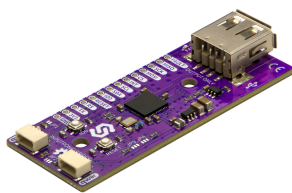


PRODUCT DATASHEET



333390

The Inputronic BRIDGE connects USB HID devices to microcontrollers, simplifying integration without a USB host stack.

Full product documentation, files and tutorials: solde.red/333390

CORE ATTRIBUTES

SKU 333390

WEIGHT 20 g

BARCODE 732388640409

DESCRIPTION

Inputronic BRIDGE is built around the **ESP32-S3** and is designed for reading USB HID device data and forwarding it to your microcontroller. It's used to connect a USB **keyboard**, **mouse**, or **MIDI controller** to any project without implementing a USB host stack on your Arduino or ESP32 side. An onboard boost converter generates 5V for the USB-A port from the 3.3V supply, with overcurrent protection limiting the connected device to 260 mA.

It communicates over **I2C**, **UART**, or **SPI**, selectable via onboard jumpers. The default I2C address is 0x50. Two **Qwiic** connectors allow tool-free I2C connection, and a 14-pin header exposes SPI, UART, I2C, interrupt, and reset pins. Events can be read by polling or via interrupt. We have made this board open-source, so all hardware design files are available for you to inspect or adapt. Our technical support is also there if you need help getting started.

It works with the **Arduino IDE** using the Soldered Arduino library. At 26 × 63 mm, with two mounting holes for M3 screws, it fits easily into any build. Full setup and usage instructions are available in the Soldered documentation.

TECHNICAL DETAILS

- **IC:** ESP32-S3FH4R2
- **Communication:** I2C, UART, SPI (selectable via jumper)
- **I2C address:** 0x50
- **UART baud rate:** 115,200
- **USB input:** USB-A female, HID devices (keyboard, mouse, MIDI), max 260 mA
- **Operating voltage:** 3.3V (onboard boost to 5V for USB)
- **Connectors:** 2x Qwiic, 14-pin header, USB-A
- **Mounting holes:** 2× 3.2 mm (M3 screws)
- **Dimensions:** 26 × 63 mm / 1.0 x 2.5 inch

LINKS

Arduino Library

<https://github.com/SolderedElectronics/Soldered-Inputronic-BRIDGE-Library>

GALLERY

