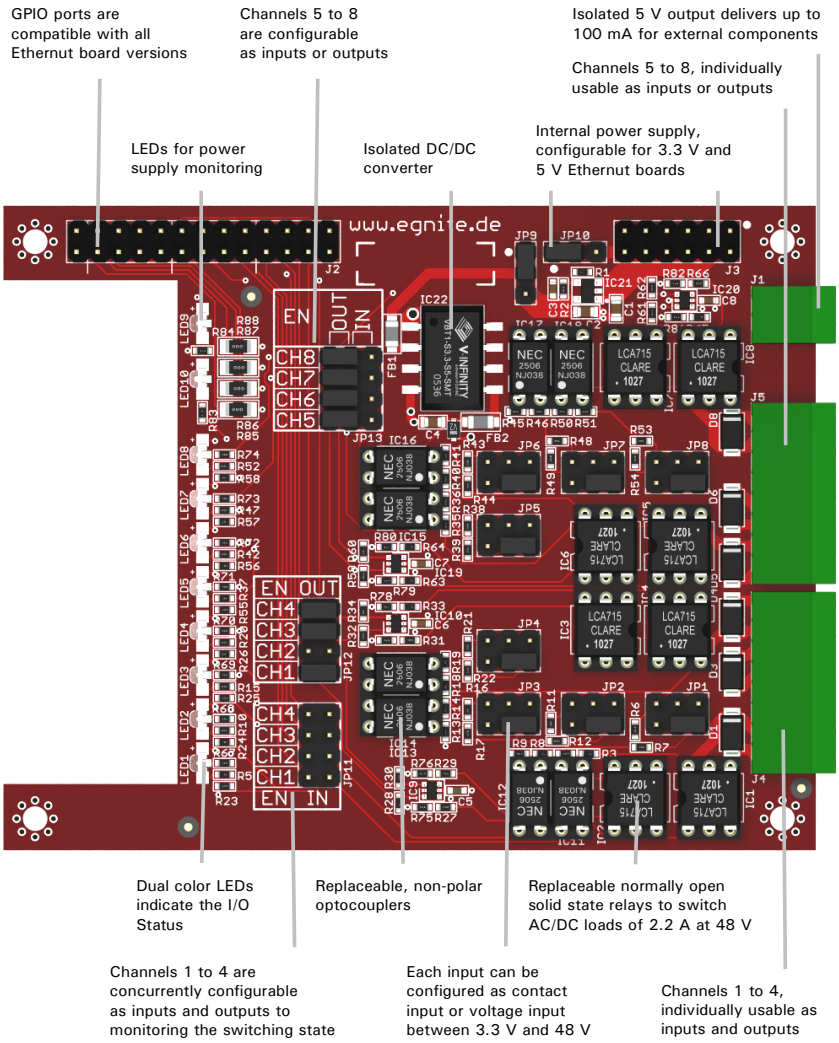
CMI8848 1.0

I/O Card – Ethernut Add-On



Hardware

CMI8848 expands the capability of the Ethernut boards by providing 8 galvanically isolated digital I/O channels, available at pluggable spring-cage terminal blocks. In combination with an Ethernut board, AC and DC loads and states can be remotely monitored and controlled over a TCP/IP network. The boards are stackable, 2 CMI8848 boards are supported by a single Ethernut board.

8 optocoupler inputs are individually jumper configurable to sense dry contacts or voltages between 3.3 V and 48 V. 8 solid state relay outputs can directly drive high loads like contactors, actuators or motors. All optocouplers and relays are mounted in sockets and may be replaced by pin-compatible components.

This robust board has been in production since 2012. Our in-house quality control procedures guarantee a consistently high level of reliability.

Software

A ready-to-use webserver application allows to control and monitor I/Os with a web browser.

In addition, well documented C source code samples are available for all Ethernut boards to help you with your own projects.

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Support

Several companies with many years of experience in Nut/OS software and Ethernut hardware offer commercial support.

Furthermore, mailing lists are an important element of this Open Source project, which enable developers to share their experiences and to help one another in problem solving.

Licence

The entire source code for the target system, as well as the hardware design, have a permissive BSD licence. This is available for commercial products without any licence fees.

In contrast to some other Open Source licence models, there is no obligation to publish your own source code enhancements.

Specifications

Digital I/O

Channels	8, individually configurable as input and/or output
Connector	Phoenix 1881480
Wire size	Min. 0.14 mm^2 (AWG 26) Max. 0.5 mm^2 (AWG 20) Solid and stranded wires

Digital inputs

Voltage	3.3 V to 48 V, non polar
Current	0.8 mA to 8.7 mA
Isolation	3750 V_{RMS}
Bandwith	165 Hz

Digital outputs

Voltage	48 V max.
Current	2.2 A max.
Latency	350 μs on, 113 μs off @ 3.3 V 200 μs on, 115 μs off @ 5 V

Power supply

Voltage	3.3 V or 5.0 V
Max. consumption	89 mA @ 3.3 V 205 mA @ 5 V

Environmental

Operating temperature	-40 to 85°C (-40 to 185°F)
Storage temperature	-65 to 140°C (-85 to 284°F)
Humidity	5 to 95%, non-condensing

Approvals

Safety	PCB flammability rating UL94-V-0
RoHS compliance	EU directive 2002/95/EC

Metrics

Dimensions (LxWxH)	98x78x26 mm (3.86x3.07x1.02 in)
Weight	60 g (0.13 lb)

Product identification

PCB revision	Written in copper on the PCB's backside
Serial number	Barcode sticker label

Order information

CMI8848 1.0

Item no.	EGN110312
Included in delivery	CMI8848 board 2 terminal plugs, 8-pin, 2.5 mm 1 terminal plug, 2-pin, 2.5 mm 4 spacers, M3 x 16 mm 8 screws, M3 x 6 mm 30 jumpers, 2.54 mm CD 2-year warranty