TRX D16

HPC ADAS/AD Development Server and Vehicle Data Logging Platform

TRX D16 is a high performance compute (HPC) server and vehicle logger for the dual purpose of lab and in-vehicle ADAS/AD development.

The AMD EPYC™ CPU and Nvidia GPU deliver cloud scale performance for AI model training and inference. With up to 480 TB storage and multiple high speed interfaces, reliably capture and transfer data from the next generation of vehicle sensors for SIL/HIL testing.

KEY FEATURES

Designed rugged with flexible chassis mounting options, the TRX D16 is equally at home in the lab or on the drive from Level 3 to Level 5 autonomy.

- AMD EPYC™ 7713 processor (64 cores and up to 768 GB RAM)
- Nvidia GPU (PCIe Gen4) support
- 200 Gbps (25 GBps) sustained data logging speeds
- 480 TB of data storage (two hot-swappable storage cassettes)
- 2 x 100 GbE high performance networking interfaces for SIL/HIL access
- RAID (PCIe Gen4) card for data redundancy, encryption and offload
- Custom I/O of automotive Ethernet, FPGA based SmartNICs, or GMSL/FPD-Link/GVIF based cameras
- Choice of AC or DC power supply
- Open software architecture to support custom lab and in-vehicle development environments

TRAINS AUTONOMOUS FLEET

KLAS

TRX D16

Specifications

TRX D16 with chassis mount bracket configured for 19" racks

ORDERING INFORMATION
- Part No: KLAS-TRX-D16-A

COMPUTE
- AMD EPYC™ 7713 processor:
  - Frequency: 3.675 GHz
  - Max cores: 64
  - Max threads: 128
  - RAM: Up to 768 GB

MAIN STORAGE
- 1 x NVMe internal boot device (512 GB)

REMOVABLE STORAGE CASSETTES
- 2 x hot-swappable cassettes
- Up to 16 x SAS3/SAS4 SSDs in standard 2.5" form factor
- Supports self-encrypting SAS SSDs (Samsung and Kioxia)

NETWORKING AND INTERFACES
- 2 x 100 Gbps QSFP28 interface
- 2 x 10 Gbps RJ45 interfaces
- 2 x 2.5 Gbps RJ45 interfaces
- 1 Gbps RJ45 interface for management
- IEEE 1588/TSN 802.1AS timing support
- RDMA over Converged Ethernet (RoCE)
- 4 x USB 3.2 Gen1 interfaces
- 1 x Serial (RS-232)
- 1 x VGA

CUSTOM INTERFACES
- 2 x PCIe Gen4 slots for optional interfaces:
  - Connect up to 16 x GMSL3 cameras (alternative support for GMSL1, 2/ GVIF3/ FPD-Link III, IV)
  - FPGA based SmartNICs
  - GPU for AI/ML training
  - Automotive Ethernet

PCIe GENERATION 4 RAID CARD
- Broadcom MegaRAID 9670W-16i
- Supports RAID levels 0, 1, 5, 50, 6, 60
- SAS3/SAS4 support, up to 32 TB per SSD
- Supercap-based battery backed cache

SECURITY
- TPM 2.0
- AMD Infinity Guard:
  - Secure Boot
  - Encrypted virtualization
  - Memory encryption
  - Shadow Stack

SOFTWARE AND MANAGEMENT
- LCD status display
- BMC

POWER
- Choice of AC or DC power supply
- 330 W, 12 VDC (consumption excluding SSDs, typ. 18 W per SAS4 SSD)
- Filter and surge protection
- Connector type: 2 pin 12.5mm screw terminal (200A/300V UL approved)
- Separate M6 earthing point

TEMPERATURE RANGE
- Operating: 0°C to 50°C (32°F to 122°F)
- Storage with supercap backup: 0°C to 70°C (32°F to 158°F)
- Storage w/o supercap backup: -40°C to 85°C (-40°F to 185°F)
- Extended operating temperatures available

PHYSICAL SPECIFICATIONS
- 4U rackmount form factor
- 17.4" x 13.0" x 7.0" (443 x 330 x 178mm)
- 35.1 lbs (16kg) incl SSDs

CONSTRUCTION
- Mounting brackets can be repositioned for multiple mounting options

COMPLIANCE
Designed to meet:
- FCC Part 15 B
- CE
- RoHS
- REACH

TRX D16 (rear view) with chassis mount bracket configured for base mounting

KLAS