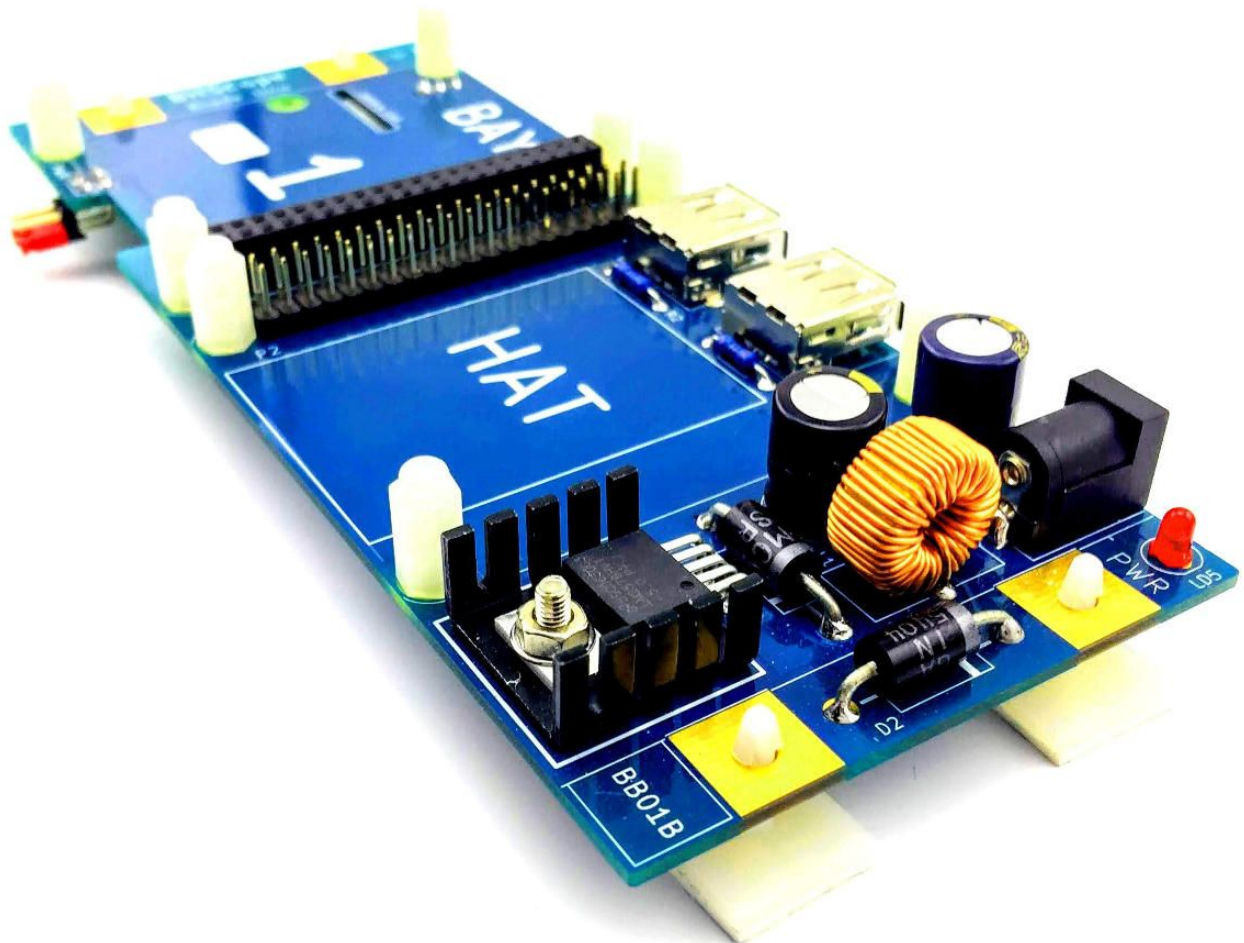


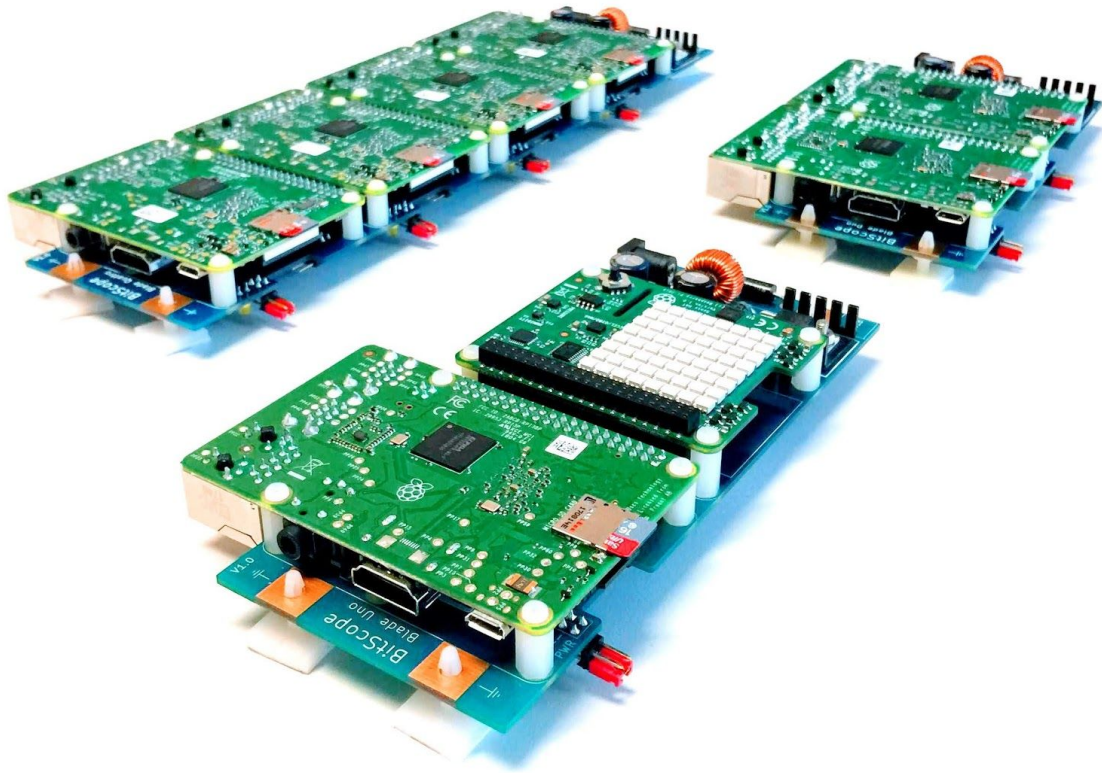
# BitScope

# Blade Uno



Industrial Deployment Solution for Raspberry Pi.

# Overview >



**Blade Uno** is one of three **BitScope Blade** industrial motherboards for Raspberry Pi.

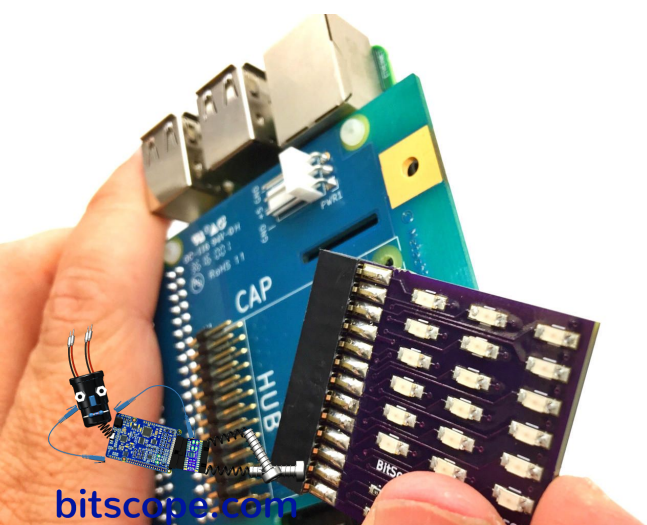
It simplifies Raspberry Pi deployment with mounting options ranging from open frame with M3 mounting tabs, desktop and wall mounting to 19" racks, cluster packs and modules.

Blade Uno accepts DC power from 12V to 48V via a power socket or the mounting tabs. Local 5V regulation ensures the Raspberry Pi and expansion cards are powered reliably and auxiliary connectors are available to power external devices such as cooling fans.

The USB and Ethernet ports are accessible at the rear, Micro SD cards at the front and the HDMI port at the left edge for connection of a monitor to the adjacent Raspberry Pi. An expansion bus supports hub cards connected underneath for I2C, SPI, GPIO and serial I/O.

Blade Uno supports HATs and has two USB sockets to power external devices.

Blade Uno makes it easy to build scalable Industrial IoT and Edge compute applications with Raspberry Pi.



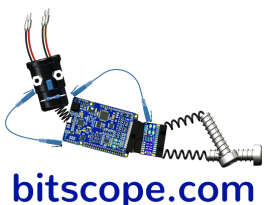
# Features >

Blade Uno offers the following features and capabilities:

1. Supports **Raspberry Pi A+, B+, 2B, 3B, 3B+** and **Zero W**.
2. Accepts DC power from **12V to 48V DC** (up to 20W).
3. Connect power via **2.1mm/2.5mm** or **Power Tabs**.
4. Supports **Passive PoE** with (optional) injector cables.
5. **Regulated 5V power** for attached devices (such as fans).
6. Can power **external USB devices** such as SSD and HDD.
7. Individual **power** and **interrupt** control for Raspberry Pi.
8. Accessible **USB** and **Network** ports and one **HDMI** port.
9. Blade **HUB expansion** bus and **HAT Support**.
10. Supports **Blade Rack** and **Cluster Pack** solutions.

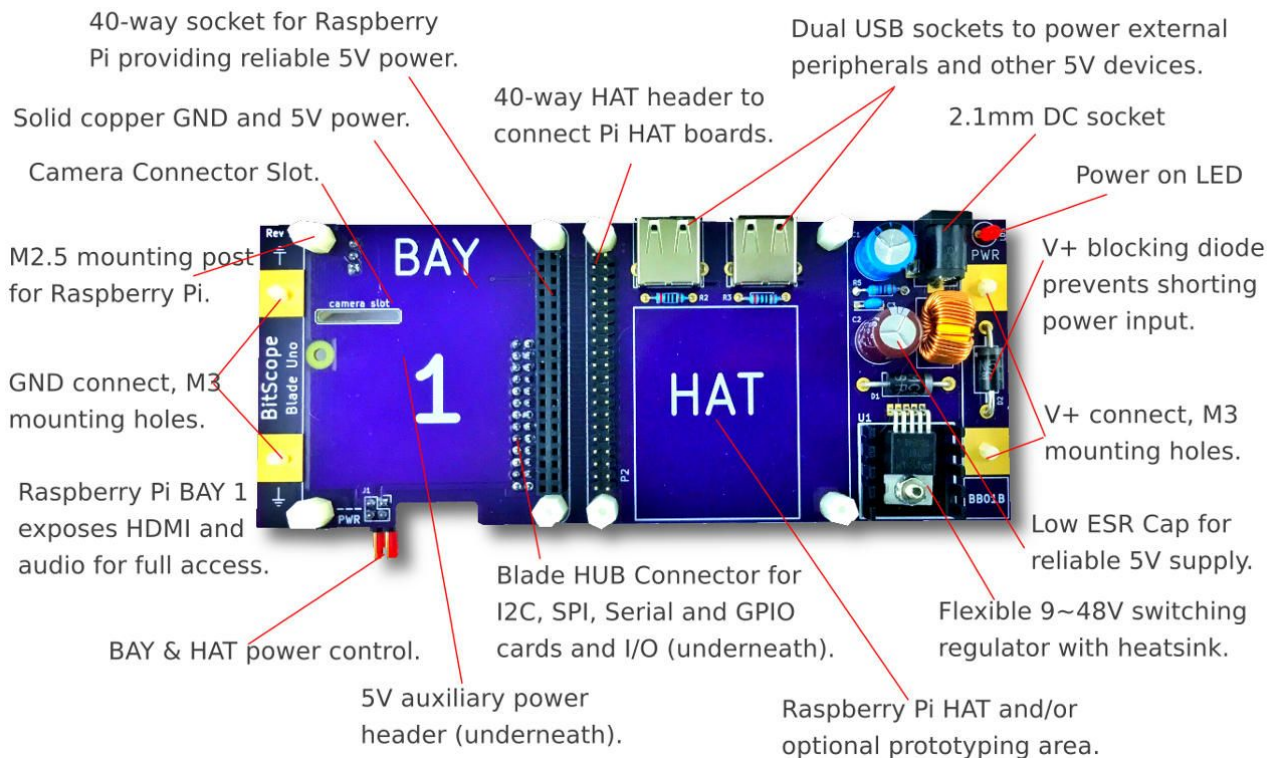
Blade Uno is designed to make it easy to deploy a Raspberry Pi and HAT in industrial contexts.

Supporting DC power from 12V to 48V, which can be unregulated, SLA battery backed or delivered via passive PoE, Blade Uno offers a very robust power and mounting solution for Raspberry Pi and a HAT.





# Product Details >



Blade Uno provides two mounting BAYs, one for Raspberry Pi, the other for a HAT.

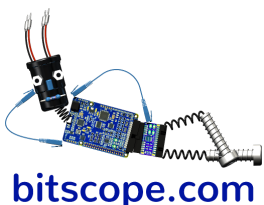
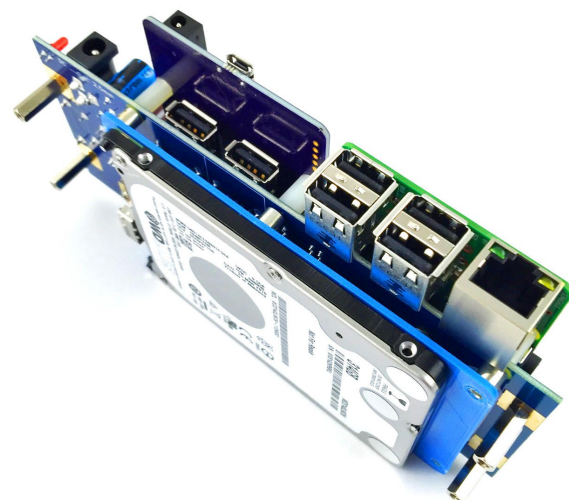
The HAT mounts adjacent to the Raspberry Pi instead of above it. This allows Blade Uno to be used “mix and match” in Blade Pack and Rack solutions with Blade Duo.

Underneath the Raspberry Pi BAY is a HUB bus and AUX power connector. At the rear of the HAT BAY are a pair of USB power sockets. These sockets and the AUX connector are available to power external 5V devices up to a total of 20W (including the Raspberry Pi).

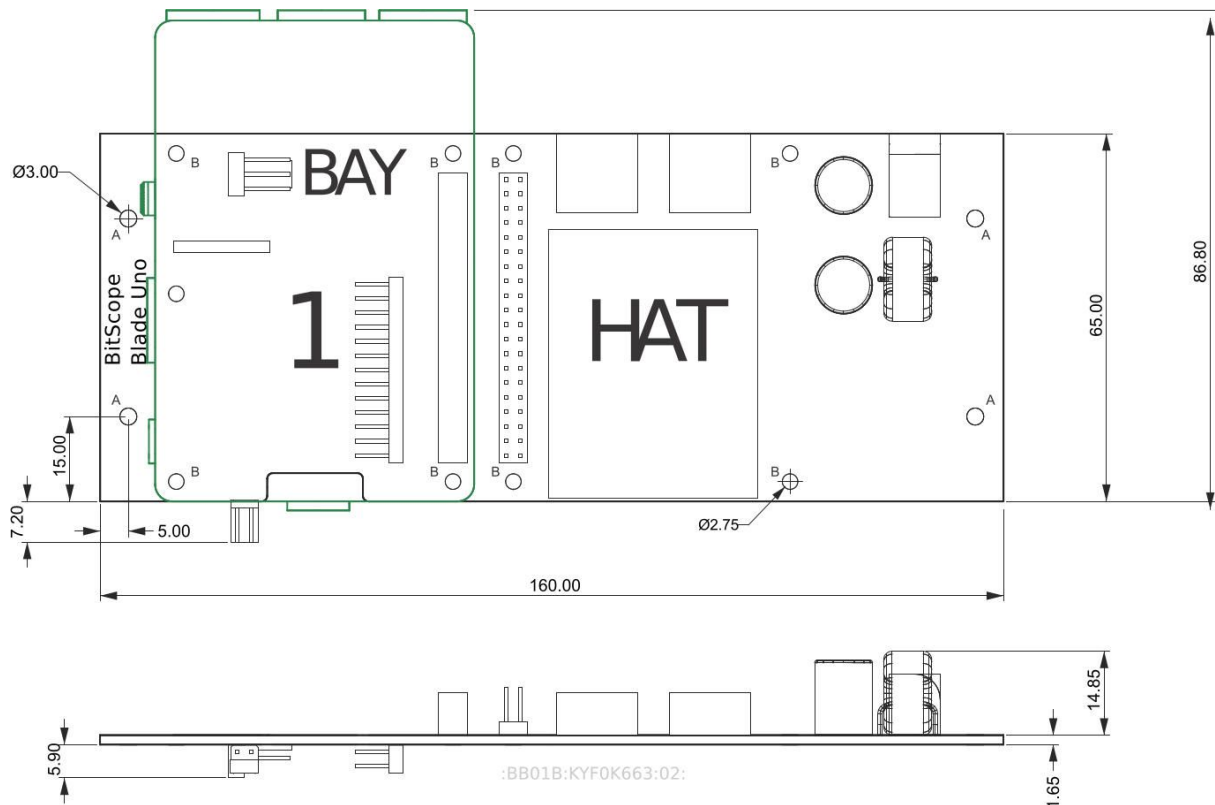
A header controls power to the Raspberry Pi without the need to switch the external power source. It's compatible with BitScope Control Plane solutions for remote (re)boot control of Raspberry Pi.

The standard kit includes stand-offs and mounting tabs and screws. It can be powered via the mounting tabs for “power wiring free” use in clusters and racks. Passive PoE is also supported enabling bespoke remote IoT solutions.

Uno is the ideal stand-alone IoT platform when combined with BitScope and/or third party HAT solutions.



# Mechanical >



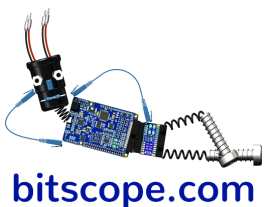
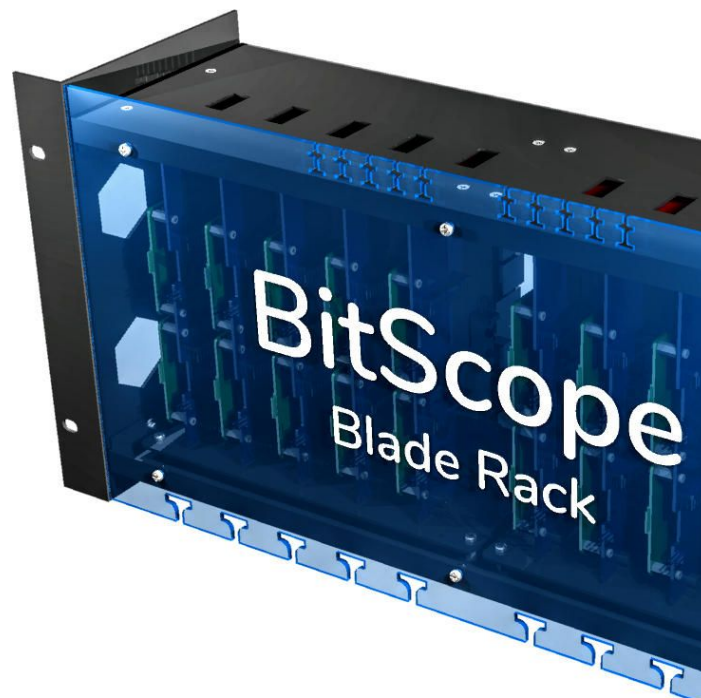
Like all Blades, Uno is compatible with BitScope Blade Rack mounting solutions.

Up to 10 Blade Uno can be mounted in a 5RU 19" Rack unit. Cluster plates and rear fans facilitate 12V~48V power distribution and cooling.

Blade Uno has the same form factor as Blade Duo so these two boards may be mixed and matched within a single Rack.

Each Raspberry Pi may be individually powered and Network, USB and HDMI ports are accessible at the rear and base. A removable perspex front panel allows Micro SD access. WiFi and Bluetooth may also be used.

Custom panels are available if connection to bespoke HAT hardware is required.



## Warnings >

- This product should only be connected to a power source rated for 12V to 48V DC capable of providing 12W to 24W or more. Any external power supply used with Blade shall comply with relevant regulations and standards applicable in the country of intended use.
- This product should be operated in a well-ventilated environment and, if used inside a case, the case should not be covered.
- Whilst in use stand-alone, this product should be placed on a stable, flat, non-conductive surface and should not be contacted by conductive items.
- The connection of incompatible devices may affect compliance, result in damage to the unit, and invalidate the warranty.
- All peripherals used with this product should comply with relevant standards for the country of use and be marked accordingly to ensure that safety and performance requirements are met.
- The cables and connectors of all peripherals used with this product must have adequate insulation so that relevant safety requirements are met.

## Safety Instructions >

To avoid malfunction of or damage to this product, please observe the following:

- Do not expose to water or moisture, or place on a conductive surface whilst in operation.
- Do not expose to heat from any source; the Raspberry Pi and Blade Solo are designed for reliable operation at normal ambient temperatures.
- Take care whilst handling to avoid mechanical or electrical damage to the printed circuit board and connectors.
- Whilst it is powered, avoid handling the printed circuit board, or only handle it by the edges to minimise the risk of electrostatic discharge damage.

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