

Data Sheet

BRICK25 PCIe GPU

BRICK25 PCIe GPU is the compact intelligent recording ADAS and AD measurement platform for AI accelerated recording and processing 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).

BRICK2 is a modular platform for a very flexible adaption and integration in sensor and ECU development and validation systems

The BRICK2 PCIe GPU now brings an enormous performance with 3584 CUDA® cores and 3rd generation tensor units to deliver unseen AI computing power for smart measurement and recording applications.

Highlights

- System performance 12,9 TFLOPS (FP32)
 - Intel® Core™ Processor i7, 64GB DDR4 RAM
 - NVIDIA® Geforce RTX3060 graphic accelerator
 - 3584 CUDA® core Ampere GPU
 - 12 GB GDDR6
 - 3rd Gen Tensor core
 - OpenGL 4.6 and DirectX 12
- Massive I/O Bandwidth 6x 10GBase-T Ethernet, 3x 1GBast-T Ethernet, 4x USB3.1
 - Optimized PCIe 3.0 architecture for high bandwidth recording up to 32 GBit/s
 - Time Synchronization System XTSS
 - BRICK2 STORAGE, very robust and removable high performance mass storage, RAID or NVMe based
 - Most integrated and compact hardware platform
 - Designed for harsh environment
 - PCIe expansion for measurement add on



BRICK25 with BRICK2 STORAGE



Features

Interfaces

Ethernet	6x 10GBase-T, RJ45	(g)PTP IEEE 802.1AS-2020
	3x 1000Base-T, RJ45	(g)PTP IEEE 802.1AS-2020
	1x 1000Base-T, RJ45	management port
Serial Port	Rx/Tx NMEA, PPS	external time synchronization
Video	DP Interface	System GPU
	4x DP Interface	PCIe GPU RTX3060
GPS	integrated GPS module	Backup cap for fast position fix
I/O	SYSCRTL (ignition), 4x GPI, optional 4x GPO	
USB	4x USB A 3.1 Gen1, 4x USB A 2.0	
STORAGE	PCIe 3.0 x8 STORAGE expansion slot	22mm slot for BRICK2 STORAGE
	up to 32 GBit/s sustained writing speed	with BRICK2 STORAGE NVMe
Measurement	2x PCIe 3.0 x4 Slot (mech. x16)	max. 5A @12V (60W), upper slot only for low profile cards

Specifications

System

CPU	Intel® Core™ i7-9850HE, UHD Graphics 630	
Memory	RAM, 64GB DDR4-2666, 512GB M.2 internal	
Ethernet	3x X550 dual 10GBase-T controller, 3x I210 1000Base-T	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 cranking save for short term
typ. Power consumption	300 - 470Watt including STORAGE	depends on configuration and used STORAGE
max. Power consumption	550W	

Environment Specification

operation Temperature	-10°C to +60°C (tbd.)	@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 132 mm (H)
Weight	8kg (tbd.)

Certification	CE, RoHS, REACH
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Order Information

Name	Part Number	Description
BRICK25 PCIe GPU	B17049-B2C-010-0000	BRICK25 measurement and recording platform for AI based ADAS and AD development
BRICK2 STORAGE	B17049-B2C-101-0xxT	BRICK2 STORAGE xx TB Cartridge with high performance RAID Controller and 8x SATA SSD
BRICK2 STORAGE	B17049-B2C-102-0xxT	BRICK2 STORAGE xx TB Cartridge with high performance RAID Controller and 8x SATA SSD, extended Temperature EXT
BRICK2 STORAGE NVMe	B17049-B2C-202-030T	BRICK2 STORAGE NVMe 30 TB, 8x E1.S SSD

Order Information Accessories

Name	Part Number	Description
BRICK STORAGE Upgrade kit for BRICK2	B17049-ACC-004-0001	Upgrade kit for BRICK STORAGE and BRICK STORAGEplus to BRICK2 STORAGE interface
BRICK Protection bar 66mm	B17575-ACC-008-0066	Set of 2 pieces. protection and handle bar 66 mm for BRICK2
BRICK2 Cable Guard	B17049-ACC-008-0000	Cable Guard 66mm with handles, screws and cable ties
BRICK Installation set 66 mm for ITEM Profile 20	B17575-BIM-001-0066	Installation set 66mm for BRICK system components with 66 mm (1½ U) height
COPYLynx	B16017-CLY-107-xxxx	Multifunctional data copy station for decentral and data center use. Copy data from BRICK2 STORAGE to disk or USB or upload via 10 GbE
MDLake Connection Set - BRICK2, 2x 100 GbE	B24004-ICO-004-2211	BRICK2 STORAGE Link 2100, 2x 100 GbE 1x DAC Ethernet Cable QSFP28, 1 m Starwind NVMe-oF Software and License on USB Stick
PCIe Measurement Card VB2 8x CAN FD	B17575-SPC-VB2-0008	Flexible Measurement Card based on FlexCard PMC-II with max 8 CAN FD ports