

1 Installing a new bootloader on mGuard devices



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1.1 Introduction

Due to the hardware structures of memory chips becoming increasingly smaller, it has become commonplace that some memory cells may not be fully functional and other memory cells may lose their ability to function as time passes. This reduction in memory capacity is compensated for by increased production capacity. As a result, the desired capacity is always maintained over the product's service life.

The mGuard devices have routines for handling defective memory cells. These routines are optimized when a new bootloader is installed.



If you do not want to update the firmware version, you can downgrade the device to the desired version after updating the bootloader. The newly installed version of the bootloader is retained after you downgrade the firmware version. However, Phoenix Contact always recommends using the latest firmware.

Devices produced with an mGuard firmware version 8.7.0 or later cannot be flashed to a firmware version < 8.7.0 (downgrade).

An up-to-date firmware version ensures that there is an optimized version of the bootloader on the device. Please observe the notes on firmware updates in the user manual of the device.

1.2 Testing the bootloader

If you have an mGuard device that is no longer booting and you want to check whether the bootloader is the cause, please follow the steps below to update the bootloader.

- 1 Disconnect the device from the supply voltage.
- 2 Use a tool such as "Putty" for communicating via the serial interface on your PC.
- 3 Establish the serial connection between the PC and the mGuard device.
- 4 Start the mGuard device by applying the supply voltage. The device will attempt to boot.

The bootloader must be updated if the following error message appears in the terminal window of your tool:

U-Boot 2009.11 (Dec 13 2013 - 08:34:06) MPC83XX

New bootloader versions are installed on MGUARD **firmware versions 7.6.8 and 8.1.4** or later.

