



Air Giants Limited Manual for brain_on_a_board

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Brain On a Board (BOB)

BOB is a test rig comprised of the components of an [Unfurl Fern](#). It was built by samw in feb-mar 2023.

Components

- A mikrotik routerboard 5 port router/access point
- 4x [Unfurl Nodes](#)
- 2x Beaglebones
 - One is the standard unfurl beaglebone
 - the second “beaglebob” is used for bob-specific stuff, like running a separate mqtt server and connecting to nodes via esp programmers over usb.
- A length of LED strip
- 2x espprog usb programmers
 - Can be connected to any of the nodes for flashing/serial debug
 - connected to beaglebob via a USB hub
- 1x 24v PSU for the nodes and router
- 1x 12v PSU for the LED strip

Network

There is a BAN (BOB Area Network) routed by the MikroTik. This includes a BOB-specific wifi network, the idea being to keep BOB-stuff entirely separate and independent of any other airgiants infra, meaning that a) BOB doesn't interfere with any real kit and b) BOB is self-contained and can be taken on holiday to places. The MikroTik

- MikroTik - 20.20.23.1
- BeagleBone - 10.20.23.10
- BeagleBOB - 10.20.23.20
- Nodes - Dynamic, somewhere in the DHCP range (10.20.23.100-200)
- The mikrotik (10

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