ASC Multi-Protocol Solutions

The Challenge

Service providers face the challenge of extending their networks to remote locations—an undertaking not feasible with traditional single protocol or multi-service backbone switches. Typical solutions consist of installing and maintaining large capacity multi-protocol switches requiring separate cards for each protocol, which results in incremental expenses for rack space, power consumption, and network management systems.

The Solution

Our low-cost ASC product solutions solve this problem by *enabling multiple protocols to be supported on the same physical card*. Service providers no longer have to purchase separate cards for each protocol – ASC's unique, software-driven implementation *provides protocol selection on a per port basis* thereby creating a extremely cost-effective solution to the economic problems of network extension.
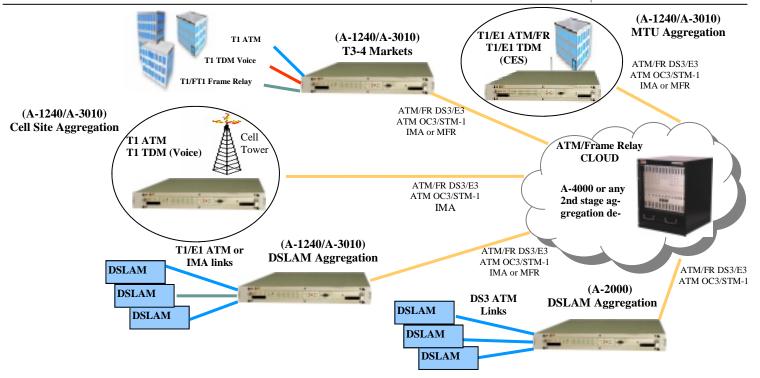
The high-density ASC products can provide the aggregation of individual T1/E1 access ports (A-1240), T1/E1 access ports within a channelized DS3/E3 (A-3010), or DS3/E3 access ports (A-2000) to a single DS3/E3 or OC3/STM-1 interface. This solution also supports the creation of IMA groups, MFR bundles, and 'any port to any port' local switching in a single compact unit, further eliminating the expense of additional rack space and protocol-specific cards.

Each ASC standalone product is just one RU high and consumes only 1.7 amps of –48v DC power. No additional expense is incurred for network management as the ASC product is manageable using either the GUI, requiring only the Internet Explorer browser, or by CLI using any standard terminal emulation program. The connection required for management can be obtained from an Ethernet or inband ATM connection to the device.

The diagram below illustrates several of the first-level aggregation scenarios that can be accomplished using one of the of the ASC standalone products. For second stage aggregation applications, another option is the A-4000 chassis which accepts easily modified cards from the standalone products to create a higher density switch.

Extend Your Network With Modest Investment

Increase Operational Profits

(A-1240/A-3010) T3-4 Markets

T1 ATM
T1 TDM Voice
T1/FT1 Frame Relay

T1/E1 ATM/FR T1/E1 TDM (CES)

(A-1240/A-3010) MTU Aggregation

ATM/FR DS3/E3
ATM OC3/STM-1
IMA or MFR

(A-1240/A-3010) Cell Site Aggregation

T1 ATM
T1 TDM (Voice)

Cell Tower

ATM/FR DS3/E3
ATM OC3/STM-1
IMA or MFR

ATM/Frame Relay CLOUD

A-4000 or any 2nd stage aggregation de-

ATM/FR DS3/E3
ATM OC3/STM-1
IMA

T1/E1 ATM or IMA links

(A-1240/A-3010) DSLAM Aggregation

DSLAM
DSLAM
DSLAM

ATM/FR DS3/E3
ATM OC3/STM-1
IMA or MFR

DS3 ATM Links

(A-2000) DSLAM Aggregation

DSLAM
DSLAM
DSLAM

ATM/FR DS3/E3
ATM OC3/STM-1

Features

Multi-Protocol Support ATM, Frame-Relay, TDM/CES, IMA, MFR, 802.1q ATM/FR Protocol interworking (FRF 5 and FRF 8.1) VLAN to PVC Mapping using 1483 bridging Any port to any port Local Switching	**File System** Field-upgradeable FLASH file system Software upgrade via FTP download Capable of storing two separate software images Capable of storing multiple configuration files
Range of access Connections FT1/E1, T1/E1, NxT1/E1 (IMA/MFR) via Channelized T3/E3 (A-3010) or Individual T1/E1 (A-1240) T3/E3 access (A-2000) only	**Local and Remote Management** Manage from CLI via serial connection, Ethernet or In band Manage from GUI via Ethernet or inband using IE browser
NxT1/E1 support Inverse multiplexing over ATM (IMA) Multilink frame relay (MFR)	**Environmental** Fits in 1 RU high rack space Requires 1.7 amp –48V DC power Accepts redundant power feeds NEBS level 3 certified

Summary

The ASC products present a viable business solution for service providers to extend their network reach without incurring large incremental expenses. Offer ATM, Frame Relay, channelized FR, IMA, MFR, structured or unstructured CES services to your customers using a single device, which fits in 1 RU rack space, consumes only 1.7 amps of power, and requires no additional Network Management Systems (NMS) to maintain.

About NSGDatacom

NSGDatacom designs, manufactures, sells and supports a wide range of voice and data products focused on real world business communication needs.

Combining key strategic acquisitions with its own core development team, NSGDatacom utilizes a wide range of proven, stable technologies. NSGDatacom creates solutions with these technologies to maintain and preserve organizations' network investments and mission-critical applications while enabling a smooth migration to newer technologies.

NSGDatacom products are deployed worldwide in corporate, financial, government, military, carrier, satellite, and cellular networks.

NSGDatacom

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