

Datasheet

Black Oak Engineering precision electronic instruments

New York · USA · blackoakeng.com · (347) 467-0912

Ethernet Module with BlueJay Wing Interface



Part number BE-WETH
Version 1.0



Description. The Black Oak Engineering Ethernet Module with BlueJay Wing interface (#BE-WETH) provides a digital communication link to 10Base-T / 100Base-TX Ethernet. It includes the PHY layer and all magnetics. It includes activity LEDs and a high stability 50 MHz oscillator.

The Wing-Ethernet is fully supported by BOE's industry leading device drivers. As always, BOE is available for value-added support.

Copyright © 2021-25 Black Oak Engineering ®. All rights reserved.

'BlueJay' and its design are protected.

All Black Oak Engineering products are designed and manufactured in the US.

It has a wide operating temperature range of -40 to +85 °C (-40 to +185 °F).

The Wing format is designed to be a daughterboard on BOE BlueJay MultiBoards, but it can be used by many other hosts that support Ethernet. There are two sockets, 100-mil (2.54 mm) separation. Board is 2.0 x 1.5 inch (51 x 38 mm). Ping BOE for drawing or .Step file.

Features

- Wing form factor.
- 10Base-T / 100Base-TX Ethernet.
- EMI protections to minimize conducted and radiated emissions and susceptibility.
- AEC-Q100 Grade 2 automotive industry qualified.
- RMI interface with MDC/MDIO management.
- LinkMD® diagnostics.
- Receive Signal Quality Indicator.
- Fast start-up and link.
- Loopback diagnostic mode.
- Programmable interrupts.
- Includes diagnostic LEDs and highly stable 50 MHz oscillator.
- Current load varies greatly depending on operating mode. Typical values are: 17 mA in 10Base-T link, 45 mA in 100Base-TX link. The Wing-Ethernet module may be disabled for ultra low power.
- Temperature operating range: -40 to +85 °C (-40 to +185 °F).
- Humidity / water exposure. The PCBA does not include a protective enclosure. Nor is it conformally coated. Condensing humidity and water exposure must be completely avoided.

BOE is continuously improving. We also strive to keep one step ahead of procurement shortfalls. We will deliver to you the latest hardware version possible. In some cases specifications will change.

Additional Approvals & Compliance

- RoHS.
- REACH.
- California Prop 65.

Value Added Design. Want to use the IMU1 module in a new project or OEM application, but need a little assistance? Not a problem. BOE contracts regularly with end users for value added design.

Copyright © 2021-25 Black Oak Engineering ®. All rights reserved.

'BlueJay' and its design are protected.

All Black Oak Engineering products are designed and manufactured in the US.

Warranty Policy. Any instrument ordered from BOE may be returned for full refund, less shipping costs, within 30 days of delivery, provided that the instrument has not, in the opinion of BOE been damaged or misused. An RMA number is required in all cases. See our *Standard Terms & Conditions - Instruments* for more details.

BOE reserves the right to make changes to these specifications as it deems necessary. All technical information contained herein is as accurate as possible; however BOE shall not be held responsible for any errors or for product use, nor for any infringements upon the rights of others which may result from its use. BOE products are not to be used in life support or safety critical applications.

All BOE products are designed and manufactured in the USA.

Copyright © 2021-25 Black Oak Engineering ®. All rights reserved.

'BlueJay' and its design are protected.

All Black Oak Engineering products are designed and manufactured in the US.