AC2041
Multiservice ShDSL
Network Termination Device

Flexible
Multiservice ShDSL terminal with E1, serial
interface (up to 2048 kbps) and

Convenient and Cost-Effective
Substitutes outdated leased-line network
equipment with inexpensive and highly
scalable network infrastructure

Reliable
Provides ATM Circuit Emulation Services (CES),
with up to eight independent channels,
over E1 and serial interfaces

AC2041 is a 4-wire ShDSL
Multiservice Network Termination. The
ShDSL interface is configurable as a single
link with an aggregate symmetric rate up
to 4608 kbps (using 2-pair bonding) or as
2 independent ShDSL links (2 different
links up to 2312 kbps each).

Configurable Connectivity
AC2041 offers flexible ShDSL Network Termination Point with
different operating modes:
• ATM Circuit Emulation Service
• Frame Relay to ATM Interworking
• Cell Bridging to transport ATM cells between the ShDSL
  network interface and the E1 service interface
• IP Routing and MAC Bridging

High-Performance Digital Subscriber Line Access
Multiplexer Transmission
Used over an ATM based network, AC2041 connected to a
DSLAM, terminates the physical ShDSL and many other xDSL
links. AC2041 cross connects and concentrates up to 128
Virtual Circuit Connections (VCC) over a single or a dual high
speed link to the backbone ATM network, reaching up to
4608kbps (4-wire mode).
Deploying an inexpensive and highly scalable network
infrastructure using AC2041 replaces obsolete DCE, HDSL
transceivers, TDM cross-connects, and other leased
linenetwork equipment.
AC2041
Technical Specifications

LED Indicators
• PWR
• RDY
• E1: LOS,LFA,A.CT,AIS (alarms)
• ShDSL (Link, Sync)
• VX (Act)

Physical Interfaces
• Balanced and unbalanced E1 G.703/G.704 interface with RJ-45 or external adapter-BALUN
• 2 switched 10/100bT Ethernet ports with RJ-45 connectors
• Local configuration auxiliary interface one RS-232 interface(DB9 cable)

ShDSL Network Interfaces
• ShDSL interface: up to 4608 kbps
• ETSI TS 101 524
• ITU G.991.2
• Line rate up from 200 kbps to 4608 kbps

Operating Modes
• Circuit Emulation Service
• Frame Relay to ATM
• Cell bridging
• Simultaneous Circuit Emulation and Frame Relay to ATM interworking services on E1 and serial interface

Frame Relay
• Support for up to 128 PVCs
• FRF.1 UNI
• Up to 10 classes for traffic policy

Interworking Function
• Configurable per VC
• Network Interworking FRF.5
• Service Interworking FRF.8.1
• Transparent mode
• Protocol Translation (RFC2427, RFC2684)

Circuit Emulation Service
• Structured and unstructured data mode
• Playout buffer size
• Partial cell filling
• CES ATM forum atm-vtoa-0078.000

Mixed Mode Features
• Up to 128 ATM VCUs
• Up to 128 NW or SW channels
• CBR and UBR configurable for VC
• 8 CES channel

IP Routing
• Enhanced Network Address and Port Translation (NAPT) engine, supporting a number of advanced features including a number of Application Level Gateways (ALGs): H.323, VPN pass through, FTP, CMP, IGMP
• Extended Access Lists
• DHCP Server
• DNS Server/Forwarder
• IP services (ICMP, IGMP, Telnet, TFTP)
• ipается (2684), PPPoE (rfc 2364) and PPPoE client (rfc 2516).
• Extensive monitoring, tracing and troubleshooting facilities (including IP ping, ATM ping and tracert)
• Multicast traffic support
• VPN and Tunneling: PPTP server, PPTP client, IP-SEC, GRE, IPinIP

Timing
• Local
• Adaptive
• Network

Local Management Interface (LMI)
• Selectable Q.933 Annex A or ANSI T.1617 Annex D
• Standard or bi-directional procedures
• Management local or remotely configured and operated using a designed ATM VCC

Management and Configuration
• Password Protected Access:
  - 2 login levels
  - Local authentication

Local Management
• Console port
• Extensive CLI
• Windows-based wizard for configuration and firmware download
• Remote Management (configuring a dedicated VC maintenance and using a remote host)
• CLI (internal Telnet Server)
• HTTP (embedded WEB Server)
• SNMP Agent (v1, v2c)
• Syslog
• Ping MIB
• Firmware upgrades: Local and Remote (TFTP client embedded)

Environment
• Operating Temperature: 5° + 45°C (23° ÷ 113°F)
• Non-Operating Temperature: -40° + 70°C (-40° ÷ 158°F)
• Operating Humidity: 10 + 93% (non-condensing)

Compliance & Approvals
• Storage: ETSI EN 300 019-2-1 T 1.3
• Transportation: ETSI EN 300 019-2-2, T 2.3
• Operating Conditions: ETSI EN 300 019-2-3, T 3.2
• EMC: EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3
• Protection: ITU-T K 21
• Safety: EN 60950-1

Power
• External power supply
• AC input voltage: 100 to 240 Vac
• AC input frequency: 50 to 60 Hz
• AC input current: 0.2 to 0.38 A

Dimensions
• Length 180 mm
• Width 145 mm
• Height 40 mm

Notes
1. Dedicated cable available

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