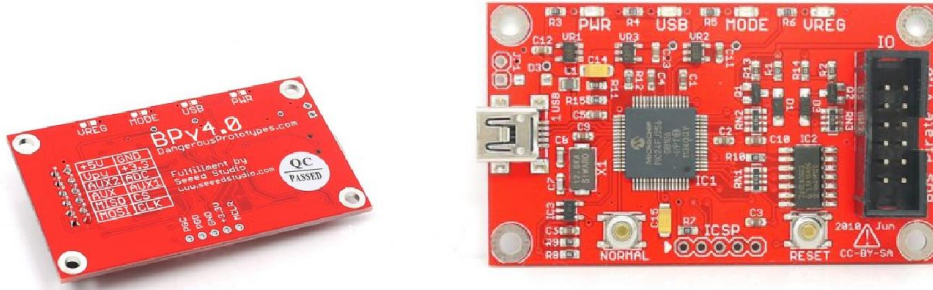


Bus Pirate v4



[Bus Pirate v4](#) is a universal bus interface that talks to electronics from a computer serial terminal. Get to know a chip without writing code. Eliminates a ton of early prototyping effort with new or unknown chips. Seed Studio is the official manufacturer and supporter of the Bus Pirate project. Version 4 is the next generation Bus Pirate hardware, but it's not as stable as [Bus Pirate v3](#). If you're just starting out with the Bus Pirate we still recommend v3 - it's cheaper, more reliable, and has all the same major features. See a [Bus Pirate v4 vs v3 comparison](#). **Protocols** 1-Wire, I2C, SPI, JTAG, asynchronous serial (UART), MIDI, PC keyboard, HD44780 LCDs, and generic 2- and 3-wire libraries for custom protocols.

Features

- USB interface, USB powered
- 5volt tolerant pins
- 0-6volt measurement probe
- 1Hz-40MHz frequency measurement
- 1kHz-4MHz pulse-width modulator, frequency generator
- On-board multi-voltage pull-up resistors
- On-board 3.3volt and 5volt power supplies with software reset
- Macros for common operations
- Bus traffic sniffers (SPI, I2C)
- Transparent USB->serial bridge mode
- 10Hz-1MHz low-speed logic analyzer
- Custom support in [AVRDUDE](#) , [Flashrom](#) , [OpenOCD](#)
- AVR STK500 v2 programmer clone
- Scriptable from Perl, Python, etc.
- A bootloader for easy USB firmware updates
- Open source (CC 0/public domain)

New in Bus Pirate v4

- 256K program space, 4 times more flash than v3
- Integrated, on-board USB (faster)
- Data storage EEPROM to store settings
- Software pull-up voltage selection: 3.3volt, 5volt, or external supply
- 2 extra I/O pins
- Multipurpose button
- [Bus Pirate v4 vs v3 comparison](#)

Support

- [Bus Pirate manual](#)
- [Bus Pirate v4 hardware overview](#)
- [Chip demonstrations](#)
- [Latest firmware](#)
- [Bus Pirate forum](#)

First batch warning

Each Bus Pirate v4 is tested before it leaves the factory, but please keep in mind that v4 is still experimental, unproven hardware. If in doubt please buy the cheaper [Bus Pirate v3](#), it is still manufactured and actively supported. This hardware is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.