EUROCARD SERIES

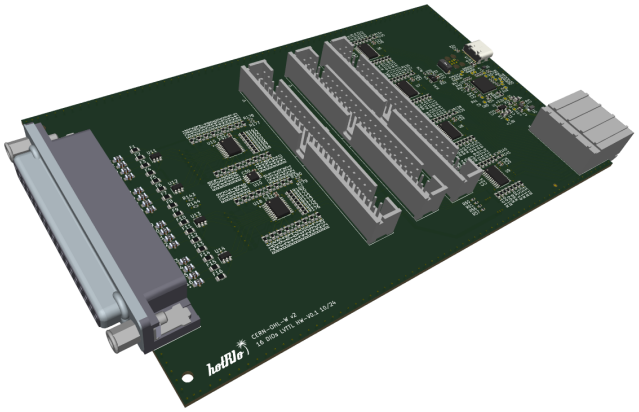
hotRIo

FUSION FOR ENERGY

F-HEE-DIO-LVTTL-16IO

HotRIO Eurocard Expansion board

- 16 LVTTL channels with copper interfaces
- Two banks of 8 channels, each bank independently configurable as input or output
- Supports LVTTL voltage levels for both input and output



The F-HEE-DIO-LVTTL-16IO is a HotRIO Eurocard expansion module designed for flexible digital interfacing with a HotRIO controller board via a Eurocard Type A backplane. It provides sixteen fully isolated LVTTL channels, organized into two banks of eight channels each. Each bank can be independently configured as either input or output, allowing for a mix of input and output channels as required by the application.

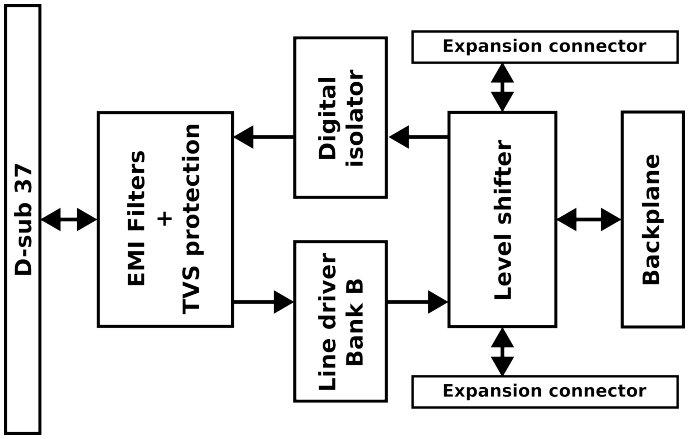
Functionally, the F-HEE-DIO-LVTTL-16IO serves as a robust, transparent digital interface between the field-side DB-37 connector and the system backplane. Signals from the controller board's FPGA enter via the backplane connector and are first conditioned by voltage level shifters (converting 1.8 V logic to 3.3 V LVTTL), followed by line buffers and drivers equipped with Schmitt triggers. This arrangement ensures clean, reliable signal transitions and high noise immunity.

All sixteen channels adhere to the LVTTL voltage standard, supporting low-voltage, high-speed digital signaling. The board's architecture provides full electrical isolation between the backplane and the field wiring, significantly enhancing system safety and reducing susceptibility to electrical noise.

No onboard data processing occurs; instead, the board faithfully transmits signals between the controller and external devices, making it ideal for applications demanding flexible, isolated digital I/O with configurable directionality.

Technical Specifications

Form factor	100x160 mm (Eurocard)
Mounting	Eurocard chassis
Backplane interface	HotRIO Type A
Digital channels	16 (LVTTL, fully isolated, configurable in 2 banks of 8 as input or output)
Isolation method	Line drivers
Input/output connector	DB-37 (front panel)
Power supply	5V DC (from backplane)
Power consumption	TBD W



open source hardware

Warning: This document exclusively describes the hardware detailed herein. Any reference to software or firmware used to operate this hardware is outside the scope of this document.

Developers are advised to consult separate documentation for any information related to software or firmware functionality.

1 License