# Olencom FMC-IP16-R-CO

FMC-IP16-R-CO is a Gigabit Ethernet aggregator with inverse multiplexing and VLAN TAG function; it provides three gigabit Ethernet interfaces (2 electrical and 1 optical Ethernet interfaces) compliant with IEEE 802.3 series standard and up to 24 E1 interfaces. It can separate the Ethernet data from GE port encapsulate them into EoPDH signal, and then into E1 signal; in the opposite direction, it can de-map the Ethernet data from E1 signal, aggregate them into GE port.

FMC-IP16-R-CO supports 16 VCG channels, and each VCG channel can be configured to work in single E1 mode or Multi-E1 conversion mode independently, In single E1 conversion mode, each channel bandwidth is one E1; In multi-E1 conversion mode, the maximum bandwidth of each channel is 16 E1.

FMC-IP16-R-CO can be used in the traffic convergent network, supports point-to-multipoint application; it supports NE management based on simple CLI command via RS232 type; meanwhile, it supports SNMP_V1 and SNMP_V2 protocol, supports network management platform OEView based on C/S architecture, which is easy for device configuration, management and maintenance.

With EoPDH (Ethernet over PDH) technology compliant to ITU-T G.7041, G.7042, G.7043 and G.8040 standards, FMC-IP16-R-CO can communicate with products from other vendors adopting the same standards.

## Features

- Compact design with 1U height, 19 inch, 205mm depth, and can be installed on standard rack
- E1 interface
  - Provides 8/16/24 E1 interfaces, compliant to G.703, and balanced/unbalanced selectable
  - Jitter tolerance comply with ITU-T G.823 and G.742 recommendations
  - Supports E1 line loop and device loop
  - Supports E1 BERT function
- Ethernet interface
  - One fiber gigabit Ethernet interface and two copper gigabit Ethernet interfaces
  - The copper gigabit Ethernet supports auto-negotiation, 1000M full-duplex, 100M full/half-duplex, 10M full/half-duplex mode;
  - The fiber gigabit Ethernet interface adopts 1.25G SFP module, 1000M full-duplex mode
  - Supports unicast, multicast and broadcast frame;
  - Supports flow control and broadcast storm filtering control;
  - 4K MAC address table, with optional 12s / 300s ageing time configurable, the default is 300s;
  - Supports MAC address dynamic learning function;
  - Accepts frames with length between 64 and 1552 bytes (otherwise filtering);
  - Supports port-based VLAN and IEEE802.1Q tag-based VLAN;
  - Provides performance statistic for each Ethernet interface;
  - Supports QinQ (Double Tag VLAN);
  - Supports port rate control for LAN port

- Ethernet encapsulation
  - In single E1 mode, it supports GFP-F encapsulation compatible with ITU-T G.7041 recommendation and HDLC encapsulation compatible with RJ017, under HDLC encapsulation, it supports framed PCM31/ unframed mode;
  - In Multi-E1 conversion mode, it supports GFP-F encapsulation;
- Communication with remote equipment
  - In single E1 mode, it supports communication with the remote FMC-IP-R-E1 converter and the equipment adopted the same Ethernet encapsulation from other vendor;
  - In Multi-E1 conversion mode, it can communicate with the remote FMC-IP16-R series and the equipment adopted the same Ethernet encapsulation from other vendor ;
- Compliant to ITU-T standards
  - GFP-F encapsulation , compatible with ITU-T G.7041 recommendation;
  - Virtual concatenation (VCAT) and Link Capacity Adjustment Scheme (LCAS) recommendation G.7042;
  - Ethernet to nxE1 mapping recommendation G.7043;
  - Ethernet to single E1 mapping recommendation G.8040;
- NE Management
  - Supports Simple Network Management Protocol (SNMP), compatible with V1 and V2C protocol;
  - Supports FTP protocol and firmware download online without disturbance of existing traffic;
  - Supports remote management FMC-IP-R-E1 and FMC-IP16-R, besides, it can manage the remote media converter with TS1000 protocol via FMC-IP-R-E1 or FMC-IP16-R;
  - Monitoring the alarms and status in real-time;
- Supports hot-spare power, the power consumption is less than 20W
  - -48V DC single power access;
  - -48V DC double power access;
  - 220V AC single power access;
  - 220V AC double power access;
  - -48V DC+220V AC double power access.

# Application