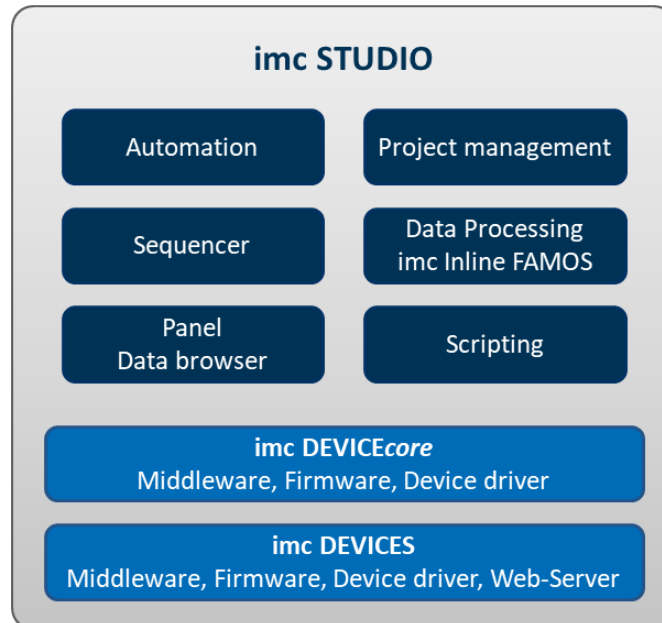


imc STUDIO vs. imc DEVICEcore and imc DEVICES

imc STUDIO is the current universal operating software for imc measurement systems such as the imc CRONOS family of systems, imc SPARTAN, imc C-SERIES, imc BUSDAQ, imc ARGUSfit or imc EOS.

This software is installed on a PC. Along with the PC software, the installation comprises components such as device drivers and firmware. The firmware is loaded into the system hardware in a firmware update. Some other components constitute so-called "middleware", which serves as an interface between the elements of the system and the PC.



imc DEVICEcore and imc DEVICES as a driver package for imc STUDIO

The drivers and firmware components for imc devices are provided in "imc DEVICEcore" and "imc DEVICES". Thus, at least one of the two driver packages is a necessary requirement for operating imc devices under imc STUDIO.

- imc DEVICEcore: For devices belonging to the [firmware group B](#) - e.g. ARGUSfit, EOS
- imc DEVICES: For devices belonging to the [firmware group A](#) - e.g. CRONOS family, C-SERIES, SPARTAN, BUSDAQ

Both packages can be installed and operated in parallel. The software and the devices automatically apply the appropriate package.

Note

Parallel operation

imc DEVICEcore: The associated firmware- and driver package ships with the software used, and is installed in the software's installation folder. Any other installations are not recognized and thus cannot be used. In some cases, a firmware update is not mandatory. In such cases, the update is available to you as "optional". However, we still recommend performing the update, since every update not only implements improvements, but also fixes any bugs.

imc DEVICES: It is possible to work with multiple groups of imc DEVICES simultaneously and in parallel. In special cases, this may be relevant or even recommendable, particularly in conjunction with the use of multiple devices.

Compatibility between imc STUDIO and imc DEVICEcore

In regard to the use of imc DEVICEcore as the device driver, there is a clear assignment:

imc STUDIO version	assigned firmware version
2022 R1	3.4 R2
2022 R2	3.5 R1
2022 R3	3.5 R2
2023 R2	3.6 R2
2023 R3	3.6 R3
...	...
2023 R6	3.6 R6
2024 R1	3.7 R1

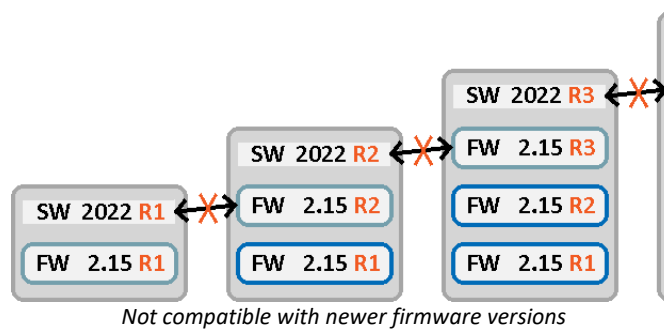
Compatibility between imc STUDIO and imc DEVICES

In regard to the use of imc DEVICES as the device driver, there is a clear distinction determining the compatibility of versions/version groups:

imc STUDIO version	assigned firmware / version group	additionally compatible
5.0 R1	2.8 R5	2.8 R3
5.0 R3	2.8 R7	2.8 R3, 2.8 R5
5.0 R5+	2.9	2.8 R3, 2.8 R5, 2.8 R7
5.2 R1-R2	2.10	---
5.2 R3-R9	2.11	2.10
5.2 R10+	2.13	2.10, 2.11
2022	2.15	2.14
2023	2.16	2.14, 2.15
2024	2.17	2.14, 2.15, 2.16

For version 5.2, the applicable rule is: the assigned version group and all **predecessor groups going back to 2.10** are compatible with the imc STUDIO-version used.

As of version 2022, the applicable rule is: the assigned version group and all **predecessor groups going back to 2.14** are compatible with the imc STUDIO-version used.



Overview of the versions

									sw 5.2 R25			
									2.13 R20			
									sw 5.2 R24		2.13 R19	
									2.13 R18		2.13 R18	
									sw 5.2 R23		2.13 R17	2.13 R17
									2.13 R16		2.13 R16	2.13 R16
									2.13 R15		2.13 R15	2.13 R15
									2.13 R14		2.13 R14	2.13 R14
									sw 5.2 R11		2.13 R2	
									sw 5.2 R10		2.13 R1	2.13 R1
									sw 5.2 R9		2.11 R9	2.11 R9
									sw 5.2 R8		2.11 R9	2.11 R9
									sw 5.2 R7		2.11 R8	2.11 R8
									sw 5.2 R4		2.11 R7	2.11 R7
									sw 5.2 R3		2.11 R2	2.11 R2
									sw 5.2 R2		2.11 R1	2.11 R1
									sw 5.2 R1		2.10 R3	2.10 R3
									2.10 R2		2.10 R2	2.10 R2
									sw 2022 R1		2.15 R1	
									2.14 R2			
									2.14 R1			

Table: Overview of the versions 5.2

									sw 2024 R1			
									sw 2023 R6		2.17 R1	
									sw 2023 R5		2.16 R6	2.16 R6
									sw 2023 R4		2.16 R5	2.16 R5
									sw 2023 R3		2.16 R4	2.16 R4
									sw 2023 R2		2.16 R3	2.16 R3
									2.16 R2		2.16 R2	2.16 R2
									sw 2022 R3		2.16 R1	2.16 R1
									sw 2022 R2		2.15 R3	2.15 R3
									sw 2022 R1		2.15 R2	2.15 R2
									2.15 R1		2.15 R1	2.15 R1
									2.14 R2		2.14 R2	2.14 R2
									2.14 R1		2.14 R1	2.14 R1

Table: Overview of the versions 202x

Installation

Components of the product installation medium

When imc STUDIO is installed from the installation medium or after downloading the installation package, supplemental components are installed along with the actual core product. In particular, this includes an up-to-date and appropriate version of the driver packages (imc DEVICEcore / imc DEVICES). Further global system components, which are also used by other imc products (such as the curve window, etc.) are grouped under the package name "imc Shared Components".

Following the installation procedure, it is possible to specify whether the components are to be installed either automatically, or individually upon selection.

Update-Installation and uninstalling

When installing an update of imc STUDIO which replaces an existing older version with an up-to-date version, it is generally recommended to uninstall the older version.

However, this procedure intentionally does not include automatic uninstalling of the older version of the imc DEVICES driver package.

In contrast to imc DEVICES, the driver package imc DEVICEcore will always reside in its latest version, only. This is why it will always completely deinstall upon deinstallation of imc STUDIO.



Note

imc DEVICES

To ensure that imc STUDIO also uses up-to-date drivers and firmware, please uninstall any existing older versions of imc DEVICES. This can also be performed subsequent to the completed installation of imc STUDIO by means of the Windows Control Panel.

Determining what versions are used

The file "ReadMe.txt" which comes with the installation package explicitly lists all components along with their version numbers and creation dates.

When in doubt, it is possible to view in the "Info" dialog of the imc STUDIO program currently running in order to learn what version of imc DEVICEcore and imc DEVICES was installed in conjunction with imc STUDIO.

Additionally, it is possible to use the dialog "Device Properties" pertaining to the currently connected device in order to verify whether this driver version actually was loaded to the device. In case only a single (current) version of imc DEVICES is located on the computer, then performing the "Prepare" procedure on the configuration always ensures that this version is transferred to the device (by firmware update).

Nomenclature of the data media and installation packages

The circumstances regarding imc STUDIO's software components, as just described, explain the necessity of maintaining a detailed and structured version nomenclature.

First of all, the installation medium/download package contains a version of imc STUDIO, for instance "imc STUDIO 2024 R1", which is uniquely denoted by its Build-date.

The assigned version of imc DEVICES, for example "imc DEVICES 2.17 R1", is also relevant, as it often has its own (differing) Build-date.

Additional supplements are then denoted by the designation "AddOn" with an appended unique date, for instance imc STUDIO 2023 R5 2023-12-07 AddOn 2024-01-19. Any changes to imc DEVICES such as firmware patches are listed and typically annotated in the file AddOn_Info.txt.

Device overview

Some of the capabilities discussed in this document only pertain to certain device models. The associated device groups are indicated at the respective locations. The groups are shown in the following table which can be used with imc STUDIO.

— not available ● standard ○ optional
 CRXT imc CRONOS-XT CRFX imc CRONOSflex CRC imc CRONOScompact

imc device	SPARTAN	BUSDAQ	BUSLOGflex	BUSDAQflex	SPARTAN-R	SPARTAN-N	CRSL-N	CRC-400	C1-N	C-SERIE-N	C1-FD	C-SERIE-FD	CRFX-400	CRFX-2000	CRC-2000G	CRC-400GP	CRFX-2000G	CRFX-2000GP	CRXT	EOS	ARGUSfit
Driver package	imc DEVICES																		imc DEVICEcore		
Firmware group	A																		B		
Device group	A4				A5					A6	A7				B10	B11					
SN ¹	13				14					16	19				4120	416					
TCP/IP Interface [MBit/s]	100				100					100	1000				1000	1000					
Sampl.Rate ² [kHz]	400				400					2000 / 400 ³	2000 / 400 ³	2000 / 400 ³	2000	2000	2000	4000	5000				
STUDIO Monitor supported	●				●					●	●				—	—					
Connections ⁴	4				4					4	4				—	—					
Signal processing in the device																					
Online FAMOS	○	○	—	○	○	●	●	●	●	●	●				—	●					
Preprocessing original channel	●	—	—	—	●	●	●	●	—	●	●	●	—	—	—	—	—				
Preprocessing monitor channel	●	—	—	—	●	●	●	●	—	●	●	●	—	—	—	—	●				
Data Storage																					
CF	●				●					—	—				—	—					
Express Card	—				—					●	—				—	—					
CFast	—				—					—	●				—	—					
USB	—				—					●	●	●	●	●	—	—	—				
microSD	—				—					—	—				—	●					
Storage on network drive	●				●					●	●				—	—					
Internal hard disk	○	(○) ⁵	—	—	○	○	—	—	○	○	○				●	—					
Synchronization																					
DCF	●				●					●	●				—	—					
IRIG-B	—	—	●	●	●					●	●				●	●					
GPS	●	●	—	(●) ⁶	●					●	●				—	●					
NTP	—	—	●	●	●					●	●				●	●					
PTP	—				—					—	—	●	—	●	●	—	—				
Phase offset correction	—	—	●	●	●					●	●				●	●					

1 Extend serial number range by four digits (three for imc EOS)
 2 Max. aggregate sampling rate (see data sheet)
 3 2000 via EtherCAT else 400
 4 Number of imc STUDIO Monitor-connections or imc REMOTE (as of 14xxxx) connections
 5 not available for imc BUSDAQ-2
 6 not available for imc BUSDAQflex-2-S



An Axiometrix Solutions Brand

Contact imc

Address

imc Test & Measurement GmbH

Voltastr. 5

13355 Berlin

Phone: (Germany): +49 30 467090-0

E-Mail: info@imc-tm.de

Internet: <https://www.imc-tm.com>

Tech support

If you have problems or questions, please contact our tech support:

Phone: (Germany): +49 30 467090-26

E-Mail: hotline@imc-tm.de

Internet: <https://www.imc-tm.com/service-training/>

imc ACADEMY - Training center

The safe handling of measurement devices requires a good knowledge of the system. At our training center, experienced specialists are here to share their knowledge.

E-Mail: schulung@imc-tm.de

Internet: <https://www.imc-tm.com/service-training/imc-academy>

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You will find the contact person responsible for you in our overview list of imc partners:

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