M9410A/M9411A/M9415A VXT PXIe Vector Transceiver

CAUTION The newly shipped VXT module is only compatible with the latest version of transceiver software. To use the newly shipped module properly, please install the latest version of TRX software on your controller.
If you want to use a newly shipped module with the early released software version, please go to product page to download the service pack of the early released software respectively. If you want to use the option EP6 properly, please use the TRX software M.26.00 or greater even the service pack is installed. Please refer to section "TRX Software & Modular Hardware Compatibility" of the *VXT Transceiver Getting Started Guide* for the detailed information of the service pack.
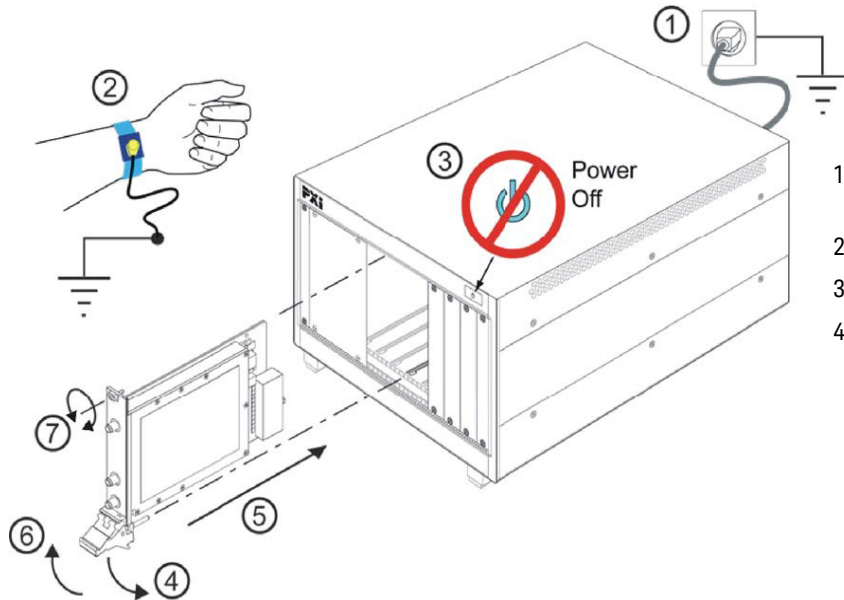
Hardware Requirement

Description	Requirements
Chassis	PXIe or PXI-H chassis slot (Keysight **M9018B/M9019A** PXIe chassis is recommended)
Reference	A reference with 100 MHz output (Keysight **M9300A** Reference is recommended)
Controller	**Embedded controller** Keysight **M903xA** or an equivalent embedded controller that meets the following requirements: · A PXIe system controller (PXI-1 embedded controllers are not compatible). · Utilizes a 2x8, 4x4, or 1x8 PXIe system slot link configuration. · Runs one of the operating systems listed in controller system requirement below. **Or remote controller** · A PC running one of the operating systems listed in controller system requirement below and a Keysight M9021A/22A/23A Cable Interface with the following PC interface configuration: · Keysight M9048B PCIe Desktop Adapter x8, with Y1202A PCIe cable (for a desktop PC).

Controller System Requirement

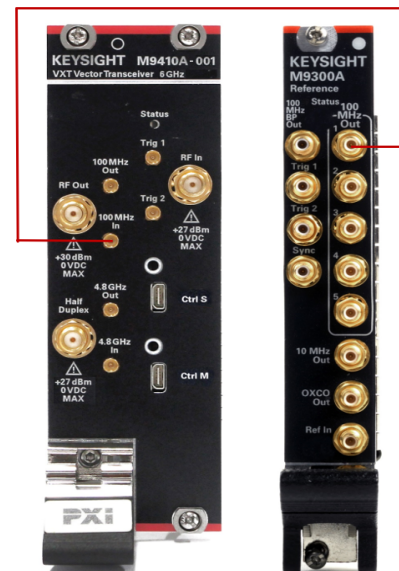| Description	Requirements
Operating system	Window 7/10 (64-bit), English Version
Processor	Single Core with hyper threading, 1.86 GHz minimum
Available memory for each module	8 GB minimum, 16 GB or greater recommended
Available disk space for each modular on Drive C:	8 GB minimum, 40 GB or greater for multiple applications

Setup and Installation

1. **Install the embedded controller module** into a compatible chassis (**slot 1**). Keysight PXIe chassis is recommended. See the http://www.keysight.com/find/pxi-chassis. If you are using a remote controller, please refer to *M9410A/M9411A/M9415A Getting Started Guide* for details.

2. **Install the M9410A/M9411A/M9415A modules** into the chassis.

Module Installation Procedure

1. Ensure line cord is plugged in to be connected to earth ground.

2. Wear a grounded wrist strap for ESD precaution.

3. Ensure the chassis power switch is off

4. Holding the module by the injector/ejector handle, slide it into a slot, as shown in callouts 4 – 6 in the figure.
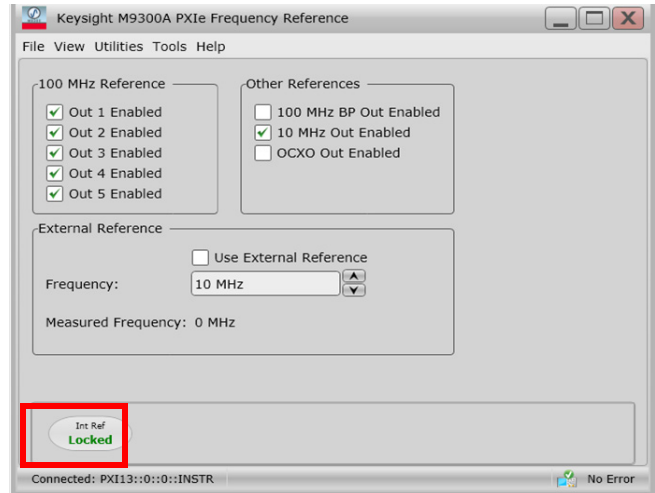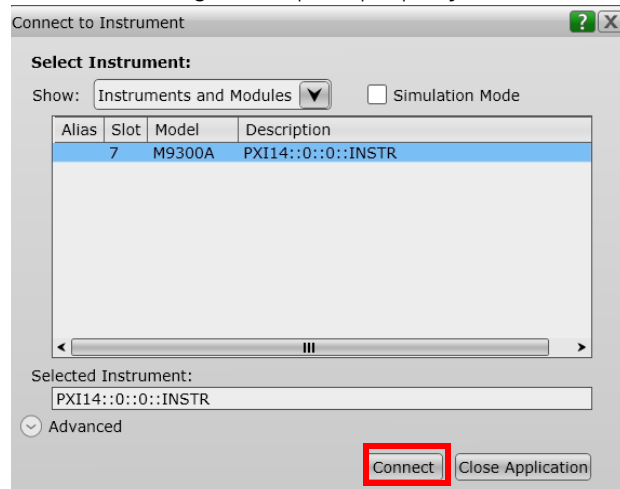
3. **Install the M9300A reference module** into the chassis. **Connect a cable** from **M9300A 100 MHz Out** port to **M9410A/M9411A/M9415A 100 MHz In** port. If you are using multiple transceiver modules, all the 100 MHz In ports need connect to M9300A 100 MHz Out ports. If you are using an external 100 MHz reference signal, make sure the signal is connected and output properly.

4. **Connect peripherals** (mouse, keyboard, monitor) to the controller.

5. **Connect a LAN cable** to the controller for further LAN configuration and software download.

6. **Power up the chassis** after all the cables and modules are installed properly. Then, the windows system of the controller will be launched properly.

7. **Download** the **transceiver (TRX) software** and **M9300A soft front panel software** from the web. The link is listed in the table on the last page.

8. **Execute and Install the TRX software** according to the installer prompts. After the software installation is completed, please refer to the section on the next page for your first time launching the transceiver.

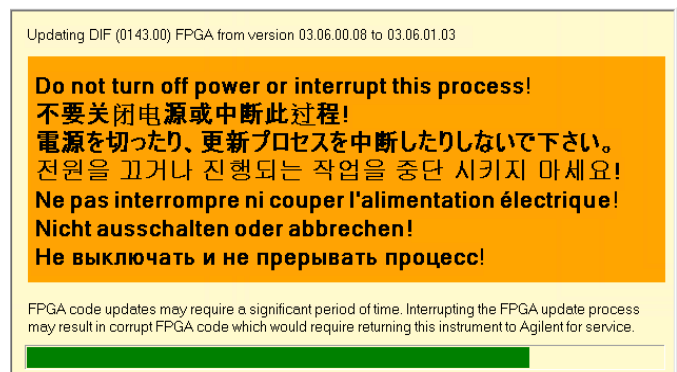M9300A Reference Connection

First Time Launching the Transceiver

1. **Enable reference:** click to run the **M9300A Soft Front Panel software**. The connection window will pop up as the picture in the left. Click **Connect**. The soft front panel window will pop up as the picture in the right.The indicator "*Int Ref Locked*" on the lower left corner indicates the 100 MHz signal outputs properly.

2. Click to **execute the transceiver launcher**. Launcher will **check the FPGA versions** on all the installed modules. If the FPGA version is different with the version required by current TRX software, the FPGA on this module will be updated automatically. During the FPGA updating, a message box will be shown as following and the LED on the module will be in Fast Blink mode.

   After FPGA update is completed successfully, a message box will pop up, Click OK and then re-power the chassis to enable the update.
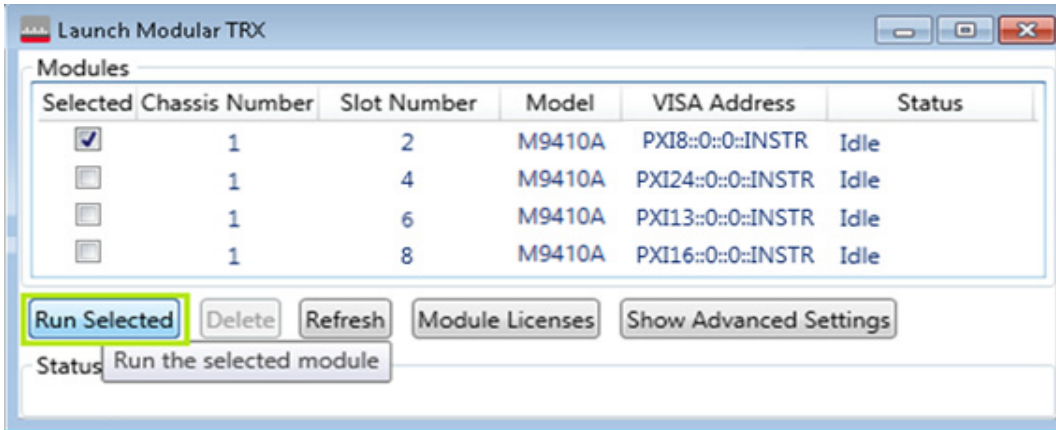

NOTE	If there is not any module numbers displayed in the launcher during the launching process, the possible reason is the controller's TRX software version is not compatible with the later FPGA version in the module.

To upgrade the module's FPGA version, please go to http://www.keysight.com/find/m9410a –> **Support** Tab –> **Drivers, Firmware & software** to download the latest FPGA service pack *UpdateFPGA.exe*. After running this file, the FGPA version will be upgraded and the current installed module number will be shown in the launcher.

3. After the FPGA is updated, the launcher window will be pop up as below. All the installed modules will be shown as "Idle" status. Select the needed module in the launcher. Click **Run Selected** and the TRX application of the selected module will be launched immediately.

To use the interactive help system of TRX applications, please click **Help** key on the bottom bar. For the further information, please refer to the links as below.

Description	URL
Product Information	http://www.keysight.com/find/xxx*
Product Documents	http://www.keysight.com/find/xxx -> Resource Center
TRX Software[†]	http://www.keysight.com/find/xxx -> Support -> Drivers, Firmware & Software
M9300A Soft Front Panel	http://www.keysight.com/find/m9300a -> Support -> Drivers, Firmware & Software

*. "xxx" indicates the product number. If you are looking for the M9410A product page, please refer to http://keysight.com/find/m9410a for details.
†. IO Libraries Suite is included in the TRX software

M9410-90014
www.keysight.com