daqscribe
ETHERNET PACKET CAPTURE • RECORD • PLAYBACK

RDR7000-R-10G-16

Rugged 160Gbps Ethernet recorder

OPTIONAL DATA PLAYBACK UP TO 160Gbps

FEATURE SUMMARY

- A rugged (**MIL-STD-810** compliant) Ethernet recorder featuring **16 x 10GbE** ports.
- Sustained 100% Ethernet capture and record performance at **160Gbps**.
- Up to **180 Terabytes** (SSDs) of local data storage.
- Data offload: **USB 3.0** and **10GbE** or optional **25/40/100GbE** ports.
- **STIG** compliant & **AES256** encryption options.
- Real-time status monitoring of capture ports.

MOST SUITABLE FOR THE FOLLOWING APPLICATIONS

Wireless comms

- **remote radio**
- **5G baseband**
- µ/mmWave
- MIMO
- O-RAN

Autonomous vehicle

- LiDAR
- IoT (i.e., MIPI® DSI)
- test & measurement

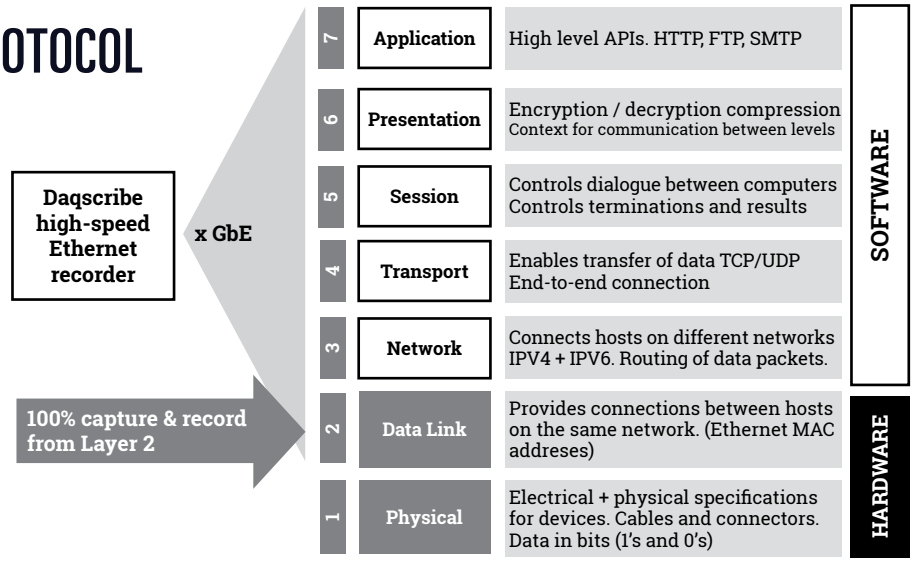
Embedded systems

FPGAs

- **RFSoC**
- GPGPU
- FPGA

DESIGNED FOR ANY NETWORK PROTOCOL

- The **RDR7000-R-10G-16** captures data from **Layer-2** through **Layer-7** of the Ethernet protocol stack.
- This includes recording **IPV4** or **IPV6** protocols at the network layer and **TCP** or **UDP** protocols at the transport layer.
- The result is our robust, **network protocol-agnostic** packet recording tool.
- Data format - compatible with other popular network monitoring tools like **Wireshark**.



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Release: 12/02/2020

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SYSTEM SPECIFICATIONS

Performance	✓ Line rate Rx 160Gbps (16 x 10Gbps) for packet size 61 - 10,000 bytes ✓ Line rate Tx 160Gbps (16 x 10Gbps) for packet size 61 - 10,000 bytes ✓ 100% packet capture
Network Interfaces	✓ IEEE 802.3 10GbE Ethernet support ✓ Network interface: 4 x QSFP+ ports ✓ QSFP+ modules: 4 x 10GBASE-CR/SR/LR breakout from QSFP+
Hardware Time Stamp	✓ Resolution: 1 ns, Stratum 3 compliant TCXO ✓ Time formats: PCAP-ns/-µs, UNIX 10 ns, 1 ns
Timing/Synchronization	✓ SMA interface for PPS ✓ RJ45 100/1000BASE-T interface for IEEE1588 PTP support ✓ OS time synchronization
Data Format	✓ PCAP format (capture/record only) ✓ NTCAP – PCAP style binary format (capture/replay) ✓ CLI utilities: simple/quick conversion from NTCAP to standard PCAP format or payload extraction
Optional Capture /Record In-Line Features (FPGA Processing)	✓ Filtering based on e.g. L3/L4 criteria ✓ GTP, IP-in-IP, GRE and NVGRE tunneling support ✓ IP fragment handling ✓ Slicing at fixed or dynamic offset
Storage Options	✓ NVMe NAND flash (enterprise) ✓ 25TB (149TBW), 50TB (298TBW), 120TB (269TBW), 180TB (403TBW) ✓ Storage in TB with endurance TBW (Total Bytes written in PB) ✓ SSD endurance TBW is based on 128K sequential writing
CPU & Memory	✓ Intel Xeon scalable dual socket CPUs ✓ System memory from 64GB up to 2TB
Peripherals	✓ 2 x rear 10GBASE-T, 1 x 1GbE IPMI ✓ 2 x rear USB3.0 ✓ 1 x rear COM port ✓ Rear VGA/DVI/HDMI display
Data Offload Options	✓ 10G: 2 or 4 x SFP+, 10GBASE-T | 40G: 1 or 2 x QSFP+ | 100G: 1 or 2 x QSFP28
Environmental Standards	✓ MIL-STD-810, Operational Temperature, Method 501, Procedure I/II: -15°C to +55°C, capable of -40°C to 71°C with select processors ✓ MIL-STD-810, Storage, Method 501, Procedure I/II: -55°C to +85°C ✓ MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours with humidity kit ✓ MIL-STD-810, Altitude, Method 500: 12,500ft operation, 40,000ft transport ✓ MIL-STD-810, Vibration, Method 514, Procedure I: 4.63 GRMS, 5-2,000Hz, 60 min/axis with solid state drives + vibration kits ✓ MIL-S-901, Grade B ✓ MIL-S-901, Grade A: With solid state drives + shock kits
Electromagnetic Compatibility Standards	Some standards may require an internal kit ✓ AC, FCC compliant ✓ AC, MIL-STD-461, RE102, CE102 compliant ✓ DC, MIL-STD-461, RE102, CE102 compliant ✓ RTCA DO-160 Section 21, Category M
System Cooling	✓ Five high speed, high volume fans CPU temperature controlled
Power Supply	✓ Option 1: 1200W 120/240VAC 1+1 w/PFC ✓ Option 2: 1005W 18-36VDC
Dimensions & Weight	✓ Height: 5.25" (13.34cm) x Width: 17.5" (44.45cm) EIA-310 rack compliant x Depth: 24" (61cm) ✓ Weight: 60-66 lbs. (27-30 kg) [content dependent]
Mounting	✓ Option 1: Mounted on Delrin glides ✓ Option 2: Fixed mount, front and rear ✓ Option 3: Jonathan rails

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