

MiniPlex-3 WiFi Firmware V1.5

Date: July 18, 2022

Please read this document carefully!

Updating the WiFi firmware is a complicated process which requires careful planning and a number of steps that need to be executed in exactly the right order. Many problem reports we receive regarding this update can be traced back to not having read these instructions carefully!

Introduction

A MiniPlex-3Wi(-N2K) contains two firmware images: MiniPlex-3 firmware and WiFi V1.5 firmware.

The MiniPlex-3 firmware is what makes your multiplexer tick and it is present in every MiniPlex-3 series multiplexer. We developed this firmware.

The MiniPlex-3Wi(-N2K) also contains a WiFi interface which is a self-contained module running its own firmware. The manufacturer of the WiFi module is the supplier the WiFi firmware.

What's new

This WiFi firmware update contains many improvements in the stability of the connections.

Updating the Firmware

First, ensure the MiniPlex-3 firmware version is V2.3.x or higher. If your MiniPlex-3 contains older firmware, please update it to the latest firmware or V2.3.17 if you're on a Mac and use MPXConfig3 for macOS.

This procedure is described in the manual of the MiniPlex-3.

If you have navigation data visible in MPX-Config3, it's best to either shut down all navigation equipment or to temporarily set the speed of the NMEA inputs of the MiniPlex-3 to non-standard values. This will effectively mute the inputs and ensures that all messages during the firmware update can be seen. Don't forget to restore the original settings after the update procedure is completed.

It is necessary to connect your computer to the MiniPlex-3Wi with a USB cable. Your computer also needs to join the MiniPlex access point at the same time. The MiniPlex-3 firmware is updated over USB and the WiFi firmware is updated using the web interface of the MiniPlex' WiFi module.

Preparation

In order to successfully update the WiFi firmware, a few preparations must be made:

1. You must be using the latest MPX-Config3 and update the MiniPlex-3 firmware if required.
2. The zip file containing the WiFi firmware file must be unpacked into a folder on your computer.
3. Your computer must be connected to the MiniPlex with a USB cable and to the MiniPlex access point. The update process uses both the USB connection and the WiFi connection.

Update Procedure

In the following steps, you will be asked to enter specific commands. These commands must be entered in the Manual NMEA Sentence Input section of MPX-Config3. All resulting responses are visible in the NMEA viewer on the top half of the window.

1. Start MPX-Config3 and connect to the USB COM port.
2. Now check the current WiFi firmware version by entering the following command:

PSMDWI,V

The multiplexer will respond with the WiFi firmware version:

PSMDWI,VER,x.x.x.x...

If the current version is 1.5.0.3R3, you don't need to update the WiFi firmware. Instead, proceed to step 11.

3. Start your Internet browser, enter **10.0.0.1** in the address bar of your browser and hit Enter. You will be asked for a user name and a password, which are **admin** and **MiniPlex** respectively. Both are case-sensitive.
4. On the web page that appears, select "Device" from the menu on the left. The "Device Status" page appears. On that page, click on "Firmware Upload" (marked in red).

xPico Wi-Fi LANTRONIX

QuickConnect
Status
AES Credentials
CPM
Clock
Device
Diagnostics
Discovery
File System
HTTP
Line
Modem Emulation
Monitor
NTP
Network
Power
SPI
Tunnel
Users
WLAN Profiles

Device Status

This page displays the current status of the Device.

Property	Status
Product Type:	xPicoWifi
Product ID:	Y1
Product SKU:	XPCW1002
Antenna:	U.FL
Serial Number:	0080A3A0215B
Firmware Version:	1.3.0.1R4
Build Date:	Dec 5 2014 (17:17:11)
Uptime:	0 days 01:02:04
Permanent Config:	saved
	[Save]
	[Reboot]
	[Factory Defaults]
	[Firmware Upload]

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5. A confirmation line will appear at the top of the page:

Device Status

CONFIRM: Upload firmware image? [Okay] [Cancel]

Property	Status
Product Type:	xPicoWifi
Product ID:	Y1

Click on "Okay" to start the firmware update process.

6. Your browser will be directed to the Firmware Upgrade page after appr. 20 seconds:

xPico Wi-Fi Firmware Upgrade

Lantronix STM32F2XX OTA Loader 1.1.0.0R10 Jun 20 2014 15:29:43

No file selected.

7. On that page, click "Browse" to navigate to the folder where you unzipped the firmware. Select the **mpx-3_wifi_1.5.0.3R3.rom** file and click "Open" to start the update.
8. When the update is complete, the page below will appear:

xPico Wi-Fi Firmware Upgrade

Lantronix STM32F2XX OTA Loader 1.1.0.0R10 Jun 20 2014 15:29:43

Upgrade successful

Reboot

Click on "Reboot" and confirm in the dialog that appears.

9. After 10 to 20 seconds, the main web page will appear again, unless your computer switched to another access point while the WiFi interface rebooted.
10. Now go back again to MPX-Config3 and enter:

PSMDWI,V

The MiniPlex should respond with:

PSMDWI,VER,1.5.0.3R3

A **\$PSMDWC,No response** message appears if the WiFi interface was still starting up. Just try again until the version message appears.

11. Now we have to re-initialize the WiFi interface using command:

PSMDWI,A

The MiniPlex responds with:

\$PSMDWI,Initializing WiFi interface (V1.5.0.3R3, wait 40s)...

This does indeed take approx. 40 seconds. Eventually **\$PSMDWI,RDY** will appear.

This finalizes the update procedure. You should now be able to connect with MPX-Config3 using both TCP and UDP.