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# Keysight PXIe Chassis Family

M9010A, M9018B, M9019A





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[www.keysight.com/find/M9018B](http://www.keysight.com/find/M9018B)

[www.keysight.com/find/M9019A](http://www.keysight.com/find/M9019A)

(product-specific information and support, software and documentation updates)

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The following general safety precautions must be observed during all phases of operation of this instrument. Failure to comply with these precautions or with specific warnings or operating instructions in the product manuals violates safety standards of design, manufacture, and intended use of the instrument. Keysight Technologies assumes no liability for the customer's failure to comply with these requirements.

## General

**Do not use this product in any manner not specified by the manufacturer. The protective features of this product must not be impaired if it is used in a manner specified in the operation instructions.**

### Before Applying Power

**Verify that all safety precautions are taken. Make all connections to the unit before applying power. Note the external markings described under "Safety Symbols".**

### Ground the Instrument

Keysight chassis' are provided with a grounding-type power plug. The instrument chassis and cover must be connected to an electrical ground to minimize shock hazard. The ground pin must be firmly connected to an electrical ground (safety ground) terminal at the power outlet. Any interruption of the protective (grounding) conductor or disconnection of the protective earth terminal will cause a potential shock hazard that could result in personal injury.

PXIe Chassis are for indoor use only.

Mains supply voltage fluctuations must not exceed  $\pm 10\%$  of the nominal supply voltage.

Transient overvoltages typically present on the Mains supply (installation CAT II)

### Do Not Operate in an Explosive Atmosphere

Do not operate in the presence of flammable gases or fumes.

### Do Not Operate Near Flammable Liquids

Do not operate the module/chassis in the presence of flammable liquids or near containers of such liquids.

## Cleaning

Clean the outside of the Keysight module/chassis with a soft, lint-free, slightly dampened cloth. Do not use detergent or chemical solvents.

### Do Not Remove Instrument Cover

Only qualified, service-trained personnel who are aware of the hazards involved should remove instrument covers. Always disconnect the power cable and any external circuits before removing the instrument cover.

### Keep away from live circuits

Operating personnel must not remove equipment covers or shields. Procedures involving the removal of covers and shields are for use by service-trained personnel only. Under certain conditions, dangerous voltages may exist even with the equipment switched off. To avoid dangerous electrical shock, DO NOT perform procedures involving cover or shield removal unless you are qualified to do so.

### DO NOT operate damaged equipment

Whenever it is possible that the safety protection features built into this product have been impaired, either through physical damage, excessive moisture, or any other reason, REMOVE POWER and do not use the product until safe operation can be verified by service-trained personnel. If necessary, return the product to a Keysight Technologies Sales and Service Office for service and repair to ensure the safety features are maintained.

### DO NOT block the primary disconnect

The primary disconnect device is the appliance connector/power cord when a chassis used by itself, but when installed into a rack or system the disconnect may be impaired and must be considered part of the installation.

### Do Not Modify the Instrument

Do not install substitute parts or perform any unauthorized modification to the product. Return the product to a Keysight Sales and Service Office to ensure that safety features are maintained.

## In Case of Damage

Instruments that appear damaged or defective should be made inoperative and secured against unintended operation until they can be repaired by qualified service personnel.

## CAUTION

Do NOT block vents and fan exhaust: To ensure adequate cooling and ventilation, leave a gap of at least 50mm (2") around vent holes on both sides of the chassis.

Do NOT operate with empty slots: To ensure proper cooling and avoid damaging equipment, fill each empty slot with an AXIe filler panel module.

Do NOT stack free-standing chassis: Stacked chassis should be rack-mounted.

All modules are grounded through the chassis: During installation, tighten each module's retaining screws to secure the module to the chassis and to make the ground connection.

## WARNING

Operator is responsible to maintain safe operating conditions. To ensure safe operating conditions, modules should not be operated beyond the full temperature range specified in the Environmental and physical specification. Exceeding safe operating conditions can result in shorter lifespan, improper module performance and user safety issues. When the modules are in use and operation within the specified full temperature range is not maintained, module surface temperatures may exceed safe handling conditions which can cause discomfort or burns if touched. In the event of a module exceeding the full temperature range, always allow the module to cool before touching or removing modules from the chassis.

# Safety and Regulatory Symbols

## CAUTION

A CAUTION denotes a hazard. It calls attention to an operating procedure or practice that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

## WARNING

A WARNING denotes a hazard. It calls attention to an operating procedure or practice, that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

Products display the following symbols:



Refer to manual for additional safety information.



Earth Ground.



Chassis Ground.



Alternating Current (AC).



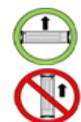
Direct Current (DC).



Standby Power. Unit is not completely disconnected from AC mains when power switch is in standby position



Indicates that antistatic precautions should be taken.



Operate the PXIe chassis in the horizontal orientation. Do NOT operate this chassis in the vertical orientation.



The CSA mark is a registered trademark of the Canadian Standards Association and indicates compliance to the standards laid out by them. Refer to the product Declaration of Conformity for details.



Notice for European Community: This product complies with the relevant European legal Directives: EMC Directive and Low Voltage Directive



The Regulatory Compliance Mark (RCM) mark is a registered trademark. This signifies compliance with the Australia EMC Framework regulations under the terms of the Radio Communication Act of 1992.

## ICES/NMB-001

ICES/NMB-001 indicates that this ISM device complies with the Canadian ICES-001.

Cet appareil ISM est conforme a la norme NMB-001 du Canada.



This symbol represents the time period during which no hazardous or toxic substance elements are expected to leak or deteriorate during normal use. Forty years is the expected useful life of this product.



MSIP-REM-Kst-xxxxxxx

South Korean Class A EMC Declaration. this equipment is Class A suitable for professional use and is for use in electromagnetic environments outside of the home.

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This product complies with the WEEE Directive (2002/96/EC) marking requirement. The affixed product label (see below) indicates that you must not discard this electrical/electronic product in domestic household waste.

Product Category: With reference to the equipment types in the WEEE directive Annex 1, this product is classified as a "Monitoring and Control instrumentation" product.

Do not dispose in domestic household waste.

To return unwanted products, contact your local Keysight office for more information.





# Contents

Introduction . . . . .	9
Recommendations . . . . .	9
Firmware Releases . . . . .	10
Determining the Installed Version . . . . .	16
Firmware Version Contents . . . . .	17
Firmware Version Detail . . . . .	19
2017 Firmware Version Detail . . . . .	19
2018 Firmware Version Detail . . . . .	20
2019StdTrig Firmware Version Detail . . . . .	21
2019EnhTrig Firmware Version Detail . . . . .	21
2023StdTrig Firmware Version Detail . . . . .	21
2023EnhTrig Firmware Version Detail . . . . .	22
2025StdTrig Firmware Version Detail . . . . .	22
2025EnhTrig Firmware Version Detail . . . . .	22
Upgrading or Downgrading Chassis Firmware . . . . .	23



## Introduction

For the Keysight M9010A, M9018B, and M9019A PXIe chassis, there are different versions of firmware for each chassis. The same set of changes apply to each chassis.

The versions include:

- The original version
- Enhanced Front Panel Trigger Port capability
- Support for an updated Power Supply hardware

## Recommendations

In general, if the chassis is meeting your test or manufacturing requirements, you do not need to update the firmware. However, if you need the enhanced front panel trigger port capability, you will need to use the enhanced Front Panel Trigger Port firmware titled **2018, 2019EnhTrig, 2023EnhTrig, or 2025EnhTrig (for M9010A)**.

When the **2018, 2019EnhTrig, 2023EnhTrig, or 2025EnhTrig** firmware version is installed in your chassis, the PXIe chassis Driver 1.7.82.1 or later version offers the enhanced front panel trigger port capability in both the SFP Trigger Ports tab and in the IVI software API.

If your chassis has Power Supply hardware version 2, then you already have the correct version of firmware for Your Power Supply hardware. No further action on your part is necessary.

### NOTE

It is important to install **PXIe Chassis Family Drivers** version 1.7.1032.1 or later before running firmware upgrade. DO NOT run firmware upgrade until you have **PXIe Chassis Family Drivers** version 1.7.1032.1 or later installed. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.

## Firmware Releases

Each firmware zip file contains multiple files for updating various components in the PXIe Chassis. The PXIe Chassis firmware releases are listed in the following table.

### PXIe Chassis Family Firmware Releases

PXIe Chassis	Firmware Version	File Name of Firmware .ZIP File	Description
M9010A	2017	M9010A_Firmware_2017.zip	<ul style="list-style-type: none"> <li>Initial release.</li> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1.</li> </ul>
	2018	M9010A_Firmware_2018.zip	<ul style="list-style-type: none"> <li>Enhanced front Panel Trigger Ports</li> <li>Support for Power Supply hardware version 1.</li> </ul>
	2019StdTrig	M9010A_Firmware_2019StdTrig.zip	<ul style="list-style-type: none"> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1 and 2.</li> <li>Improved over current detection to prevent a false detection.</li> </ul>
	2019EnhTrig	M9010A_Firmware_2019EnhTrig.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1 and 2.</li> <li>Improved over current detection to prevent a false detection.</li> </ul>
	2023StdTrig	M9010A_Firmware_2023StdTrig.zip	<ul style="list-style-type: none"> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply Hardware version 1 and 2.</li> <li>Enable operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail.</li> </ul>
	2023EnhTrig	M9010A_Firmware_2023EnhTrig.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply Hardware version 1 and 2.</li> <li>Enable operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail.</li> </ul>
	2025StdTrig	M9010A_Firmware_2025StdTrig.zip	<ul style="list-style-type: none"> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1 and 2.</li> <li>Support M9010A chassis with the new fan hardware update. Refer to M9010A-05 service note for details.</li> </ul>

PXIe Chassis	Firmware Version	File Name of Firmware .ZIP File	Description
M9010A	2025EnhTrig	M9010A_Firmware_2025EnhTrig.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply Hardware version 1 and 2.</li> <li>Support M9010A chassis with the new fan hardware update. Refer to M9010A-05 service note for details.</li> </ul>
M9018B	2017	M9018B_Firmware_2017.zip	<ul style="list-style-type: none"> <li>Initial release.</li> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1.</li> </ul>
	2018	M9018B_Firmware_2018.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1.</li> </ul>
	2019StdTrig	M9018B_Firmware_2019StdTrig.zip	<ul style="list-style-type: none"> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1 and 2.</li> </ul>
	2019EnhTrig	M9018B_Firmware_2019EnhTrig.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1 and 2.</li> </ul>
	2023StdTrig	M9018B_Firmware_2023StdTrig.zip	<ul style="list-style-type: none"> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply Hardware version 1 and 2.</li> <li>Enable operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail.</li> </ul>
	2023EnhTrig	M9018B_Firmware_2023EnhTrig.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply Hardware version 1 and 2.</li> <li>Enable operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail.</li> </ul>

PXle Chassis	Firmware Version	File Name of Firmware .ZIP File	Description
M9019A	2017	M9019A_Firmware_2017.zip	<ul style="list-style-type: none"> <li>Initial release.</li> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1.</li> </ul>
	2018	M9019A_Firmware_2018.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1.</li> </ul>
	2019StdTrig	M9019A_Firmware_2019StdTrig.zip	<ul style="list-style-type: none"> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1 and 2.</li> </ul>
	2019EnhTrig	M9019A_Firmware_2019EnhTrig.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply hardware version 1 and 2.</li> </ul>
	2023StdTrig	M9019A_Firmware_2023StdTrig.zip	<ul style="list-style-type: none"> <li>Standard front panel Trigger Ports.</li> <li>Support for Power Supply Hardware version 1 and 2.</li> <li>Enable operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail.</li> </ul>
	2023EnhTrig	M9019A_Firmware_2023EnhTrig.zip	<ul style="list-style-type: none"> <li>Enhanced front panel Trigger Ports.</li> <li>Support for Power Supply Hardware version 1 and 2.</li> <li>Enable operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail.</li> </ul>

The compatibility with the PXIe Chassis Family Driver is listed in the following table.

PXIe Chassis Family Driver Compatibility

PXIe Chassis Family Driver Version	2017 Firmware Compatibility	2018 Firmware Compatibility	2019StdTrig Firmware Compatibility	2019EnhTrig Firmware Compatibility	2023StdTrig Firmware Compatibility	2023EnhTrig Firmware Compatibility
1.6.2.1	Compatible	Not compatible	Compatible	Not compatible	Compatible	Not compatible
1.6.493.1	Compatible	Not compatible	Compatible	Not compatible	Compatible	Not compatible
1.7.82.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
1.7.402.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
1.7.483.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
1.7.741.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
1.7.913.1	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.
1.7.925.1	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.
1.7.1032.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
1.7.1036.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
1.7.1039.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
1.7.1043.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
1.7.1044.1	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible

PXIe Chassis Family Driver Version	2025StdTrig Firmware Compatibility	2025Enh Trig Firmware Compatibility
1.6.2.1	Compatible	Not compatible
1.6.493.1	Compatible	Not compatible
1.7.82.1	Compatible	Compatible
1.7.402.1	Compatible	Compatible
1.7.483.1	Compatible	Compatible
1.7.741.1	Compatible	Compatible
1.7.913.1	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.
1.7.925.1	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.	Compatible DO NOT run FW update with this version. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.
1.7.1032.1	Compatible	Compatible
1.7.1036.1	Compatible	Compatible
1.7.1039.1	Compatible	Compatible
1.7.1043.1	Compatible	Compatible
1.7.1044.1	Compatible	Compatible

**CAUTION**

The **2018**, **2019EnhTrig**, **2023EnhTrig**, and **2025EnhTrig** firmware can only be used with the 1.7.82.1 or later PXIe Chassis Family driver. It will not work with driver version 1.6.493.1 or older versions. If the **2018**, **2019EnhTrig**, **2023EnhTrig**, and **2025EnhTrig** Firmware version is installed in your chassis, you must use the 1.7.82.1 or later driver. If you cannot use 1.7.82.1, then you must downgrade your firmware.

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**NOTE**

It is important to install **PXIe Chassis Family Drivers** version 1.7.1032.1 or later before running firmware upgrade. DO NOT run firmware upgrade until you have **PXIe Chassis Family Drivers** version 1.7.1032.1 or later installed. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.

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**NOTE**

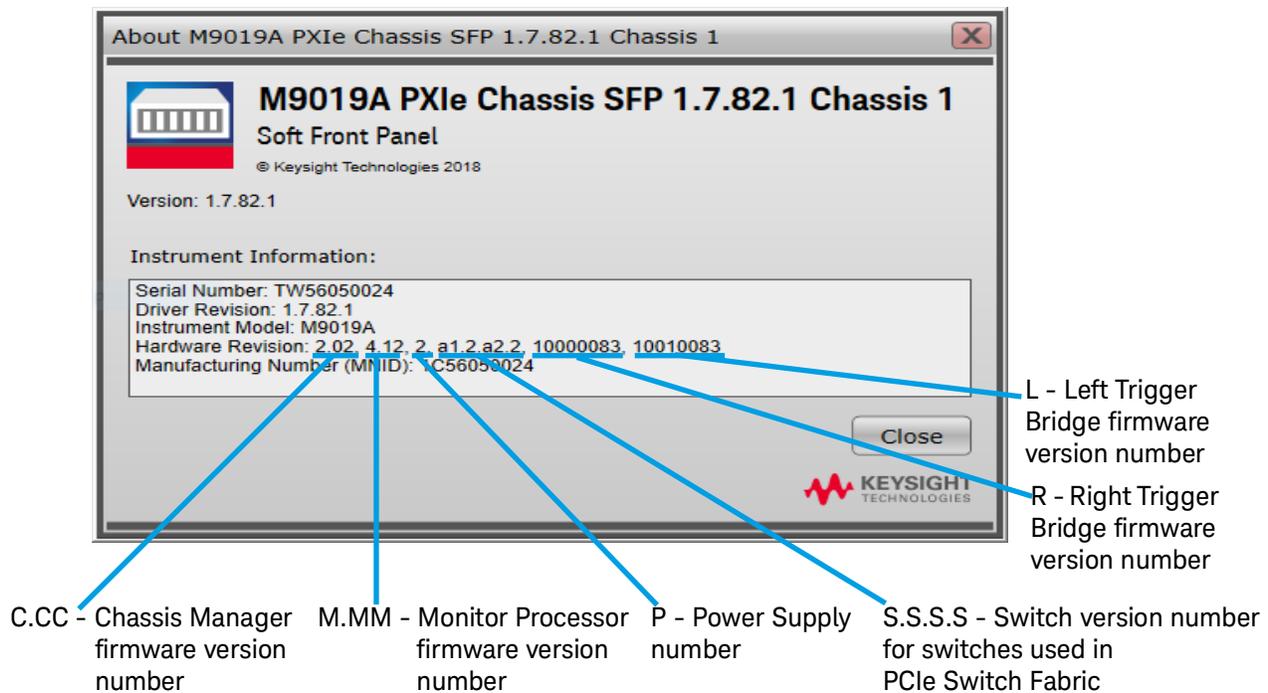
The 2025StdTrig and 2025EnhTrig are for the M9010A chassis with the new fan hardware update. See M9010A-05 service note for details.

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## Determining the Installed Version

Firmware version numbers are displayed by the PXIe Chassis Family driver Soft Front Panel (SFP) Help **About** screen. However, you can only see the Trigger Bridge firmware version when using PXIe Chassis Family driver 1.7.82.1 or later. You cannot observe the Trigger Bridge firmware version using the PXIe Chassis Family driver prior to version 1.7.82.1.

The figure below shows an example of the **Help > About** for an M9019A chassis. In this example, the version of the Trigger Bridge version number matches that of the **2019EnhTrig** firmware. If the **2019StdTrig** firmware were installed, it would show version 0 for the Left and Right Trigger Bridge numbers.



**Figure 1** M9019A SFP Help About

Download and install the latest driver from [www.Keysight.com](http://www.Keysight.com). Search on your chassis model number. Click the “Visit Technical Support” tab and then click on the “Drivers, Firmware & Software” tab. After installing an updated version, run the SFP for your chassis and click on **Help > About** to verify the installed version.

**NOTE**

The Power Supply number is associated with the power supply hardware installed in the chassis. It does not change when the chassis firmware is updated.

## Firmware Version Contents

The three tables below (one table for each chassis model) list the components associated with each firmware version.

M9010A Firmware Version Components

Firmware Component	2017	2018	2019StdTrig	2019EnhTrig	2023StdTrig	2023EnhTrig
Chassis Manager	2.02	2.02	2.02	2.02	2.02	202
Monitor Processor	3.11	3.11	4.12	4.12	4.17	4.17
Switch version number for switches used in PCIe Switch Fabric	a1.2.a2.2	a1.2.a2.2	a1.2.a2.2	a1.2.a2.2	a1.2.a2.2	a1.2.a2.2
Right Trigger Bridge	0	10000083	0	10000083	0	10000083

Firmware Component	2025StdTrig	2025EnhTrig
Chassis Manager	2.02	2.02
Monitor Processor	4.22	4.22
Switch version number for switches used in PCIe Switch Fabric	a1.2.a2.2	a1.2.a2.2
Right Trigger Bridge	0	10000083

M9018B Firmware Version Components

Firmware Component	2017	2018	2019StdTrig	2019EnhTrig	2023StdTrig	2023EnhTrig
Chassis Manager	2.02	2.02	2.02	2.02	2.02	202
Monitor Processor	3.11	3.11	4.12	4.12	4.17	4.17
Switch version number for switches used in PCIe Switch Fabric	1.1.257.1	1.1.257.1	1.1.257.1	1.1.257.1	1.1.257.1	1.1.257.1
Right Trigger Bridge	0	10000083	0	10000083	0	10000083
Left Trigger Bridge	0	10010083	0	10010083	0	10010083

## M9019A Firmware Version Components

Firmware Component	2017	2018	2019StdTrig	2019EnhTrig	2023StdTrig	2023EnhTrig
Chassis Manager	2.02	2.02	2.02	2.02	2.02	202
Monitor Processor	3.11	3.11	4.12	4.12	4.17	4.17
Switch version number for switches used in PCIe Switch Fabric	a1.2.a2.2	a1.2.a2.2	a1.2.a2.2	a1.2.a2.2	a1.2.a2.2	a1.2.a2.2
Right Trigger Bridge	0	10000083	0	10000083	0	10000083
Left Trigger Bridge	0	10010083	0	10010083	0	10010083

## Firmware Version Detail

It is recommended that you always use the latest version of the firmware. Check the firmware download web page for the latest version available. Details about each firmware capability follows.

The only difference between the **2017** firmware version and the **2018** firmware version is in the behavior of the front panel trigger ports.

The differences between firmware version **2019** and earlier versions is the support for Power Supply hardware version 2 and, for the M9010A, an improvement in over-current detection.

The **2023** firmware version enables operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail.

The **2025StdTrig** and **2025EnhTrig** are for the M9010A chassis with the new fan hardware update. See M9010A-05 service note for details.

### NOTE

There is no operational difference between Power Supply 1 and Power Supply 2. There was an update to the Power Supply flash ROM. To determine the power supply version in a chassis, see [“Determining the Installed Version”](#) on page 16.

## 2017 Firmware Version Detail

If you do not need the enhanced capability of the front panel trigger ports and you are using the **2017** firmware version, then you can use any version of the PXIe Chassis Family driver, including 1.7.82.1. The 1.7.82.1 PXIe Chassis Family driver automatically detects the firmware version installed and performs accordingly.

In the PXIe Chassis firmware version **2017**, the front panel trigger port, when configured as an Input, can connect to only a single PXI\_TRIG line on Trigger Bus Segment 2 (Segment 1 for the M9010A). The front panel trigger port, when configured as an Output, can only output the trigger signal from a single PXI\_TRIG line on Trigger Bus Segment 2 (Segment 1 for the M9010A). In both of these situations, only one PXI\_TRIG trigger signal line can be used and it must be on Trigger Bus Segment 2 (Segment 1 for the M9010A). If you want to connect a front panel trigger port to a PXI\_TRIG trigger signal line on a different Trigger Bus Segment, you must add a route to the chassis configuration. See the *PXIe Chassis Family User Guide* for more information.

## 2018 Firmware Version Detail

The PXIe Chassis firmware version **2018** adds enhanced capability to the front panel trigger ports, but it can only be used with PXIe Chassis Family driver 1.7.82.1 or later. If you want the enhanced capability for the front panel trigger ports, then you must use both the **2018** firmware and the 1.7.82.1 driver or later.

### CAUTION

The **2018**, **2019EnhTrig**, **2023EnhTrig**, and **2025EnhTrig** firmware can only be used with the 1.7.82.1 or later PXIe Chassis Family driver. It will not work with driver version 1.6.493.1 or older versions. If the **2018**, **2019EnhTrig**, **2023EnhTrig**, and **2025EnhTrig** firmware version is installed in your chassis, you must use the 1.7.82.1 or later driver. If you cannot use 1.7.82.1, then you must downgrade your firmware.

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When the **2018** firmware is installed in your chassis, the PXIe chassis Driver 1.7.82.1 offers the enhanced front panel trigger port capability in both the SFP Trigger Ports tab and in the IVI software API.

The front panel trigger port, when configured as an Input, can connect to multiple PXI\_TRIG lines on Trigger Bus Segment 2 or 3 (or both). For the M9010A chassis, the front panel trigger ports can connect to Segments 1 or 2 (or both). You have a great deal of flexibility in configuring the destination of the incoming trigger signal. You can configure the incoming trigger signal to go to a single PXI\_TRIG line on a single segment or to multiple PXI\_TRIG lines on two segments.

The front panel trigger port, when configured as an Output, can only output the trigger signal from a single PXI\_TRIG line, but you can connect it to either Trigger Bus Segment 2 or 3 (Segments 1 or 2 for the M9010A). Unlike the **2017** firmware, which is limited to a single Trigger Bus Segment, the **2018** firmware can output from either of two Trigger Bus Segments.

## 2019StdTrig Firmware Version Detail

The **2019StdTrig** firmware version is identical to the **2017** firmware but now supports Power Supply hardware version 2 as well as version 1. Do not install firmware version **2017** in chassis with Power Supply hardware version 2.

For the M9010A, the firmware includes an improved over current detection to prevent a false detection.

## 2019EnhTrig Firmware Version Detail

The **2019EnhTrig** firmware version is identical to the **2018** firmware but now supports Power Supply hardware version 2 as well as version 1. Do not install firmware version **2018** in chassis with Power Supply hardware version 2.

For the M9010A, the firmware includes an improved over current detection to prevent a false detection.

### NOTE

There is no operational difference between Power Supply hardware version 1 and Power Supply hardware version 2. There was an update to the Power Supply hardware Flash ROM only. To determine the Power Supply hardware version in a chassis, see [“Determining the Installed Version”](#) on page 16.

### CAUTION

Do not downgrade the firmware on a chassis with Power Supply hardware version 2 to firmware version **2017** or version **2018**. If you do downgrade the firmware version, the chassis will continue to operate normally but you will not be able to update the Monitor Process firmware to version 4.12 or later Monitor Process firmware revisions.

### CAUTION

Do not downgrade the firmware on the M9010A chassis that use new fan hardware. **Chassis stall conditions occur when the system is downgraded to firmware version 2023 or earlier. Refer to M9010A-05 service note for details.**

## 2023StdTrig Firmware Version Detail

The 2023StdTrig firmware version enables operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail. This firmware is compatible with power supply version 1 and 2.

## 2023EnhTrig Firmware Version Detail

The 2023EnhTrig firmware version enables operation with M9161D and/or Duagon F204 modules. Refer to M9010A-02, M9018B-05, and M9019A-04 service notes for detail. This firmware is compatible with power supply version 1 and 2.

## 2025StdTrig Firmware Version Detail

The 2025StdTrig are for the M9010A chassis with the new fan hardware update. See M9010A-05 service note for details.

## 2025EnhTrig Firmware Version Detail

The 2025EnhTrig are for the M9010A chassis with the new fan hardware update. See M9010A-05 service note for details.

## Upgrading or Downgrading Chassis Firmware

This section describes how to upgrade or downgrade your chassis firmware. PXIe Chassis Family driver version 1.7.82.1 or later is required to perform the firmware change process.

### NOTE

It is important to install **PXIe Chassis Family Drivers** version 1.7.1032.1 or later before running firmware upgrade. DO NOT run firmware upgrade until you have **PXIe Chassis Family Drivers** version 1.7.1032.1 or later installed. Refer to M9010A-03, M9018B-06, and M9019A-05 service notes for detail.

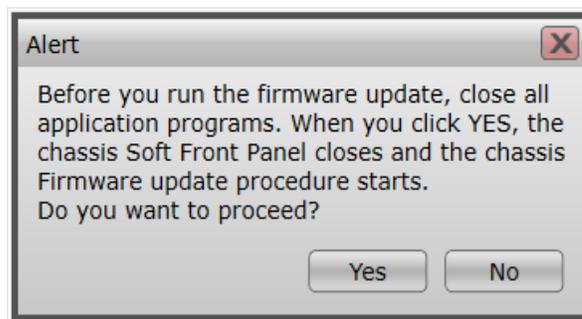
- 1 Determine the model number (i.e. M9010A, M9018B, or M9019A) of the chassis that you want to upgrade or downgrade the chassis firmware.
- 2 Determine whether you are upgrading or downgrading the chassis firmware. It is recommended that you always use the latest version of the firmware.
- 3 On the host computer, go to the Keysight web page for the chassis you are upgrading/downgrading the firmware on.

[www.Keysight.com/find/M9010A](http://www.Keysight.com/find/M9010A)

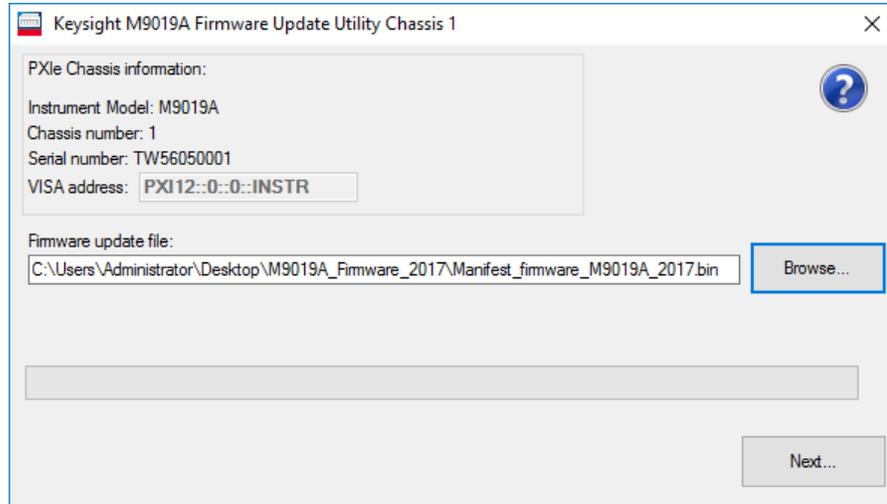
[www.Keysight.com/find/M9018B](http://www.Keysight.com/find/M9018B)

[www.Keysight.com/find/M9019A](http://www.Keysight.com/find/M9019A)

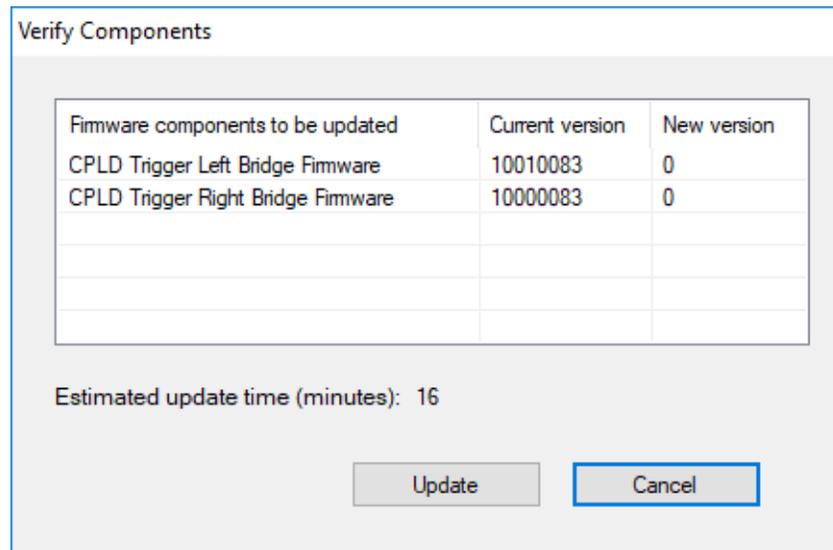
- 4 To download the firmware .zip file from Keysight.com.
  - a Click on the “*Visit Technical Support*” link.
  - b Click on the “*Drivers, Firmware & Software*” tab.
  - c Click on “<chassis model> *Chassis Firmware*” link.
  - d Find the firmware version you want and download it to the host PC.
- 5 Unzip the firmware .zip file to any convenient location on the host PC.
- 6 Start the Soft Front Panel and connect to the chassis.
- 7 Click on **Utilities > Firmware Update**.
- 8 Click on **Yes** if the following Alert screen opens.



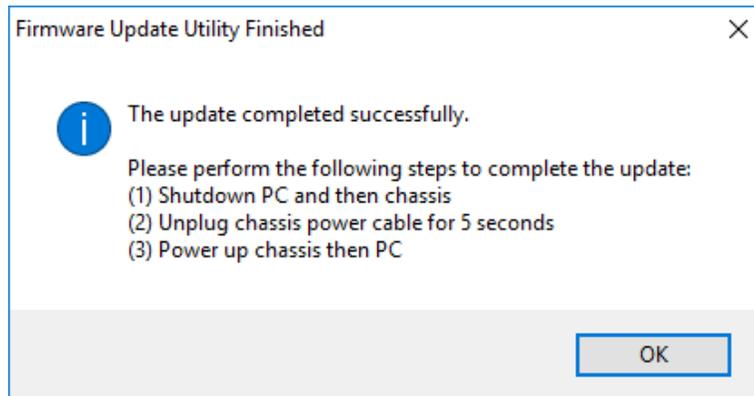
- 9 The Firmware Update Utility starts as shown in the following screen capture.



- 10 Click **Browse**.
- 11 Navigate to the location where you unzipped the Firmware zip file. Select the `Manifest*.*` file and click **Open**.
- 12 With the browse path filled in, click **Next**.
- 13 The Firmware Update Utility asks you to verify that you want to update the “Current version” to the “New version”. In the example below, we are downgrading from **2018** firmware to **2017** firmware. To start the process, click “Update”.



- 14 When the Firmware Update Utility finishes, it displays the following message. Follow the instructions to complete the firmware change process.









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