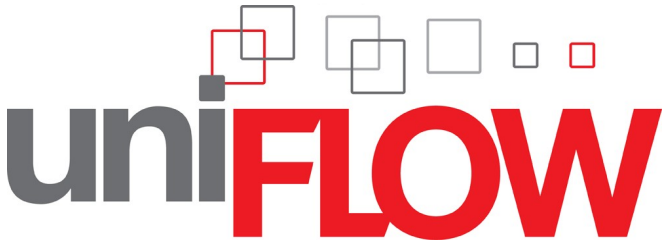

microMIND
Installation Guide

NTware

microMIND

Installation Guide

Disclaimer

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microMIND Installation & Configuration

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Note

Printer Wizard

Important Note

Settings

Online link

Advanced Configuration

Advanced Printer Configuration

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Short Summary:

This manual describes the features, the installation, and the configuration of the microMIND in detail.

microMIND

2

2.1 Introduction

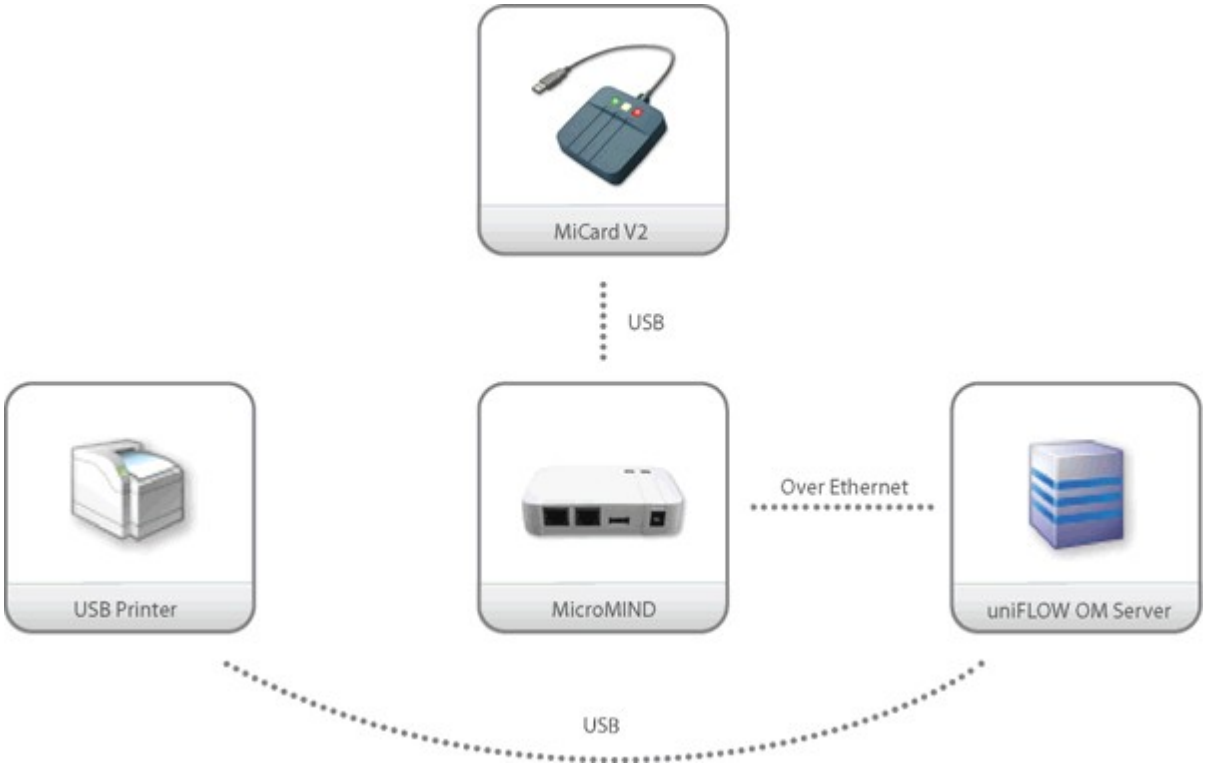
The microMIND provides the possibility to add a MiCard (V2) reader as a Secure Print solution for any printer. Thus allowing you to turn your normal office printer into a cost effective secure print solution. No matter if this printer is a USB, a network printer or a printer with a different connection. The microMIND supports both, MiCard V1 (deprecated former version of the MiCard) and MiCard V2 readers.

The microMIND is designed to add the Secure Print feature to single function printers, not only limited to Canon devices. Each device from each vendor is supported. It doesn't matter if your printer provides an Ethernet TCP/IP network connection, WLAN connection, USB connection etc. Thus, NT-ware provides an easy and cost effective solution to include almost all printers makes and install them in uniFLOW as a secure printer.

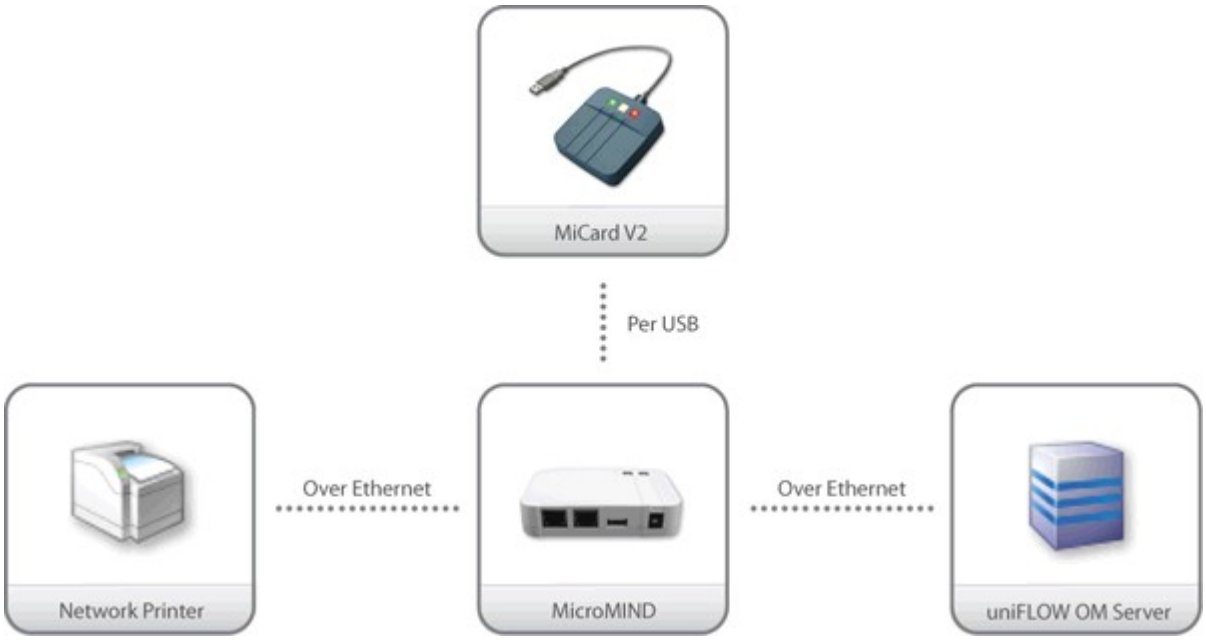
However, an Ethernet TCP/IP network connection is required for the microMIND. The microMIND has a build in network switch, allowing it to connect the printer to the network through the microMIND. This can be required for network printers. Note that the microMIND must not be attached to the printer. It only transfers the ID data, read from the users ID card, to the uniFLOW Server and thus tells the uniFLOW Server to release the print jobs for this user.

The microMIND is designed to support Secure Printing. As Secure Printing always requires a uniFLOW Server to be present, Emergency Access is not possible with the microMIND. This is not a specific limitation of the microMIND itself, but should be mentioned here.

The following graphics outline how the microMIND is implemented in the network environment. The microMIND also offers two Ethernet ports, allowing both the microMIND and a network printer to connect to the companies network. Thus no additional network port or switch port is required. The first graphic shows a USB printer connected to the uniFLOW Server. The second graphic shows a normal network printer using the build in network switch.



microMIND attached to a USB printer



microMIND attached to a network printer

2.2 Scope of supply

The microMIND package includes

- the microMIND device
- a short patch cable to connect the device to a printer
- Power supply (if no PoE microMIND)
- a Quick Installation Guide

2.3 Technical Specifications

Power Supply:	The microMIND is available in two different versions. One with PoE (Power over Ethernet) and one without. If you have a microMIND which doesn't support PoE or if your network switch doesn't support PoE, you have to use the respective power supply. If you have purchased the device without PoE support, the power supply is delivered with the device.
Rated Voltage:	12 V ⎓ LPS
Ethernet:	2x RJ-45 Ethernet connection with a build in 10/100MBit switch
USB:	USB Type A connection with USB 1.1 (Full-Speed) to connect a MiCard (V2) reader
Ambient temperature:	0 … +40 °C (32 … +104 °F)
Printer:	Any printer with or without a respective network interface can be connected to the uniFLOW Server. Printers without network connections, such as USB or LPT connections, can also be "virtually" attached to the microMIND via the uniFLOW Server.
Supported Readers:	MiCard (V1) and MiCard V2
uniFLOW:	uniFLOW and/or RPS V5.x or higher
Status LEDs:	The microMIND is equipped with colored status LEDs 8.

Note that the MiCard (V2) readers are the only readers supported by the microMIND. Do not attach different readers or USB devices to the microMIND.

Important Note:

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

2.4 FCC and IC 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 to 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.

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.

2.5 Installation

Required components:

- microMIND
- Power supply for the microMIND if no PoE support
- Printer
- Ethernet patch cable (delivered with the microMIND)
- MiCard (V2)
- USB cable (delivered with the MiCard (V2)

Installation

1. Switch off the desired printer.

2. If it is a network printer, disconnect the device from the network.
3. If it is a network printer, plug-in the printers network cable in one of the RJ45 input jacks.
4. Attach the MiCard (V2) reader to the microMIND's USB port.
5. Attach the microMIND reader to the network.
6. Plug-in the power supply of the microMIND if required. This is necessary if you have no PoE microMIND or if you have a PoE microMIND but your network doesn't support PoE.
7. The microMIND reader boots up.
8. Switch on the printer.

The microMIND and MiCard (V2) reader are now ready for more advanced configurations. For the microMIND configuration, see chapter Configuration 9. For the MiCard (V2) reader, refer to the respective MiCard (V2) manual and the uniFLOW manual.

2.6 LED Status

The microMIND is equipped with two status LEDs. The tables below show the status information given by the respective LED.

Power LED:

Status/Color	Status description
Off	No power supplied or boot loader phase (see also chapter Firmware update 10).
Green	Device is powered with Power over Ethernet (PoE).
Orange	Device is powered with an external power supply.

Status LED:

Status/Color	Status description
Off	The microMIND did not boot. It is most likely defective.
Green	A MiCard (V2) card reader is connected and has been identified. The microMIND is ready to receive data from the MiCard (V2).
Green flashing	No USB card reader is connected. This status will only be displayed if the microMIND is connected to the network and to a uniFLOW Server.
Green flashing (fast)	If a new firmware has been loaded successfully during the boot loader phase, the green LED is flashing fast (see also chapter Firmware update 10).

Status/Color	Status description
Orange	A card has been detected by the MiCard (V2) reader and the uniFLOW server has been informed about it. This status is shown for approx. 2 seconds. Afterwards the LED turns green again. It also lights up in orange during the boot loader phase.
Orange flashing	A not supported USB card reader has been connected. Note that only MiCard (V2) readers are supported by the microMIND.
Red	The microMIND has an IP address but is not connected to a uniFLOW Server nor to an RPS, thus it is inoperable.
Red Flashing	The microMIND has no IP address and is trying to acquire an IP address, thus it is inoperable.

RJ45 LEDs:

LEDs	Status description
Green	A link to a network is established.
Green flashing	Link established and data is transmitting.
Yellow ON	Network speed is 100 Mbit/s
Yellow OFF	Network speed is 10 Mbit/s

2.7 Configuration

The microMIND works without any additional configuration if your network has a DHCP server configured to provide an IP address for the microMIND. However, some “advanced” options are available which are explained below.

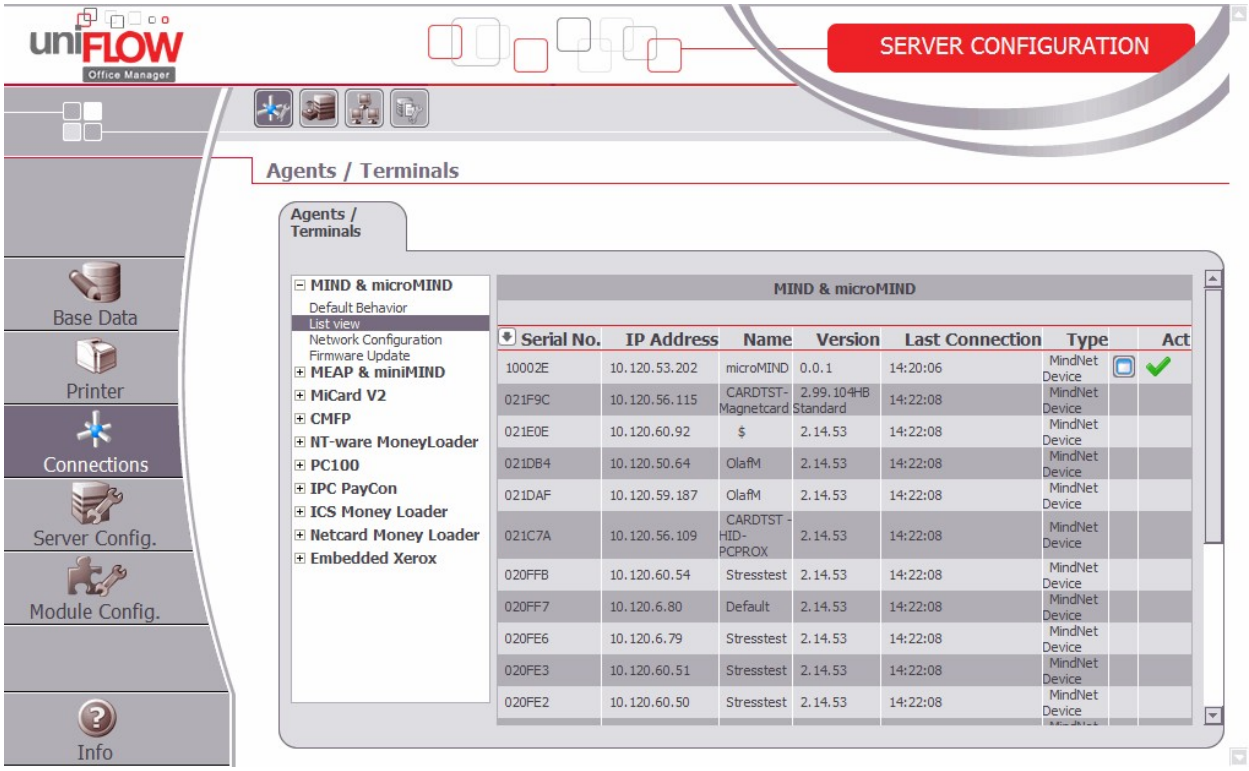
2.7.1 Configurable parameters

IP Address

The IP configuration of the microMIND is performed directly via uniFLOW.

To configure a microMINDs IP address, open the uniFLOW Server Configuration, choose the main menu ***Connections / Agents/Terminals*** / ***MIND & microMIND*** and select the ***List view*** page.

In this screen you can see the status information of the attached MINDs / microMINDs. The column ***Type*** shows you if it is a MIND or a microMIND.



The microMINDs IP configuration can be found by selecting a microMIND via mouse click on the IP address. You'll find the serial number of the respective microMIND on a sticker on the back of the microMIND. A browser screen will open to configure the microMINDs IP address.

By default the microMIND is set to DHCP, meaning that the microMIND receives it's configuration from the companies DHCP server if available.

If there is no DHCP server available or if a DHCP server doesn't send any IP configuration to the microMIND, the microMIND will appear on the ***MIND & microMIND / List view*** page as well. This is because the microMINDs vendor MAC address portion is known to the uniFLOW Server.

After all settings have been made, confirm the settings by clicking on ***Save Settings***.

The rebooting process of the microMIND takes a few seconds.

2.8 Firmware update

The microMINDs firmware can be updated with a normal USB stick.

Requirements:

- USB stick formatted with FAT and a sector size of 512 bytes.
- New firmware with the file name ***MMAPP*** (note that the file name has no extension).

Update process:

- Format your USB stick according to the requirements listed above.
- Copy the ***MMAPP*** file onto the USB stick.
- Detach your microMIND from the power supply. If PoE is used, detach the network connection.
- Attach the USB stick to the microMIND.
- Attach the power supply. If PoE is used, attach the network connection.

Update proceedure:	LED Status:
1. The device starts with the boot loader phase. The microMIND checks if there is a USB stick with a valid firmware connected to the device.	Power LED: off Status LED: orange
2. If there is no valid firmware found, the device starts normally (step 3. and 4. are skipped)	
3. If there is a valid firmware found, it gets loaded.	
4. Once the firmware has been successfully and completely loaded, the Status LED is flashing green.	Power LED: off Status LED: green flashing
5. Afterwards the microMIND starts its normal application.