

Ethernet Converter Board



Preliminary

ETH001 KEY FEATURES

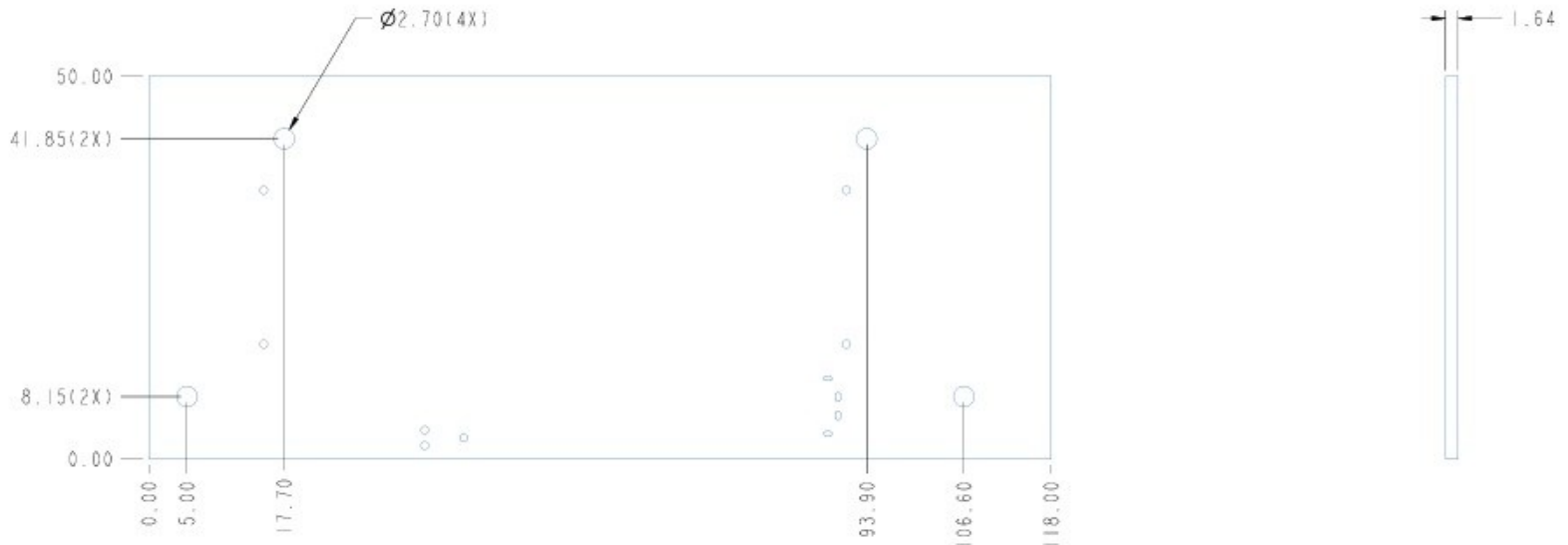
- Compact, configurable 10GBase-KR to 10GBase-T Ethernet media converter
- Supports SOSA aligned backplane/chassis designs
- Supports multi-rate functionality, backward compatible with 2.5GBase-T, 5GBase-T, and 10GBase-T standards
- Supports conversion for 5G and 2.5G rate over USXGMII/XFI, 5000Base-R/5000Base-X MAC interface
- Low profile mounting mechanism, affixes to I/O panel interface board or the rear of the backplane inside an ATR, rackmount, or other chassis
- Designed for MIL rugged designs and for temperature range of -40C to + 85C
- Integrated magnetics to minimize footprint
- GUI enables easy configuration with the utilization of an STM32 microcontroller via USB
- Power input via VS2 (3.3V AUX) interface
- Customized versions are available upon request

The Pixus Ethernet Converter Board is a versatile module that does the PHY conversion of Ethernet signal. It supports 4 channels of signals up to 10GBase-KR as well as lower data rates. Pixus developed a GUI for easy configuration of the microcontroller via a USB port.

Pixus has developed the MCU firmware code and the unit utilizes a versatile PHY transceiver for multi-rate versatility and rugged application environmental considerations.

Conformal coating and customization is also available.

Drawing for ETH001



Pixus Design Verification Testing

- Burn-in Test
- Verify stable data link and connectivity over long period of time (48-72 hours)
- Packet Loss and Packet Error Test
- Verify packet loss rate as well as error counters while running stress test on the interface
- Bandwidth Testing
- Test established data link bandwidth and confirm achieved data rate meets the interface requirements

Pixus has performed the testing above to ensure the performance of the ETH001.

Specifications

Architecture		
Physical	Dimensions	50mm tall x 118mm wide x 1.6mm thick
	Chipset	BCM84894 Transceiver
	Connectors	
	Mating Backplane Connectors	
Standards		
RJ-45	Type	RJ-45
Configuration		
Power		3.3V AUX input power (VS2)
		Power consumption: under 5W
Environmental	Temperature	Operating temperature: -40° to +80°C
		Storage temperature: -55° to +90°C
	PCB	FR-4 or equivalent
Conformal coating		Upon request (See page 4 selection "C" for available options)
Other		
MTBF	MIL Handbook 217-F @ TBD Hrs.	
Certifications	Designed to meet FCC, CE and EN/UL/TUV certifications where applicable	
Warranty	Two years	
Trademarks and logos	The Pixus Logo is a registered trademark of Pixus Technologies Inc. other registered trademarks are the property of their respective owners. Specs. subject to change without notice.	

Ethernet Converter Board Configuration Sheet

ETH001-A0C-XX

A = Type

0 = 10GBase-KR to 10Gbase-T (or lower speeds of same protocols), capable of up to 4 channels
1 = 10GBase-T to 10GBase-KR (or lower speeds of same protocols), capable of up to 4 channels
2 = Reserved
3 = Other

2 digit customization code

Blank = standard, no customization

C = Conformal Coating

0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic
3 = Other