MSMU60-2 Source Measure Unit

V1.2.1 Firmware Release Notes

Tektronix, Inc.
13725 SW Karl Braun Drive
P.O. Box 500
Beaverton, OR 97077
USA
tek.com

Important information

These release notes contain important information about version 1.2.1 of the Tektronix MSMU60-2 firmware.

Introduction

This document provides supplemental information regarding the behavior of the MSMU60-2 firmware. This information is grouped into the following categories:

Revision history	Lists the date of the firmware release, the version of firmware, and the document version.
Firmware version compatibility	A cross-reference for compatible mainframe and module firmware versions.
New features / enhancements	Summary of each significant new feature and enhancement.
Problem fixes	Summary of each significant firmware bug fix.
Known problems	Description of each significant known problem and ways to work around it.
Installation instructions	Detailed instructions describing how to install the firmware.

Revision history

This document is periodically updated and distributed with releases and service packs to provide the most up-to-date information. This revision history is included in the following table.

Date	Firmware version	Document number
9/11/2026	V1.2.1	077193503
4/21/2026	V1.1.0	077193502
12/5/2025	V1.0.2	077193501
11/13/2025	V1.0.1	Initial release

Firmware version compatibility

To avoid compatibility issues between modules and the mainframe, it is recommended to either keep all products on the newest firmware or ensure that the mainframe firmware is newer than the module firmware.

The following table lists the compatible firmware versions to this firmware version. For other versions, see the corresponding release notes.

MP5103	**1.2.0 / 1.2.1**
MPSU50-2ST	1.2.0 or older
MSMU60-2	1.2.1 or older
MSMU200-2	1.2.1

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New features / enhancements

Issue number	TREB-14851
Model affected	MSMU60-2
Enhancement	A mainframe and module firmware version compatibility table has been added to the release notes.
Issue number	TREB-14965, TREB-14485
Model affected	MSMU60-2
Enhancement	The `slot[Z].bank[X].meminfo()` command has been added. This command returns the amount of memory used and available for use by a module memory bank. See the *MP5000 Series Programmer Manual* for details.

Problem fixes

Issue number	TREB-12425
Model affected	MSMU60-2
Symptom	When relative offset is disabled, the relative offset level is not saved to a configuration list.
Resolution	This issue has been resolved.
Issue number	TREB-13976
Model affected	MSMU60-2
Symptom	When a critical overtemperature event occurs during trigger model execution, a module may become unresponsive, requiring a reboot.
Resolution	This issue has been resolved.

Issue number	TREB-14295
Model affected	MSMU60-2
Symptom	Sweeping the source multiple times without using a trigger model may result in a 10 ms delay between steps.
Resolution	This issue has been resolved.
Issue number	TREB-14785
Model affected	MSMU60-2
Symptom	Running some trigger models more than 60,000 times may cause the mainframe or module to become unresponsive, requiring a reboot.
Resolution	This issue has been resolved.
Issue number	TREB-14872
Model affected	MSMU60-2
Symptom	A trigger model making high-speed measurements that trigger an overflow or limit condition in the status model on channel 2 may cause the module to become unresponsive.
Resolution	This issue has been resolved.
Issue number	TREB-14918
Model affected	MSMU60-2
Symptom	Generating a large sweep multiple times may cause an "Out of Memory" error.
Resolution	This issue has been resolved.
Issue number	TREB-14994
Model affected	MSMU60-2
Symptom	The mainframe front panel or web interface SMU power output button may not function if too many configuration lists have been created or if more than one module is inserted.
Resolution	This issue has been resolved.
Issue number	TREB-15034
Model affected	MSMU60-2
Symptom	Attempting to update the firmware with an invalid firmware image will result in the module entering the "updating" state without updating the firmware.
Resolution	This issue has been resolved.
Issue number	TREB-15733
Model affected	MSMU60-2
Symptom	The contact check procedure takes longer than expected.
Resolution	This issue has been resolved.

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New features / enhancements

Issue number	TREB-12244
Model affected	MSMU60-2
Enhancement	New configuration list functionality. See the new `slot[Z].smu[X].config.*` and `slot[Z].smu[X].configlist.*` commands in the *MP5000 Series Programmer Manual* for details.

Problem fixes

Issue number	TREB-12396
Model affected	MSMU60-2
Symptom	When the aperture is set to a small value, such as 1 µs, the timestamp may be incorrect and appear to show inconsistent delays between readings.
Resolution	This issue has been resolved.
Issue number	TREB-12451
Model affected	MSMU60-2
Symptom	Creating many configuration lists on a module may use all available memory on that module and cause the mainframe to become unresponsive.
Resolution	This issue has been resolved. Using all available memory will generate an `-225 Out of Memory` error, but the mainframe will not become unresponsive.
Issue number	TREB-12915, TREB-14071, TREB-14328
Model affected	MSMU60-2
Symptom	Running some trigger models more than 8000 times may cause the mainframe or a module to become unresponsive, requiring a reboot.
Resolution	These issues have been resolved.
Issue number	TREB-12972
Model affected	MSMU60-2
Symptom	Updating the measure count between some trigger model runs fails to produce the expected number of readings.
Resolution	This issue has been resolved.
Issue number	TREB-13018, TREB-13134
Model affected	MSMU60-2
Symptom	Recalling a configuration list index that does not exist or has not been configured will cause the system to become unresponsive.
Resolution	These issues have been resolved.

Issue number	TREB-14027
Model affected	MSMU60-2
Symptom	When the module output fails to turn on because of an error, remote sense may be enabled with the output off, resulting in unintended output voltage if remote sense leads are not connected.
Resolution	This issue has been resolved.
Issue number	TREB-14546
Model affected	MSMU60-2
Symptom	Performing automatic calibration (ACAL) may return incorrect offsets on all measurement ranges.
Resolution	This issue has been resolved.

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Problem fixes

Issue number	TREB-13102
Model affected	MSMU60-2
Symptom	Setting a fixed current measure range does not disable current autorange when the output is off when the function is set to voltage or when the source function is set to current.
Resolution	This issue has been resolved.

Known problems

Issue number	TREB-12903
Model affected	MSMU60-2
Symptom	Changing the source settings when `slot[Z].smu[X].overlapped` is set to `ENABLE` and then to `DISABLE` shortly afterward may cause the module to become unresponsive if a subsequent source or measure command is sent.
Workaround	Send `waitcomplete()` immediately before setting `slot[Z].smu[X].overlapped` to `DISABLE`. This will ensure that all overlapped source operations complete.
Issue number	TREB-12915
Model affected	MSMU60-2
Symptom	Running some trigger models approximately 8000 times or more may cause the SMU module to become unresponsive.
Workaround	Reboot the mainframe.

Installation instructions (front panel)

Use a USB flash drive to update the firmware from the front panel for the mainframe and modules. The latest firmware is available from tek.com.

Make sure that the firmware is loaded onto your USB flash drive, then insert it into the USB port on the front of the mainframe.

The update process is the same for the mainframe as it is for the modules. The following example demonstrates the firmware update for a module.

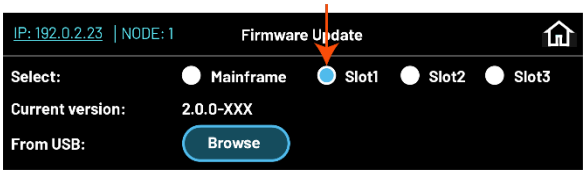
CAUTION

Do not remove the USB drive, turn off the instrument power, or otherwise interrupt the firmware update process. Your instrument may become unresponsive and require factory service.

The following procedure updates a module with mainframe firmware V1.0.1 or newer installed. If you need to update using an older mainframe version, replace the first two steps in the following procedure by selecting **General info** from the home screen and then selecting the firmware download icon.

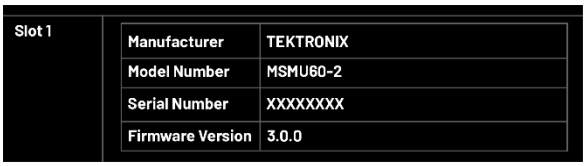
To update the module firmware (mainframe V1.0.1 and newer):

1. Select **Settings** from the mainframe home screen.
2. Select **Firmware Update**.
3. Select **Slot1**, **Slot2**, or **Slot3**.



4. Select **Browse** to locate the new firmware file on your USB flash drive, then select it.
5. Select **Update**. The firmware may take several minutes to load. The slot indicator on the front panel blinks red and green while the update is in process, and a message is displayed when the update is complete.

6. To confirm that the update was successful, select the information icon from the Home screen, then scroll to the information section for the slot to verify the module firmware version.



Installation instructions (remote)

To update the firmware using TSP Toolkit or another method, see the *MP5103 Mainframe Reference Manual*, available from tek.com.