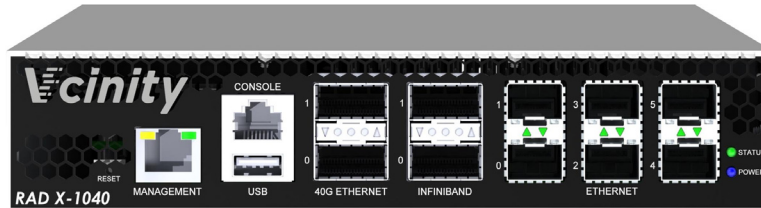


# Radical X-1040

Enabling a truly location independent enterprise infrastructure

## BENEFITS

- Global LAN**  
 WAN becomes your LAN with > 90% goodput between regions/countries/continents
- DataPrizm™**  
 Data obfuscation by splitting data into multiple paths
- In-flight Encryption**  
 Line-rate AES or SIMON encryption
- High Availability**  
 Offers redundancy and field replaceable units to support continuous operations
- Cost Savings**  
 Maximizes use of your existing infrastructure, leading to lower operational costs
- High Scalability:**  
 Supports scalable interfaces, from Mbps to 40Gbps, and standard routing protocols for multi-point configurations



Major challenges created by astronomical growth of distributed data—global reach, bandwidth scalability and timely delivery of large data sets—can be solved with a truly location-independent infrastructure. Vcinity’s Radical X™ family provides high performance connectivity and mitigates high latency environments—allowing businesses to take command of geographically dispersed compute and storage resources, with the immediacy of local access. Purpose-built for high performance data environments, Radical X-1040 (RAD X-1040) transforms the WAN into a Global WAN by using patented RDMA over WAN technology and creates a truly location-independent infrastructure. Its compact form factor allows it to be rack-mounted or even used on a desktop making it especially suitable for remote locations such as satellite offices, oil rigs, cruise ships, etc. It supports a high density of speed-selectable interfaces delivering a scalable and power efficient system that is complimented by an open software architecture with standard interfaces/protocols for data, control and management functions.

Feature	Description / Benefit
DataPrizm™	Data obfuscation across up to eight paths using up to eight DataPrizms in one system. Please see the Vcinity <i>DataPrizm Solution Brief</i> for details.
In-flight encryption	Single or dual encryption with AES-GCM-256 <sup>1</sup> and/or Lightweight SIMON 256 <sup>1</sup> (dual encryption requires two daisy-chained RAD X-1040 systems); MACSec
Enhanced buffer architecture	<ul style="list-style-type: none"> <li>Deep buffers – unprecedented fabric reach (e.g., RTT 2500ms @ 10Gbps, 625ms @40Gbps)</li> <li>Dynamic allocation of buffers for policy-driven flows – on-demand configurable data plane</li> </ul>
High availability	Field-replaceable and redundant power supplies/fan modules result in high availability and continuous operations
ANY MAN/WAN Service	Point-to-point/point-to-multipoint (E-Line/E-LAN) full-rate or partial rate Ethernet service, layer 2 Virtual Private Network (L2VPN) service, MPLS-TE service, dark fiber
Concurrent, multiple LAN fabrics	1/10/40G RoCE (RDMA over Converged Ethernet) and FDR InfiniBand interfaces aggregating concurrently to a single network service
Fabric routing	Standard routing protocol for connection of geo-diverse locations over topology-agnostic multi-point network configurations
Open control and management interfaces	SNMP v2/3, NETCONF, REST API, HTTPS, SSH, CLI (console)
Speed-selectable interfaces	From Mbps to 40Gbps terrestrial and satellite connections
High interface density	250Gbps interface density in a compact 1 RU form factor
Switching capacity	120Gbps non-blocking switching

<sup>1</sup>Governed by Export Administration Regulation under ECCN 5D002

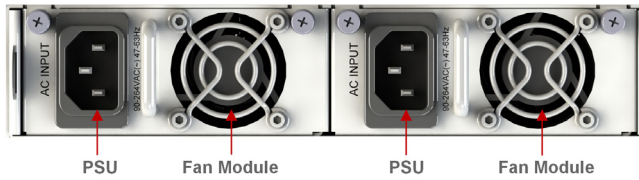
SPECIFICATIONS

Systems Overview

Switching Interface	120Gbps non-blocking switching capacity 250Gbps interface capacity with pluggable transceivers
Control Fabric Reach	Single integrated system controller Round-trip time (RTT) of 2500ms @10Gbps, 625ms @ 40G

Chassis

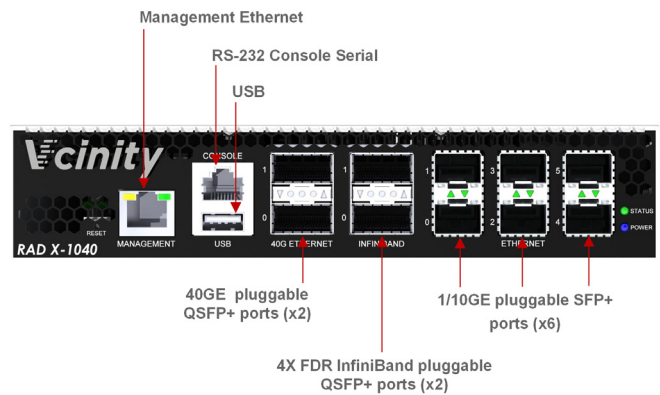
Form Factor	1U (1/2 width), 19 in. front rackmount, or two units per 1RU with rear rackmount kit for use with four post racks, or desktop use
Dimensions	1.63 in. (H) x 7.84 in. (W) x 18.67 in. (L) (4.14 cm x 19.91 cm x 47.42 cm)
Ventilation	Negative pressure system with front-to-back airflow
Acoustics	Intelligent, speed-controlled fans for low-noise operation
Indicators	AC power input, system status, and link/activity LEDs
High Availability	Redundant, hot-swappable AC power supply/fan module
Warranty	1 year for hardware



Management and Monitoring

Ethernet:	RJ45 (Full Duplex 10/100/1000Base-T w/auto MDI-X)
Serial:	RJ45 (RS-232)
Protocols:	HTTP/HTTPS, Secure Shell (SSH)
User Interface:	Web-based Graphical User Interface - GUI (HTTPS), Command Line Interface - CLI (Console and SSH)
User Authentication:	Supports multiple user accounts and privilege levels, LDAP
Remote Monitoring:	SNMP (v2/3) managed object support, Syslog
Configuration:	Plaintext file format with backup and restore capabilities, NETCONF, SNMP
Software Upgrades:	Web-based image upload or URL-based image download

Interfaces



Power and Environmental

Power Input	90-264 VAC (47-63Hz), auto-voltage sensing
Power Supplies	2 x 225 Watts, dual AC input
Power Consumption	<200 Watts
Temperature	Operating: 32°F to 104°F (0°C to 40°C) Storage: -40°F to 158°F (-40°C to 70°C)
Humidity	Operating: 10% to 85% RH, non-condensing Storage: 5% to 95% RH, non-condensing

The RAD X-1040 supports the following interfaces:

- Two 4X FDR InfiniBand QSFP+ ports
- Two 40GE QSFP+ ports
- Six 1/10GE SFP+ ports
- One 10/100/1000Base-T Ethernet management port
- One serial RS-232 console port
- One USB port



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