# MiCard Card Readers



## **Installation Guide**

**MiCard Version 1.2** 

English



## **Table of Contents**

1	MiCard Versioning Information	1
2	MiCard Contactless Card Reader	2
2.1	Scope of supply	3
2.2	Requirements	3
2.3	System Setup	4
2.4	LED Status	5
2.5	Configuration	6
3	MiCard Magnetic Card Reader	13
3.1	Technical Specifications	13
3.2	Requirements for magnetic cards	14
3.3	System Setup for MiCard Magnetic Card Reader	14
3.4	How to read Magnetic Cards	15
3.5	Configuration	15



## **1 MiCard Versioning Information**

Version:	1.2			
Date:	June 5, 20	800		
First Draw-up Date:	July 27, 2	007		
Author:	Claudia K	leinekemper		
Revision history:	Version:	Revision date:	Reviewer:	Final Review:
	1.0	23.08.2007	Michael Rosemann	Michael Rosemann
	1.1	23.01.2008	Michael Rosemann	Michael Rosemann
	1.2	06.06.2008	Michael Rosemann	Michael Rosemann
Technologies concerned:	uniFLOW Printing A	OM Login M pplet) v2.1.2	anager/MomClien	t (Secure/Public
File name:	MiCard®	_installation_guide	e_EN.hmx	

Short Summary:

This manual describes the features and the installation of the MiCard® Readers. MiCard® is a registered Trademark of NT-ware Systemprogrammierung GmbH

Update History:

V 1.1:

Added Firmware Update possibility for MiCard® which is available with uniFLOW OM Login Manager / MomClient (Secure/Public Printing Applet) v2.1.2

V 1.2:

Added MiCard® Magnetic Card Reader



## 2 MiCard Contactless Card Reader

MiCard® provides an easy to use, easy to install and cost effective solution for identification with a contactless card at your Canon iR. With MiCard® you simply wave your card over the reader and you will be identified. After identification the Canon iR opens up and you are able to make your copies or pick up your secure print jobs.

Installation and configuration has never been easier. You simply connect the MiCard® via USB directly to the device. Even power is supplied via USB, thus providing a cost effective solution by removing the expense normally required for an additional interface. After connecting MiCard® to the device, it will automatically be recognized and configured by the in the Canon iR integrated uniFLOW MEAP application.

There are many different technologies for Radio Frequency Identification (RFID) on the market. Therefore, for additional flexibility, MiCard® Contactless Card Reader is available in 3 different versions, MiCard® HiTag, MiCard® Legic/MiFare, and MiCard® HID Prox, all supporting different RFID frequencies and technologies.

The uniFLOW MEAP application embedded in the Canon iR will also make your life in the office easier. You can use it for printing confidential information securely. Simply select the print job you want to print directly from the control panel of the Canon iR, without the risk of interception by others.

Additionally it can be used for charging back copy jobs to cost centers, departments or customers, printing of general/internal company documents, or the authentication into other applications like for instance eCopy.





## 2.1 Scope of supply

The MiCard® reader package consists of the MiCard® Reader itself and the appertaining connection cable.

## 2.2 Requirements

Rated Voltage: 5 V ----USB 1.1 Full Speed Ambient temperature 0 ... +50 °C

#### Canon iR:

- has to be MEAP enabled
- USB Application Interface board of the respective iR
- uniFLOW OM Login Manager/MomClient (Secure/Public Printing Applet) v2.1.0

#### uniFLOW OM:

 uniFLOW OM/RPS v3.1 required / uniFLOW OM / RPS v3.1.1. recommended

#### **Important Note:**

Changes and/or modifications of the MiCard® not approved by NT-ware Systemprogrammierung GmbH will void the user's authority to operate the MiCard®.

#### FCC Compliance Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



#### FCC Compliance Note for Canada:

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

### 2.3 System Setup

- Ensure the MFP is equipped with the USB Application Board.
- The uniFLOW OM Login Manager and / or MomClient (Secure/Public Printing Applet) v2.1.0 should be installed and running on the MFP. For installation of the Login Manager and the uniFLOW OM MEAP Applets please see the uniFLOW OM User Manual.
- Connect the MiCard® reader to the USB Host Connection of the MFP (See photo below. Please be aware that the arrangement of the USB connection may vary depending on the model of the copier).



The power supply for the MiCard® reader is effected via the USB connection.

• The MiCard® beeps twice and the red and green LED flash twice when being connected.



## 2.4 LED Status

The MiCard® readers are equipped with 3 status LEDs: green (left hand), yellow (middle) and red (right hand). The table below shows the status information given by the respective LED.

Status	Green LED	Yellow LED	Red LED
Booting up	flashing		flashing
Not synchronized			flashing
Synchronized (operating)		flashing	
Authentication OK	on	flashing	
Authentication failed		flashing	on



## 2.5 Configuration

The MiCard® device is working without further configuration; however some "advanced" options are available.

When using uniFLOW OM v3.1.1 you can see the connected MiCard® readers on the *MEAP/miniMIND Status* tab of the main menu *Connections*.

By clicking on in the *ID Device* column a new window opens showing the advanced options. When using uniFLOW OM v3.1 you won't see the connected MiCard® readers in the status overview, but you can open the configuration page using this URL:

UniFLOW=		SERVER CONFIGURATION
	MEAP & miniMIND	
	Status Network Configuration Resources	
Base Data	On this tab you can set the default behavior for all MEAP Applications for all printers in the network. You can also make a setting per device by clicking on the icon beside the column 'Behavior'. Default behavior for MEAP Applications for all Printers ( (*) unsigned Behaviour ):	
	unFLOW MEAP Client Secure Public Printing	
Printer	uniFLOW Login Manager Proximity Card Login	
Connections	Save	
	Serial No. Name IP Address L Conn. Licensed Behavior ID unRLOW MEAP Clent	Device
Server Config.	VDE00000 192.168.1.2 14:22:54 VDE00000 INFLOW Login Manager Proximity Card Login MCar	
Module Config.	2000	Conigure to-bevice
	1	
100	-	

http://<MFP-IP>:8000/usbidmodule/base.htm

The Configuration page will look like in the screenshot below.



IFLOW-		MEAP Configuration
Connected ID Module:	MiCard ( <u>confiq</u> )	
Last Read ID:	A881C045	
Conversion Result:	A881C045	
<b>-</b>		
Code Remove First	0	
Code Remove Last	0	
Code Length	0	
Code Conversion No.1	None	•
	Save	

In the following please find an explanation of the terms used and the possible settings on the configuration site:

#### **Connected ID Module**

shows the ID Module connected, e.g. MiCard® / miniMIND

#### Last Read ID

shows the last ID read by a card swipe

#### **Conversion Result**

shows the result of the last read ID when the configured code conversions are applied. This is the ID sent to the server for authentication.

#### **Code Remove First**

specifies the number of characters to be removed from the ID read before the code conversion takes place. For instance a value of 3 applied to A881C045 will result in 1C045.

#### **Code Remove Last**

specifies the number of characters to be removed at the end of the ID read before the code conversion takes place. For instance a value of 3 applied to A881C045 will result in A881C.

#### Code Length



specifies the code length applied after the code conversion. For instance a value of 6 applied to A881C045 will result in A881C0, whereas a value of 10 applied to A881C045 will result in 00A881C045.

put Manager		
Connected ID Module:	MiCard ( <u>config</u> )	
Last Read ID:	A881C045	
	A881CU45	
Code Remove First	0	
Code Remove Last	0	
Code Length	0	
Code Conversion No.1	Reverse HexBytes (45C08145)	
	Decimal To Hex ()	
	Sa String Reverse (540C188A)	
	Reverse Bitorder in Bytes (158103A2) Remove Leading Zeros (A881C045)	
	Hex To Decimal (2827075653)	
	Convert to ASCII (1008080112000405) Reverse HexBytes (45C08145)	

#### Code Conversion No. [N]

specifies the code conversion that has to be applied to the ID read in a series of code conversions at step [N]. The result of the code conversions at step [N] is displayed next to the name of the code conversion in the drop down list. If the result is empty "()", this code conversion can't be applied in the actual step (cf. screenshot above).



Last Read ID:	A881C045
Conversion Result:	A20381A2
Code Remove First	0
Code Remove Last	0
Code Length	0
Code Conversion No.1	Reverse HexBytes (45C08145)
Code Conversion No.2	Reverse Bitorder in Bytes (A20381A2)
Code Conversion No.3	None
	Sava

After a code conversion step [N] is saved by clicking the **Save** button the configuration page will allow to specify code conversion step [N+1] as shown in the screenshot above.



Next to the name of the **Connected ID Module** in the configuration page (MiCard®) you can click on a link **(config)** which will bring up the page shown below.

🖉 uniFLOW OM Meap ID Module Configurati	on - Windows Internet Explorer		- 🗆 ×
😋 🕘 👻 🖉 http://192.168.110.86:8000/us	bidmodule/micardcfg.htm	🛨 🛃 🗙 Google	<b>P</b> -
😭 🏟 🏉 uniFLOW OM Meap ID Module Configurat	tion	👌 🔹 🔝 🔹 🖶 🔹 📴 Seite 👻 🎯 Extras	- 🛛 - 🛍 🦓
UniFLOW=		MEAP Configuration	
Update MiCard USB Reader Software MiCard USB Reader Software File:	are: Update	Durchsuchen	
	Back		
Fertig		📑 🚺 Internet	<u>▼</u> 100% <del>▼</del>

With uniFLOW OM Login Manager / MomClient (Secure/Public Printing Applet) v2.1.2 the update of the MiCard® Firmware is possible via this configuration page. A Firmware update file can be requested from our support department (Email: Support@nt-ware.com).



To upload the new Firmware browse for the file and click on Update.

If the file is not a valid MiCard® Firmware File, you will be presented with the following message:





In the case of a valid MiCard® Firmware file the upload will be started and you will be informed about the upload progress via a progress bar.

🖉 uniFLOW OM Meap ID Module Configuration	n - Windows Internet Explorer		- 🗆 X
G V I http://192.168.110.86:8000/usb	idmodule/micardcfg.htm	🔽 🐓 🗙 Google	<b>P</b> -
🔆 🏟 🍘 uniFLOW OM Meap ID Module Configuratio	n	🛛 🔄 🔹 🔝 👻 🖶 🔹 📴 Seite 🔹 🎯 Extras	- 💽 - 🏭 -3
UniFLOW=		MEAP Configuration	
Updateing MiCard Firmware. Please wait			
Programming:			
			-
, Fertig		🛛 🕞 🌍 Internet	€ 100% · //

Once the upload is completed, the MiCard® is automatically rebooted with the new Firmware. A device restart is not necessary.



If the update fails the MiCard® will start in a "Bootloader" mode that allows updating the Firmware again, but has no card reading functionality.



## 3 MiCard Magnetic Card Reader

To enhance the field of use for the MiCard® Card Reader, the MiCard® Magnetic Card Reader has been developed. As the name already implies the MiCard® Magnetic Card Reader allows a magnetic card identification at the printer using the MiCard® Reader.



With the Magnetic Card Reader it is possible to read out either track 1, 2 or 3 of magnetic stripe information and use the content of the read-out track for identification.

This document describes only the points of the installation and configuration of the MiCard® Magnetic Card Reader where it differs from the information given in the MiCard® Contactless Card Reader 2 chapter.

## 3.1 Technical Specifications

Usage	Swiping magnetic cards
Standard input	Reading track 1- 3 from magnetic cards
Power Supply USB port	5 Volt
Dimensions (h x l x d)	28 x 32 x 90 mm
Weight	132 grams
Set parts	1 x Magnetic Card Reader with firmly attached cable



## 3.2 Requirements for magnetic cards

Rating: 5 V ----USB 1.1 Full Speed Ambient temperature 0 ... +50 ° C

#### Canon iR

- has to be MEAP enabled
- USB Application Interface board of the respective iR
- uniFLOW OM Login Manager/MomClient (Secure/Public Printing Applet) v2.1.3

#### uniFLOW OM:

 uniFLOW OM / RPS v3.1 required / uniFLOW OM / RPS v3.1.1. recommended

## 3.3 System Setup for MiCard Magnetic Card Reader

• Connect the Magnetic Card Reader to the USB Host Connection of the MFP (See photo below. Please be aware that the order of the USB connection may vary depending on the model of the copier).



The power supply for the MiCard® reader is provided via the USB connection.

• A proper USB connection and a sufficient power supply of the MiCard® Magnetic Card Reader is indicated by a lighted LED and a beep.



## 3.4 How to read Magnetic Cards

- To read a card swipe it through the reader slot in either direction, with the magnetic stripe facing the magnetic head.
- While swiping the card through the reader slot, the LED will go off.
- Once the magnetic stripe has been read, the LED will light up green to indicate a good reading result. If no good result has been obtained, the LED will light up red.
- As already indicated above, you can read out either track 1, 2 or 3 of a magnetic stripe. When a track is read out successfully, the reader beeps.

## 3.5 Configuration

Please see MiCard® Contactless Card Reader Configuration Chapter

Deviating from the configuration described in the *MiCard*® *Contactless Card Reader Configuration Chapter* the status site under **Server Configuration/Connections/MEAP** & *miniMIND* will show the default behaviour *Magnetic Card Login*.

Image: Server Config.   Image: Server Con	atwork	k. ID Devic	
MEAP & miniMIND     Status   Network Configuration   Resources     Base Data   On this tab you can set the default behavior for all MEAP Applications for all printers in the n You can also make a setting per device by clicking on the loon beside the column 'Behav Default behavior for MEAP Applications for all Printers:     unFLOW MEAP Client   Secure Public Printing   ♥ (*) unsigned Behavior     unFLOW Login Manager   Magnetic Card Login   ♥ (*) unsigned Behavior     Server Config.   ● Serial No.   Name   IP Address   L Conn.   Licensed   Behavior     Magnetic Card Login   ♥ (*) unsigned Behavior   Instrume   Instrume   Instrume   Instrume     Server Config.   ● Serial No.   Name   IP Address   L Conn.   Licensed   Behavior     DCF00002   R C2380/2550   192.168.120.14   09:47:35   ✓   not available     MAgnetic Card Login   JAM00072   R2220/R3320   192.168.120.5   09:47:35   ✓   not available     Magnetic Card Login   JAM00072   R2270/R2870   192.168.120.15   09:47:35   ✓   not available     Mugnetic Card Login   JAM00072   R2270/R2870   192.168.120.15   09:47:35   ✓ <th>atwork</th> <th>K. ID Devic</th> <th></th>	atwork	K. ID Devic	
Status   Network Configuration   Resources     Base Data   On this tab you can set the default behavior for all MEAP Applications for all printers in the n You can also make a setting per device by clicking on the icon beside the column "Behavior Unification of MEAP Applications for all Printers:     Image: Printer   Image: Printer   Image: Printer     Image: Printer   Image: Printer   Image: Printer <th>etwork</th> <th>k. ID Devic</th> <th></th>	etwork	k. ID Devic	
On this tab you can set the default behavior for all MEAP Applications for all printers in the n You can also make a setting per device by clicking on the icon beside the column 'Behavior UniFLOW MEAP Client     Default behavior for MEAP Applications for all Printers:     uniFLOW MEAP Client     Secure Public Printing     uniFLOW Login Manager     Magnetic Card Login     Save     Secure Config.     ABB00023     IRS075     192.168.120.14     09:47:35     Ocfoulue Config.     DCF00002     R C2380/2550     192.168.120.15     09:47:35     Magnetic Card Login     uniFLOW MEAP Client     Secure Public Printing     UniFLOW MEAP Client     Secure Public Printing     Magnetic Card Login     UniFLOW MEAP Client     Secure Public Printing     UniFLOW MEAP Client     Secure Public Printing     Magnetic Card Login	etwork	k. ID Devic	
Base Data   Default behavior for MEAP Applications for all Printers:   (*) unsigned Behavior     unFLOW MEAP Client   Secure Public Printing   (*) unsigned Behavior     unFLOW Login Manager   Magnetic Card Login   (*) unsigned Behavior     Save   Save   (*) unsigned Behavior     Save   Save   (*) unsigned Behavior     Octoonfig.   Secial No.   Name   IP Address   I. Conn.   Licensed   Behavior     ABB00023   IR5075   192.168.120.14   09:47:35   not available   UniFLOW MEAP Client     DCF00002   IR C2380/2550   192.168.120.9   09:47:35   Inot available   UniFLOW Login Manager     JAM00072   IR2220/IR3320   192.168.120.15   09:47:35   Inot available     Info   MEV00002   IR C5185   192.168.120.10   09:47:35   Inot available		ID Devic	
Printer   unFLOW MEAP Client   Secure Public Printing   ✓   (*) unsigned Behavior     unFLOW Login Manager   Magnetic Card Login   ✓   (*) unsigned Behavior     Save   Save		ID Devic	
Printer   Magnetic Card Login   (*) unsigned Behavior     Save   (*) unsigned Behavior     Save   (*) unsigned Behavior     Serial No.   Name   IP Address   I. Conn.   Licensed   Behavior     ABB00023   R5075   192.168.120.14   09:47:35   (*) unsigned Behavior     DCF00002   R C2380/2550   192.168.120.9   09:47:35   (*) unsigned Behavior     Magnetic Card Login   UniFLOW MEAP Client   Secure Public Printing     JAM00072   R2220/R3320   192.168.120.5   09:47:35   (*) not available     KBU04436   R2270/R2870   192.168.120.15   09:47:35   (*) not available     Magnetic Card Login   Magnetic Card Login   (*) 1433   R 2570C EUR   192.168.120.15   09:47:35   (*) not available     Multicol   R2220/R320   192.168.120.15   09:47:35   (*) not available   (*) not available     Multicol   R2270/R2870   192.168.120.15   09:47:35   (*) not available     Multicol   R2570C EUR   192.168.120.10   09:47:35   (*) not available     Multicol   R2570C EUR   192.168.120.10   09:47:35   <		ID Devic	
Save       Serial No.     Name     IP Address     I. Conn.     Licensed     Behavior       rver Config.     AB800023     R5075     192.168.120.14     09:47:35     ✓     not available       DCF00002     R C2380/2550     192.168.120.9     09:47:35     ✓     uniFLOW MEAP Client Secure Public Printing uniFLOW Login Manager       JAM00072     R2220/R3320     192.168.120.5     09:47:35     ✓     not available       Imfo     M2220/R3320     192.168.120.5     09:47:35     ✓     not available       Imfo     M2220/R3320     192.168.120.15     09:47:35     ✓     not available       Imfo     M220/R2870     192.168.120.15     09:47:35     ✓     not available       Imfo     M20002     R C5185     192.168.120.15     09:47:35     ✓     not available		ID Devic	
Serial No.     Name     IP Address     L Conn.     Licensed     Behavior       rver Config.     AB800023     R5075     192.168.120.14     09:47:35     not available       dule Config.     DCF00002     R C2380/2550     192.168.120.9     09:47:35     ✓     not available       JAM00072     R2220/R3320     192.168.120.5     09:47:35     ✓     not available       Import     R C2380/2550     192.168.120.5     09:47:35     ✓     not available       JAM00072     R2220/R3320     192.168.120.5     09:47:35     ✓     not available       KBU04436     R2270/R2870     192.168.120.15     09:47:35     ✓     not available       Import     MEV00002     R C5185     192.168.120.10     09:47:35     ✓     not available		ID Devic	
ABB00023   irS075   192.168.120.14   09:47:35   Inot available     Magnetic Config.   DCF00002   irR C2380/2550   192.168.120.9   09:47:35   Image: Config:		MiCard 1.0	e
DCF00002     iR C2380/2550     192.168.120.9     09:47:35     uniFLOW MEAP Clent Secure Public Printing uniFLOW Login Manager Magnetic Card Login not available       Image: Comparison of the secure Public Printing UniFLOW Login Manager Magnetic Card Login not available     09:47:35     Image: Comparison of the secure Magnetic Card Login not available       Image: Comparison of the secure Magnetic Card Login not available     Image: Comparison of the secure Magnetic Card Login not available     Image: Comparison of the secure Magnetic Card Login not available       Image: Comparison of the secure Magnetic Card Login not available     Image: Comparison of the secure Magnetic Card Login not available     Image: Comparison of the secure Magnetic Card Login not available       Image: Comparison of the secure Magnetic Card Login not available     Image: Comparison of the secure Magnetic Card Login not available     Image: Comparison of the secure Magnetic Card Login not available       Image: Comparison of the secure Magnetic Card Login not available     Image: Comparison of the secure Magnetic Card Login not available     Image: Comparison of the secure Magnetic Card Login not available		USB HID Reader	
JAM00072     IR2220/R3320     192.168.120.5     09:47:35     ✓     not available       KBU04436     IR2270/R2870     192.168.120.15     09:47:35     ✓     not available       KNQ01143     IR 2570C EUR     192.168.120.12     09:47:35     ✓     not available       Info     MEV00002     IR C5185     192.168.120.10     09:47:35     ✓     not available		MiCard Magnetcard Reader	(
KBU04436     IR2270/IR2870     192.168.120.15     09:47:35     ✓     not available       Image: Market Marke		not available	
KNQ01143     IR 2570C EUR     192.168.120.21     IN 4.35     ✓     not available       Info     MEV00002     IR C5185     192.168.120.10     09:47:35     ✓     not available	233	not available	
Info MEV00002 IR C5185 192.168.120.10 09:47:35 V not available		not available	
		not available	
SVQ00003 IR3035/R3045 192.168.120.38 1459.37 💙 not available		not available	
1			



By clicking on in the *ID Device* column a new window opens showing the configuration page for the selected MiCard® Magnetic Card Reader.

IFLOW-		MEAP Configuration
Connected ID Module:	MiCard Magnetcard Reader ( <u>config</u> )	
Last Read ID:	111111111	
Conversion Result:	111111111	
Code Remove First	0	
Code Remove Last	0	
Code Length	0	
Code Conversion No.1	None	<b>V</b>
	Save	



Via the *config link* at the end of the line, next to *Connected ID Module* you will get to another configuration window where you can additionally specify, which of the three tracks of the magnetic stripe you would like to use for identification. The desired track can be selected from the drop-down list box next to *Use Card Track*.

Reader MiCard Magneticard Read	erconnected. Please select a valid card track below:	
Jse Card Track:	Track 3 (333333333)	
	Save	

For more information on the possible code conversion / configuration settings please refer to the MiCard® Contactless Card Reader Configuration Chapter 6.

