :	255		255		255	1	0		
Gateway :	192		168		1		1		
					tion	_		Configura	

Figure 84 Dynamic IP configuration

USB port state	Reboot m	odule		Res	et to d	efault	t	Upgrad	le firmware
System Management Se	rvice Conf	igurat	tion (DCP (Configu	ratior	n Us	er Confi	guration
Network									
DHCP Static	Mac Add	fress	:	D0	: 39 : 7	2:5	C : 2E	: 32	
IP:	192		168		0		223		
Network Mask :	255		255		255		0		
Gateway :	192		168		0		1		
WiFi (Option)									
WiFi ESSID :	support								
WiFi Key :	•••••		••••					7	
DHCP									
Static								_	
IP:	192		168		1		9	_	
Network Mask :	255		255		255		0		
Gateway :	192		168	•	1		1		

Figure 85 Static IP configuration

You can change Service Configuration.

- SOLID-510 network printer provides 3 kinds of service (change "USB Spool", "Network Spool" and "Network SDK"). You can select and change the service according to the need.
- In "Network SDK", you can control the printer and print a card well, and the printer supports SSL (Secure Sockets Layer) and User Authentication for security.
- Please use default and ask technician for details.

Card Printer [SOLID :	192.168.0	.93]		~	Refresh	Disconnec
USB port state	Reboo	t module	Reset to defaul	t	Upgrade	firmware
System Management	Service C	Configuration	OCP Configuration	n Us	ser Configu	uration
Use USB Spor						
TCP Port :		9100				
TCP Timeout	(sec) :	600				
Use Network	SDK					
TCP Port :		11110				
TCP Timeout	(sec) :	600				
Use SSL(S	ecure Sod	ket Layer)				
Use User	Authentica	tion				
Use Auton	natic Card	Out				
Log Level INFO	0				,	~
USB Key N	Ionitor					
		Get Co	nfiguration	Se	t Configura	ation

Figure 86 Network service configuration

You can use Open Card Print function.

- This function is for send commands and print through network card regardless of OS
- Click check box "Use OCP"
- "Use Terminal Emulation" is value for getting echo according to the commands through terminal. For security, it supports SSL and User Authentication.
- Please do not change default value except special case.

cara Finter [SOLD	192.168.0	.93]		\sim	Refresh	Disconnec
USB port state	Reboo	t module	Reset to defau	lt	Upgrade	firmware
System Management	Service C	onfiguration	OCP Configuratio	n U	lser Configu	ration
Use OCP(Ope	en Card Pri	nt)				
TCP Port :		23				
TCP Timeout	(sec) :	600				
Use SSL(S						
Use Auton	natic Card					
Use Auton	natic Card					
Use Auton	natic Card (LPD)	Out				

Figure 87 OCP configuration

You can add, change, delete User and change its password.

- "admin" is administrator and you can't delete this account. Please don't forget password for "admin"
- "Get User": shows available users
- "Add User": makes new user
- "Del User": deletes selected user
- "Change Password": changes password

	192.168.0.93]	~	Refresh	Disconne
USB port state	Reboot module	Reset to default	Upgrade	firmware
ystem Management	Service Configuration	OCP Configuration	User Configu	ration
admin				

Figure 88 Network user configuration

4.3. Card Printer Test

Basically Card Printer use standard printer device so you can be used same as general paper printer. In the case of magnetic stripe, contact, contactless encoder option, you will need to install appropriate driver and operate individually. Encoding operation will be controlled by "CARD PRINTER SDK". You can test all feature of printer by Card printer Test.

(1) CardPrinterTest

When CardPrinterTest is run, all function can be tested individually.

4	3		est Program v													-		×
ſ	e)in	ter IDP SOL	ID-510 Card Pr	inter [SOL	ID : USB00	1]		~		Network Printe				ast Error:				
$\tilde{2}$	şв)		Card IN E	Back Mo	ove Print I	Mag. to Flip. RF2 from Flip.	Sensor Cent		Rotate	Auto		Cleanin		Cover Fan				
6	ľ		001 8				Distance			Batch	Close				Print			uuu (
Y	2		Repeat :	0 /	1	Setting	etrv 1	Error N	Mag. R :	0 IC :			her :	0	Blocking			·····{
	١,	Batch Start	Include Car		-		rompt on Error		lag. W :	0 RF		0		<u> </u>				
	(<u>4)</u>	Card Ho	olding	1									Cle	ear Status			
	м	agnetic IC (F	PC/SC) RF (PC	/SC) Mis	c							Tempe	rature	Realtin	me Check	•••••		
	Ľ,	READ Read	Track 1							^	ō	Th Head		Rib. Cold				6
		Do Read	Track 2							~	0	Printer	Status	Realtin	ne Check	Flipper Status		
	Ì	Read All Buffer								< >		Ribbon:			249/250	Film:		0/0
	1	5)	V Track 3							< >	0	lic enco	boooooo der conn	00011B000)	000000009	0000101	
	ļ	Bit Mode	□ JIS							< >	0	magnet: flipper	ic encode connect	er connect	ted	flip tray top si cover is closed	ded	
		WRITE										flipper card er	r is top mpty	sided		flip sensor		
	I	Write	Track 1 BPI 210							< >	0							
		.o-Co ~	Track 2							^	0							
	l	Random Fill	BPI 75 Track 3							~	37 0							
		Vrite All Buffer Do Write	BPI 210							V	104 0							
	ľ	bothine								\$	69							
	ļ.,											J						
	1	7																
	ŧ.,																	

Figure 89 CardPrinterTest

- ① **Select Printer:** select printer to test. In the picture, "IDP SOLID-510 Card Printer" is the Printer name, SOLID is the Printer ID, and USB001 is the connected port.
- 2 Control : To execute each step to test
- ③ **Print:** Print test with CSD file which is designed by Smart ID program.

- ④ Batch Start: Repeat selected encoding test by "⑤ Encoding"
- 5 Encoding: Encode Magnetic Stripe, Contact Card, Contactless Card
- 6 **Printer Status:** Check printer status.
- ⑦ Message: Description of status by log.

(2) Select printer and control

When you execute CardPrinterTest, it will search connected printers by USB and Network automatically and SOLID-510 printer connected to USB has higher priority. Other printers could be selected by pull-down menu. You can test all function with connected printer.

. Control is consisted by SBS(Step by Step), Move, Rotate, Etc. section and you can control printer by each step.

• SBS

SBS is to operate SOLID-510 printer in SBS(Step-By-Step) mode which you can control the printer using commands. In SBS mode, after printing data transmission, printing a card will be run only by clicking "DoPrint". It is the main difference between NORMAL mode and SBS mode. When you click "Start", SOLID-510 is operated in SBS mode, and existing spooled data will be eliminated. To exit SBS mode, click "Stop".

• Card

Card is to bring a card into printer and eject a card. "In" is to move a card from input hopper to printer and "Out" is to move a card from printer to output hopper. In case the flipper is installed, "Back" ejects a card to the back side.

• Move

Move is to move a card to specific position in the inside of printer. "Print" is to move a card to the printing position, and "Mag." is to the magnetic encoding position, and "IC" is to the contact smartcard encoding position, and "RF" is to the contactless smartcard encoding position. "To Rotator" is to move a card from printer to flipper and "From Rotator" is to move a card from flipper to printer. "from In" is to move a card from the card in sensor to where you define position, and "from Out" is to move a card from the card out sensor to where you define position.

Rotate

Rotator is to flip over a card in the printer installed flipper. "Auto" is to move a card from printer to flipper and flip over a card and move a card to the printing position automatically. "Batch" is to repeat "Auto" as many times as the number of set. "To Bottom" is to turn to the backside of card and "To Top" is to turn to the front side of card.

• Etc

"Cleaning Roller" is to clean the roller by cleaning card automatically. "Use Log" is to display log in message space.

(3) Print

Print can be done through the CSD file which is designed by Smart ID program.

Following the steps in this section.

- **1.** Click "..." button and select the CSD file.
- 2. Click "Open" button to prepare CSD file to print.
- 3. Click "**Print**" Button to move print data to spool. In the NORMAL mode, Click "Print" button to print a card, but in the SBS mode, "Print" button to transmit a printing data from PC to printer and wait for printing. Therefore, you must click "DoPrint" to print in SBS mode. This function is for detail control of printer.
- 4. Click "Close" button to close CSD file.

(4) Batch

Batch is to repeat encoding/decoding test continuously. In the Repeat, you input the number of repeat and click "Batch Start", then the test is run as many times as the number of set. When you check **"Include Card In/Out"**, each time the printer bring a card from input hopper and perform an encoding test and eject the card. But if not, encoding test will be done only by one card. At that time, if there is no card in the printer, the printer bring a card into the printer from input hopper and repeat the encoding test on the card, and if there is a card in the printer, the encoding test is performed on the card repeatedly. **"Card Holding"** is activated when "Include Card In/Out" is ticked. When "Card Holding" is ticked and the repeat number is set, the printer repeats the encoding test as many times as the number of set in the "Card Holding" without

ejection. When it is completed, the printer ejects the card and brings a new card into the printer and starts testing.

In the Setting, "**Retry**" is to retry the encoding test when the error occurred. "**Prompt on Error**" is to display Pop up Message when the error occurred. If not, Error number will be counted without message. The number of error is displayed at Error section.

(5) Encoding

Magnetic: Magnet Stripe Encoding

"**Read**" is to read and display the data from magnetic stripe card. It is composed of "Do Read" and "Read All Buffer" and runs "Do Read" and "Read All Buffer" sequentially.

"**Do Read**" is to read the data from magnetic stripe card and store the data in the buffer.

"**Read All Buffer**" is to transmit the date stored in the buffer to PC. If the track number is ticked, the data of the ticked track is only transmitted to PC.

"Write" is to write the data to the magnetic stripe. It is composed of "Write All Buffer" and "Do Write" and runs "Write All Buffer" and "Do Write" sequentially.

"Write All Buffer" is to transmit the data to the buffer.

"**Do Write**" is to write the data stored in the buffer to the magnetic stripe of card. You can choose the magnetic foil type (LoCo or HiCo) and the track of magnetic stripe. "**Random Fill**" is to create a random magnetic encoding data for testing.

Batch process repeats the following steps sequentially, Card "IN" \rightarrow Move "Mag" \rightarrow Magnetic "Random Fill" \rightarrow Magnetic "Write" \rightarrow Magnetic "Read" \rightarrow Card "OUT".

Magnetic IC (PC/S	5C) RF (PC	:/SC) Misc	
C READ			
Read	✓ Track 1	×	O
Do Read Read All Buffer	🗸 Track 2		Ō
	🗸 Track 3		Ō
C	JIS		Ō
Bit Mode	l		
			=
Write	✓ Track 1	 × 	0 76
	🗸 Track 2		0
	🗸 Track 3		37 0
Write All Buffer			104
Do Write	JIS		0 69
	l		09

Figure 90 Magnetic stripe encoding

IC(PC/SC) : Contact Smartcard Encoding

In SOLID-510 printer, a contact smartcard encoder can be installed and SOLID-510 printer supports the contact smartcard encoder in the printer inside. "IC(PC/SC)" is to test a contact smartcard encoding.

"**ICH Contact**" is to bring the encoder head into contact with the IC chip of smartcard physically.

"**ICH Discontact**" is to separate the encoder head from the IC chip of smartcard physically.

"**Init**" is to recognize and display the installed contact smartcard reader. The recognized encoder will be displayed at the pull down control.

"Contact" is to contact with the smartcard electrically and initialize.

"**Reset**" is to finish the function electrically. After "Contact", you can run "Get ATR", "Read", "Write" and "Clear".

"Get ATR" is to read the ATR data.

"**Read**" and "**Write**" are to read and write the defined data (Name, Address and Phone). These could not be applied to all cards.

"Clear" is to clear the displayed data (ATR, Name, Address and Phone).

In case the data is read and written using APDU, Read/Write can be done by APDU commands.

"Load APDU" is to read the stored APDU commands.

"Save APDU" is to save the displayed APDU commands.

"Clear APDU" is to clear the APDU section.

"Send APDU" is to run the APDU commands.

Batch process repeats the following steps sequentially, Card "IN" \rightarrow Move "IC" \rightarrow IC "ICH Contact" \rightarrow IC "Init" \rightarrow IC "Contact" \rightarrow IC "Reset" \rightarrow IC "ICH Dis-contact" \rightarrow Card "OUT".

Magnetic IC (PC/SC) RF (PC/SC) Misc			
Internal IC (Batch)			
ICH Contact ICH Discontact Get ATR Init Read Contact Reset Write Clear	ATR Name Address Phone		0 Bytes 0 Bytes 0 Bytes 0 Bytes 0 Bytes
Load APDU APDU-01		Send APDU	0 Bytes
Save APDU APDU-02		Send APDU	0 Bytes
APDU Clear APDU-03		Send APDU	0 Bytes
APDU-04		Send APDU	0 Bytes
APDU-05		Send APDU	0 Bytes
APDU-06		Send APDU	0 Bytes
APDU-07		Send APDU	0 Bytes
APDU-08		Send APDU	0 Bytes
APDU-09		Send APDU	0 Bytes
APDU-10		Send APDU	0 Bytes

Figure 91 Contact smartcard encoding

RF(PC/SC) : Contactless Smartcard Encoding

In SOLID-510 printer, a contactless smartcard encoder can be installed and SOLID-510 printer has the internal and external contactless smartcard encoder. RF(PC/SC) is to read and write the contactless smartcard. Using internal encoder, the printer brings a card into the printer from input hopper and encodes a smartcard. Using external encoder, after putting a card on the top cover, you can encode because the antenna installed under the top cover is used. Therefore, "Batch" is applied only to the internal contactless smartcard encoding.

"Contact" is to contact with the contactless smartcard electrically and initialize.

"**Reset**" is to finish the function electrically. After "Contact", you can run "Read", "Write" and "Clear".

"Get UID" is for getting Chip Serial Number(CSN)

"**Read**" and "**Write**" are to read and write the defined data (Name, Address and Phone). These could not be applied to all cards.

"Clear" is to clear the displayed data (ATR, Name, Address and Phone).

In case the data is read and written using APDU, Read/Write can be done by APDU commands.

"Load APDU" is to read the stored APDU commands.

"Save APDU" is to save the displayed APDU commands.

"Clear APDU" is to clear the APDU section.

"Send APDU" is to run the APDU commands.

Batch process repeats the following steps sequentially, Card "IN" \rightarrow Move "RF" \rightarrow RF "Connect" \rightarrow Get UID \rightarrow RF "Discontact" \rightarrow Card "OUT"

Magnetic IC (PC/SC) RF (PC/SC)	Misc		
🔽 Internal (Batch)			
Init Contact Reset Get UID	ATR Read Name Write Addr		0 Bytes 0 Bytes 0 Bytes 0 Bytes 0 Bytes
Load APDU APDU-01		Send APDU	0 Bytes
Save APDU APDU-02		Send APDU	0 Bytes
APDU Clear APDU-03		Send APDU	0 Bytes
APDU-04		Send APDU	0 Bytes
APDU-05		Send APDU	0 Bytes
APDU-06		Send APDU	0 Bytes
APDU-07		Send APDU	0 Bytes
APDU-08		Send APDU	0 Bytes
APDU-09		Send APDU	0 Bytes
APDU-10		Send APDU	0 Bytes

Figure 92 Contactless smartcard encoding

(6) Printer status

"Get Temperature" is to get and display the temperature of Thermal Print Head. When the "Realtime Check" is ticked, it displays the current temperature of Thermal Print Head in real time.

"Get Status" is to get and display the printer status.

4.4. Firmware update

When you run the CardPrinterFirmware, you can see the pop-up window.

(1) CardPrinterFirmware Menu

Device: Select the local printer that you want to upgrade.

Card Printer / Flipper / Laminator: Select the device you want upgrade.

Device Version: Displays the current firmware version of selected printer.

Binary File: Click "Browse" button and select new firmware file to update.

Manual Update: It is used when you want to update manually.

Update: Updates automatically. In generally, we recommend updating automatically.

Close: Exit.

Message : It displays information of updating.

(2) Ready for Firmware Update

- Select the printer to update the firmware on the 'Device' list.
- Select the device to update the firmware among Printer/Flipper/Laminator tab. The Flipper and Laminator tab is shown if that option is installed only.
- Click "Browse" and select the new firmware

a CardPrinter Firmware Downloader v2.1.1.2 (20170622)	×
Devices : IDP SOLID-510 Card Printer [SOLID : US8001]	✓ Refresh
Card Printer Flipper	
Version : 1.00.08	
Binary File :	Browse
Manual Update Update Cl	lose
Program Start. 	^

Figure 93 run CardPrinterFirmware

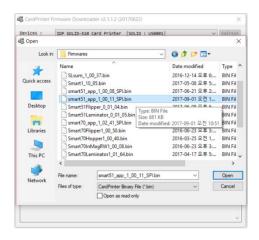


Figure 94 Select Firmware

(3) Firmware Update

- Click "Update" button to upgrade automatically, then the printer is upgraded after rebooting.
- In case there are some problems in the automatic upgrade, you click "Manual Update" and can see the pop-up widow as below picture. It shows procedure of manual upgrade. You can upgrade manually according to this procedure.

(Caution: Please do not close upgrade dialog box until it is completed successfully and do not turn off the printer.)

CardPrinter Firmware Downloader v2.1.1.2 (20170622)	×
Devices : IDP SOLID-510 Card Printer [SOLID : US8001] V	efresh
Card Printer Flipper	
Version : 1.00.11 Binary File : D:\IDP Share\Products Info\Firmwares\smartS1_app_1_00_11_SPI.bi g	Prowse
Manual Update Update Close	
Device is Ready.	
Start PRINTER Write. Reset Device for download. ===== CONNECT TO DEVICE : IDP SOLID-510 Card Printer [SOLID : US8001]	^
CardPrinter Version : 1.00.08	
CardPrinter Version : 1.00.08 Transfer is completed. Apply transfered data. ***** CONNECT TO DEVICE : IDP SOLID-510 Card Printer [SOLID : USB001]	
CardPrinter Version : 1.00.11	~

Figure 95 Update Firmware

5. Optional device driver installation

In SOLID-510 printer, you can install the optional devices that encode contact smartcard or contactless smartcard. If your purchased SOLID-510 printer has optional devices, you should also install the smart card reader drivers.

5.1. Contact smartcard reader

In SOLID-510 printer, you can install the two types of optional devices which are contact smartcard reader. If you have one or more smartcard reader devices on your printer, you should install the smartcard device driver as in the following, and connect SOLID-510 printer to your PC.

(1) Run the smartcard driver installer

Insert the smartcard installation CD and find "\Options\Gemalto PC Twin" directory on your CD. Find the right directory which is installed OS version on your PC, and run the installer. You can see the smartcard reader driver installation window as the Pic.125. And click "Next".



Figure 96 Contact smartcard reader driver installation

(2) License agreement

The license agreement window is shown. Check at the agreement and click "Next".

PC CCID Setup		
nd-User License Agreement Please read the following license agreement ca		nalto urity to be free
END USER LICENSE AGR	EEMENT	
IMPORTANT-READ CAREFULL' Agreement for Gemalto Software ("EU agreement between you and a subsidiar ("Gemalto") that distributes the Softwar by this EULA. "You" are a person or l	ILA") is a legal and bir y or affiliate of Gemal re (as defined below) g	nding to N.V. governed
☑] accept the terms in the License Agreement]		
	Back Next	Cancel

Figure 97 License agreement

(3) Installation

The installation message is shown as the picture. Click "Install" to install driver.



Figure 98 Installing the contact smartcard reader driver

(4) Complete installation

When the installation is completed, the window is shown. Click the "Finish" to complete the installation steps.



Figure 99 Completing the smartcard reader driver installation

5.2. Contactless smartcard reader

In SOLID-510 printer, you can install the two types of smartcard reader which are internal contactless smartcard reader and external contactless smartcard reader. If you have one or more contactless smartcard reader devices on your printer, you should install the contactless smartcard device driver as in the following, and connect SOLID-510 printer to your PC.

(1) Connect SOLID-510 printer to PC

When you connect the printer to PC and turn on the printer, you can see the "Found New Hardware Wizard" as the picture, then Check "No, not that time" and Click "Next" to continue.



Figure 100 Found New Hardware Wizard

(2) Choose the installation method

At the window as the picture, select "Install from a list or specific location" and click "Next".

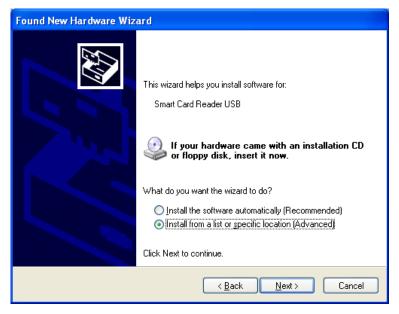


Figure 101 Installation method selection

(3) Driver location

Insert the smartcard installation CD and find "\Options\ Omnikey 5121" directory on your CD. Find the right directory which is installed OS version on your PC, and select the directory as the picture, and click "Next".

Found New Hardware Wizard
Please choose your search and installation options.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
✓ Include this location in the search:
Z: 10ptions 10mnikey 5121 1Device Driver 11/1/32
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack Next > Cancel

Figure 102 Driver location

(4) Complete installation

When the installation is completed, the window as the Pic121 is shown, click "Finish" to complete the installation steps.

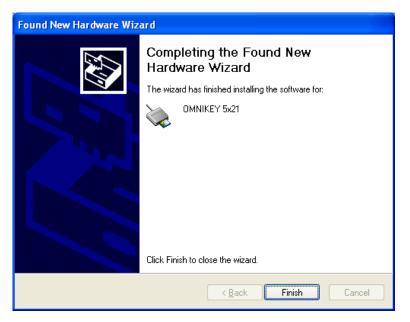


Figure 103 Completing the driver installation

6. Troubleshooting

6.1. Error Message

SOLID-510 printer shows the error message in the LCD display when it occurs. Click the Left button to retry or the right button to cancel an operation.

The following shows the error message on your SOLID Printer. For checking a status of printer, please use a CardPrinterTest or CardPrinterDiagnostics in the Utilities folder of Install CD.

No	LCD Message	Description and Countermeasures				
1	Card In Error	 Fail to move a card from the hopper to the printer inside. Check the card thickness and adjust the card thickness control lever Check cards are stuck because of static electricity Clean Hopper roller and cleaning roller 				
2	CardMove Int Err	 Fail to move a card in the printer. Remove a card if the ribbon is attached Check the rollers and cards, and clean them if they are polluted Check the operating state of the card feeding rollers and sensors 				
3	CardMove Ext Err	 Fail to move a card between printer and other module(flipper/laminator) Check the rollers and cards, and clean them if they are polluted Check the operating state of the card feeding rollers and sensors 				
4	Card Out Error	 Fail to discharge a card after printing, encoding or laminating. Remove a card if the ribbon is attached Check the rollers and cards, and clean them if they are polluted Check the operating state of the card feeding rollers and sensors 				
5	TPH UpDown Error	 The Head Up/Down Motor or Sensor don't work correctly in printing or booting up Check the operating state of the Head Up/Down Motor and Sensor. Check the status of the mirror sticker in the Head Up/Down Gear. 				
6	6 IC UpDown Error The IC Head Up/Down Motor or Sensor don't work correctly in printing or booting up.					

		Check the state of the Cable between a medule and a main beard					
		 Check the state of the Cable between a module and a main board Check the operating state of the IC Motor 					
		The printer can't search the ribbon panel in printing or booting up					
		Check the operating state of the Ribbon Motor					
7	Ribbon Seek Err	Check the operating state of the ribbon encoder sensor and gears					
		Check and clean the Color In/Out Sensor					
		Check the operating state of the color in/out Sensor					
		The printer can't wind the ribbon in printing or booting up.					
8	Ribbon Move Err	Check the operating state of the Ribbon Motor					
		Check the operating state of the ribbon encoder sensor and gears					
		Fail to read or write the magnetic stripe.					
		Check the surface and direction of magnetic card					
9	MAG R/W Error	Check the coercivity of magnetic card and encoding configuration					
		Check the rollers, encoder and cards, and clean them if they are polluted					
		Fail to read a track 1 of the magnetic stripe.					
	MAG T1 Error	Check the surface and direction of magnetic card					
10		Check the coercivity of magnetic card and encoding configuration					
		Check the rollers, encoder and cards, and clean them if they are polluted					
		Fail to read a track 2 of the magnetic stripe.					
	MAG T2 Error	Check the surface and direction of magnetic card					
11		Check the coercivity of magnetic card and encoding configuration					
		Check the rollers, encoder and cards, and clean them if they are polluted					
	MAG T3 Error	Fail to read a track 3 of the magnetic stripe.					
		Check the surface and direction of magnetic card					
12		Check the coercivity of magnetic card and encoding configuration					
		Check the rollers, encoder and cards, and clean them if they are polluted					
		Error occurs while printing					
	Printing Error	Check a card is jammed					
13		Check usage of a genuine ribbon and cards					
		Check the rollers, encoders and cards, and clean them if they are polluted					

14	Init Error	Error occurs while initializing Check the status of installation of ribbon and laminating film				
		Check the laminator turning on if the laminator is installed				
		Fail to communicate between a printer and a flipper/laminator				
15	DeviceCon Error	Check the laminator turning on if the laminator is installed				
		Check a cable between a printer and a flipper/laminator				
		Error occurs while laminating				
16	Lami Error					
10	Lamienor	Remove a card after opening a laminator top cover				
		Check usage of a genuine laminating film and cards				
		Error occurs while operating a flipper				
17	Flipper Error	Remove a card after opening a flipper cover				
		Check the card size				
18	Ribbon Zero	All ribbons are used				
10	RIDDON Zero	Install the new ribbon after purchasing it in the place of purchase				
		Ribbon is not installed or not searched				
19	RibbonNotFound	Install a ribbon if not				
		Check usage of a genuine ribbon				
		Thermal Print Head is not installed or not recognized				
20	TPH Not Found	Check the print head installation				
		Contact the place of purchase				
		Thermal Print Head is overheated				
21	TPH Over Heat	Lower the temperature when the temperature of circumstance is too high				
21		Take a stop for 10 minutes and print again.				
		Contact the place of purchase if this message is shown regularly				
	Invalid Data	Error occurs when the abnormal printing data is transmitted.				
		Replace the USB cable USB				
22		Change the USB port in the PC				
		Reinstall the printer driver				
22	Wrong Doogword	The password is not correct				
23	Wrong Password	Input the correct password				

		Contact the place of purchase if you forget the password
24	SetCommandFail	Failed to execute a command of the printer Replace the USB cable USB Change the USB port in the PC Turn off/on the printer
25	Spool Full	The printing data is full in the spooler This message disappear after printing all data to send Turn off/on the printer if the spool data is full without printing

6.2. Cleaning the printer

To maintain the best condition of SOLID-510 printer, you must clean the printer periodically. If you use the exclusive long cleaning card as the picture, you can clean the printer easily. For purchase the exclusive long cleaning card, ask to SOLID-510 printer provider.



Figure 104 Exclusive long cleaning card for SOLID-510 printer

If the exclusive long cleaning card is ready, click the "Clean Printer" in the service tab of SOLID-510 printer driver. After click, Clean Printer program to clean the printer is run.

Or, you can set the Cleaning Mode with LCD buttons by pushing both buttons for 5 seconds after opening the top cover.

HIDP SOLID-510 Card Printer Properties	×
General Sharing Ports Advanced Color Management Security	Service
IDP SOLID-510 Card Printer SPrinter Printer Printer ID : SMART	^
C encoder connected O MS encoder connected O Flipper connected O Flipper top status	
Case open Card in centor sensor Card empty sensor	
Flipper tray top status Flipper flip sensor	~
Print technical support sheet Clean Printer	
OK Cancel	<u>A</u> pply

Figure 105 Printer cleaning start

Step 1. Connect the SOLID-510 printer to PC and turn it on, and prepare the exclusive long cleaning card.



Figure 106 Printer cleaning Step 1



Step 2. Open the hopper and top cover and remove the card and ribbon cartridge.

Figure 107 Printer cleaning Step 2

Step 3. Insert the exclusive long cleaning card into the printer through input hopper. When the exclusive long cleaning card is inserted to the cleaning roller, it will be move

automatically. It is normal that the exclusive long cleaning card is inserted to the ends and rollers are moving to clean.



Figure 108 Printer cleaning Step 3

Step 4. Close the top cover to clean the Thermal Print Head and the printing roller. When the top cover is closed, cleaning card will be moving back and forth to clean.



Figure 109 Printer cleaning Step 4

Step 5. Wait until the cleaning is completed. When the cleaning is completed, the exclusive long cleaning card will be ejected automatically as the picture.



Figure 110 Printer cleaning Step 5

Step 6. Remove the exclusive long cleaning card and install ribbon cartridge into the printer.



Figure 111 Printer cleaning Step 6

6.3 TPH (Thermal Print Head) replacement

1. Check the serial number and the resistance of new Thermal Print Head as the Picture.

TPH type: A = KEE, B = KPE

Serial No.: see the red box.

TPH resistance: see the green box.



Figure 112 Thermal Print Head

2. Set up the new Print Head's configuration using CardPrinterConfig program.

Step1: Run 'CardPrinterConfig' in Utilities of the installation CD and click expansion button.

Step2: Click "Change Head" in the extended setup.

Step3: Input the Print Head's Serial No., Resistance and Type (choose KEE or KPE) on the Print Head's label, and click "OK".

Step4: Click "Set Config" to set the new Print Head's configuration.

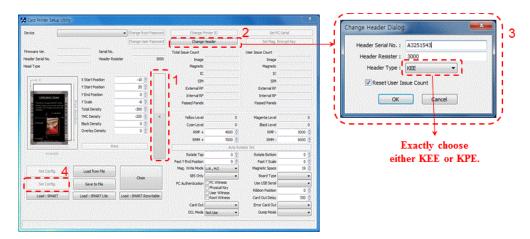


Figure 113 Print head setup

3. Replacing the new Print Head

Step1: Remove the old Print Head from the top cover.

- (1) Turn off the printer and open the top cover.
- (2) Hold the Print Head and press the locked hook, then the Print Head is disconnected..
- (3) Disconnect the Print Head from print head wire carefully.

(Caution: Print Head is possible to HOT.)

Step2: Installing the new Print Head

- (1) Connect new Print Head to the print head wire.
- (2). Put the new Print Head on the Shift and pull it up until be locked..

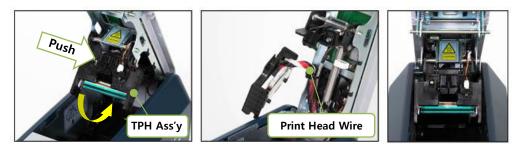


Figure 114 Print head replacement

4. Setup the print position and the color density.

After installing the new Print Head, you must reset the print position and the color density using CardPrinterConfig utility. Refer to "4.1.2 Default setting"

5. Calibration of Print Head Angle

To get the best print quality, the Print Head should be located vertically with card surface.

If print quality has the problem, it could be caused by print head angle.

Through Adjusting print head angle by screw (red mark in the right picture), you could make good quality of print.

(Use the appropriate screw driver to adjust, and turn the screw by 90 degrees at a time.)

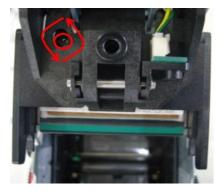


Figure 115 Print head angle

6.4. Laminator Head Replacement

1. Disassemble the Laminator Head

- 1. Open Top Cover. (Step. 1)
- 2. Push the Head Ass'y in the direction of the arrow and separate it from Top Cover. (Be Careful of burns from high-temperature) (Step. 2)
- 3. Turn the Head Ass'y and unbind cable fixing. (Step. 3)
- 4. Disconnect sensor wire(Con.1) and Laminator Head wire(Con.2) from disassembled Head Ass'y. (Step. 4)
- 5. Completely separate the Head Ass'y from main body. (Step. 5)











<Step. 3>

<Step. 5> Figure 116 Disassemble the Laminator Head

2. Assemble the new Laminator Head

- 6. Connect sensor wire(Con.1) and Laminator Head wire(Con.2) through the hole on top of the Head Ass'y. (notice to the direction) (Step. 6)
- 7. Fix the cables using the retainer coil. (Step. 7)
- 8. Turn the Head Ass'y and place its upper part to fixing point of Top Cover. (Step. 8)
- 9. In reverse order of disassembly, push the Head Ass'y in the direction of the arrow and fix to the hook. (Step. 8)
- With connected PC, Launch [CardPrinterConfig], open [Change Head] window, insert the value of R2 on the back of the Head(Step. 9) into [Lami. Head Resister] section and save the settings. (Step. 10) The Resister value must be adjusted before Laminating.



HDR-0670K-4 4F1082 HDR-0670K-4 4F1082 HDR-0670K-4 4F1082 HDR-0670K-4 4F1082 HDR-0670K-4 4F1082 HDR-0670K-4 4F1082 Step. 9>

- 1. Click [Change Head]
- 2. Insert Resister value Into [Lami. Head Resister] section on pop-up window
- 3. Click [OK] to close pop-up window
- 4. Click [Set Config] to save

Device IDP SMAR	51 Card Printer [SM	ART : USB002]	Change Root PW				PC Serial
Allow Net	etwork Printer		Change User PW	Change Head		Set Mag	. Encrypt Key
Card Printer	Laminator		Change Root PW	Comig			
Laminator Version	0.01.05		hange Head Dialog	x			
Lami. Head Resiste	r 45	53 Lamina			ear Count		
Information			Neader Serial No. : B7300294	ł	1 1	aminating	
Film Type	HOLO 1.0MIL	Film Remain	Header Resister : 2888				_
Laminator Code	[SM][00][00]	Film Code	Header Type : KPE			orque Move Min	50
Heater Temperat	ure 160 🏺	Laminating Pl	Lami. Head Resister 45.3	2		evice Attribute	
Laminating Move	Pulse 8250 🛓	Lami. Start C	Reset User Issue Count	-		lut Speed	2
Torque Laminating	g MAX 700 🌻	Torque Lamir			210		
Laminating width	Pulse 6225 🌲	Film Attribute	(3) ок	Cancel			
Get Confi	ig. L	oad from File					
			Close				
Set Confi	g. s	Save to File					

<Step. 10>

Figure 117 Assemble the New Laminator Head

6.5. Card movement

6.5.1. Cards can't enter into the printer from input hopper.

- Non-standard cards or bad cards. Change the cards. You can use only ISO CR-80 card (54mm x 86mm).
- **Card thickness control lever is set improperly.** Regulate the card thickness control lever to fit the current card thickness.
- **Bad card array.** Array the cards again and put them on input hopper as section 2.4 in this manual.
- Cards have static and moisture. Remove the moisture or static.
- 6.5.2. Card Transfer Error occurs when the ribbon is coiled around the transfer roller or the printing roller.

Open the top cover and remove the card and the coiled ribbon from SOLID-510 printer using front LED buttons. If this problem occurred frequently, check the below things.

- Non-standard cards or bad cards. Change the cards. You can use only ISO CR-80 card (54mm x 86mm).
- The transfer roller or the printing roller is contaminated with the dust and dirt

Remove the dust and dirt with the cleaning kit as section 6.2

- Wrong printing position setting. Please contact the local supplier
- When operating temperature and humidity is out of the acceptable operating limit of the printer.

Adjust the operating environment of the printer.

6.5.3. An Error occurs while the card is being transferred.

First of all, check the Error message at LCD display.

Open the top cover and remove the card by LED buttons.

If this problem occurs frequently, check the followings.

- Non-standard cards or bad cards. Change the cards. You can use only ISO CR-80 card (54mm x 86mm).
- **Printer setting is changed or is not proper.** Please contact the local supplier.
- The transfer roller or the printing roller is contaminated with the dust and dirt.

Remove the dust and dirt with the cleaning kit as section 6.1.

• The card surface is contaminated with the dust and dirt.

Check the card surface and remove the dust and dirt and try again. If this problem occurs again, retry with new card.

6.6. Printing quality

6.6.1. Not printed or wrong colors printed spot.

• The card surface is contaminated with the dust and dirt. After checking the card, change it to another

card.

• The cleaning roller is contaminated with the dust and dirt.

* * * *

Figure 118 Printing quality trouble 1

Check the cleaning roller. If there is much dust, change the cleaning roller to the new one.

• **Much dust in the printer.** Clean the inside of the printer with the cleaning kit.

6.6.2. Not printed horizontal line.

- The ribbon cartridge is installed improperly. Check the ribbon cartridge installation state and whether the ribbon has wrinkles.
- The printer head is contaminated with the dust and dirt. Clean the printer head with cleaning kit.
- The printer head is damaged. Please contact the local supplier to replace the printer head.





6.6.3. Unclear or not uniform print.

- Uneven or bad card surface. Change the card.
- Too high or low setting of the color density. Please contact the local supplier. The color density default of your printer needs to be changed.
- The printer head is contaminated with the dust and dirt. Clean the printer head with cleaning kit.



Figure 120 Printing quality trouble 3

6.6.4. Not aligned color print.

- Non-standard cards or bad cards. Change the cards. You can use only ISO CR-80 card (54mm x 86mm).
- Uneven or bad card surface. Change the card.
- The transfer roller or printing roller is contaminated with the dust and dirt.

Clean the rollers with the cleaning kit as section 6.1.

• Worn-out printer. Please contact the local supplier.

6.6.5. Unplanned color print.

- Non-standard cards or bad cards. Change the cards. You can use only ISO CR-80 card (54mm x 86mm).
- Uneven or bad card surface. Change the card.
- The transfer roller or printing roller is contaminated with the dust and dirt.

Clean the rollers with the cleaning kit as section 6.1.

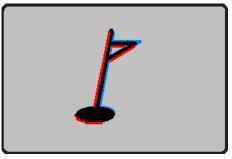


Figure 121 Printing quality trouble 4



Figure 122 Printing quality trouble 5

• Worn-out printer. Please contact the local supplier.

6.7. Magnetic stripe encoding

6.7.1. Magnetic encoding error.

First of all, Please press left LED button to retry.

• The magnetic head is contaminated with the dust and dirt.

Clean the magnetic head with the cleaning kit.

- The magnetic encoding data is not transmitted or the wrong data is transmitted. Check the setting of the program and the driver and the magnetic encoding data you transmitted.
- The card is not magnetic card, or inserting direction is wrong. Change the card or the direction.
- Bad magnetic stripes on the card. Change the card.

6.8. General operation

6.8.1. Ribbon snapped during printing.

Open the top cover and take out the cartridge. After putting the snapped pieces on together, install the cartridge again. Check the followings if this kind of problem occur frequently.

- Non-standard cards or bad cards. Change the cards. You can use only ISO CR-80 card (54mm x 86mm).
- **Too high or low setting of the color density.** Please contact the local supplier. The color density default of your printer needs to be changed.

6.8.2. LCD display "Ribbon Not Found"

Press the left LED button to retry. If it occurs frequently, check the followings.

• Not genuine ribbon.

Change to the genuine ribbon.

• Ribbon is consumed.

Printing is not possible if ribbon is used up. Change the ribbon.

• Snapped ribbon.

Open the top cover and take out the cartridge. After putting the snapped pieces on together, install the cartridge again.

6.8.3. Printer doesn't operate even if the printing data has been transmitted. Check the following.

• Printer power off.

Check the power. Turn on the printer power. Check the printer adaptor whether it is connected with a socket and the printer.

• Bad power adaptor.

Please contact the local supplier for replacement of the adaptor.

• The printer driver is "Offline".

Change the printer driver to "Online".

- The printer's USB cable is disconnected or the connection is bad. Check the cable's connection between PC and the printer. If not good, make the USB cable connection again.
- Bad USB cable. Change the USB cable.
- The printing is operated with another printer driver. Select the correct SOLID-510 printer driver again.
- Wrong USB port setting of the printer driver. Check the port setting of the printer driver and change the port setting.
- No ribbon in the printer or error occurred. Install ribbon in the printer or resolve the error.
- Too long power or USB cable (more than 1.5M). Use the cable provided with the printer.
- PC's USB port is down:

Reboot your PC.

7. Specification

Model			SOLID-510S	SOLID-510D	SOLID-510L			
Printing	Print Type		Dye-Sublimation					
	Print Area		Edge to Edge					
	Resolution		300dpi (Color & Mono) / 300x600dpi, 300x1200dpi (Mono only)					
	Dual Side Printing		Option (with Flipper)	Yes	Yes			
Card	Card Feeding		Automatic					
	Card Size		ISO CR80 o	ISO CR80 or ISO CR79 (option-Factory installed)				
	Card Thickness		0.3	8mm (15mil), 1.0mm (40	Omil)			
	Card Type		P	VC, PET, Composite P	VC			
Printing Speed	Monochrome		5	sec./card (720 cards/ho	ur)			
	YMCKC)	Max.	17 sec./card (212 cards	/hour)			
	YMCKC	Ж	_	Max. 22 sec./car	d (164 cards/hour)			
Laminating	Mode		_	_	Single & Dual			
	Film		_	_	0.6mil, 1.0mil			
		Simultaneous	_	_	22 sec./card (YMCK)			
	Speed	(Single)	-	_	32 sec./card (YMCKK)			
	Opeca	One by One	_	_	43 sec./card (YMCK)			
		(Single)	_	_	53 sec./card (YMCKK)			
Capacity	Input Hopper		100 Cards / 200 Cards with cover open					
	Output Hopper		Front : 40 Cards / Rear : 100 Cards (Optional Rear-side Stacker)					
System	Memory		64MB RAM					
	Display		2 Line LCD					
	Control Panel		2 LED Buttons					
	Supported Platforms		MS Windows 7/ 8/ 10, Mac OS, Linux					
	Communication		USB, Ethernet (Option)					
	Power Supply		Free Voltage (AC 100/220V, 50~60Hz)					
	Power Consumption		48	48	96			
	Temp. / Humidity		15~35℃ / 35~70%					
Dimensions	Millimeter (WxLxH)		165 x 390 x 210	165 x 498 x 210	165 x 675 x 210			
	Inch (WxLxH)		6.5 x 15.4 x 8.3	6.5 x 19.6 x 8.3	6.5 x 26.6 x 8.3			
Weight	Kg / Lbs		4.5 / 10	5.2 / 11.5	8.8 / 19.4			
Encoding Options	Magnetic		ISO 7811 (Track I, II, III Read/ Write, HiCo/ LoCo), JIS II					
	Contact		ISO 7816 (ID-1)					
	Contactless		MIFARE, ISO 14443 (Type A/ B), ISO 15693, DESFIRE, iCLASS					
Certifications	I		CB, CE, FCC, KC, CCC					
<u> </u>				ecifications and availability	mov obongo without notio			

Specifications and availability may change without notice.