

iRBX-M

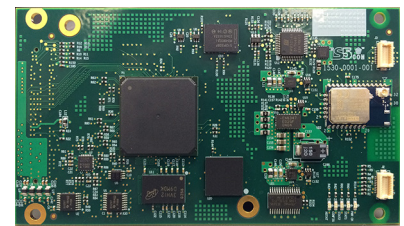


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Intelligent HSR/PRP Embedded Ethernet Module

Features

- Supports 4 x 10/100/1000Base-T(X) RJ45 and 2 x 100/1000Base-X SFP ports
- Managed Six ports Gigabit Ethernet Switch Module
- Wi-Fi IEEE 802.11 B/G/N access point
- Fully compliant with IEC 62439-3 HSR "High-availability Seamless Redundancy"
- Fully compliant with IEC 62439-3 PRP "Parallel Redundancy Protocol"
- Supports two HSR/PRP RedBoxes or single QuadBox configurations
- Supports IEEE 1588v2 one-step transparent , boundary and ordinary clocks
- Provides PPS and IRIG-B Outputs (Future Release)
- Secure access –Trusted Platform Module (TPM) authentication device support Synchronous Ethernet support (SyncE)
- Provides redundancy with no single point of failure
- Zero time to recovery in case of failure
- Single network faults in the ring result in zero frame loss
- Network remains fully operational during maintenance
- Any device can be disconnected and replaced without breaking network connectivity
- Redundancy is supervised continuously for network and device management



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Introduction

The iRBX-M module provides redundant ports for critical and high-availability networks. It supports both high-availability seamless redundancy (HSR, IEC 62439-3 Clause 5) and parallel redundancy protocol (PRP, IEC 62439-3 Clause 4). Both of these standards provide redundant paths with no single point of failure and zero time to recover in case of failure. Single network faults in the ring will not result in any frame loss. The network is fully operational during maintenance and any device can be disconnected and replaced without breaking network connectivity.

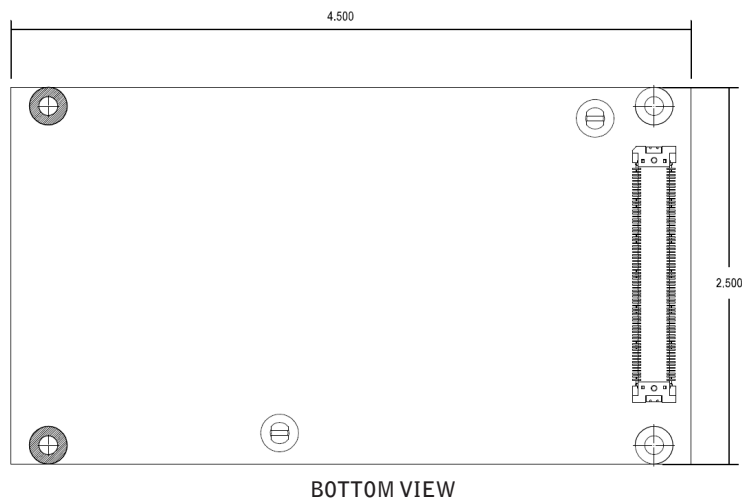
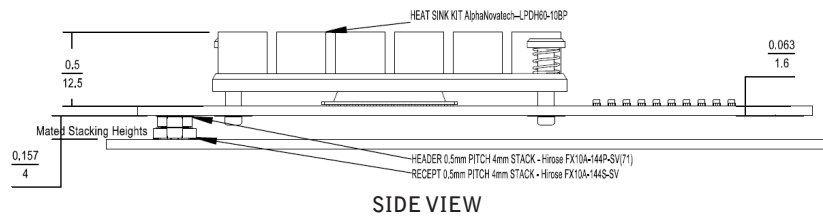
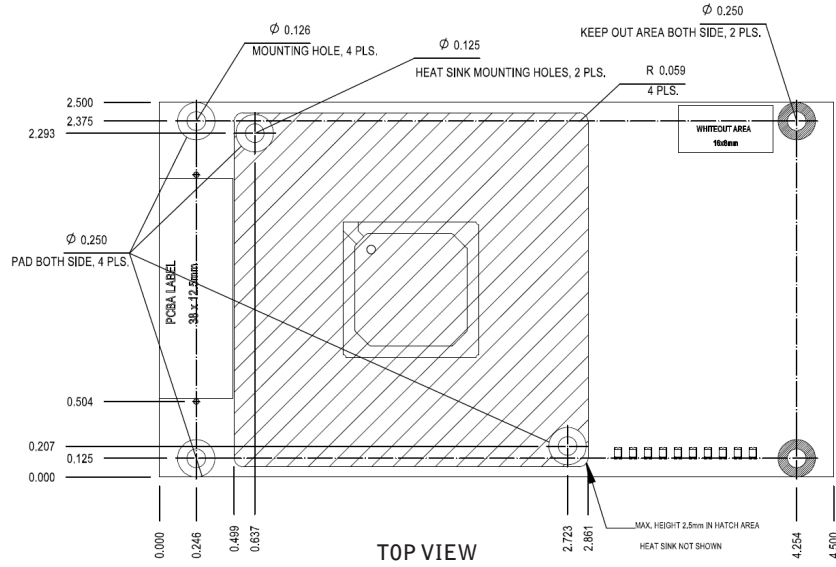
Specifications

Model Number iRBX-M	
Physical Ports	
10/100/1000Base-T(X) RJ45 and 100/1000Base-X SFP Ports	2
100/1000Base-X SFP Ports	4
PPS and IRIG-B Outputs	Supported
2.4GHz, Wi-Fi IEEE 802.11 b/g/n, U.FL antenna connector	1
Technology	
Ethernet Standards	IEEE 802.11 B/G/N, 2.4Ghz, U.FL antenna connector IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3ab for 1000Base-T IEEE 802.z for 1000Base-X IEEE 802.1Q for VLAN Tagging IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) IEEE 1588v2 one-step transparent , boundary and ordinary clocks IEC 62439-3 HSR "High-availability Seamless Redundancy" IEC 62439-3 PRP "Parallel Redundancy Protocol"
Priority Queues	4
Time Synchronization	Supports IEEE 1588v2 transparent, boundary and ordinary clock
Network Redundancy	HSR, PRP as per IEC62439-3 RSTP - Rapid Spanning Tree Protocol
Software Features	IEEE 1588v2 PTP clock synchronization IEC 62439-3 HSR "High-availability Seamless Redundancy" IEC 62439-3 PRP "Parallel Redundancy Protocol" MSTP (RSTP/STP compatible) Quality of Service (802.1p) for real-time traffic IGMP Snooping IEEE 802.1Q VLAN support - 4095 simultaneous VLANs Multicast filtering -16 MAC entries per input port, every entry has configurable mask IGMP multicast groups: 128 for each VLAN
Power	
Input Power	3.3V (+-3%)
Power Consumption	4W
Physical Characteristics	
Enclosure	IP-40 Galvanized Steel
Dimension (W x D x H)	52 (W) x 106.1 (D) x 144.3 (H) mm (2.05 x 4.18 x 5.68 inches)
Weight (g)	~1000 g
Environmental	
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Operating Temperature	-40°C to +85°C (-40°F to +185°F) No Fans
Operating Humidity	5% to 95% Non-condensing
Warranty	
Warranty	5 Years



Dimensions

All Dimensions are in Inches





Ordering Information

Base	Option 1	Option 2	Description
iRBX-M	W	XX	
iRBX-M			Core assembly and packaging
	XX		None
	W		Wi-Fi IEEE 802.11 b/g/n
		XX	None
		1BNC	1 X PPS and IRIG-B Outputs

Example Order Code: iRBX-M-W-XX

Description: iRBX-M-Embedded Module with WiFi IEEE 802.11 b/g/n, (Option 2) None
C1 – Add for conformal coating

Development Board - iRBX-CB - Carrier Board HSR/PRP Embedded Module

Base	Description
iRBX-CB	Carrier Board HSR/PRP Embedded Module

Note: Carrier Board to be ordered separately

