

## Virtual Access IP Remote Access Server



- Next generation IP RAS
- Supports SIP/RTP & ISDN PRI access
- 4 to 16 PRI ports in a 2U high platform
- Modular plug-and-play architecture for online expansion with no loss of service
- Channelised E1, T1 or J1 connectivity for ISDN PRI
- Dynamic detection of analogue or digital calls
- G.711 Voice Band Data support
- Built-in external RADIUS server support
- L2TP or Ascend ATMP (RFC2107) tunnelling support

### Overview

Despite widespread broadband coverage, there are still large numbers of users with dial up modems for Internet access, transaction processing, security and other applications. The need for dial-up is declining, but due to poor broadband coverage or the prohibitive cost of replacing equipment, in many instances it is still the best option. For the foreseeable future many Telcos will need to continue to provide and support dial data services.

Much of the network equipment used for these services is no longer supported, therefore it will be difficult for the telecommunications service providers to support these customers. Additionally, having to maintain a TDM infrastructure does not align with the aim of service providers to move to all IP/Ethernet infrastructures.

The Virtual Access RAS is a new generation system that comes with a commitment to long term support. It is based on Telco-class MicroTCA architecture and uses the latest distributed processing techniques. The modems are soft, running in general purpose processors, and do not depend on specialised hardware that may be at risk of obsolescence.

### Pure IP RAS

The Virtual Access RAS supports a “Pure IP” access mechanism. The IP RAS integrates with modern IP/Ethernet based IMS systems to connect to the access network using SIP and RTP. When this option is selected there is no requirement for ISDN PRI interfaces on the RAS; all connections are via Gigabit Ethernet.

### ISDN RAS Replacement

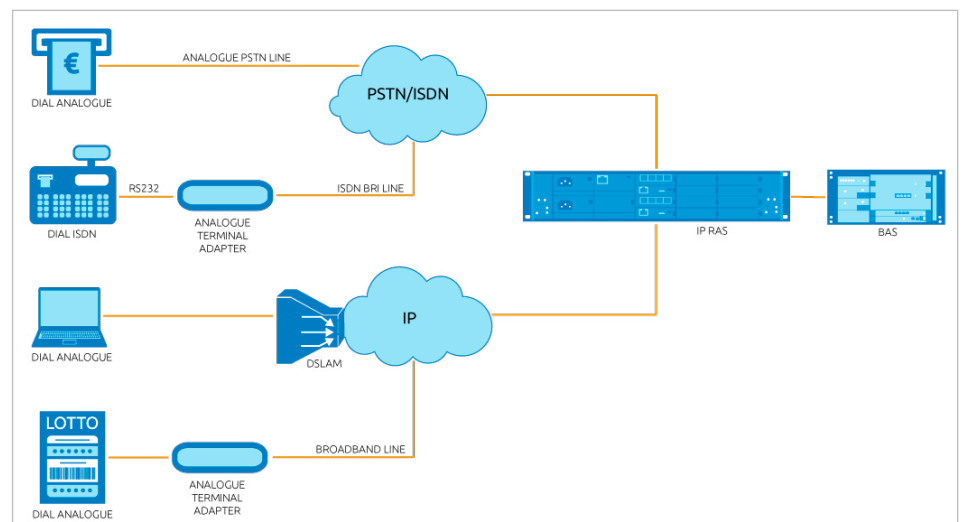
The Virtual Access RAS also supports ISDN PRI interfaces, enabling a direct replacement for legacy RAS equipment. RAS systems with ISDN interfaces can also support SIP/RTP interfaces and hence they can support the slow migration of the customer base from ISDN to SIP/RTP.

### Wholesale Delivery of Services

L2TP and PPPoE can be used to deliver user traffic to ISPs, retailers or private networks. L2TP and PPPoE are common methods for the aggregation of broadband user traffic; therefore the L2TP Network Server and BAS infrastructure in place for broadband can also be used for dial access.

### Telco Class Availability

The Virtual Access RAS supports redundant Ethernet ports, power supplies and cooling fans, enabling very high availability service delivery.



## Features

Modem Modulations	V.90, V.34, V.32bis, V.32, V.22, V.22bis, V.21, Bell 212A, Bell 202, Bell 103, EIA-PN-2330, V.8, V.8bis, Sync/Async receiver/transmitter for V.14, V.42/V.42bis error correction & compression, V.110 and V.120 as required
PRI Interfaces	Supported for E1, T1 and J1 ISDN interfaces
Management Services	HTTP, SNMP, SSH, Ethernet or RS232 console port, Syslog client, remote software upgrade via FTP, HTTP or SSH/SCP
RADIUS Authentication	Yes
Protocols	Telnet, PPP, L2TP, ATMP, RIP, RIPv2, OSPF, static routing, HDLC, TCP/IP, SIP signalling, RTP, RFC4040 HDLC over IP, V.152
Network Connectivity	Gigabit Ethernet Packet loss recovery option

## Specifications

<b>1. Hardware</b>		
<b>1.1 Physical</b>		
1.1.1	Size	206D x 449W x 88Hmm (2U)
1.1.2	Chassis format	MicroTCA chassis
1.1.3	Cooling unit	2 hot swappable cooling units
1.1.4	EMC and safety	IEC60950, FCC CFR Part 15, EN55024, EN55022 Class B, EN61000-6-2, EN61000-6-4 & VCCI.
1.1.5	Power	Single or dual AC or DC power supplies Note: The AC power supply will support a chassis with up to 4 PRI and 4 CPU cards. A DC PSU is required for a higher density system.
<b>1.2 Slot</b>		
1.2.1	AMC slots per chassis	12 slots
1.2.2	MCH slots	1 or 2 MicroTCA Carrier Hubs (MCH) with GigE Ethernet uplinks
<b>1.3 PRI Line Interface AMC Card</b>		
1.3.1	PRI Interfaces supported	4 x E1, T1 or J1 ISDN interfaces per AMC card
1.3.2	Physical line termination	4 x RJ45 sockets on front of each AMC card
1.3.3	Line interface specifications	RJ45 connector 100ohm/120ohm balanced ITU G.703 and G.704 compliant, channelised E1, T1 or J1
<b>1.4 CPU AMC Card</b>		
1.4.1	Analogue modem channels supported	120 modem channels per CPU card up to V.32 60 modem channels per CPU card up to V.90
1.4.2	ISDN channels supported	120 ISDN channels per CPU card in synchronous PPP mode 120 ISDN channels per CPU card in V.110 or V.120 mode
<b>2. Environment</b>		
2.1	Operating temperature	+5°C to 40°C
2.2	Storage temperature	-20°C to 85°C
2.3	Humidity	5% to 95% @40°C
2.4	Rack mountable	Yes
<b>3. Redundancy Options</b>		
3.1	Redundant MicroTCA Carrier Hub Ethernet switch and uplink card (MCH)	Optional
3.2	Dual AC or DC power supplies	Optional