MetaLIGHT® 1300

***Profit* from Copper™**

The MetaLIGHT 1300 is a high-density, point-to-multipoint Ethernet in the First Mile (EFM) platform that delivers multiple high-performance, symmetrical Ethernet services, aggregating the traffic and services into a high-speed uplink to a backbone transport network. With its superior performance and low-cost, the MetaLIGHT 1300 provides the best value to its users.

The MetaLIGHT 1300 allows service providers and enterprises to use their existing copper infrastructure to deliver 1 to 40 Mbps Ethernet services to all users within their service area or enterprise. It achieves unprecedented rate, reach and reliability on any grade of available copper, and installs within minutes, enabling immediate deployment of broadband services.

The MetaLIGHT 1300 is interoperable with any standard backbone Ethernet switch/router and complements Metro Ethernet access nodes by expanding a single high-capacity port (e.g. Gig-E and/or 100Base-T) to multiple lower-rate, copper-fed customers. The MetaLIGHT 1300 forms an EFM link with a peer MetaLIGHT 50 on 1 to 8 copper pairs.

The MetaLIGHT 1300 optimizes the existing copper access network and reduces the cost and deployment time required to deliver high-performance broadband services. It enables a low-risk approach and dramatically improves ROI and customer satisfaction. Because fiber trenching is not required with MetaLIGHT systems, capital expenditures to deliver broadband services are greatly reduced.

Based on standard EFM technology, the MetaLIGHT 1300 aggregates 1 to 8 copper pairs together to create a High Speed Link™ (HSL™) which carries the users' traffic. Multiple HSL's can be supported per shelf. The transmission layer is additionally powered by elements of Actelis Networks' MetaLOOP® technology, such as Cross Talk Cancellation (CTC) and Cross Talk Management (CTM), which boost transmission rate, reach and reliability far beyond comparable systems, while retaining the standards compliance of G.SHDSL modems. It is fully compliant to the strictest global safety and emission standards.

The MetaLIGHT 1300 can support present or future Ethernet Quality of Service (QoS) and Type of Service (ToS) requirements, and has the highest available packet throughput efficiency. It supports 802.1q VLAN-aware bridge functionality, double tagging ("Q-in-Q", VMAN) for end-user VLAN transparency, including four 802.1p priorities and wire-speed non-blocking Layer 2 bridging. Support for 802.3x is included for traffic management.

The MetaLIGHT 1300 is graphically managed via the MetaASSIST™ EMS (element management system) or by the MetaASSIST GUI craft application. Management interfaces include SNMP V2c standard MIBs for seamless integration with standard network management applications (e.g., HP OpenView) and command line interface (TL1). Both local and remote management via an IP network are supported, in either in-band or out-of-band modes.

Highlights

- Ethernet in the First Mile (EFM) Solution
- Rapid Service Deployment
- Superior Rate and Reach Beyond 18,000 ft/5.5 km
- Low Delay for Voice and Video
- Compliant with Worldwide Spectral Standards
- NEBS Level III, FCC, UL and CE Compliant
- Environmentally Hardened
- SNMP Management

Applications

- Transparent LAN Service
- Fast Internet Access
- Metro Ethernet Extension
- Private Campus Network Intra-Connection
- MDU/MTU
- DSLAM Backhaul
- WiFi Backhaul

Markets Served

- RBOC's, PTT's, Independent Operators, Competitive Operators
- Federal, State and Local Government Agencies
- Education, Health Care, Utilities, Campus

Actelis Networks®

MetaLIGHT® 1300

System Specifications

• Non-blocking Switching Fabric	3.4 Gbps
• Maximum Line Rate per 8-Pair Link	40 Mbps symmetrical
• Low Delay	2-4 ms (typical)
• Cascading Capability	5 shelves 320 pairs

Product Specifications

Interfaces

Network Interfaces

• Ethernet 10/100 Base T	4 Auto-negotiating, Auto MDIX Full/half duplex
• Connector Type	RJ45 (front)
• Gig-E Optical Interface (optional)	1
• Connector Type	MM 850 nm SM 1310 nm SFP LC duplex

High-Speed Link (HSL- Copper Pairs)

• Number of MLU Line cards	1-4
• Maximum Number of Copper Pairs	64
• Number of Copper Pairs per HSL	1-8
• Connector Type	50-pin telco (rear)
• Spectral Compatibility	ITU-T G.991.2, G.SHDSL.bis, ETSI TS 101 524, ANSI T1.417, Enhanced G.SHDSL
• Sealing Current	G.991.2

LAN Protocols

• Ethernet	802.3
• VLAN Tagging	802.1q
• Double Tagging (optional)	Q-in-Q, VMAN
• Priorities (4 Queues)	802.1p
• Dynamic Bridging	802.1q, 4K MAC addresses

Management

Protocols

- SNMP V2c and V1
- Command Line Interface
- HTTP
- Connectivity: In-band and Out-of-band
- Optional Secured Access Through SSH2 Encrypted Sessions

Configuration and Monitoring

- MetaASSIST EMS
- MetaASSIST GUI Craft
- SNMP
- Command Line Interface
- Performance Statistics
- System Logs

Front Panel

System LEDs

- Power
- Critical/major/minor
- Alarm Cutoff Button (ACO)/Lamp test (LMT)

Card LEDs

- Active
- Status

Ethernet Interface LEDs

- Active (ACT)
- Link (LNK)

Alarm Contacts

- DB15 and Wire-wrap (rear)

Physical

• Rack Mounting		19", 23" and ETSI
• Dimensions	Height:	7" (176mm)
	Depth:	11" (280mm)
	Width:	21.32 (538mm) or 17.2" (436mm)
• Weight		19 lbs (8.6 Kg) (chassis only)
• Plug-in Cards		6 horizontal, front loading
• Power DC		-48/-60 V nominal, dual A+B 100 Watts for minimal system 220 Watts for fully loaded system

Regulatory Approval

Safety

- UL60950, CSA C22.2 60950
- EN 60950, IEC 60950

EMC

- FCC Part 15 Class A
- ICES-003 Class A
- ETSI EN 300 386
- ETSI EN 300 132

NEBS

- Level III (GR-1089-CORE, GR-63-CORE)

CE

- EMC and Safety

Environmental

• Operating Temp.	-40° to +65°C
• Storage Temp.	-40° to +70°C
• Relative humidity	Up to 95%, non-cond.
• GR-63-CORE	
• ETSI ETS 300 019	

For information regarding pricing and ordering options, please contact Actelis sales.

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