BRG-W01

WiFi Radio Gateway
Sub-IDRANet Bridge

w: www.idratek.com

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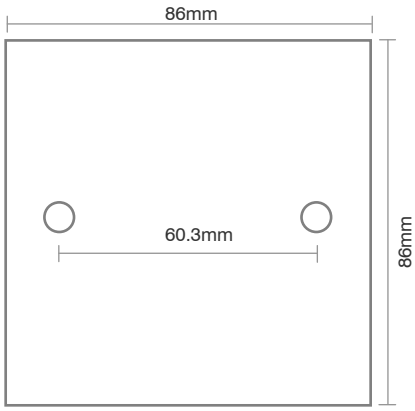
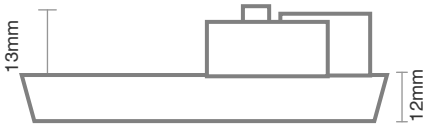
The BRG-W01 module provides a WiFi bridging function between its own sub-IDRANet domain and the main Cortex controlled domain (via an MRG-W01 or Cortex direct to WiFi option). It also allows radio connectivity to other remote network segments and/or direct connectivity to singular WiFi based IDRATEK modules. The IDRANet protocol is translated across the radio connections (IDRANet Over The Air – IOTA), such that modules on remote networks can be operated by Cortex as if they are on the main network. Also Reflex functions are able to traverse the radio connections. Furthermore, the module implements an MQTT communication channel which allows connectivity beyond the local network and a route for 3rd party applications to communicate directly with the wired modules on the sub net.. The module also acts as the power injection point for the sub net which the module serves (just requires an external 12V PSU to form a complete network island). Note: Audio connectivity is not implemented at this time.





Radio

- WiFi IEEE 802.11 b/g/n 2412 - 2484MHz (2.4GHz band) FCC/CE
- Sensitivity: up to -90dBm
- Transmit power: up to 16dBm nom.
- WEP/WPA-PSK/WPA2-PSK (TKIP in AP mode)
- Station (STN) and Access Point (AP) operating modes

Functional

- Translates IDRANet protocol across WiFi (IOTA WiFi)
- Provides connectivity to main IDRANet domain and to other bridged IDRANets and singular WiFi IDRATEK modules
- IOTA via MQTT allows wider and 3rd party spanning integrations
- All above can be individually enabled or disabled
- Can operate as an Access Point for configuration purposes
- Station mode allows conventional connection to 3rd party routers including an MRG-W01 operating in AP mode
- On board Web server user interface (configuration direct to module via standard browsers)
- Over the Air firmware updates (requires connection to intermet)
- WiFi and IDRANet status indicator LEDs
- Sub network power state indicator LED
- Sub network 12-15VDC power injection point
- Allows control of power to the sub network (e.g to allow remote sub network power down/reset)

Electrical

- Operating voltage 12-15V DC (Derived from suitable PSU)
- Source reverse polarity and overcurrent protected
- Current consumption (module only) 30mA avg.
- Maximum sub net current: 1A (fuse limited)

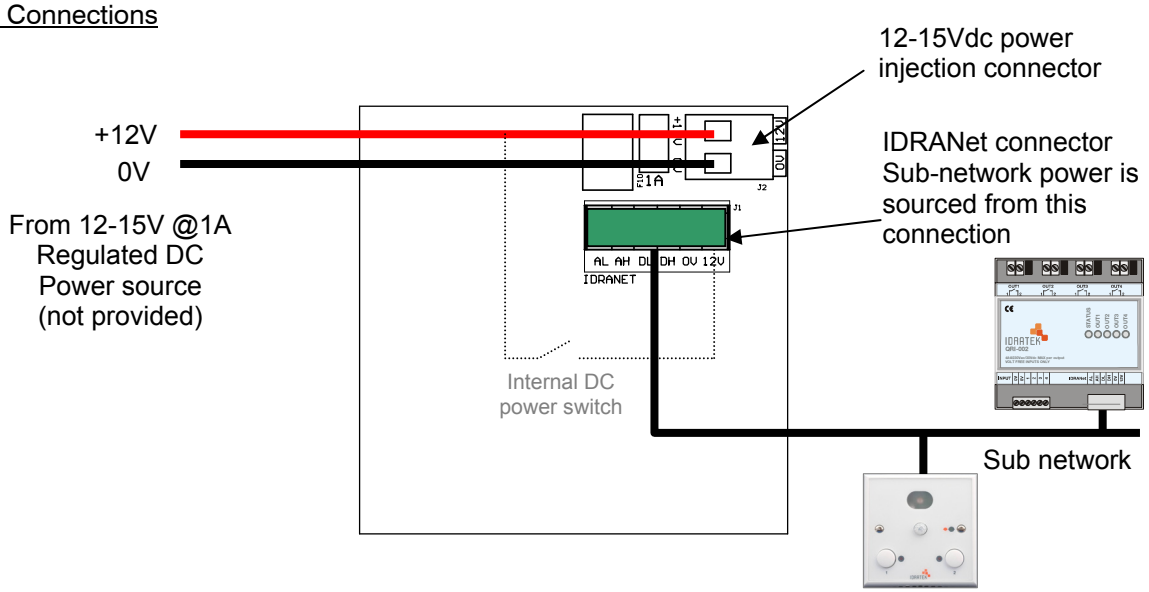
Environmental

- Operating temperature –10°C to +40°C
- Operating humidity 5% to 85% (non-condensing)

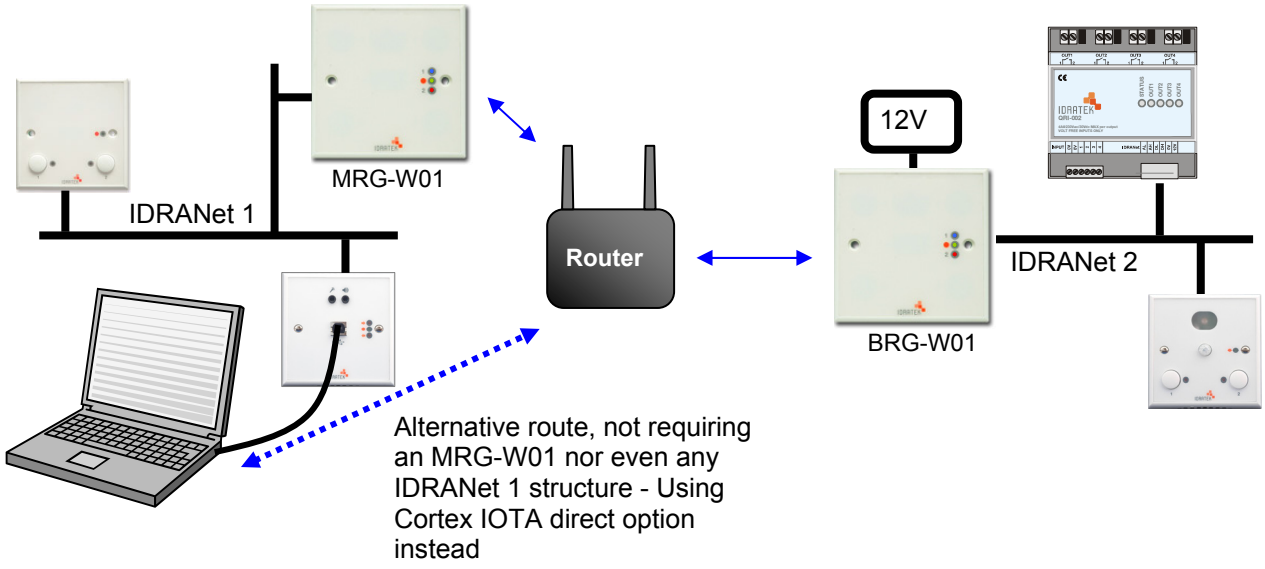
Mechanical

- Designed to fit UK standard 35mm deep electrical pattress
- 60.3mm fixing centres using standard M3.5 screws

Module Connections



Example IDRAnet WiFi bridging connectivity



Example of MQTT connectivity