M9410A/M9411A/M9415A
PXI VXT Vector Transceiver

Modular FPGA
Downgrade
Instructions

The M9410A/M9411A/M9415A service pack is a software package that includes the FPGA downgrade pack for M941xA software/hardware compatibility. The instrument software installed on the controller will only recognize the module with its corresponding, or older, FPGA version(s). If you want to use a previously released software revision with the module which has a newer FPGA version, the FPGA downgrade pack must be installed along with the instrument software. The scenarios include:
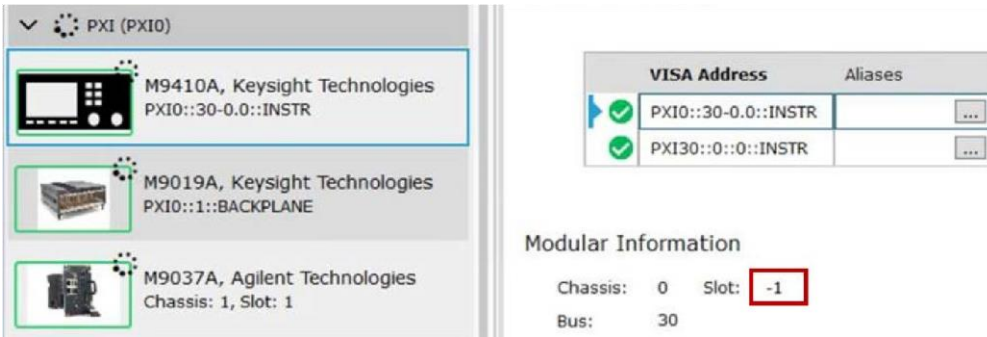
- You receive a newly shipped module from Keysight, and you want to use a previously released instrument software on the controller to work with the module.

- You receive a module which was used with a newer instrument software version compared with the one installed on the current controller.

- You downgrade the instrument software on the controller and want to work with the current modules.

If you do not install the service pack for the three cases above, you probably will get the issues below:

- The M941xA module is not listed in the launcher.

- The TRX application crashes after launching.

- An error will occur and the error message will pop up as shown below.

- The M941xA unit is listed in *Keysight Connection Expert* with the slot number "−1" as below.

Please follow the installation procedure below to complete the pack installation on your controller.

1. Install the M941xA modules into the chassis.

   CAUTION Before installing this service pack, please double check that the M941xA module is installed properly in the chassis. If you do not install the modules into the chassis, the FPGA downgrade will not be completed even if the service pack is installed successfully in your controller.

2. Turn off the TRX application and the launcher program if they are still running.

3. Download the service pack from www.keysight.com/find/m9411a -> View Technical Support -> Driver, Firmware and Software to your controller, right click on the file and select "Run as administrator".

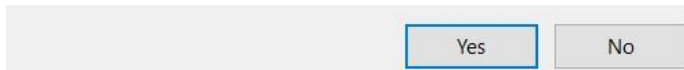   M941x_ServicePack_Rev1.exe

4. A window will pop up as shown below. Click Yes to initiate the installation. The FPGA downgrade process will be triggered automatically.

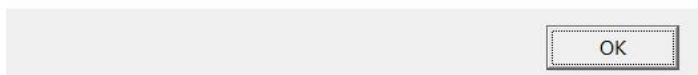   This Service pack will update Stage2 FPGA files and some other files if necessary.

   IMPORTANT:
   1. This is a green patch, no need to uninstall, but need to install again after M941x installer reinstalled.

   2. If SA crash, it may caused by configuration file, delete all files in folder 'C:\ProgramData\Keysight\X-Series Instrument', then install m941x installer and this patch again.
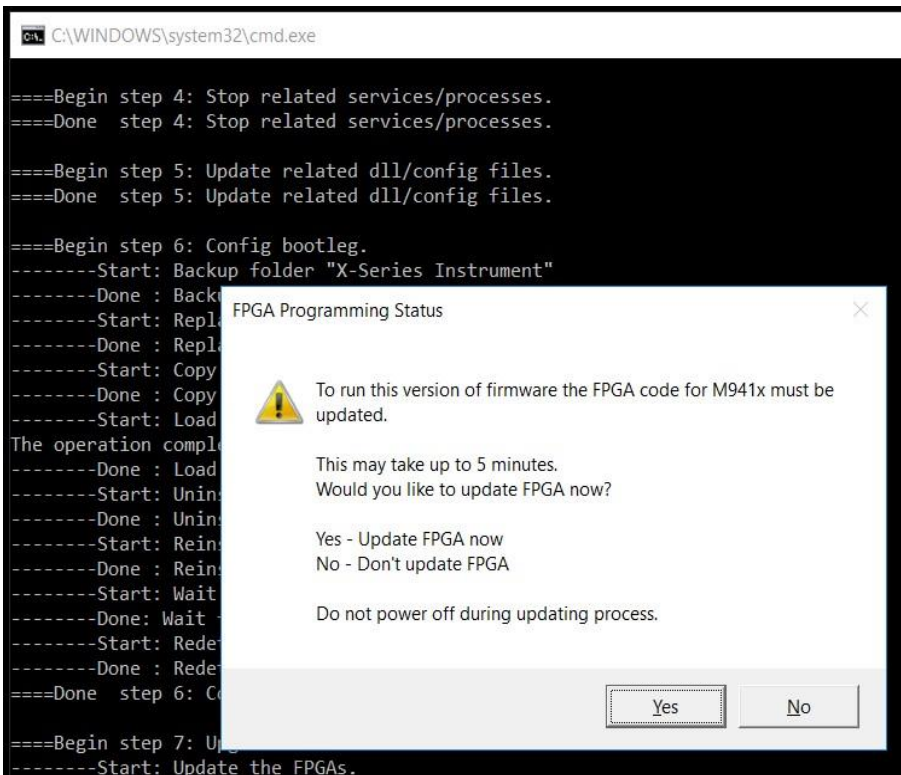
   | Yes | No |

5. The service pack will install the .net 4.8 software package automatically. Please restart your controller when there is an instruction pop up on the screen. If this software is installed in your controller already, the installation will skip this step and go to the next step directly.

   Please restart the controller immediately to complete the new installed components configuration. Please re-run this service pack after the controller is rebooted.

   | OK |

6. After the .net software installation is completed, the service pack will update the FPGA code into the VXT module. A message will pop up on the screen as shown below. To update the FPGA code immediately, please click Yes and the FPGA will be updated automatically.

The FPGA update will last for 3 - 20 minutes for each module depending on the different FGPA versions. The pop-up window, as shown below, indicates the updating status.

Updating Digital (219.3) FPGA from version 1.1.150.0 to 1.4.207.0

Do not turn off power or interrupt this process!
不要关闭电源或中断此过程!
電源を切ったり、更新プロセスを中断したりしないで下さい。
전원을 끄거나 진행되는 작업을 중단 시키지 마세요!
Ne pas interrompre ni couper l'alimentation électrique!
Nicht ausschalten oder abbrechen!
Не выключать и не прерывать процесс!

FPGA code updates may require a significant period of time. Interrupting the FPGA update process may result in corrupt FPGA code which would require returning this instrument to Keysight for service.

Update FPGA Status

FPGA Assemblies

Name	SubInstrument	HW ID	Address	Current Rev	Target Rev	Update Status
Digital	Slot 5	219.3		1.1.150.0	1.4.207.0	Update in process ...
LO	Slot 5	220.4		0.2.0.15	0.2.0.15.	Already current
Receiver	Slot 5	221.3		0.0.2.11	0.0.2.11.	Already current
Source	Slot 5	222.4		0.0.3.5	0.0.3.5.	Already current

Status
Summary

```
Checking environment ...
Starting configuration "Slot 5" ...
Initializing hardware ...
Querying current FPGA versions ...
Updating FPGAs ...
Begin to update FPGA M9410A_Slot5_CarrierBoard
Updating FPGA M9410A_MY58326220_Carrierboard: 56%
Updating FPGA M9410A_MY58326220_Carrierboard: 63%
Updating FPGA M9410A_MY58326220_Carrierboard: 73%
```

7. When the installation is complete, a window will pop up as shown below. Click "OK" and power cycle the chassis.

Congratulations! The service pack has been installed successfully. The FGPA has been updated successfully. Please power cycle the chassis.

OK

Please refer to chapter 4, "Launching Modular TRX Application" on *M9410A/M9411A/M9415A Getting Started Guide* to launch the application. If the service pack is installed successfully, the module name will be listed in the launcher window.

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www.keysight.com