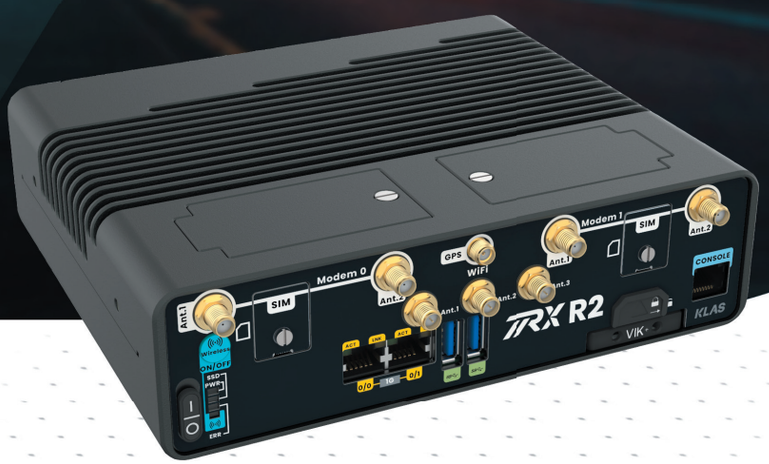
TRX R2

Key Features

- Intel® Atom™ Denverton 8-core or 4-core processor options
- Two LTE modem slots supporting Sierra Wireless EM7455 & EM7511 incorporating Band 14 FirstNet support
- NVMe-based storage with up to 1TB capacity
- Two copper 1Gb Ethernet ports
- Two 10 Gb SFP ports in 8-core variant
- Simultaneous Wi-Fi AP and client
- KlasOS Keel software providing:
  - Connectivity
  - Virtualization
  - Telematics
  - Management



Cellular Gateway With In-built Compute

TRX combines both connectivity and local compute so that vehicles have cloud connectivity when they need it, but local processing power for analytics when there is no backhaul. The solution is underpinned by KlasOS Keel, a lightweight hypervisor with SD-WAN and the latest Wi-Fi and LTE connectivity.

TRX R2 provides the KlasOS Keel feature-set in a Voyager module form factor, compatible with Voyager 1, Voyager 2 and Voyager 8 chassis. R2 is available with two Category 12 modems with downlink speeds of up to 600Mbps and also has a built-in Wi-Fi interface. Combined with Klas' proven SDWAN feature embedded in KlasOS Keel, multiple transports can be used simultaneously in a secure and agile way. A broad range of virtual machines are also supported including VPN technology, WAN optimization, RoIP and video analytics on Intel Atom Denverton 4 or 8 core variants.

Trains

Autonomous

Fleet

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KLAS

TRX R2

Specifications

Physical Specifications

- 7.4"W x 6.3"L x 2"H (188 mm x 160 mm x 52 mm)
- 4.4 lb / 2 kg

Electrical Specifications

- 9 - 36 VDC input
- 15 - 32 W power consumption

Construction

- Aluminum chassis with fanless cooling

- Temperature Range
- 4-Core : -20°C to 60°C
- 8-Core: -20°C to 40°C

Ports

- 2 x LTE Modem Slots of M.2 form factor accessible by removing the top modem cover
- 2 x SIM card slots (one for each LTE modem)
- 2 x 1 Gb Ethernet ports
- 2 x 10 Gb SFP ports (8-core only)
- 4 x modem antenna ports (2 per modem)
- 1 x GPS antenna port
- 3 x Wi-Fi antenna ports
- 2 x USB 2.0 interfaces
- RJ-45 serial console port with hypervisor access

CPU Options

- Intel® Atom™ Denverton C3708 8-Core processor with 1.7 GHz, 16MB Cache with Intel® Cache Allocation Technology
- Intel® Atom™ Denverton C3508 4-Core processor with 1.5 GHz, 8MB Cache with Intel® Cache Allocation Technology
- Intel® Virtualization Technology (VT-x) & Intel® Virtualization Technology for Directed I/O (VT-d)
- 8 to 48 GB RAM

4G LTE Modems

- Sierra Wireless EM7455 LTE Cat-6 (B1, B2, B3, B4, B5, B7, B12, B13, B20, B25, B26, B29, B30, B41)
- Sierra Wireless EM7511 LTE Cat-12 (B1, B2, B3, B4, B5, B7, B8, B9, B12, B13, B14, B18, B19, B20, B26, B29, B30, B32, B41, B42, B43, B46, B48, B66)

Wi-Fi Interface

- IEEE802.11 ac/b/g/n modem with datarates of 1.3 Gb/s downlink
- 3x3 MIMO
- Supports 2.4 GHz and 5 GHz bands
- Enhanced wireless security supporting 64/128-bits WEP, WPA, WPA2, 802.1x

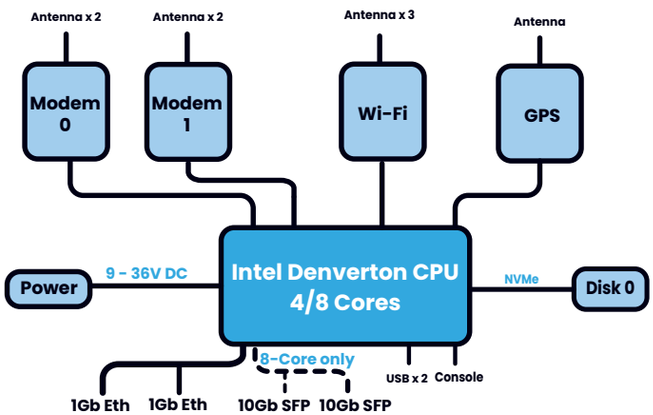
Software Support

- KlasOS Keel KVM-based hypervisor

Compliance

Compatible with:

- MIL-STD-810G
- MIL-STD-461F
- FCC Part 15 B
- CE
- RoHS, REACH



KEELOS | BLACKROCK

Optimised Management & Virtualization

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