Ethernet Interface Option Module

Gigabit Ethernet Interfaces for the PacketAssure iQ

- Gigabit Ethernet interfaces ensure high performance and long service life

- Copper and fiber SFP modules for comprehensive physical layer connectivity

- Multiple, standards-based operating modes

- Supports wide range of packet sizes to accommodate varying service requirements

- Extensive MAC address management under operator control

The Ultra Electronics DNE Technologies Ethernet Interface Option Module (IOM) adds high performance Gigabit Ethernet interfaces to the PacketAssure iQ Service Delivery Manager platform. The Ethernet IOM is a hot-swap capable, field replaceable component of the PacketAssure iQ that provides up to six ports of Gigabit Ethernet. It supports a mix of rates and physical interfaces, all conforming to IEEE 802.3 specifications. Designed to the same form factor as all other PacketAssure iQ Interface Option Modules, the Ethernet IOM installs into any iQ chassis slot for maximum configuration flexibility. Each of the six ports can be separately provisioned to operate in one of several operating modes to align with user connectivity requirements.

The Ethernet IOM contains four 10/100/1000BASE-T copper ports and two Small Form-factor Pluggable (SFP) receptacles. Each copper port is a shielded RJ-45 connection, supports Auto MDI/MDIX functionality and auto-negotiates with its respective link partner. Authorized users may override auto-negotiation and force operation to a specified rate, full or half duplex. The SFP receptacles may be configured with a mix of copper or fiber SFP transceivers, as required, to change physical layer connectivity. Two LEDs are provided for each port: Link Status, which verifies that the port has a valid link partner; and Activity, which indicates transmit or receive data.

The Ethernet IOM accommodates packet sizes from 64 octets through 1522 octets, which includes support for VLAN tagging (802.1q). An internal HW-based Media Access Control (MAC) lookup table associates incoming source MAC address and VLAN ID to an input port. If configured for Learning Mode, this association is made on the first occurrence of the MAC/VLAN pair on a particular port, and remains there until it is aged out (removed from the table). Numerous system parameters that govern the behavior of this table within the PacketAssure system provide the user with

extensive options for MAC address management.

The Ethernet Interface Option Module is the ultimate in

performance, flexibility and connectivity with packet networks at any access or distribution point.
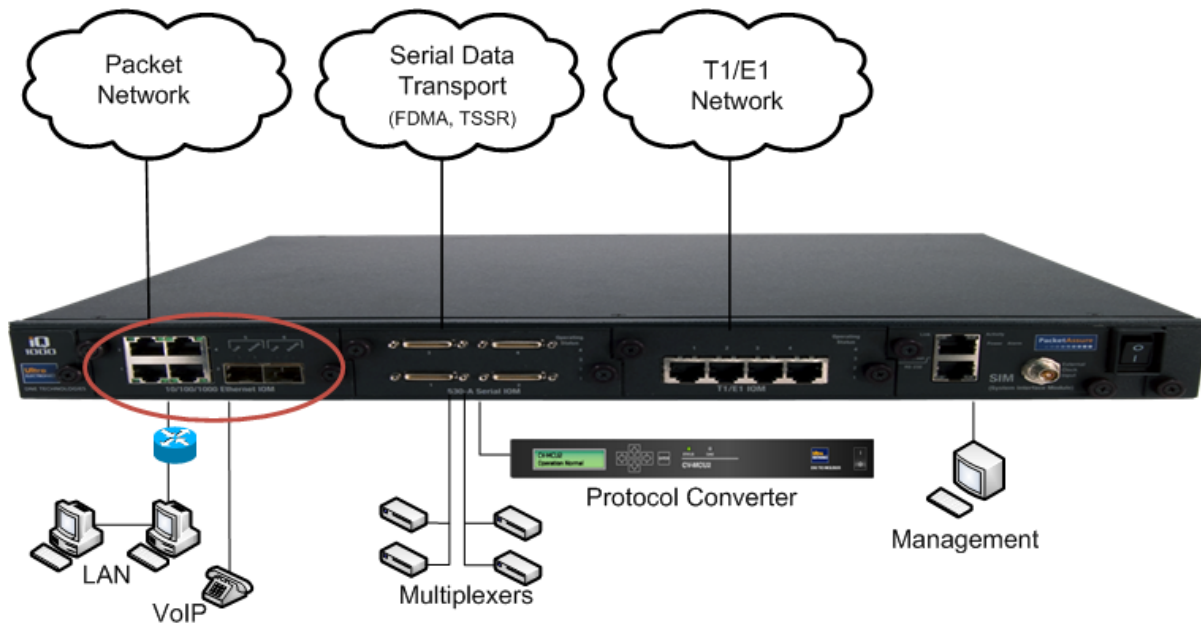
The Ethernet Interface Option Module takes Ethernet-based applications into the PA iQ and provides the network connection for converged Ethernet and Serial application streams across a Packet-based transport network

Specifications

Operating Modes	10BASE-T, 100BASE-TX, 100BASE-FX, 1000BASE-T, 1000BASE-X per IEEE 802.3; Auto-Negotiate and Auto MDI/MDIX (copper)
Operating Rates	10/100/1000 Mbps
Physical Ports	Up to six ports per module. Four shielded RJ-45 female connectors, plus two Small Form-factor Pluggable (SFP) receptacles for optional copper/fiber connections
SFP Support	Copper: 10/100/1000BASE-T Fiber: Multi-Mode 850nm, Multi-Mode 1310nm, Single-Mode 1310nm
LEDs	Two per port: Link /Activity
Protocols / Standards	IP Stack, Ethernet, IEEE 802.3, 802.1p, 802.1q, VLAN, STP/RSTP, Layer 2 Multicast, MAC Bridging, IPv4/IPv6, TCP/UDP