

MicroRAPTOR® (iMR920)

Guideform Specifications

The iS5Com's iMR920 *MicroRAPTOR*® shall meet the following specifications:

Hardware

Layer 2/Layer 3 switching ports: The device shall support 8 or 16 10/100/1000 MB Ethernet ports. The first 8 shall be copper with RJ45 connectors, the 2nd 8 may also be copper RJ45, or SFPs.

HSR/PRP ports: The device shall support 2 Redboxes or 1 Quadbox.

Serial ports: The device shall optionally support 8 serial ports with RJ45 connectors, or 4 ports with DB9 connectors. All serial ports may be configured for RS232, RS422, or RS485.

Application processing module: The device shall optionally support one application processing module. This module shall have a minimum 1.6GHz 4 core Intel architecture processor, with up to 8GB RAM and up to 2 TB Storage. Application processing module must have minimum 2 ethernet connections into the switch, and one terminated externally.

Wide temperature range: The device shall operate over a range of -40°C to +85°C (-40°F to 185°F).

Robust industrial design: The device shall meet the requirements of IEC 61850-2 and IEEE 1613.

Alarm contact: The device shall have an alarm contact rated at 1A @ 24VDC.

Serial Console Port: The device shall have an RS-232 console port with an RJ45 interface.

USB port: The device shall have a USB 2.0 for software updates, downloading syslog files and configuration backup/restore.

System Resource Monitoring: The device shall monitor temperature and CPU speed locally and remotely via SNMP

Power supply options: The device shall support the following power inputs: 10 – 36 VDC, 36 – 72 VDC, 88 – 300 VDC, and 100 – 240 VAC

Redundant power supplies: The device shall support redundant power supplies

Warranty: The device shall have a materials and workmanship warranty of 5 years, which may optionally be extended to 10 years.

Layer 2 Functionality

MAC Address table: Supports up to 16K addresses.

Switch shall support store and forward operation with switching latency of no more than 7 µs

Switching plane bandwidth: Minimum of 128 Gbps.

Virtual Local Area Networks (VLANs): The device shall support up to 4095 IEEE 802.1Q-2005 VLAN IDs. It shall support VLAN-aware bridging (Port Based VLAN, Protocol based VLAN).

Rapid Spanning Tree Protocol (RSTP): The device shall support RSTP (IEEE 802.1D, 2004) /MSTP/PVRST+. BPDU load/ attack prevention mechanism, verbose logs on the screen up for debugging level.

Jumbo Frame: The device shall support jumbo frames up to 9216 bytes.

Port Based Authentication: The device shall support 802.1x authentication.

Quality of Service: The device shall support QoS (Classification based on ACL and Priority Map Table, Traffic Shaping, Scheduling and Queueing). It shall support pre-Marking Support for IP, DSCP, Metering TRTCM, Frames for IP, DSCP, Metering and Priority Marking of Frames for IP, DSCP, Egress Port Scheduler and Shaper.

Link Layer Discovery Protocol (LLDP): The device shall support IEEE 802.1 AB-2009.

Link aggregation: The device shall support Link Aggregation using LACP.

Layer 3 Functionality

Unicast Routing: The device shall support unicast routing with IPv4 (Static, RIPv1/v2, OSPF), and support Route redistribution between protocols.

Virtual Router Redundancy Protocol: The device shall support VRRP v2 and v3.

BGP: The device shall support BGP.

Internet Group Management Protocol: The device shall support IGMP v1, v2, and v3 and IPv4 multicast routing (Protocol Independent Multicast- Sparse Mode PIM-SM).

Management and Administration

Command Line Interface (CLI): The device shall support Console, Telnet, and SSH.

WebUI: The device shall support HTTP and HTTPS / SSL.

Configuration Save and Restore: The device shall support configuration save and restore using MIB OIDs and text file.

Software and configuration: The device shall support software and configuration upgrades through TFTP and SFTP.

Multiple User levels: The device shall support at least 3 user levels (Admin, Tech, Guest).

Authentication: The device shall support RADIUS and TACACS+ Authentication.

Other functionality

IEEE 1588 Precision Timing Protocol (PTP): The device shall support IEEE 1588 precision timing protocol v2, with power profile v2, in transparent clock mode, on all Ethernet ports.

Syslog: The device shall have a syslog client to record and syslog relay to forward syslog messages.

SNMP: The device shall support SNMP (v1, v2c, and v3) agent and MIB support.

Simple Network Time Protocol (SNTP): The device shall support SNTP.

RMON: The device shall support RMONv1.

Port Mirroring: The device shall support mirroring of traffic to a designated target port.

IGMP snooping: The device shall support IGMP v1, v2, v3 snooping – explicit Host Tracking and Fast Leave, Multicast Statistics (for control plane messages).

Dynamic Host Configuration Protocol (DHCP): The device shall support DHCP (Client, Server & Relay) for IPv4, with support for option 82.

ACLs (Access Control Lists) for Traffic Filtering: The device shall support L2 ACL and L3 ACL.

Security Functionality

Network Address Translation: The device shall support Static NAT, Dynamic Source NAT, Destination NAT, and Network Address Port Translation.

IPsec: The device shall support Layer 2 and Layer 3 IPsec.

GRE: The device shall support GRE over IPsec.

Firewall: The device shall support a Stateful Firewall implementation.

For more information, visit is5com.com

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