



GSV-8 EtherCat

Selection of the ESI device description file



Most EtherCAT Master systems require the standardized device description file, the ESI file, based on XML format. It contains all relevant information, such as the version number of the device embedded software (firmware). That one should be the same as the firmware version number in the device - especially as the one stored in the EEPROM of the EtherCAT adapter (see below), otherwise the device may not be recognized correctly. **Most master programs recognize the correct ESI file by themselves.** Otherwise, the following instructions help to select the right ESI file.

In the ZIP archive available from ME Messsysteme, the names of the ESI files contain the firmware version number, with underscores at the end.

Examples:

GSV8esi_v21FW_1_43.xml Firmware version 1.43

GSV8esi_v20FW_1_38.xml Firmware version 1.38 and most older versions

To select the valid ESI file for a given device, its correct firmware version number must be known, normally before the device will be integrated in a master project. It can't reliably be correlated to the devices serial number, e.g. because the manufacturer also updates items in stock; also some users may have performed a firmware update (which is possible with our assistance).

For displaying the firmware version number, the GSV-8 can be connected to a Windows PC by using the USB port. Then, the following programs (both in English) may be used, that can be downloaded from the ME website:

GSVmultichannel

A comprehensive software for measuring and complete configuration. The installer setup is of about 280MB in size and the installation is not very fast. But you can perform all parametrizations with it, also those who can't be accessed via EtherCat. It can be downloaded here:

<https://www.me-systeme.de/de/software/gsvmulti>

A smaller setup of an older version is here:

https://www.me-systeme.de/setup/gsv/gsvmulti/GSVmulti-1-39_noDAQmx_noSSE2.zip

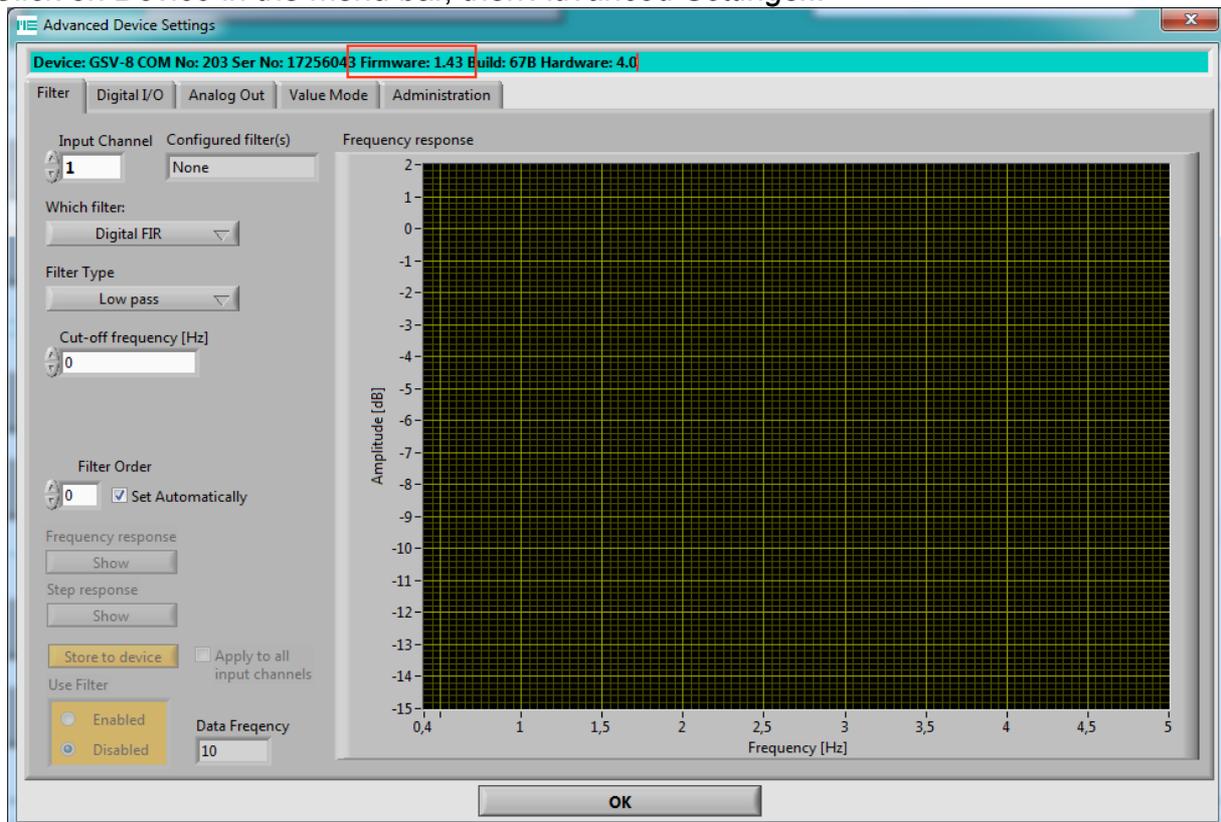
GSV Loader

An installation-free, small program intended for performing a firmware update. It also shows the firmware version number. Configuration isn't possible with that.

<https://www.me-systeme.de/setup/gsv/gsv-8/GSV8-Loader.exe>

Displaying the version number with GSVmultichannel

- Connect the GSV-8 via USB to the PC
- Start GSVmulti
- In the *Configuration*, click on *Add Channel*
- Select *Devicetype =GSV-8* and the Comport number
- Click *Connect*
- Click on *Device* in the menu bar, then *Advanced Settings...*

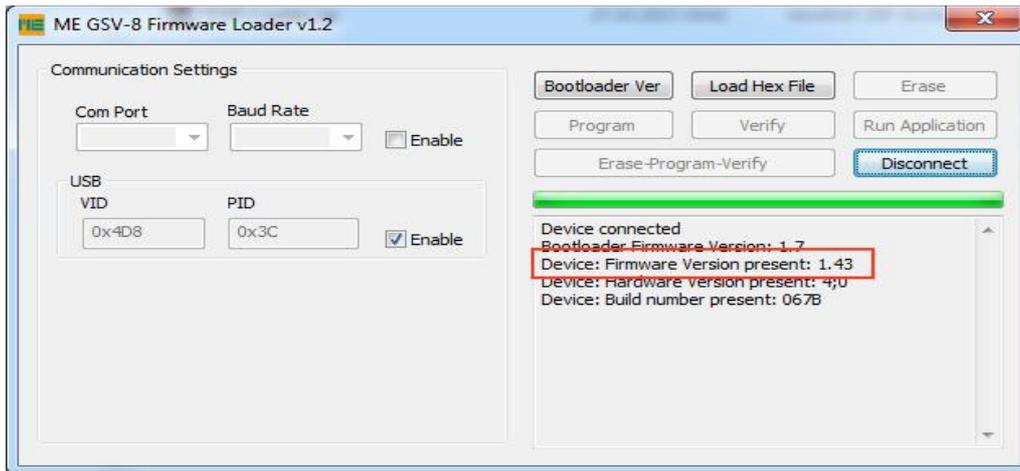


You'll see the firmware version number in the text above inside the line with background in turquoise, here highlighted in red, in this example: 1.43



Displaying the version number with GSV Loader and GSV-8DS

- Connect the GSV-8 via USB to the PC
- Switch it off or leave it off
- Press the MOD key and hold it, then press the power-on button. Keep MOD pressed, until the power button flashes in blue.
- Start GSV Loader
- Click *Connect*



You'll see the version number in the text console, highlighted in red in the picture above. Then, click *Disconnect* and close the program.

With the housing version GSV-8AS, the keys mentioned are inside the box, so, the housing cover must be unmounted.

Additional Information

Via EtherCat, the version number can be read with the **CoE Objects** "Revision number", Index 100Ah or with the "Identity Object", Index 1018h, sub-index 5.

The version number is also stored in the EEPROM (non-volatile memory) of the EtherCat adapter ("ESC") assembled with the GSV-8. This one should correspond to that one in the ESI file. In case of performing a firmware update, the number in this EEPROM must be overwritten with the new number. Some EtherCat master programs, like TwinCAT by Beckhoff, are capable of displaying this EEPROM data may be editable, too. Editing the EEPROM content must be done very carefully, because corrupted content may result in functional failure.

This "Revision-No" is stored in the EEPROM of the ESC at byte addresses 0x18 to 0x1B. It's a U32 number, whereby the "High" versions number (e.g. 1 with 1.43) is at address 0x1A and the "Low" versions number (e.g. 43 with 1.43) at address **0x18**, i.e. it's stored in little-endian byte order.

In the **ESI-File** you'll find the version number in the XML path
EtherCATInfo -> Descriptions -> Devices -> Device -> Type -> RevisionNo



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Subject to change without notice.

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