Storage Media

Alongside transfer to the PC, it is also possible to save measured data on removable data storage media. The operating software imc STUDIO allows free selection of data storage options (see the description of data storage in the operating software's user manual). imc measurement devices of a particular device group are compatible with particular data storage media, such as CF-Card, CFast-Card or USB data volumes. Storage media with verified performance can be purchased as accessories from imc. Hard drives are ordered with the device and can only be installed subsequently by imc.

imc device	serial no.	device group	CF	CFast	USB	microSD
CRONOS*flex* (CRFX-2000GP), CRONOS*compact (*CRC-400GP)	19XXXX	A7	-	✔	✔	-
CRONOS*flex* (CRFX-400), CRC-400, C-SERIES, SPARTAN	14XXXX	A5	✔	-	-	-
BUSDAQ*flex* (BUSFX)	13XXXX	A4	✔	-	-	-
ARGUS*fit* (ARGFT)	416XXX	B11	-	-	-	✔

Certain devices can be equipped with a hard drive (see chap. "device overview" in each manual). A distinction is drawn between **removable and internal storage media**.

Removable and internal storage media

Internal storage media can not be interchanged, but rather are permanently installed inside the device. They are usually magnetic or SSD harddrives. Use of such media is the best approach whenever the required storage capacity exceeds data volumes which removable media can provide. The internal storage media exclusively serve the purpose of data acquisition. Hard drives are ordered along with the device, and can only be retrofit by imc for existing equipment.

If both large storage capacity and interchangeability are required at the same time, a drive bay for 2.5" SATA hard drives can be used, see photo: CRC/HDD-FRAME 4 . This means that the system displays this drive as a removable drive. Otherwise, this drive is displayed as internal storage. Irrespective of an eventually available hotplug capability, the drive can always be exchanged while the device is deactivated, so that the accumulated data can be conveniently analyzed or archived.

Guidelines for proper handling of the removable storage media

- **Always insert only one removable storage medium (e.g. either CFast or USB with CRFX-2000GP).**
  In the case of multiple installed storage options (CFast & USB) the device does only support one storage volume at a time. Which one is determined upon activation, and there is no fixed sequential order. For this reason, remove any data storage volumes which you do not wish to use for the measurement before activating the device. When one removable data storage volume is currently inserted and an additional one is then inserted, the status-LED flashes red one time to indicate that the removable volume can not be used.
- Ensure that sufficient time is available for the exchange. The time needed for registering and deregistering with the system depends on the data carrier and on the channel count. As a guideline value, we recommend at least 30 s, even for simple configurations.
- Formatting of the 1 TB SSD hard drive can only take place when it is inserted in the device. It is important that this hard drive is only formatted in FAT32.

Exchanging the data carrier

In case you are using a removable storage medium, please be aware that before you remove it (if the device is switched on), the Hotplug button must be pressed to ensure that storage medium can be safely removed.

⬥ Reference	Storage media in the device

The chapter: "*Storage media in the device*" in the software manual or also in the First steps with the imc device supplied describe the prescribed handling, correct replacement, formatting and much more with storage media.

Removable CF Storage Media Cards

Overview of the available storage media

Order code	article number
ACC/CF-2.0-GB-ET	13500020
ACC/CF-8.0-GB-ET	13500079
ACC/CF-16.0-GB-ET	13500081
ACC/CF-32.0-GB-ET	13500137

Operating conditions - removable CF storage media

Storage temperature:	-65°C to 150°C
Operating temperature:	-40°C to 85°C condensation allowed (extended temperature range)
Shock protection	in operation 1000 g

Removable CFast Storage Media Cards

conforming to CFast 2.0 specification

One major advantage of the CFast-format is its high transfer/write-speed. **CFast is not compatible with CF** (CompactFlash). Both storage media have roughly the same housing dimensions, but different connectors and are therefore not plug-compatible.
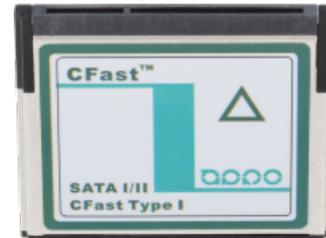
CFast is based electrically on the SATA Standard, while CF is based on the parallel IDE-ATA, so that the former offers significantly higher transfer speeds.

The CFast storage media are compatible with devices with a serial number (SN) > 190000 (device group A7)

Overview of the available CFast storage media

Order code	article number
ACC/CFast-8 GB ET	13500163
ACC/CFast-16 GB-ET	13500164
ACC/CFast-32 GB-ET	13500165
ACC/CFast-64 GB ET	13500260

Operating conditions - removable CFast storage media

Operating temperature:	-40°C to 85°C
Shock and Vibration	conforming to MIL-STD-810F

CFast Card Reader with USB 3.0

Order code	article number
FH/CARDREADER-CFAST-USB3	13300018

- Hot Swap, Plug & Play
- 1x micro USB 3.0
- 1x CFast Card Slot
- Supports CFast type I/II memory cards
- Data transfer rate up to 5 Gb/s
- Aluminium case
  (LxWxH: 82 x 60 x 12 mm)

Removable USB 2.0 Storage Media Cards

Overview of the available USB storage media for devices of the group A7

Order code	article number
ACC/USB-32,0 GB-ET	13500200

Operating conditions - removable USB storage media

Operating temperature:	-40°C to 85°C
Shock and Vibration	conforming to MIL-STD-810F

> **❗ Note**   **USB hard disks with external power supply**
>
> When using USB hard disks with external power supply, this may not be applied to the USB port. This may destroy the current limitation of the imc USB port when the measuring instrument is switched off.

> **❗ Note**   **Manufacturer and Age of the storage medium**
>
> - imc has no way to affect the quality of the removable storage media provided by the various manufacturers.
> - Storage media which come with newly purchased devices have been inspected in the framework of quality assurance and have passed the relevant tests.
> - We expressly declare that the use of removable storage media is at the user's own risk.
> - imc and its resellers are only liable within the framework of the guarantee and only to the extent of providing a substitute.
> - imc expressly declines any liability for any damages resulting from loss of data.

Flash storage media for ARGUS (microSD)

Overview of the available storage media

Order Code	article no.
ACC/MICROSD-256GB-ET	13500428
ACC/MICROSD-256GB-ET	13500449

Device extension: internal hard drive

Overview of the available hard drives

Order Code	article no.	device	operating temperature
CRC/400-SSD-960GB	11700298	CRC-400-x	0°C to 70 °C (commercial)
CRC/400GP-SSD-960GB	11700300	CRC-400GP-x	-40°C to 85°C (industrial)
CRC/400GP-SSD-480GB	11700299	CRC-400GP-x	-40°C to 85°C (industrial)
CRFX/400-SSD-960GB	11900282	CRFX-400	0°C to 70 °C (commercial)
CRFX/2000GP-SSD-960GB	11900284	CRFX-2000GP	-40°C to 85°C (industrial)
CRFX/2000GP-SSD-480GB	11900283	CRFX-2000GP	-40°C to 85°C (industrial)
SPAR/SSD-960GB	11300133	SPARTAN	0°C to 70 °C (commercial)

Notes

- The operating conditions of the device in which the hard disk is integrated apply (requires a slot).
- Approximately 14% of the total size is reserved for possible defragmentation and is therefore not available.

Removable frame - HDD-FRAME

Order Code	article number	remarks
CRC/HDD-FRAME	11700230	frame component for removable HDD/SSDs, max. 1 per CRC device, requires 1 slot
CRC/HDD-FRAME-R	11700231	variant for the imc CRONOS*compact*-RACK
CRFX/HDD-FRAME	11900223	frame component for removable HDD/SSDs, max. 1 per base unit, requires 1 slot

Housing/frame component for SSD 2.5" SATA Format, max. one per device, not hot-swap capable.

Notes

- In order to fit into the frame, the max. height of a hard drive should not be more than 9.5 mm.
- If you buy the storage media from a supplier other than imc, we can not guarantee the quality.

CRC/HDD-FRAME how to insert the SSD

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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.

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