

TRX D8 2.0

Data Logging and Compute for ADAS/AD Development

Versatile 100 Gbps (12.5 GBps) logging solution supporting both PCI-based and network-based data acquisition.



KEY FEATURES

- Network-based logger built on Intel's 10th Gen Xeon-D processor and designed for edge environments
- Interface to PCI/PXI-based data acquisition systems by swapping compute for PCIe Target Adapter (Gen4 x16)
- Field-proven storage cassette with up to 8 x SAS3/SAS4 SSDs in a standard 2.5" form factor
- Up to 240 TB of storage, 100 Gbps write speeds
- PCIe Gen4 RAID card for data redundancy, encryption and offload



TRAINS



AUTONOMOUS



FLEET

TRX D8 2.0

Flexible Deployment Options



TRX D8 2.0 base storage module

TRX D8 2.0 enables the base storage unit to be used as a PCI- or network-based logger by simply swapping the head unit for a PCIe Target Adapter or compute unit. Example deployments are as follows:

PCI-based Logging

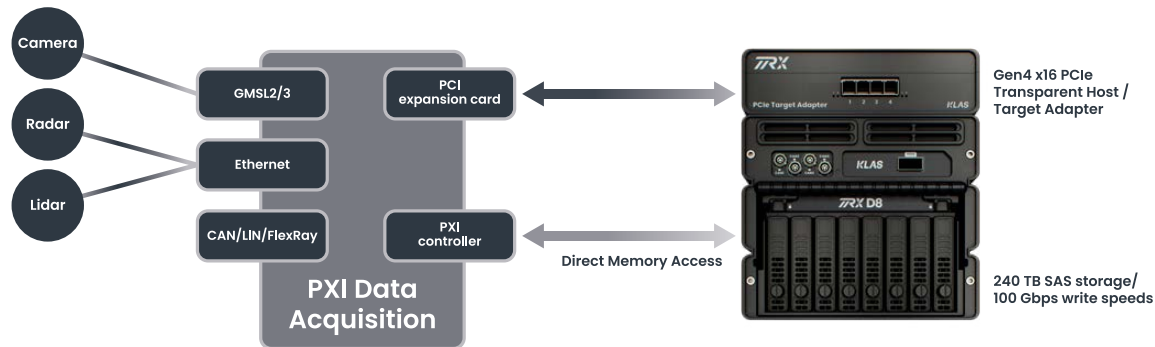


Figure 1: PCI-based logger interfaces to existing PXI toolchains via the PCI expansion card

Network-based Logging

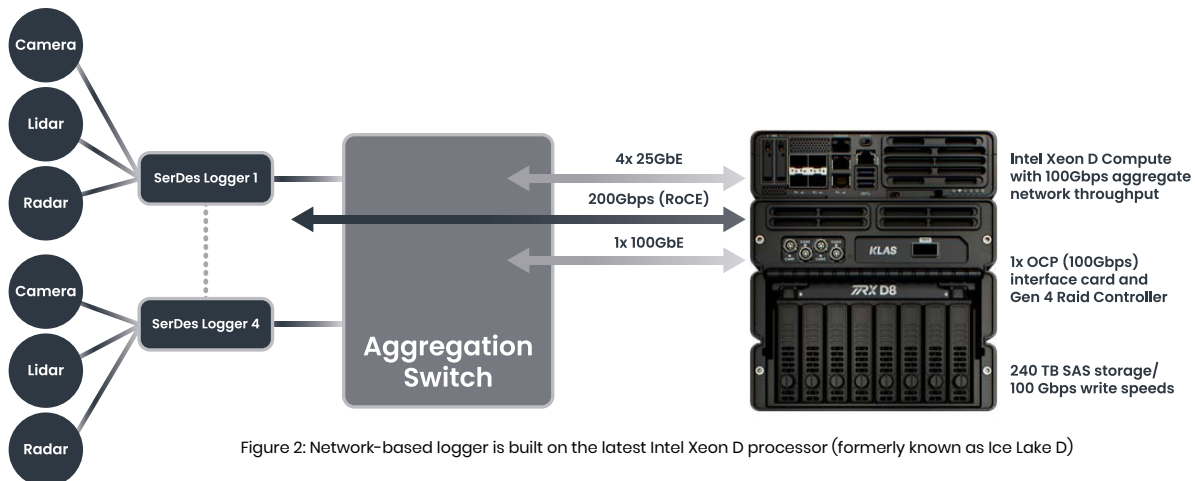


Figure 2: Network-based logger is built on the latest Intel Xeon D processor (formerly known as Ice Lake D)

KLAS OS KEEL | BLACKROCK

Optimised Management & Virtualization

TRX D8 2.0

Specifications



PCI-based Logging

ORDERING INFORMATION

Part No.: KLAS-TRX-D8-PCI

PCIe TARGET ADAPTER

- Gen4 x 16 PCIe Transparent Host/Target Adapter

REMOVABLE STORAGE CASSETTE

- 8 x SAS3/SAS4 SSDs in standard 2.5" form factor
- Supports self-encrypting SAS SSDs (Samsung and Kioxia)
- Supercap option for battery-backed cache

PCIe GENERATION 4 RAID CARD

- Broadcom MegaRAID 9660-16i x8 RAID card support
- Supports RAID levels 0, 1, 5, 50, 6, 60
- SAS3/SAS4 support, up to 32 TB per SSD
- Supercap-based battery backed cache
- JBOD mode for ZFS deployments

PHYSICAL SPECIFICATIONS

- 7.4" x 8.5" x 9.0" (188 x 217 x 228mm)
- 13.9 lb (6.3kg)

TEMPERATURE RANGE

- Operating: 0°C to 50°C (32°F to 122°F)
- Storage: -40°C to 85°C (-40°F to 185°F)
- Extended operating temperatures available

COMPLIANCE

Designed to meet:

- FCC Part 15 B
- CE
- RoHS
- REACH



TRX D8 2.0 PCI-based logging module (front)



TRX D8 2.0 PCI-based logging module (rear)

TRX D8 2.0

Specifications



Network-based Logging

ORDERING INFORMATION

Part No.: KLAS-TRX-D8-10X

COMPUTE

- Intel 10th Gen Xeon D-1746TER
- Frequency: 3.1 GHz
- Max cores: 10
- Max threads: 20
- RAM: 128 GB

MAIN STORAGE

- 2 x E1S 9.5mm NVMe SED SSDs
- 1 x VIK+ NVMe boot or write-cache device
- 1 x NVMe internal boot device (256 GB)

REMOVABLE STORAGE CASSETTE

- 8 x SAS3/SAS4 SSDs in standard 2.5" form factor
- Supports self-encrypting SAS SSDs (Samsung and Kioxia)
- Supercap option for battery-backed cache

NETWORKING

- 1 x 100 Gbps QSFP28 interface
- 4 x 25 Gbps SFP28 interfaces
- 2 x 2.5 Gbps RJ45 interfaces
- 1 x 1 Gbps for management
- IEEE 1588/TSN 802.1AS timing support
- RDMA over Converged Ethernet (RoCE)
- 4 x CAN-FD (single connector, 4-channels)

PHYSICAL SPECIFICATIONS

- 7.4" x 8.5" x 9.0" (188 x 217 x 228mm)
- 13.9 lb (6.3kg)

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

PCIe GENERATION 4 RAID CARD

- Broadcom MegaRAID 9660-16i x8 RAID card support
- Supports RAID levels 0, 1, 5, 50, 6, 60
- SAS3/SAS4 support up to 32 TB per SSD
- Supercap-based battery backed cache JBOD mode for ZFS deployments

SECURITY

- Secure Boot
- Intel Boot Guard
- Intel TXT (Trusted Execution Technology)
- Intel TME (Total Memory Encryption)
- Intel SGX (Software Guard Extensions)
- Tamper switch

SOFTWARE AND MANAGEMENT

- OpenBMC
- BIOS & Hypervisor CLI over console
- KlasOS Keel: KVM-based hypervisor
- Blackrock: IT management, automation, and monitoring

POWER

- 300 W, 9-36 V
- Filter and surge protection to ISO 16750-2
- Connector type: Amphenol PT02E12-4AP
- Ignition controlled

COMPLIANCE

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TRX D8 2.0 network-based logging module (front)



TRX D8 2.0 network-based logging module (rear)