

# ACE-202

## Dedicated Multiservice Access Concentrator



### FEATURES

- Allows carriers and service providers to provide LAN, IP, voice/TDM and Frame Relay services over ATM networks
- Creates a demarcation point for the ATM network
- Guarantees Service Level Agreement (SLA) performance and provides extensive statistic reports
- Differentiates between services by mapping Layer 2 VLAN and Layer 3 Class of Service to ATM Quality of Service (QoS)
- Features traffic management including shaping and policing
- Operation And Maintenance (OAM) for QoS assurance and fault localization (I.610 compliant)
- Supports CBR, VBR (rt and nrt), UBR, UBR+ and ABR classes of service
- Equipped with two plug-in user and network interface modules and two optional built-in user interfaces
- ATM (user or network) interfaces:
  - STM-1/OC3
  - E3/T3
  - 4xE1/T1 IMA
  - E1/T1
  - ATM 25 Mbps
- Interworking (user) interfaces:
  - 10/100BaseT Ethernet
  - E1/T1 CES
  - E3/T3 CES
  - Frame Relay
  - HDLC
- Up to 256 virtual connections
- Power supply redundancy
- Compact, 1U-high enclosure, suitable for mounting in 19-inch racks

### DESCRIPTION

- ACE-202 is a Customer Premises Equipment (CPE) that can be used as a multiservice access device or as an ATM network termination unit.
- As a CPE, ACE-202 enables carriers and service providers to define the boundary between their ATM public services and the customer's private network. A clear demarcation point at the customer premises increases service reliability, improves network efficiency and ensures end-to-end QoS support.
- ACE-202 can be used as a CPE for native ATM or for legacy services, such as TDM (CES), LAN (bridge/router) HDLC and Frame Relay over ATM.
- ACE-202 extends ATM network facilities up to the customer premises. These facilities include advanced traffic management (spacing, policing and port pacing) and I.610 OAM flow support. In addition, the wide range of ATM network interfaces further enhances the flexibility of service offerings.

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- When used as an interworking device, ACE-202 enables smooth connection of any Customer Premises Equipment (CPE), such as PBXs and routers, to operate over ATM networks. ACE-202 can be used as a concentrator for medium to large corporations. The unit enables different types of corporate traffic to pass over public networks in the most efficient way.

### ATM CAPABILITIES

- ACE-202 supports both UNI and NNI cell headers with full bit range of VPI/VCI fields. ACE-202 supports up to 256 VPC and/or VCC connections, enabling the use of ACE-202 as a concentrator for large corporate networks.
- To increase QoS versatility, ACE-202 performs VP tunneling. This enables bundling multiple VCCs into a single VPC, while maintaining all the VCC QoS characteristics and OAM capabilities at F4 and F5 layers.

- ACE-202 supports up to 30 VP tunnels. Each tunnel is paced as a CBR connection. It can be defined with end-to-end OAM flow and act as a regular VP in the public network.
- ACE-202 feature Call Admission Control (CAC), which prevents network congestion, by checking the network resources when a request to open a new connection is received. If network resources are insufficient, the request for a new connection is rejected.

### TRAFFIC MANAGEMENT

- Traffic management in ACE-202 is performed on several levels: VC, VP, VP tunnel or per user interface.
- ACE-202 provides the following traffic management options:
  - Monitoring: The unit monitors and gathers statistical information on the violations of the traffic contract.
  - Policing: The unit compares the user traffic with the SLA parameters. In case the user traffic exceeds the SLA parameters, violating cells are tagged or discarded.

- Spacing: Both user and network operator benefit from spacing bursty traffic. For the user, more traffic can pass through the link at no additional cost. For the operator, spacing enables better statistical efficiency while keeping the same backbone equipment and QoS.

### MANAGEMENT

- The RADview-HPOV network management application monitors, configures and presents network statistics using a graphical, user-friendly display. This UNIX-based application alerts in real-time on service availability and faulty network conditions, and enables chronological sorting of events. In addition, the RADview application can download and store a complete pre-defined configuration of ACE-202, to shorten and simplify its field installation.
- ACE-202 also supports the Alcatel 5620 SNMP-based network management system. The ACE-202 Model Descriptor is used for the device configuration and monitoring.

## APPLICATION

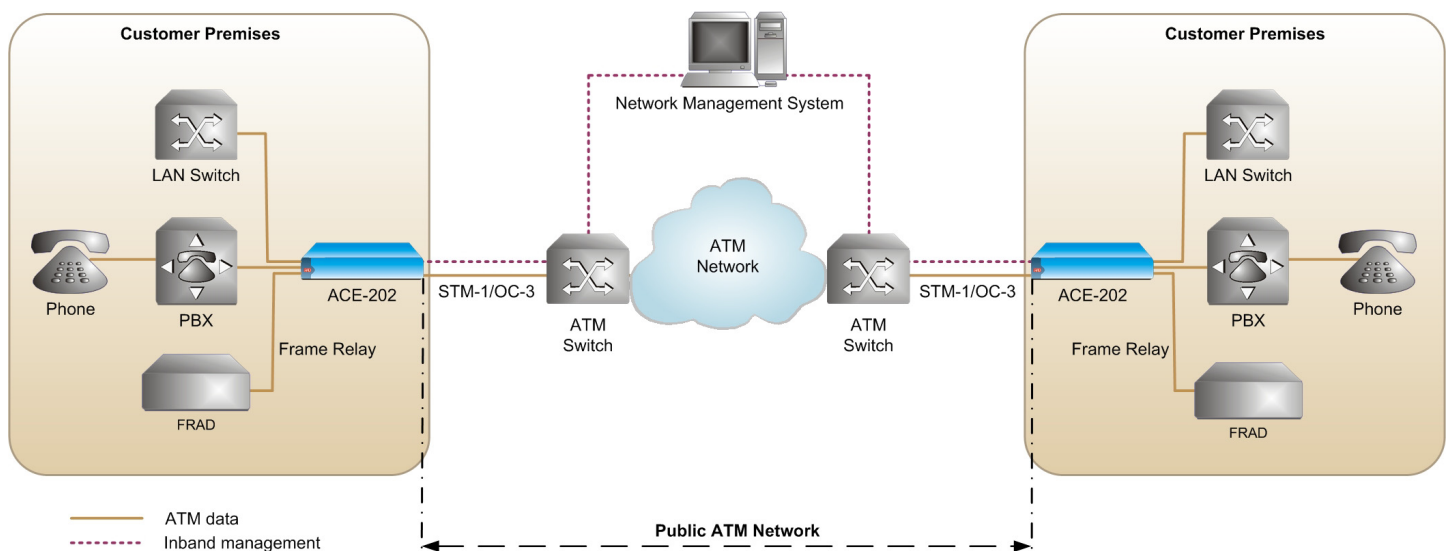


Figure 1. ACE-202 as a Multiservice Access Concentrator



# ACE-202

## Dedicated Multiservice Access Concentrator

### SPECIFICATIONS

- **Interface Modules**
  - Up to two modular interfaces in slot 1 and slot 2 (see *Table 1* and *Table 2* in the Supported ACE-2002/2002E/202 Modules data sheet)
  - Up to two built-in interfaces in slots 3 and 4 where slot 3 is intended for LAN modules only and slot 4 is intended for LAN, LAN+CES or IMA/UNI modules
- **ATM Connections**  
256 connections, 8/12 VPI bits, 16 VCI bits
- **Rate Conversion Buffer**  
Buffer size is 64,000 cells in each direction
- **Standards**
  - **ATM Forum**  
UNI 3.1, Circuit Emulation Service 2.0 (at-vtoa-0078), TM 4.0, IMA 1.0 & 1.1
  - **ITU-T**  
I.363.1, I.371, I.372, I.432, I.610, G.703, G.704, G.706, G.732, G.823, G.957
  - **ANSI**  
ANSI T1.403, AT&T TR-62411
  - **IETF**  
IETF RFC 1483
  - **Frame Relay Forum**  
FRF.5, FRF.8
- **Control Interface**  
Type: RS-232/V.24 (DTE)  
Baud rate: 9.6, 19.2, 38.4, 57.6, 115.2 kbps  
Connector: 9-pin, D-Type, male
- **Power**  
AC: 100 to 250 VAC, 47–63 Hz, 60W  
DC: -41 to -60 VDC (-48 VDC nominal)  
*Note: ACE-202 supports redundant hot-swappable power supplies.*
- **Physical**  
Height: 44 mm / 1.7 in  
Width: 432 mm / 17.0 in  
Depth: 350 mm / 13.8 in  
Weight: 5.3 kg / 11.7 lb
- **Environment**  
Temperature:  
Operating 0–50°C/32–122°F  
Storage -20–70°C/-4–158°F  
Humidity: Up to 90%, non-condensing

### ORDERING

#### ACE-202/#/@/%

Dedicated multiservice access concentrator

# Specify power supply type:  
**AC** for 100–250 VAC  
**DC** for -48 VDC

@ Specify **R** for optional redundant power supply (same as the first)

% Specify optional fixed interface for slot 3 and a slot 4:

**NULL** for no fixed interface

**LAN** for Ethernet/Fast Ethernet port (RJ-45)

**LAN/CES/E1** for one Ethernet/Fast Ethernet port (RJ-45) and one balanced E1 CES port (RJ-45)

**LAN/CES/T1** for one Ethernet/Fast Ethernet port (RJ-45) and one balanced T1 CES port (RJ-45)

**LAN/LAN** for two Ethernet/Fast Ethernet ports (RJ-45)

**IMA-UNI/E1** for four E1 IMA/UNI ports (RJ-45)

*Note: Two additional plug-in modules can be ordered separately.*

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