

Gigabit Ethernet Demarcation for Profitable Customer Acquisition and Penetration



The biggest challenge for Carrier Ethernet service providers today is to rapidly deliver new profitable Ethernet services, and scale their network architectures while dramatically reducing the operational costs of delivering such services.

Nokia Siemens Networks' A-210 is the industry's leading demarcation product that expands the reach of a service provider's Carrier Ethernet network and delivers managed Carrier Ethernet services to the customer premise.

Product Highlights

- Managed Gigabit Ethernet Demarcation
- AC Power Supply
- Modular Design: 10/100/1000Base-T or 1000Base-X (SFP) Access Modules
- User VLAN Transparency (Q-in-Q SP-VLAN 802.1ad)
- Jumbo Packet
- Optical Digital Diagnostic Monitoring (DDM Functionality)
- Remote Loopback Testing
- Fault Alert and Fault Propagation

Product Overview

Nokia Siemens Networks' A-210 Carrier Ethernet Demarcation device has been developed specifically to enable a cost effective managed solution for high speed Carrier Ethernet service demands.

This powerful yet compact device expands a service provider's ability to deliver managed and profitable Gigabit Ethernet services to small locations. The A-210 is packaged in a modular fashion with options for 10/100/1000 Base-TX or a 1000 Base-X SFP port for connectivity to the Enterprise and one 1000 Base-X optical interface with pluggable optics (SFP) for connectivity with the Carrier Ethernet metro network.

Features and Functions

Modular

The A-210 is comprised of a chassis and access module which forms a complete demarcation product. Versions of the A-210 access modules are available with 1000 Base-X (SFP) or 10/100/1000 Base-TX connectivity to the enterprise. Connectivity to the Carrier Ethernet network is established via the 1000 Base-X optical interface with pluggable optics (SFP).

End-to-End Service Level Agreements (SLAs)

The A-210 enables service providers to cost effectively extend Ethernet services beyond their Points of Presence (POPs) while preserving the ability to provide fully managed and customized service on demand. All services are provisioned and managed using the ASPEN network and services management suite. Services from the A-210 support all the SLA parameters supported by the broader A-Series Switches Carrier Ethernet product line consisting of the A-1180, A-2000, A-4000 and A-8000 Carrier Ethernet platforms. Some of these flexible parameters are:

- Committed Information Rate (CIR)
- Excess Information Rate (EIR)
- Priority
- Delay
- Jitter



Flexible, Ethernet Metro Access

The A-210 delivers flexible, affordable Gigabit Ethernet extension services, supporting point-to-point, point-to-multipoint and multipoint-to-multipoint services. In addition, the platform supports jumbo frames, and tagged and untagged customer traffic. A-210 also boasts rich Operations, Administration and Maintenance (OAM) features and functions including optical interface

diagnostics and monitoring (DDM), loopback testing, fiber alert, fiber fault propagation towards the subscriber port, and port failure notification.

Industry-leading Service Provisioning and Management Solution

The A-210 features full SNMP based manageability and service provisioning capability from the ASPEN network management platform. ASPEN

delivers the optimal management, control and provisioning capability needed by carriers and service providers to ensure fast, reliable and flexible service operations across the network. ASPEN features a CORBA and XML-based open API (Applications Programming Interface) for fast and flexible integration with the service provider's Operating Support Systems (OSS) applications.

Standards• **MIBs**

- RFC 1213 MIB II
- RFC 1757
- RMON MIB

• **IEEE**

- 802.3
- 802.3u
- 802.3z
- 802.1p
- 802.1Q
- 802.3ab

A-210 Specifications

Access Port	<ul style="list-style-type: none"> • 1000Base-X (SFP) • 10/100/1000BaseTX
Network Port	<ul style="list-style-type: none"> • 1000Base-X(SFP)
Management Interfaces	<ul style="list-style-type: none"> • RS232 - Console Port • 10/100/1000Base-TX • In-band Management via ASPEN
OA&M	<ul style="list-style-type: none"> • Network Loopback with and without MAC address swap • Optical Digital Diagnostic Monitoring (DDM Functionality) • Network link down fault propagation
Environmental	<ul style="list-style-type: none"> • Operating Temperature 0°C to 50°C • Operating Humidity 5% to 95% relative humidity, non-condensing • Storage Temperature -20°C to 70°C • Storage Humidity 5% - 95% relative humidity, non-condensing
Physical	<ul style="list-style-type: none"> • Height 56.4 mm (2.22") • Depth 187.1mm (7.37") • Width 120.41mm (4.74") • Weight 891 gr (1.96 lb.)
MTBF	<ul style="list-style-type: none"> • A-210 chassis 471,063 hrs (Level II) • A-210 demarcation module 281,615 hrs (Level II)
Power Consumption	<ul style="list-style-type: none"> • AC (123V) – 0.04A • AC (251V) – 0.02A
Power Input	<ul style="list-style-type: none"> • AC Chassis: 100 - 240V AC
Safety	<ul style="list-style-type: none"> • US UL60950-1 • Europe EN60950-1 • Canada CSA C22.2 No. 60950-1-03
Laser Safety	<ul style="list-style-type: none"> • US and Canada FDA Radiation Performance Standard 21 CFR Subchapter J • Europe EN60825-1, EN60825-2
Emission	<ul style="list-style-type: none"> • FCC 47 CFR Part 15, Subpart B (Class B) • IECS-003 – Class B • EN55022