

ORCA® RDT-8v

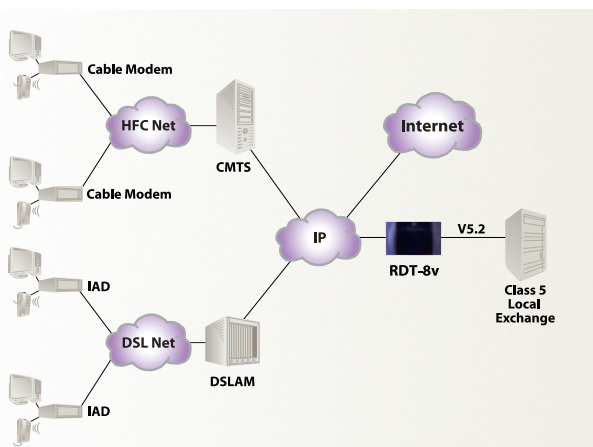


ORCA RDT-8v

The ORCA RDT-8v is a VoIP broadband access gateway that provides interworking between a managed IP network and the public switched telephone network (PSTN). The RDT-8v enables broadband telephony subscribers to communicate with landline and mobile telephone subscribers throughout the world. Using the standard V5.2 interface to connect with the PSTN, the RDT-8v enables network operators to deliver a wide range of subscriber features while using their existing billing and management systems. The RDT-8v provides high levels of scalability and reliability for cable VoIP that enables broadband network operators to efficiently build-out and maintain their networks.

Open, Reliable Communications Architecture

The ORCA product family consists of carrier-class VoIP infrastructure products. Service providers throughout the world use ORCA gateways and softswitches to deliver local, long distance and enhanced telephone services.



Broadband Telephony Application

Capacity and Performance

The RDT-8v supports up to 4,000 subscribers. With a capacity of supports up to 480 voice ports on 16 E1 interfaces, the RDT-8v enables broadband network operators to engineer their networks to deliver cost-effective high-quality telephone service. Each RDT-8v supports 19,200 BHCA. One equipment rack can support up to 28,000 subscribers.

Standards Compliance and Interoperability

The RDT-8v complies with the PacketCable™ NCS (Network Call Signaling) protocol specification to ensure interoperability with a wide range of customer premise devices including cable Multimedia Terminal Adapters and Integrated Access Devices from leading vendors such as ARRIS, Motorola and Scientific Atlanta. For PSTN connectivity, the standard V5.2 interface of the RDT-8v interoperates with local exchange switches from Alcatel, Ericsson, Huawei, Lucent, NEC, Nokia, Nortel, Siemens and ZTE.

Voice Processing

The RDT-8v supports G.711 A-law encoding. To preserve bandwidth, the RDT-8v also supports G.726 (32 Kbps) and G.729a (8 Kbps) vocoding. For home office and small business services, the RDT-8v automatically detects fax and modem signals. In addition, the RDT-8v provides dynamic jitter buffers, adaptive echo cancellation, packet loss concealment and Diffserv packet prioritization to support high quality voice communications under the most demanding IP network conditions.

Security

To prevent eavesdropping, theft of service, and malicious call disconnects, the RDT-8v supports the PacketCable Security specification. The RDT-8v enables a secure network deployment through the use of IPsec, HMAC and AES to authenticate and encrypt signaling and bearer traffic.

Reliability

Many features enable the RDT-8v to deliver the 99.999% systems-availability required in local exchange applications. The RDT-8v is NEBS certified. All common logic resources are 1+1 redundant and hot swappable. Power supplies and fans are redundant and hot swappable. In addition, RDT-8v capacity can be increased and software can be upgraded without interrupting calls while the gateway is in service.

Investment Protection

As broadband network operators deploy softswitch-based services, network operators can convert the RDT-8v to an IPCablecom media gateway. New operating software enables softswitch or media gateway controllers to control the gateway.

Management

Each RDT-8v contains an integrated SNMP agent for monitoring and control. The gateway supports SNMPv2. The NueraView element management system and the Nuera Configurator tool provide graphical user interfaces to simplify the management processes.

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RDT-8v rack view

73.5 inches
(186.69 cm)

Specifications

Capacity

Subscribers	4,000
Simultaneous Calls	480
E1s	16
V5.2 Interface Bundles	4

Standards Compliance

PSTN Signaling	ETSI V5.2 and country variants
NCS	PacketCable™ call control signaling
Security	IPSec for NCS signaling; HMAC and AES for bearer (media) traffic
DQoS	PacketCable™ Dynamic Quality of Service

Reliability

Voice Ports	Independent voice processing modules
Common Logic	1+1 redundant and hot swappable
Fans	1+1 redundant and hot swappable
Power Supplies	1+1 redundant and hot swappable
NEBS Certifications	Level 3

Voice Processing

Vocoders	G.711 μ -law and A-law 64 Kbps, G.726 32 Kbps G.729a 8 Kbps
Fax	Group III and Super G3
Modem	V.32, V.34 and V.90
Echo Cancellation	G.168; 0-128ms
Jitter Buffers	Dynamic
Packet Loss Concealment	Automatic

Packet Interface

IP	Dual 100 Base-T
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Element Management

Agent	SNMPv2c
Manager	NueraView element management system and Configurator

Environment

AC Inputs	100-250 VAC, Autoranging, 47-63 Hz, 2-4 Amps
DC Inputs	-40 to -60 VDC, 9.5 A
Size	10.5" (26.7 cm) H, 17.5" (44.5 cm) W, 14.25" (36.2 cm) D
Weight	61.2 lbs (27.75 kg)
Operating	5 to 40°C

