EM6400 Multiservice Access Node

The Avara EM6400 Multiservice Access Node is a highly reliable, feature rich and cost effective integrated access device with multiple broadband 10/100Base-T and narrowband Voice Frequency interfaces for use over single or multi mode optical fibre in point to point, linear or ring network topologies.

The Avara EM6400 is specifically designed to provide a compact solution for delivering switched Ethernet and VF circuits over optical fibre.

The EM6400 provides 4 x 10/100Base-T (with PoE support) and 4 x VF E&M circuits over SFP based optical uplinks.

It also has 2 x 1000Base-X (SFP based) ports for network connectivity user Ethernet.

Each unit has two 1000Mbps optical network interfaces which can be configured for linear or ring topology operation. These ports carry Ethernet traffic as well as the VF traffic.

The EM6400 delivers high performance Layer 2 Ethernet switching in a compact form factor. Tag based VLANs (802.1q) are supported allowing network segmentation without being restricted by physical connections. VLAN stacking is also supported allowing network designers more flexibility.

Advanced features such as rate limiting on the Ethernet ports is provided, preventing unpredictable network performance due to broadcast storms of malfunctioning equipment.

When the units are configured in a ring topology, a switchover time of <50ms is achieved in the event of a fibre break. The rapid switchover allows VF connectivity to be maintained in the event of a fibre break.

The VF ports can function in 2-wire or 4-wire mode and provide very low latency operation, ideal for cascading voice and data circuits.

They support both point to point and point to multi-point operation.

In point to point mode, E&M signals are supported with the E signal at one end connected to the M signal at the other.

In point to multi-point mode, signal distortion due to A/D conversion is minimised with the broadcast function being performed in the digital domain, thus maximising the number nodes that can be cascaded.

The EM6400 can be managed locally via the console port or remotely using Telnet, SNMP or Avara's Web Server over a secure VLAN.

Full remote configuration and software download functionality reduces installation time and complexity.

A comprehensive set of SNMP traps and alarms are provided to assist fault management and isolation.

Technical Highlights

- 2 x 1000Mbps (SFP) Network Ports
- 4 x 10/100Base-T (2 x PoE) Ports
- 4 x VF E&M (2/4-Wire) Ports
- Single or Dual Fibre Operation
- Multi-mode or Single-mode Fibre
- 802.1q, 802.1p
- Rate Limiting on Ethernet Ports
- Management via SNMP, Telnet, CLI & Web Browser
- 11 to 36VDC Power Supply

Technical Specifications

AVARA
TECHNOLOGIES

Model Order Code P21071.01 EM6400-4GE	EM6400 4xETH with PoE, 4xVF, 2xGE Network, 2xGE Access, Stand-alone	**Security** Data Interfaces Management	Dedicated VLAN Password Protection, Dedicated VLAN
Mechanical Height Depth Width	44 mm 220 mm 440 mm	**Power** Supply Max Consumption	11 to 36VDC 15W (excluding PoE & 2xGE) 17W (excluding PoE)
Customer Interfaces Ethernet	4 x 10/100Base-T (RJ45) (Switched)	**Alarm Reporting**	2 x Relay outputs with current carrying capacity of 1A @ 24V
Voice	VF E&M (RJ45) Codec: G.711 Impedance: 600 Ohms E&M: Optically Isolated	**MTBF**	65 Years
Optical Network Interfaces	A full range of optical and copper SFP's are available covering 500m to 130Km as single or dual fibre working, multimode or single mode options	**Environmental** Operating Temperature Relative Humidity	-5 °C to +65 °C 5-90% (Non-condensing)
Network Topology	Linear Network Ring Network	**Standards**	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.1p VLAN Tagging IEEE 802.1q Priority Queing IEEE 802.3x Flow Control IEEE 802.1d STP IEEE 802.1x RFC1157 SNMP RFC1213 MIB II RFC854 Telnet RFC783 TFTP S003 Customer Premises Switching S004 VF Performance EN55022 Class A Emissions EN60950 Safety 41003 Laser Safety AS/ACIF S016 EN55024 Immunity EN50082-2 Generic Immunity EN60825-1 Class 1 ITU-T G.823/G.711/G.712 ITU-T Q.552 ETS 300 019-1 Environment ETS 300 019 -1-1 Storage ETS 300 019 -1-2 Operational ETS 300 019 -1-3 Transport
Protection Switch Time	< 50ms		
Switch Parameters Speed Auto negotiation Duplex MDI/MDIX Support IEEE 802.1p/q MAC Address Size Max Frame Size VLANs Supported Rate Limiting Traffic Shaping Priority Queues Per Output	10/100Base-T Yes Full/Half Yes Yes 8K 1632 Bytes 4096 128K, 256K, 512K, 1M, 2M, 4M, 8M Strict & Weighted Round Robin 4		
Management Local Remote	CLI via Console (RS-232) Telnet, SNMP, Web Browser		

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