

RX D8 2.0

Rackmount Form Factor

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

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Flexible Deployment Options



TRX D8 2.0 Rackmount 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

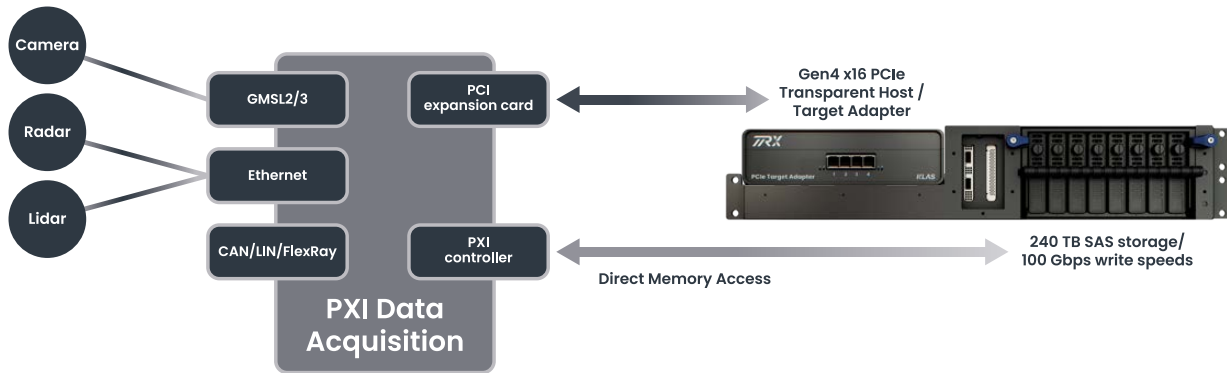


Figure 1: PCI-based logger interfaces to existing PXI toolchains via the PCI expansion card

Network-based Logging

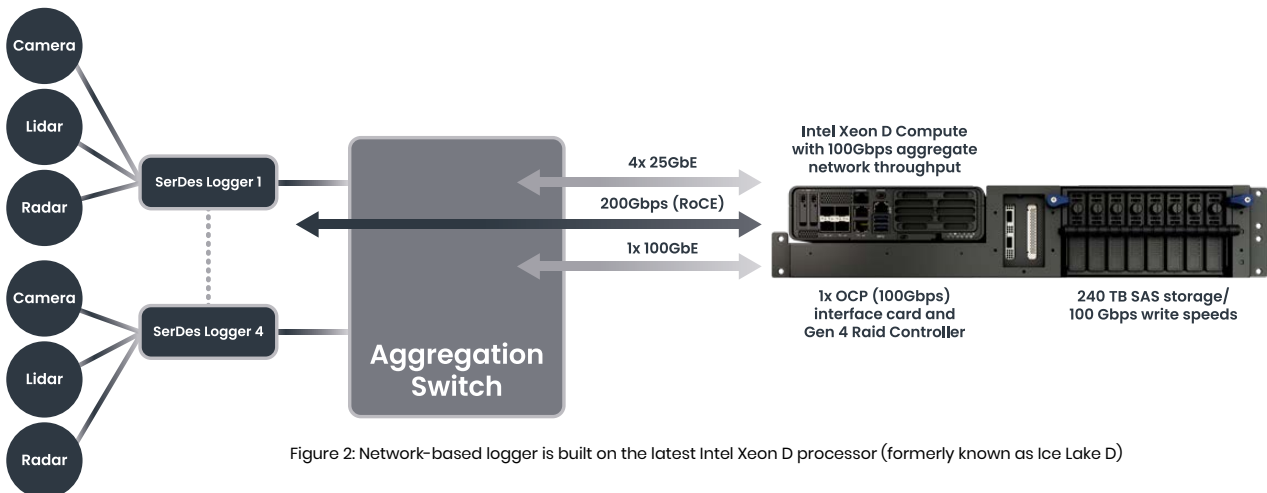


Figure 2: Network-based logger is built on the latest Intel Xeon D processor (formerly known as Ice Lake D)

KLAS OS KEEL | BLACKROCK

Optimised Management & Virtualization

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Specifications



PCI-based Logging

ORDERING INFORMATION

Part No.: KLAS-TRX-D8-PCI-R

PCIe TARGET ADAPTER

- Gen4 x16 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

- 2U 19" full rack form factor
- 17.3" W x 3.54" H x 9.85" D (440 x 90 x 250mm)
- ~17.6 lb (~8 kg)

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 Rackmount PCI-based logging (front)



TRX D8 2.0 Rackmount PCI-based logging (rear)

TRX D8 2.0

Rackmount Form Factor

Specifications



Network-based Logging

ORDERING INFORMATION

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

COMPUTE

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

MAIN STORAGE

- 2 x E1.S 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)

PHYSICAL SPECIFICATIONS

- 2U 19" full rack form factor
- 17.3" W x 3.54" H x 9.85" D (440 x 90 x 250mm)
- ~17.6 lb (~8 kg)

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

- 300W, 9-36 V
- Connector type: Amphenol SurLok Plus (Product code: SLPRA)

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TRX D8 2.0 Rackmount network-based logging (front)



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