



BRIGHTHABITAT

DATA SHEET

Universal IoE Controller

Bright Habitat Universal Internet of Everything Controller is specifically designed to offer smart solutions that maximize the performance of Smart Building services.



Description:

The controller is an integrated multi-radio hardware and software system that acts as a gateway to connect networks of devices, collect data in real-time, and monitor devices off-site from a smartphone app or web portal.

The controller supports:

- ✓ Wifi
- ✓ Bluetooth
- ✓ EnOcean
- ✓ AllJoyn compliant
- ✓ Project Haystack compatible
- ✓ Wireless mesh mode

This makes it perfect for vendor agnostic integration with a plethora of devices, and complies with common data formats found in smart building ecosystems. The controllers can be interconnected through wireless mesh which allows cost-effective integration.

The Universal Controller can be deployed in residential and commercial buildings such as office spaces, co-working spaces, hotels, warehouses, student residences, luxury hi-rises and malls.

We excel at large scale deployments and interoperability: whatever process needs to be automated or optimized, our solutions use data points gathered by the controller to deduce context and trigger actions.

Applications and benefits:

The controller acts as an enabler to enhance processes and workflows within spaces. Its plug and play, vendor agnostic design makes it perfect for building a customized IoT infrastructure. It can support simple use cases such as indoor positioning and automation of lighting, HVAC and appliances, to more complicated use cases such as efficient space management by controlling the flow of people and goods, to workflow optimization and energy saving.

Building a customized infrastructure is cost efficient thanks to the wireless mesh feature, the data is secured through state of the art security protocols, and the VizLore cloud platform supports dynamic service management through its dedicated web portal.

Current VizLore services include but are not limited to: Smart Access, WiOcean, and WiBlue.

- Smart Access is an access control solution composed of the controller, a user app, and a manager portal - it grants access to secured areas through a simple swipe on the smart access app.
- WiOcean is a wifi to enocean bridge that enables enocean sensors and devices to communicate through the controller and relay data for enhanced automation options
- WiBlue is an ibeacon service that detects devices and sends notifications about real-time events, and provides engagement metrics.

SPECIFICATION

Power:	Universal input (85~264 Vac / 100~370 Vdc)
Physical size:	107mm x 90mm x 58mm (W x H x D)
SoC:	Broadcom BCM2837
CPU:	4× ARM Cortex-A53, 1.2GHz
GPU:	Broadcom VideoCore IV, OpenGL ES 2.0, OpenVG 1080p60 H.264 high-profile encode/decode, 400 MHz
RAM:	1GB LPDDR2 (900 MHz)
Networking:	10/100 Ethernet, 2.4GHz 802.11n wireless, Bluetooth 4.1 Classic, Bluetooth Low Energy, EnOcean 902 RF MODULE, TRANSCEIVER, FSK, 902MHZ, 125KBPS
Storage:	microSD (8GB by default)
Ports:	<ul style="list-style-type: none"> • 1x 10/100 Ethernet • 4x USB 2.0 • HDMI video/audio connector • TRS connector, 3.5mm analogue audio-video jack • Camera Serial Interface (CSI) • Display Serial Interface (DSI) • Low level peripherals: • 40 General Purpose Input/Output (GPIO) pins, Serial Peripheral Interface Bus (SPI), I²C, I²S, [5] I2C IDC Pins at 3.3V • Important note: • Not all 40 pins are available: • Pins 14 (UART0_TXD), 15 (UART0_RXD) used by EnOcean transceiver • Pins 29 (GPIO5), 31 (GPIO12) used for driving relays • All remaining pins are available for usage
Relays:	<p>2x embedded relays:</p> <ul style="list-style-type: none"> • Relay 1: terminators 1 to 3 • Relay 2: terminators 4 to 6 <p>Nominal switching capacity (resistive load)</p> <ul style="list-style-type: none"> • N.O. side: 10 A 125 V AC, 5 A 250 V AC, 5 A 30 V DC • N.C. side: 3 A 125 V AC, 2 A 250 V AC, 1 A 30 V DC <p>Max. switching power (resistive load)</p> <ul style="list-style-type: none"> • N.O. side: 150 W, 1,250 VA • N.C. side: 30 W, 500 VA <p>Max. switching voltage 250 V AC, 30 V DC</p> <p>Max. switching current</p> <ul style="list-style-type: none"> • N.O.: 10 A (125V AC), • N.C.: 3 A (125V AC) • Expected life: Mechanical Min. 107 (at 180 times/min.)
Environmental:	Operating temperature: 0°C to 70°C
Mounting:	EN50022 DIN rails
Power consumption:	<p>Boot: Max: 3.75W Avg: 1.75W</p> <p>Idle: 1.5W</p> <p>Stress: Max: 6.7W Avg: 4.25W</p>
Configuration:	Local Web User Interface (HTTP/S), CLI (Telnet/SSH), Cloud/Web based management and configuration
Monitoring:	Cloud/Web based monitoring
Software updates:	Over the air (OTA) updates
Frameworks and protocols:	AllJoyn, Project Haystack, SIP, Wireless mesh routing protocol - B.A.T.M.A.N. Advanced
Compliances:	RoHS compliant / CE, cULus, EN, IEC / BS EN ISO9001:2008 / ANSI/ESD S20.20:2007 / BS EN 61340-5-1:2007