

Features

Linking your equipment, devices and sensors together.

- *Embedded microcontroller*
- *Customisable universal converter*
- *Customisable signal conditioning*
- *Communication converter*
- *Programmable logic*
- *Small industrial form factor*
- *Wide input voltage supply range 12V – 28V*
- *Simple screw terminal connection*
- *Status indicator logo*

Example Configuration Options

- *Digital I/O Bridge*
- *Analog I/O Bridge*
- *PWM to Frequency*
- *Serial Monitor*
- *Motor Control Bridge*
- *Contact MeT for custom configuration requirements*



Size:
68.1 x 66.22 x 28 mm
(2.68 x 2.61 x 1.1 in)

Product Description

The UniBridge is an incredibly flexible platform that enables the conversion, monitoring and modification of almost any electrical or electronic signal into another. Some examples are listed in the Configuration Options, but they are not limited to these. We can customise the UniBridge to suit your specific applications.

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Bridge Connectivity

The UniBridge has a 7way screw terminal input connector, and a 7way screw terminal output connector. Both of which provide 5x pins for signal conversion. The VDC and GND pins are connected internally to both terminal connectors, to provide a power supply pass-through. This allows the UniBridge to be treated as an in-line module, taking advantage of the existing voltage source.

The USB-C is presented and can be connected to a PC for monitoring. It can also be used to power the UniBridge. If additional power is needed for the application, VDC should be treated as the main power source.

Configuration Flexibility

The most notable feature of UniBridge is the configuration flexibility as a universal converter. Each configuration is customised and provided by MeT, ready to be used out of the box. No modifications are required by the operator or installer. The UniBridge is configured by a custom internal electronics board and microcontroller firmware.

Environment and Mounting

The UniBridge electronics are housed in a small and simple ABS plastic enclosure. Designed to suit industrial applications, operating temperature between -10 to 70 °C.

There are multiple mounting accessory options for the UniBridge, such as DIN rail mount, panel mount and pole mount.

SPECIFICATIONS

Power

Input Voltage: 12-28Vdc, with pass-through feature

Input Current: 0.7mA (no load)
(max current varies per configuration)

Protection: Reverse Polarity and Overcurrent

USB: 5Vdc via USB input

Indication: Red LED Illumination Logo

Input/Output Options

- Up to 10x input/output connection combinations (5x per terminal block)

DIGITAL

- 10x Digital I/O 5Vdc max, 40mA sink/source current single output (when not using level shift)
- Voltage level shift configuration available
- PWM pulse configuration available

ANALOG

- Up to 5x ADC input channels
- 1x Analog Comparator Input
- Analog output configuration available
- 4-20mA configuration available

Environmental

Operating Temperature: -10°C to 70°C

Ingress Protection Rating: IP30

PCA Protection: Conformal Coating Option Available

***Note:** Rugged Enclosure options available.

Communications

SPI: Serial Peripheral Interface

- Full Duplex, 3 wire synchronous
- Master or Slave operation
- Selectable LSB or MSB first data transfer
- Seven programmable bit rates

USART: Universal Synchronous & Asynchronous RX/TX

- Full Duplex
- Support serial frames with 5-9 data bits and 1-2 stop bits
- Hardware odd or even parity check

TWI/I2C: Two Wire Interface

- Up to 400kHz data transfer speed
- 7-bit address space (128 devices)
- Transmitter and Receiver operation supported

USB COM:

- Default baud rate 9600, 8 bits, 1 stop, no parity
- Other rates can be set on request
- Transceiver can be disconnected if USART required
- Monitoring of system status and values (Optional)

SSI: Serial Setup Interface

- Accessible via the USB Port
- Provide basic parameter tuning for the Configuration

Physical

Enclosure Material: Black ABS (UL94-HB)

Width: 68.1mm (without connectors)
79.5mm (with connectors)

Depth: 66.22 mm

Height: 28mm

Weight: 80 - 110 g (determined by configuration)

Mounting Options: Rubber Feet, DIN Rail Mount, Pole Mount,
Panel Mount