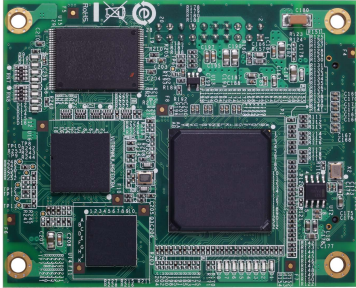


EOM-G103 Series

IEC 62439-3 3-port full Gigabit embedded managed redundancy modules



Features and Benefits

- IEC 62439-3 Clause 4 (PRP) and Clause 5 (HSR) compliant
- 3 SGMII pinouts reserved for PRP/HSR (LAN A/LAN B/Inter Link) and an extra 1 SGMII reserved for Ethernet console connection

Certifications



Introduction

The EOM-G103 Series is designed for device manufacturers that want to embed and integrate the advanced IEC 62439-3 supported modules with minimum effort into their products to enhance performance and reliability in certain mission-critical applications.

IEC 62439-3 Clause 4 (PRP) and IEC 62439-3 Clause 5 (HSR) are the standardized redundancy protocols for industrial automation networks where zero recovery time is needed. PRP and HSR are suitable for electrical substation automation and other mission-critical applications that cannot tolerate any system downtime.

The EOM-G103 Series is compliant with the IEC 62439-3 standard and provides an easy and cost-effective integrated solution for adding a redundancy module to a non-IEC 62439-3 compliant product. The modules support two IEC 62439-3 Ethernet ports for constructing PRP or HSR networks: SGMII (MAC mode)/SerDes (1000BaseX). It also includes one standard Ethernet port SGMII (MAC mode)/SerDes (1000BaseX) for connecting with standard IEEE 802.3 Ethernet devices. Additionally, the EOM-G103-PHR-PTP Series provides an extra SGMII (MAC mode)/SerDes (1000BaseX) for building up a local access Ethernet console port to easily maintain, control, and manage devices at the local site.

Additional Features and Benefits

- PRP (Parallel Redundancy Protocol): Transmit or receive two independent active paths to/from different LANs simultaneously in a network that needs zero recovery time
- HSR (High-availability Seamless Redundancy): Every frame is duplicated and then transmitted in both directions of the HSR ring to deliver zero switchover time
- Hardware-based IEEE 1588v2 PTP (Precision Time Protocol) end-to-end one-step transparent clock for precise time synchronization of networks
- Configurable via CLI

Specifications

Ethernet Interface

Standards	IEEE 802.3ab for 1000BaseT(X) IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3z for 1000BaseSX/LX/LHX/ZX
Ethernet Interface	3, SGMII (MAC mode) / SerDes (1000BaseX) (PRP/HSR LAN A/LAN B/INTERLINK)
Connector	1 connector with 2 x 40 pins, and 1 connector with 2 x 10 pins
GPIO	3 x Programmable I/O pins

Ethernet Software Features

Redundancy Protocols	HSR, PRP
----------------------	----------

Serial Interface

Console Port	Ethernet console (SGMII (MAC mode) / SerDes (1000BaseX))
--------------	--

Power Parameters

Input Current	0.49 A @ 3.3 VDC
---------------	------------------

Physical Characteristics

Dimensions	80 x 1.6 x 65 mm (3.15 x 0.06 x 2.56 in)
Weight	28.6 g (0.06 lb)

Environmental Limits

Operating Temperature	-40 to 60°C (-40 to 140°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

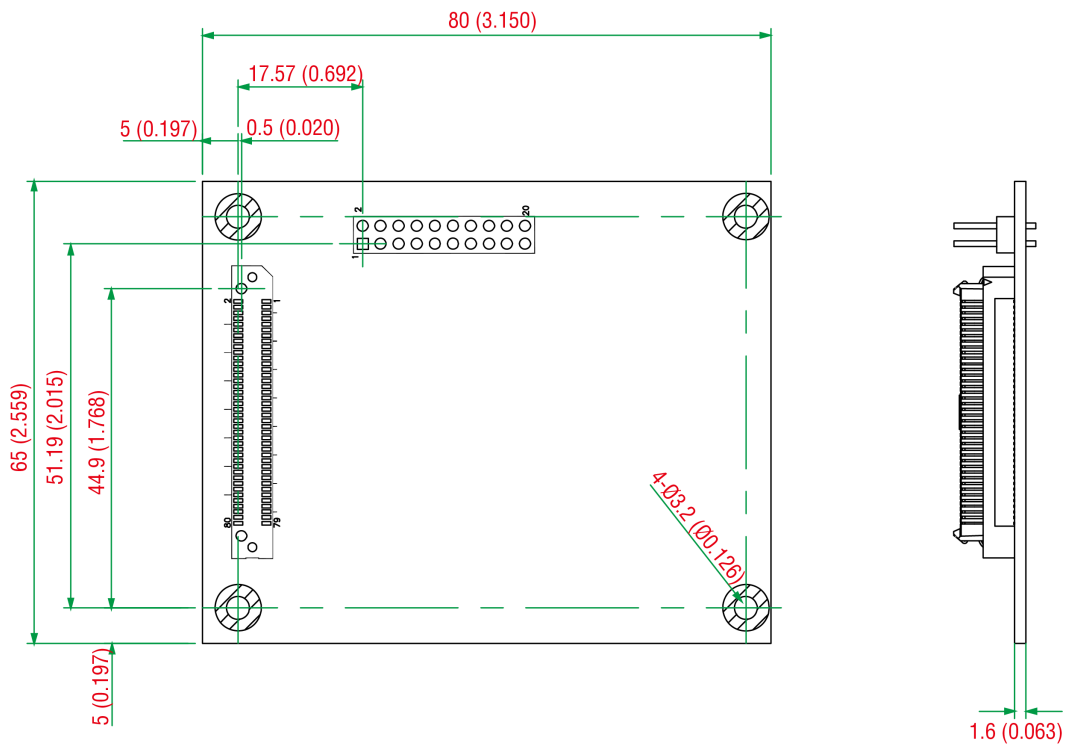
EMC	EN 55032 Class A
EMI	CISPR 32, FCC Part 15B Class A

Package Contents

Device	1 x EOM-G103-PHR-PTP module
Power Supply	1 universal power adapter and 2 power cords (EOM-G103-PHR-PTP-ST)
Cable	EOM-G103-PHR-PTP-ST: 1 x USB type A male to USB type B male
Documentation	1 x developer's guide 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	Operating Temp.	Input Voltage	EOM-G103-PHR-PTP managed redundancy module	Evaluation board for testing and application development
EOM-G103-PHR-PTP	-40 to 60°C	3.3 V	1	-
EOM-G103-PHR-PTP-ST	-40 to 60°C	3.3 V	1	1

© Moxa Inc. All rights reserved. Updated Apr 25, 2022.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.