

Driver assistance, logging and measurement platform

BRICK CORE COM

Product overview

BRICK CORE COM is the central computing and communication unit for the acquisition, processing and logging of high bandwidth data.

The application areas for this platform are demanding measurement tasks for driver assistance systems (ADAS) or automated and autonomous driving (AD).

High performance computing unit

Quad-Core 5th Gen Intel® Core™ Processor

Data Stream Logging and Processing

Permanent data throughput up to 8Gb/s in combination with BRICK STORAGE Cartridge

Mass Storage: BRICK STORAGE Cartridge

Minimal height (22mm) and removable RAID System up to 32 TB capacity and 8Gb/s writing speed

Robust and compact hardware platform

Designed for in vehicle use and harsh environmental conditions with minimal dimensions

Massive I/O Bandwidth

2x 10 GBit Ethernet, 6x 1 GbE, USB3.0, SATA

Time Synchronization XTSS

Platform Timesync: Ethernet interfaces are hardware time synchronized, Cluster Timesync: Ethernet Time Sync via IEEE 802.1AS / IEEE 1588



BRICK CORE COM with Storage Bay



BRICK CORE COM with Storage and Measurement Interface

Highlights



Maximum processor performance and data processing in ca. 3,5l volume



10 Gb Ethernet for distribution of measurement data and clustering of systems



Time synchronization based on IEEE Std 802.1AS Add-On



Extended operating temperature range



Stackable systems



GPIO panel for tagging, triggers
CFast-Slot for configuration, Service

Alle Daten bei 25°C Umgebungstemperatur, falls nicht anders angegeben. / All data at nominal input and 25° C ambient temperature, if not marked otherwise. ▪ Alle Daten dienen nur Informationszwecken und sind nicht als zugesicherte Eigenschaften aufzufassen. / All data for information purposes only, no assured characteristics. ▪ Technische Änderungen ohne vorherige Ankündigung sowie Irrtümer vorbehalten. / Technical modifications without notice and errors reserved. ▪ Belastung mit Extremwerten über einen längeren Zeitraum kann die Zuverlässigkeit beeinflussen. / Strain with extreme values for a longer period may affect the reliability. ▪ Alle Trademarks und Logos sind Eigentum der jeweiligen Unternehmen. / All trademarks and logos are property of the concerning companies. In case of doubts the German version of the document is binding. © b-plus GmbH • 24.03.2020 14:12* Version: 1.11

Technical information

Processor and main memory

- Intel® Core™ i7-5700EQ (4x 2,6 GHz)
- 16 GB RAM
- 128 GB M.2 SSD

Interfaces

- 2x RJ45 10GbE (Data back bone) for easy networking on system level with highest bandwidth
- 6x RJ45 1GbE, 5x IEEE 802.1AS / IEEE 1588
- DisplayPort
- 2x SATA 6G via SFF-8088 (external lockable conn.)
- 4x USB 3.0 Host
- M.2 mass storage interface (internal)
- External accessible CFast mass storage interface
- SYSCTRL (Ignition In, clamp 15, CAN-Bus for control – from the house keeping controller)
- GPIO (4x In, 4x Out –ca. 1A HighSide, @12V Power)
- WLAN 802.11 a/b/g/n (Option)
- GPS (Position and time)
- LTE/UMTS (OPTION) for e.g. fleet management
- Microphone input, e.g. for message to the measurement trigger
- Headphone output

Add-On

STORAGE Bay

- Preparation for 22mm flat BRICK STORAGE Cartridge with a capacity of up to 32 TB

Measurement Interface

- External Measurement Data Interfaces MDILink via 10Gb Ethernet and IEEE 802.1AS timesync
- Optional Add On for PCIe measurement cards

Time synchronization

- Add-on: IEEE Std 802.1AS & GPS

Software support

- Windows 7 Professional 64Bit
- Linux 64Bit (for special application profiles)
- Other OS on request

High-End-ADAS Frameworks

- Application ready for the AVETO toolchain and 3rd party frameworks

Power Supply

- 12V, 24V / cranking safe in the car down to 6,5V
- Power consumption range between ca. 80 and 140 Watt (including Storage) depending on setup and performance level
plus maximum 60W for SPC Add on

Operating Temperature Range

Active cooled in the closed finned heat sink

- At typical performance (@2,6GHz):
-25°C ~ +70°C

On request at reduced performance:

- -40 ~ +80°C

Housing

- Robust aluminum profile housing
- B:320mm, H:66mm(1,5HE), T:250mm

Certification

- CE / FCC / VCCI / ICES
- RoHS / REACH
- KC

Name

BRICK CORE COM5700EQ

Order-no.

B17575-BCC-016-0000

Description

High Performance Embedded Communication Unit

Base: Intel® Core™ i7-5700EQ(4x2.60GHz), 16 GB RAM,128 GB M.2 SSD, Supply Voltage: 12V DC

Interfaces: 2xRJ45 10GbE, 6x RJ45 1GbE, Display Port, 2xSATA over SFF-8088, 4x USB3.0 Host, SYSCTRL, 4xGPI and 4x GPO, GPS, CFast-Slot, WLAN 802.11 a/b/g/n

OS: Windows® 7 Professional for Embedded Systems 64Bit EN preinstalled, Operating temperature: -25 to 70°C,

Package Content: 2xWLAN Antenna, 1xGPS Antenna, PWR-Cable, SYSCTRL-Cable, GPIO-Cable, 110V-230V Power Supply