Data Sheet

BRICK-CORE-COMplus

BRICK CORE COMplus is the central measurement and communication unit for the acquisition and recording 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).

BRICK-CORE-COM is a modular platform for a very flexible adaption and integration in sensor and ECU development and validation systems. Due to the optimized architecture a recording performance up to 16 Gbit/s opens a wide range of validation use cases.

Highlights

- High I/O Bandwidth 2x 10GBase-T Ethernet, 6x 1000Base-T Ethernet, 4x USB3.1
- Time Synchronization System XTSS (g)PTB
- Cluster Time sync: Time synchronization via IEEE 1588v2 802.1AS-2020 multi domain
- Modular system for measurement add on BMC

- Quad Core Processor, 32GB RAM
- Integrated GPU
- Hardware time synchronized Ethernet interfaces
- PCIe 3.0 architecture for high bandwidth recording up to 16 GBit/s

- High integrated and compact hardware platform designed for harsh environment
- BRICK STORAGE, very robust and removable high performance mass storage, RAID or NVMe based
- Extended temperature range

BRICK-CORE-COMplus BMC with BMC-ETH 6000 and BMC-VB2

Features

Interfaces

Ethernet	2x 10GBase-T, RJ45	(g)PTP IEEE 802.1AS-2020
	5x 1000Base-T, RJ45	(g)PTP IEEE 802.1AS-2020
	1x 1000Base-T, RJ45	management port
	integrated Wi-Fi module	optional
Video	DP Interface	Integrated GPU
GPS	integrated GNSS module	
I/O	SYSCRTL (ignition), 4x GPI, optional 4x GPO	
USB	4x USB A 3.1 Gen1	
SATA	2x eSATA 6G via SFF8088, CFast Slot	eSATA need self-powered device
STORAGE Interface	PCIe 3.0 x4 STORAGE expansion slot	22mm slot for BRICK STORAGE
BRICK SPC	2x PCIe 3.0 x8 Slot (mech. x16 and x8)	Max. 5A @12V (60W)
BRICK BMC	2x BRICK Measurement Card BMC	PCIe based module concept

Specifications

System

CPU	Intel® Core™ i7-6820HE, HD Graphics 530	
Memory	32GB DDR4 RAM, 128 GB M.2 internal	
Ethernet	1x Intel® x550 (x540) dual 10GBase-T controller 5x Intel® I210 1000Base-T controller	hardware based platform time synchronization for highest accuracy
Operating System	Windows 10 IoT Enterprise, Ubuntu 20.04	other on request
ADAS Framework	AVETO® ready x64 platform	

Electrical Specification

Supply Voltage	12V (10V – 28V) wide range	6V short term cranking save
Typ. Power consumption	100 - 140Watt including STORAGE	depends on configuration and used BRICK STORAGE
Max. Power consumption	200W	incl. measurement add-on and STORAGE

Environment Specification

operation Temperature	-25°C to +70°C	@typical performance
non operation	-40°C to +85°C	
Relative Air Humidity	max. 90 % non-condensing	

Mechanical Specification

Dimensions	320 mm (W) x 250 mm (D) x 66 mm (H)	BRICK CORE COMplus
	320 mm (W) x 250 mm (D) x 88 mm (H)	BRICK CORE COMplus BMC
	320 mm (W) x 250 mm (D) x 110 mm (H)	BRICK CORE COMplus SPC
Weight	approx. 7kg	
Certification	CE, FCC, VCCI, IECS, RoHS, REACH	

Order Information

Name	Part Number	Description
BRICK-CORE-COMplus	B17575-BCC-100-0000	BRICK-CORE-COMplus measurement and recording platform for ADAS and AD development
BRICK-CORE-COMplus BMC	B17575-BCC-107-BA00	BRICK-CORE-COMplus measurement and recording platform for ADAS and AD development, dual slot BMC Add on empty
BRICK-CORE-COMplus SPC	B17575-BCC-101-SA00	BRICK-CORE-COMplus measurement and recording platform for ADAS and AD development, dual slot PCIe Add on
BRICK STORAGEplus	B17575-BSC-101-0xxT	BRICK STORAGEplus, 8 TB, 16 TB, 32 TB, 8x SATA SSD EVO, PCIe 3.0, including neoprene protection cover
BRICK STORAGEplus	B17575-BSC-102-016T	BRICK STORAGEplus, 15,36 TB, 8x SATA SSD EXT extended temperature, PCIe 3.0, including neoprene protection cover
x4 STORAGE NVMe	coming soon	x4 STORAGE NVMe 15, 30, 60 TB, 8x M.2 SSD, integrated download port, neoprene protection cover, x8 adapter

Order Information Accessories

Name	Part Number	Description
220W AC/DC power supply	B17575-ACC-004-0001	BRICK Accessories Set 002 AC Power + EURO CEE7/7, 220 W AC power supply, In: 85-264 VAC, Out: 24 V DC / 9,2 A
BRICK Protection bar 66mm	B17575-ACC-008-0066	Set of 2 pieces. protection and handle bar 66 mm for BRICK2
BRICK Cable Guard	B17049-ACC-008-0000	Cable Guard 66mm with handles, screws and cable ties
BRICK Installation set 66, 88, 110 mm for ITEM Profile 20	B17575-BIM-001-00xx	Installation set 66, 88, 110mm for BRICK system components
COPYLynx G7. K1 - BSC/x4 STORAGE	B16017-CLY-107-0001	Multifunctional data copy station for decentral and data center use. Copy data from BRICK STORAGEplus to disk or USB or upload via 10 GbE
Measurement Card BMC-ETH 6000	B17575-BMC-ETH-6000	Time-synchronized measurement card with 6x 1GbE 802.1AS ports and power over Ethernet support
Measurement Card BMC-VB2 8x CAN FD	B17575-BMC-VB2-0008	Flexible Measurement Card based on FlexCard PMC-II with max 8 CAN FD ports