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## General Information

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### Supported models

This firmware is used on the following Keithley Instruments products:

Models 3706A, 3706A-S, 3706A-NFP, 3706A-SNFP, and all Series 3700 cards

## Installation instructions

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To install the V1.51b firmware, copy the .zip file containing the firmware to the base (root) directory of a USB thumb drive. Once the .zip file has been copied, insert the USB thumb drive into the front USB port of the 3700A mainframe. Press the "Menu" button and select the "Upgrade" menu item to install the firmware. Once the firmware upgrade procedure has started, you must let it complete.

## Version 1.51b Release

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### Overview

**NOTE** The 1.51b release can only be used on 3700A models. This release is not compatible with 3700 (non-A) models.

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The following table lists the exact version numbers of the available Series 3700 components when the firmware upgrade is complete.

Model	Version
Series 3700A Mainframe	1.51b
Series 3700A High Performance DMM	1.50b
3720 Dual 1x30 Multiplexer	1.40h
3721 Dual 1x20 Multiplexer	1.40h
3722 Dual 1x48 High Density Multiplexer	1.40h
3723 Dual 1x30 High Speed Reed Relay Multiplexer	1.40j
3724 Dual 1x30 FET Multiplexer	1.40j
3730 Dual 6x16 High Density Matrix	1.40h
3731 Dual 6x16 High Speed Reed Matrix	1.40j
3732 Quad 4x28 High Speed Reed Matrix	1.40m
3740 32 Channel Isolated Switch	1.40h
3750 Multifunction I/O Card	1.40j

### Critical fixes

NOTE: Firmware version 1.51 is the initial firmware release for the 3700A series and should not be installed on non-A (for example 3706) models. For non-A series instruments, V1.41c is the latest firmware version. The information provided below is only used to inform customers who had been previously using a model 3706 with firmware release 1.41c.

PR45880 **Models affected:**

3706A, 3706A-S, 3706A-NFP, 3706A-SNFP

**Symptom:**

A repeated call to dmm.open was causing a memory leak.

**Resolution:**

The firmware was modified to free up allocated memory correctly.

**PR45951 Models affected:**

3706A, 3706A-S, 3706A-NFP, 3706A-SNFP

**Symptom:**

It was observed that reading large amounts of data using VXI would occasionally cause the data to be terminated early.

**Resolution:**

During heavy amounts of reading the VXI driver would set the EOI bit to early terminating the data transfer. This was corrected.

## Enhancements

None.

## Noncritical fixes

**PR45677 Models affected:**

3706A, 3706A-S, 3706A-NFP, 3706A-SNFP

**Symptom:**

The login window of the Java applet was not sized properly.

**Resolution:**

The resolution of the login window was set to correct values.

**PR45017 Models affected:**

3706A, 3706A-S, 3706A-NFP, 3706A-SNFP

**Symptom:**

channel.calibration.verifydate returns a misleading error for cards that do not support calibration.

**Resolution:**

For cards that do not support calibration the error was changed to "Card not supported".

## Known issues

None.

