SignallX iMossa V7 IP-MPLS ROUTER

- **SignallX iMossa V7 IP-MPLS Router is a family based model.** SignallX iMossa V7 IP-MPLS Router is designed to meet the new challenges and requirements that wide deployment of advanced services needed from networking. The router has the following benefits.

- SignallX advanced software and hardware architecture, which uses the most high-performance multi-core processor, provides superb concurrent service processing capabilities & unparalleled network performance with **64 Gbps** backplane. It allows integrating routing and switching in one device and provides multiple Gigabit Ethernet (GE) ports for simplifying management and protects user investment.

- It supports Branch Intelligent Management System (BiMS) which allows batch software upgrade, automatic configuration issuing, configuration rollback, operation monitoring, and fault alarm.

- It supports multiple startup options likes zero-configuration startup to lower network deployment complexity and cost. It has an embedded intelligent network management platform for LAN device and user management.

- Provide on board LED indication for various functionalities/failures.

Features and Benefits of Advanced Technology used:

- The router runs state-of-the-art network operating system, provides intelligent service scheduling management mechanism, and supports loose coupling of service modules and dynamic loading of processes and patches.

- The high-performance multicore processor with the non-blocking switching architecture enhances the concurrent service processing capability significantly. Dual CPU system architecture allows millisecond CPU switchover and process-level backup.

- Integrated routing and switching fabric technology and separation of routing and switching planes help achieving 10 Gbps data transmission.

- High Availability: Supports 1+1 Control plane processing Unit redundancy and hot swapping of interface modules.

- Comprehensive network management methods—Supports command line and SNMP.

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Environment standards

- QM 333 certified and fully compliant with the RoHS standards. Space efficient by using separate airflow aisles designed in unique way for the system and power modules.

Software Specifications

FEATURES	SPECIFICATIOS
Protocols supported	• Unicast IPv4/IPv6 routing protocols (BGP, OSPF, IS-IS, OSPF v3, Segment Routing or similar protocol). Traffic engineering for node and link protection and aggregation of links. Minimum 8 links supported as part of single aggregation on a network side. • IPV4 and IPV6, IGMP, MLD, and PIM-SM & SSM, ECMP. Router support 6PE and 6VPE mode for IPV6 transport over IPV4. • LDP, MPLS-TE with FRR for sub 50 msec Protection. Performance monitoring for Layer-2 and layer-3 services (Y.1731, TWAMP). • BFD with interval of 10ms or less. Router support RFC 3107 of Carrying Label Information in BGP-4. • Point to Point and Point to Multipoint LSP for Unicast and Multicast traffic. Router supportlayer3 and layer2 MPLS VPN, VPLS and EVPN. Internet Group Management Protocol (IGMP) v1, v2 and v3. • Protocol Independent Multicast – PIM-SM and SSM. Multicast trouble shooting tools like Mtrace and mfib ping or equivalent troubleshooting mechanism. IEEE 1588v2 Precision Timing Protocol (PTP) and Synchronous Ethernet support for network synchronization
Quality Of Service	• Provide per-service, per-forwarding class queuing and shaping features. Router supports 3 level HQOS on all kind of Ethernet interface with minimum 6K hardware queues. Provide QoS features like classification and hierarchical scheduling, WRR, strict priority (SP), profiled scheduling and multi-tier policing and shaping. • QOS supported for all type of interface including Bundled interfaces. IP Application Mapping. The list of IP match criteria include Source IP address and mask, Destination IP address and mask, IP protocol, UDP source port, TCP source port, UDP destination port, TCP destination port. • VLAN CoS preservation: the IEEE 802.1p priority bits. VLAN CoS differentiation: appropriate service differentiation must be applied according to the802.1p bits. These will map of the 802.1p bits to DSCP values and EXP-bits in the MPLS header when the service is offered over a (partially) MPLS enabled network. End-to-end delay budgets area strictly- enforced to support critical Applications SCADA, VOICE, Video.
Security	• Support Access Control List to filter traffic based on Source & Destination IP Subnet, Source & Destination Port, Protocol Type (IP,UDP, TCP, ICMP etc) and Port Range etc. Should Support SNMPv1/v2/V3. Black hole filtering or equivalent: dropping of traffic destined for a specific prefix at wire speed. Ingress and egress packet filtering based on L2-L4 criteria at wire speed. The possibility to log the actions on individual filter rules shall be supported. • Protection of local services (http, small udp/tcp servers, dhcp, telnet, ssh) based on L2-L4 criteria. • AAA support – Accounting, Authorization and Authentication of users and commands. Support of local authentication, TACACS+ and Radius. Authentication of routing protocol updates : IS-IS, OSPF,BGP.SSH support.

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Performance	• Support non-blocking through put capacity of 64 Gbps full duplex. • Support 10K IPv4 & 5K Pv6 routes. • Support 100 multicast groups. • Minimum 100 MPLS layer-3 VPN's. • Minimum 64 MPLS VPLS. • Minimum 500 MPLS Layer-2 PWs. • Router shall support min 64 BFD sessions.

Hardware Specifications

FEATURES	SPECIFICATIONS
Rack height and type	4U - standard sized 19 inch rack mounting Modular chassis
Fan	Hot-swappable and Field Replaceable Unit (FRU)
Non-blocking throughput	64 Gbps
Console Port	1
Out of Band Management Port	1
Power Supply Unit	-40 V DC to– 60 V DC, 1+1 redundant, Field replaceable DC power supply units
Operating temperature	-15°C to 65°C
Environment standards	TEC QM-333 certified

Parts & Accessories

SignallX iMossa V7 Module	Module Code	Description
Router Chassis with Backplane	SignallX iMossa 4RC	4U Rack mount Chassis with Backplane
Controller & Forwarding Plane	SignallX iMossa SX-SCE	Controller Card and Forwarding plane
DC Power Supply	DC-400	Dual Redundant DC 40 -60V DC
Interface 1G Optical/Electrical	SX-IG	4 Nos of 1G ports
Interface 10G/1G Optical Ethernet	SX-XIG	2 Nos of 10G/ 1G ports
Interface 16 port E1	SX-E1	16 Ports E1 Card
Interface 4 port STM-1	SX-STM1	4 Port STM1 Card with SR SFP
EMI EMC Class of equipment	Class B	Class B equipment

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