

A-1240

24 T1/E1 ACCESS AGGREGATION SWITCH FOR ATM, FRAME RELAY, TDM AND VLAN TRAFFIC

A-1240 SPECIFICATIONS

A-1240 Network Interfaces

24 DSX-1 Ports

- Connector: 100-pin female SCSI, rear panel
- Pigtail cable (SCSI to dual 50 pin telco female) included
- ATM speed: clear channel at full T1
- FR speed: full/fractional (Nx64) T1
- Frame formats: ESF
- Line code: B8ZS
- Optional channelization of DS-1 ports to DS-0 level for frame relay and TDM (CES) termination (enables multiple end-users per DS-1, up to 288 frame relay users and 576 TDM users)

1 DS-3 port option for single-slot chassis

- Connector: dual BNC, 75Ω, rear panel
- Frame formats: C-bit or M23
- Line code: B3ZS
- Speed: clear channel at full DS-3
- 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.707 SDH STM-1

A-1240E Network Interfaces

24 E1 Ports

- Connector: 100-pin female SCSI, rear panel
- Pigtail cable (SCSI to dual 50 pin telco female) included
- ATM speed: clear channel at full E1
- FR speed: full/fractional (Nx64) E1
- Frame formats per ITU-T G.704:
 - E1-CRC CAS enabled/disabled
 - E1-CAS enabled/disabled
- Line code: HDB3 or AMI
- Optional channelization of E1 ports to E0 level for frame relay and TDM (CES) termination (enables multiple end-users per E1)

1 E3 port option for single-slot chassis

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

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

THE ASC A-1240

The MultiStream™ A-1240 aggregates and switches multi-protocol traffic from 24 DS-1/E1 ports and an optional DS-3/E3 port or OC-3c/STM-1 port. Protocol options that can be supported include ATM, inverse multiplexing over ATM (IMA), frame relay, multilink frame relay (MFR), channelized DS-1/E1 frame relay, circuit emulation service (CES), as well as bridged Ethernet/VLAN traffic from the 10/100BaseT port. The A-1240 can operate either stand-alone in a single-slot chassis or as an access card in the 18-slot A-4000.

ASC's MultiStream™ A-1240 provides flexible, upgradeable bandwidth from fractional T1/E1 to NxT1/E1 levels with IMA and MFR inverse multiplexing. It also features the unique ability to pack frame relay and TDM circuits on a single interface. With strong quality of service (QoS) capabilities, the A-1240 enables service providers to offer and meet customer service level agreements (SLAs).

The NEBS-3 certified A-1240 offers remote provisioning of multiple protocols for any port. 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.



A-1240 SPECIFICATIONS

Ethernet/VLAN (optional on single-slot models)

- IEEE 802.1Q virtual bridged local area network
- VLAN-to-ATM PVC mapping
- IETF 1483 bridged PDU support
- Access via 10/100BaseT Ethernet

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 user-assignable priorities including one default priority
- Informational CAC
- Traffic policing: single and dual leaky bucket options
- Traffic shaping: single and dual leaky bucket, configurable per-VC upstream and downstream
- Congestion control: AAL5 autodetect with EPD procedures
- Cell payload scrambling options

IMA (Optional)

- ATM Forum inverse multiplexing over ATM (IMA) 1.0, 1.1
- Up to 12 groups, up to eight circuits per group

Frame Relay (Optional)

- UNI (FRF.1.1 and FRF.4)
- NNI (FRF.2.1 and FRF.10)
- LMI/annex A, annex D, gang of four
- CIR policing, FECN/BECN
- Per VC queuing
- 15 assignable priorities including one default priority

Multilink Frame Relay (Optional)

- Frame Relay Forum FRF.16 multilink frame relay
- Up to 12 groups, up to eight circuits per groups

ATM-to-Frame Relay Interworking (Optional)

- Network interworking FRF.5
- Service interworking FRF.8.1 – transparent mode and translation mode
- ILMI/LMI interworking
- EFCI-to-FECN/BECN mapping
- CLP-to-DE mapping

Circuit Emulation Service (CES) (Optional)

- T1/E1 TDM connections converted to CES virtual connections
- Non-structured CES for clear channel T1/E1
- Structured CES for Nx64 fractional T1/E1
- Channel associated signaling (CAS)
 - AF-vtoa-0078.000
 - AF-vtoa-0085.000
- ITU-T Rec I.363 B-ISDN ADM adaptation layer (AAL) specification
- Up to 24 PVCs per T1 port (576 PVCs total)

Switching (optional on single-slot models)

- Any-to-any port mapping for PVCs
- IMA and MFR groups supported
- VPCCs

Management & User Interface

- HTTP manager for standard Web-browser access
- Full SNMP v1 agent includes traps for dynamic alarming
- Full suite of standard and enterprise MIBs for SNMP management
- ASCII configuration file upload/download via FTP over 10/100BaseT Ethernet port or in-band
- CLI manager via telnet over 10/100BaseT Ethernet, craft port (front panel DB-9 female connector) or in-band
- Support for optional ASCmanager (see ASCmanager datasheet)
- Configurable maximum transfer unit (MTU) size
- Extensive physical layer and network protocol statistics

- Detailed status per port and per connection
- Field-upgradeable FLASH file system holds dual code loads and configurations; upload and download by FTP
- RADIUS or TACACS+ admin authentication

Timing Sources

- Internal timing: free-running stratum level 3
- External timing: BITS A and B primary reference source via wire wrap pins
- Line timing: from any T1/E1 or T3/E3 interface
- User-definable timing hierarchy

Alarms, Visual Diagnostics

- Event and alarm log with time-stamps in NVRAM
- Physical port and VC statistics collection in NVRAM
- Critical, major and minor alarm contact closures with front panel LEDs and alarm cut off
- Front panel LEDs for power, timing, fan fail, and each T1/E1 and T3/E3 port
- Line status LED for each T1/E1
- Alarms: RDI, LOS, LOF, OOF, AIS
- Optional Smartjack and FDL loop codes for DS-1 ports
- Optional BERT line testing for DS-1/E1 or DS-3/E3 ports, manual or timed automated testing

Certifications

- Safety: UL 1950, EN 0950/IEC950, CSA 22.2 950
- Emissions: EN 55022/CISPR 22, FCC Part 15 Class A
- 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
- Rack mountable, 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
- Optional external AC power supply
- 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 T1 and E1 versions
 - 24 T1 or E1 ports, ATM support Pigtail cable, SCSI to dual 50 pin telco female
 - Rack mountable chassis
- Orderable options:
 - T3, E3, OC-3c/STM-1 port
 - Frame relay support
 - MFR software
 - IMA software
 - ATM-to-frame relay interworking
 - Ethernet/VLAN support
 - Channelized frame relay (1:0)
 - Channelized frame relay and CES (1:0)
 - Switching software
 - Facilities test (includes BERT, Smartjack, FDL)
 - External AC power supply, rack mounted or in-line
 - ASC NetAssure support
 - Feature upgrades
 - Priority tech support
 - Expedited repair

Contact Info

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