Fiber on Demand™

Key Hardware Components

At the Headend
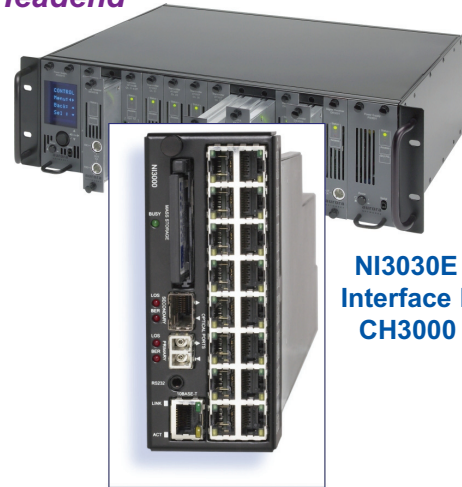
NI3030E Network Interface Module in CH3000 Chassis

- Headend/Hub/RDC device with convenient 100BaseT Ethernet handoff
- Layer 1 transport device, transparent to Layer 2 and higher protocols, including IEEE 802.1P, 802.1Q, 802.3u, VLAN, ToS
- SNMP management of every active device in the Fast Ethernet network
- Channelized end-to-end via TDM for a very high degree of security
- Very low latency (<1 ms)
- Hot plug in/out

At the customer premises

Devices for Access Services

In the Optical Node
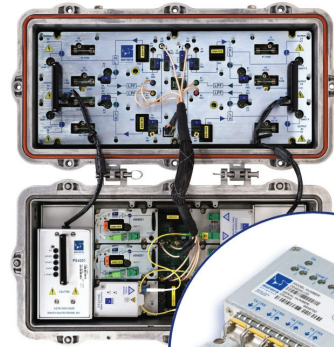
DS4004 Optical Ethernet Multiplexer

- Compact multiplexer module that serves up to four customers, each with a dedicated wire speed full duplex 100Base-FX optical Local Port
- Time division multiplexing of traffic from the four Fast Ethernet Local Ports into Aurora's high-speed (2.125 Gbps) digital transport optical Network Port
- All ports field configurable with a variety of SFP plug-in transceivers (1310 nm, 1550 nm, CWDM, and others)
- Layer 1 transport device, transparent to Layer 2 and higher protocols, including IEEE 802.1P, 802.1Q, 802.3u, VLAN, ToS, QinQ, and MAC-in-MAC
- Support for VoIP and other time-sensitive traffic with low latency and low delay variation (jitter)
- Remote management via SNMP or Aurora's EMS
- High degree of customer data security and isolation

---

- Fast Ethernet media converter CPE (single-mode/multi-mode 1310 nm or 1550 nm, 100Base-FX to 10/100Base-TX)
- One 10/100Base-TX Fast Ethernet UTP port[Note 1] and one 100Base-FX Fast Ethernet fiber port with Layer 1 media converter
- Single-mode/multi-mode transceiver with simplex-SC/UPC connector
- Class 1 laser diode transmitter (1310 nm or 1550 nm) that complies with Laser Safety Standard IEC 60825-1
- Up to 20 km transmission over single-mode fiber, and up to 4 km transmission over multi-mode fiber
- 0 to 70ºC operating temperature range
- *Note:* MC1301P models support Power over Ethernet (IEEE 802.3af POE) powered devices with a common PD port for both PoE powering and 10/100Base-TX. All MC1301 models are provided with a power supply.
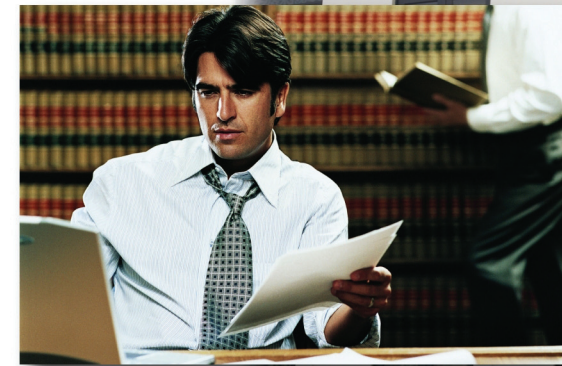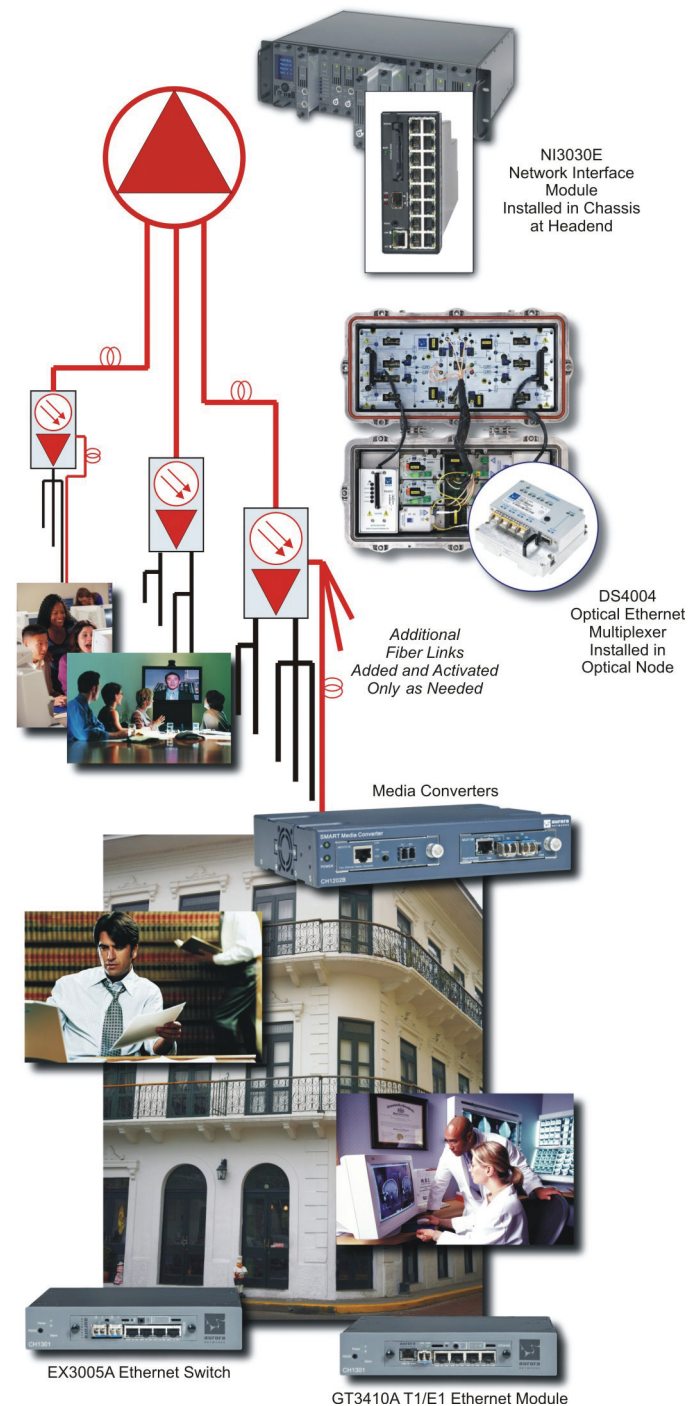
Fiber on Demand™
For the demanding subscriber

A whole new light, growing brighter!

Aurora's Award-winning Fiber on Demand™

Capture the Revenue on an Evolving Basis!

NI3030E
Network Interface
Module
Installed in Chassis
at Headend

DS4004
Optical Ethernet
Multiplexer
Installed in
Optical Node

*Additional
Fiber Links
Added and Activated
Only as Needed*

Media Converters

EX3005A Ethernet Switch

GT3410A T1/E1 Ethernet Module

Deploy fiber-based Ethernet services when and where speed-hungry customers demand it with Aurora's award-winning solution.

- Ultra-high-speed services up to 100 Mbps bidirectionally per subscriber

- Immediate, cost-effective implementation with rapid ROI

- Augmented support for hybrid HFC subscribers that eliminates video service interruptions during installation

- CPE media converters available in a wide variety of ports and capabilities to fulfill your network's unique needs

- Ability to serve 240 subscribers

- Least expensive ultra-high-speed access solution

- Highly secure Layer 1 TDM transport

CARRIER ETHERNET

MEF
Certified Compliant

Your Best Defense Against FTTP Competition!

- Leverage your existing HFC architecture, headend service delivery systems, IP network core infrastructure, operational practices and customer premises equipment to capitalize on a new revenue stream

- Seize fiber-based opportunities as they present themselves

- Deploy fiber-based Ethernet services on an evolving as-needed basis when and where customers demand it

The Advantages of Aurora's Fiber On Demand

- Aurora's Fiber on Demand (FonD) solution is today's most cost-effective solution for delivering ultra-high-speed services to the subscriber's premises.

- For the typical subscriber demanding higher IP bandwidth for fiber-based services, FonD delivers up to 100 Mbps symmetrical dedicated to each FonD subscriber.

- FonD has minimal impact on current operational methodology by:
  - Utilizing the existing IP core infrastructure, including security and user access control
  - Freeing up DOCSIS resources as subscribers convert to FonD, relieving needs for additional node splits
  - Enabling delivery of ultra-high-speed services from the same plant (with service differentiation done at the H/E Router)

- FonD has minimal impact at the headend:
  - No change to the video delivery infrastructure
  - No change to the core IP network infrastructure
  - Ability to add IPTV if required and when necessary

- Impacts at the customer premises are entirely beneficial:
  - The ability to support hybrid subscribers eliminates downtime at customer premises while allowing delivery of existing video services.
  - Integrated media converters are available in a wide variety of ports and capabilities, enabling further service differentiation at subscriber premises.
  - The ability to support MDU via fiber for data conserves DOCSIS for lower density residential users.