

A-2000

4 T3/E3 PORT ACCESS AGGREGATION SWITCH FOR ATM AND FRAME RELAY TRAFFIC

A-2000 SPECIFICATIONS

A-2000 Network Interfaces

4 DSX-3 Ports

- Connector: dual BNC 75Ω rear panel
- Speed: clear channel at full DS-3
- Frame formats: C-bit parity or M23
- Line code: B3ZS
- Port mapping: ADM or PLCP

1 OC-3c port option for single-slot chassis

- Connector: dual SC duplex female, front panel
- Single-mode or multi-mode order option
- Frame format: I.432/G.709 SONET

1 DSX-3 port option for single-slot chassis

- Connector: dual BNC 75Ω rear panel
- Speed: clear channel at full DS-3
- Frame formats: C-bit parity or M23
- Line code: B3ZS
- Port mapping: ADM or PLCP

A-2000E Network Interfaces

4 E3 Ports

- Connector: dual BNC 75Ω rear panel
- Speed: clear channel at full DS-3
- Frame formats:
 - ITU-T G.832 ADM mapping
 - ITU-T G.751 ADM mapping
 - ITU-T G.751 PLCP mapping
- Line code: HDB3
- Port mapping: ADM or PLCP

1 STM-1 port option for single-slot chassis

- Connector: dual SC duplex female, front panel
- Single-mode or multi-mode order option
- Frame format: I.432/G.707 SDH STM-1

1 E3 port option for single-slot chassis

- Connector: dual BNC 75Ω rear panel
- Speed: clear channel at full E3
- Frame formats:
 - ITU-T G.832 ADM mapping
 - ITU-T G.751 ADM mapping
 - ITU-T G.751 PLCP mapping
- Line code: HDB3

THE ASC A-2000

The MultiStream™ A-2000 aggregates and switches ATM and frame relay traffic between four DS-3/E3 ports and an optional OC-3c/STM-1 port or optional fifth DS-3 port. With strong quality-of-service (QoS) capabilities, the A-2000 enables service providers to offer and meet customer service level agreements (SLAs).

The NEBS-3 certified A-2000 offers remote provisioning of multiple protocols for any port, and can operate either stand-alone in a single-slot chassis or as an access card in the 18-slot A-4000.

ASC provides multiple choices for local and centralized management, including a Web-based element manager, CLI, SNMP agent, and ASCmanager—a full EMS based on Solaris/Oracle platforms.

With support for ATM/frame relay interworking, any-port-to-any-port switching and traffic policing/congestion control, the A-2000 and A-2000E pack a surprising amount of functionality into a one rack-unit high platform.



A-2000 SPECIFICATIONS

Protocol Support

ATM

- ATM UNI 3.0, 3.1, 4.0
- Virtual UNI on network-side port
- ILMI
- Connections: VPCC, PVCC, PVPC
- Class of service categories:
 - CBR, nrtVBR, rtVBR, and UBR
 - Per VC queuing
 - 15 assignable priorities including one default priority
- Informational CAC
- Traffic policing: single and dual leaky bucket options
- Traffic shaping: single leaky bucket, configurable per-VC upstream and downstream
- Congestion control: AAL5 autodetect with EPD procedures

Frame Relay DS-3/E3 Ports Only

- 2 Byte DLCI
- UNI (FRF.1& FRF.4)
- NNI (FRF.2 & FRF.10)
- FR/ATM service interworking – FRF.8.1, transparent and translation modes
- FR/ATM network interworking – FRF.5
- LMI/annex A, annex D
- CIR policing, FECN/BECN
- Per VC queuing
- 15 assignable priorities including one default priority

ATM-to Frame Relay Interworking (optional)

- Network interworking FRF.5
- Service interworking FRF.8 – transparent mode and translation mode
- ILMI/LMI interworking
- EFCI-to-FECN/BECN mapping
- CLP-to-DE mapping

Switching

- Any-to-any port mapping for PVCs

Management & User Interface

- Embedded HTTP server for standard Web-browser access
- Full SNMP v1 agent includes traps for dynamic alarming
- ASCII configuration file upload/download via FTP over 10BaseT or in-band
- Command line interface via Telnet over 10BaseT or via front-panel craft port (DB-9 female connector) or via in-band
- MIB support includes:
 - MIB II support with extensions
 - Enterprise MIB
 - MIB II RFC 2233
 - ATM MIB RFC 2515
 - OC-3c SONET RFC 2558
 - DS-3 RFC 2496
- Extensive physical layer and network protocol statistics
- Per-port and per-connection detailed status with user-configurable polling
- Configurable maximum transfer unit (MTU) size
- RADIUS and TACACS+ admin authentication
- Field-upgradeable FLASH file system holds dual code loads and configurations; upload and download by FTP

Timing Sources

- Internal: stratum level 3
- External: BITS A and B Primary Reference Source via wire wrap pins
- Line: DSX-3/E3 or OC-3c/STM-1 interface
- User-definable timing hierarchy

Alarms, Visual Diagnostics

- Event and alarm log with timestamps in NVRAM
- Physical port and VC statistics collection in NVRAM
- Critical, major and minor alarms contact closures with front panel LEDs and alarm cut off
- Front panel LEDs for power, timing, fan fail and OC-3c mux port.
- Line status LED for each DS-3
- Loopbacks: local and remote
- Alarms: RDI, AIS, LOS, LOF, OOF

Certifications

- Safety: UL 1950, EN 60950/IEC950, CSA 950
- Emissions: EN 55022/CISPR 22
- Immunity: EN 61000
- NEBS Level 3: GR-1089, GR-63
- CE Approved
- RBOC colocation certified: Verizon, Bell South, SBC

Environmental

- Size: 1.75"(1U) H x 19" W x 18"D
- Rackmountable center or flush mount
- Operating temp: 0° to 40°C, short term -5° to 50°C
- Temperature storage: -40° to 70°C
- Humidity: 5% to 80% (relative, non-condensing)
- Weight: 9 lbs.
- Dual voltage input feeds: -48 VDC @ 1.7A, via 2 euro block connectors
- Typical DC Power: under 50 Watts, 168 BTU
- Max DC Power: 85 Watts, 286 BTU
- Cooling: field serviceable air filter and fan tray with redundant fans

Ordering Information

- Base System:
 - Available in DS-3 and E3 versions
 - 4 DS-3 or E3 ports (connectors on rear panel)
 - Rackmountable chassis
- Orderable options:
 - OC-3c/STM-1 mux port, multi-mode
 - OC-3c/STM-1 mux port, single-mode, intermediate reach
 - DSX-3 mux port
 - ATM-to-frame relay interworking
 - External AC power supply, rack mounted or in-line
 - Switching software
 - ASC NetAssure support
 - Feature upgrades
 - Priority tech support
 - Expedited repair

Contact Info

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