BluFi[™] Bluetooth LE – WiFi Gateways

Smart Gateways for Beacon Management



BluFi[™] are Bluetooth Low-Energy (LE) to WiFi gateways that relay signals between BEEKs Beacons and the cloud of HID's end-to-end IoT Services ecosystem. In combination with the corresponding Bluzone[™] cloud services, BluFi enable BEEKs[™] beacons to be centrally managed through the cloud, to transfer new messages, firmware updates, sensor data and battery status checks remotely. Their unique design allows BluFi devices and BEEKs beacons to broadcast reliably even in densely populated WiFi environments.

BEEKs and BluFi are not limited to standard beacon applications. HID Condition Monitoring Services, include a range of sensor beacons for motion, temperature and vibration. This sensor data is sent via BluFi gateways to the Bluzone Cloud to perform operational analysis for motorized equipment.

HID Location Services, is an efficient real-time asset location and item management platform leveraging BEEKs beacons to effectively pin down the locations of assets inside a warehouse, campus or manufacturing hall.

The calculation of the BEEKs location is based on received signal strength and other factors measured by BluFi devices.

BluFi AC devices are available in four major international power plug versions and can be installed in any standard power outlet on a wall or ceiling. BluFi DC Plenum is a flame resistant, low-voltage DC powered version without battery.

BluFi UP are powerd through Power over Ethernet (IEE 802.3af) connectors and may communicate via omni-directional internal or specialized external antennas. Also BluFi UP devices and AC US support the 5 GHz WiFi band in addition to 2.4 GHz and TLS 1.2 end-to-end encryption. BluFi DC Plenum is designed to be installed with an optional mounting kit on walls, ceilings or in the plenum. DC power connection can be done via USB or direct wires.

BluFi devices make it easy and cost efficient to cover an area with Bluetooth LE to internet connectivity to take advantage of centralized management, real-time condition monitoring or location services with a fraction of the effort required by alternative technologies.



KEY BENEFITS

- Cloud Enabled Bi-directional Bluetooth LE to WiFi gateway for remote management
- Smart Accurately measures distance to Bluetooth LE Beacons for RTLS
- Rapid Implementation Simply install at any conventional power plug

TECHNOLOGY HIGHLIGHTS

- · Bluetooth and WiFi compliant
- iBeacon (Apple), Eddystone (Google) and sBeacon (HID) supported
- Models for any standard A/C, UP or USB power outlet
- · Central management possible
- Bluetooth LE enabled Aruba access points may reduce the number of BluFi devices needed to implement Location Services



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Optional mounting kit for BluFi DC Plenum or BluFi UP

APPLICATION AREAS

Condition Monitoring

- Wireless status info on motorized equipment (on/off)
- Fault detection based on vibration or temperature trends
- Reporting of equipment duty cycles
- Cold chain applications

Real-time location

- Indoor position tracking of assets (Tools, portable equipment, vehicles)
- Position based alerting, heatmaps etc.
- · Workplace optimization
- · Emergency mustering

Retail advertisement

- BEEKs beacons may be used in iBeacon and/or Eddystone mode for advertising messages or location based services
- Central provisioning or monitoring via BluFi and Bluzone possible
- Optional counting phones in vicinity

	BluFi™ AC			
	6		160	•
Model Number	BluFi-AC01	BluFi-AC00		
Configuration Types	BluFi-ACUS US Plug (Type A)	BluFi-ACEU EU Plug (Type C)	BluFi-ACUK UK Plug (Type G)	BluFi-ACAU AU Plug (Type A)
Part Number	BVBFUS-V2 (US)	BVBFEU (EU)	BVBFUK (UK)	BVBFAU (AU)
	ELECTRICAL			
Operating Voltage	100-240V AC, 50/60 Hz	Hz		
AC Plugs / Charge Plug	NEMA 1-15 ungrounded (Type A)	CEE 7/16 "Europlug" (Type C)	BS 1363 (Type G)	AS/NZS 3112 (Type I ungrounded)
	RF SPECIFICATION	IS		
Standard Protocol	Bluetooth Low Energy (LE) 4.2 & 5.1 / WiFi: 802.11 b/g/n	Bluetooth Low Energy (LE) 4.2 / WiFi: 802.11 b/g/n		
Frequency Band (No. of Channels)	2400-2483.5 MHz (40 channels) & 5.180-5.825GHz	2400-2483.5 MHz (40 channels)		
Max Output Power	Bluetooth Low Energy (LE): <10 dBm (e.i.r.p.) / WiFi: <20 dBm			
Antenna / Gain	integral pcb, 0 dBi			
	BATTERY			
Туре	N/A			
Life	N/A			
	PHYSICAL			
Length × Width	2 × 1.5 × 1.5 in (50 × 38 × 38 mm)			
Housing Material	Polycarbonate			
Color	White			
Weight	1.3 oz (37 g)	1.6 oz (46 g)	1.7 oz (48 g)	1.6 oz (46 g)
	THERMAL			
Storage	-13° to +149° F (-25° to +65° C)			
Operating Temperature	-13° to +149° F (-25° to +65° C)			
	OTHER			
Standards	FCC JQ6. BLUFIAC01, IC 2236B-BLUFIAC01; Bluetooth LE; WiFi 2.4 GHz and 5 GHz	FCC/CE/UL/FRE; Bluetooth LE; WiFi 2.4 GHz		
Options	Software configurable			
Box Size	1 pcs.			
Warranty	1 year			





	BluFi™ DC Plenum	BluFi™UP		
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Model Number	BluFi-DC00	BLUFI-UP00		
Configuration Types	BluFi-DCPL (Plenum environment)	BluFi-UP (3dBi Internal antennas + 9dBi high gain internal BLE antenna)	BluFi-UP-EXT (External antenna option + internal 3dBi WiFi and BLE antenna)	
Part Number	BVBFLVPW	BVBFPOEUP	BVBFP0EUP-EXT	
	ELECTRICAL			
Operating Voltage	Input: 5V DC, 2.0A max	Input: 9V-24V DC, PoE IEEE 803.af		
AC Plugs / Charge Plug	USB Type A	Optional DC power cable		
	RF SPECIFICATIONS			
Standard Protocol	Bluetooth Low Energy (LE) 4.2 / WiFi: 802.11 b/g/n	Bluetooth Low Energy (BLE) 4.2, WiFi: 802.11 b/g/n, Ethernet		
Frequency Band (No. of Channels)	2400-2483.5 MHz (40 channels)	2400-2483.5 MHz (40 channels) & 5.180-5.825GHz		
Max Output Power	Bluetooth Low Energy (LE): <10 dBm (e.i.r.p.) / WiFi: <20 dBm			
Antenna / Gain	Internal, 0 dBi, Directional Duplex	Internal: 3 dBi Omni Directional WiFi and BLE antenna & 9 dBi high-gain BLE antenna	Internal: 3 dBi Omni Directional WiFi and BLE antenna, External: External SMA male conection for WiFi and BLE antennas	
	BATTERY			
	N/A			
Туре	N/A			
Type Life	N/A N/A			
	N/A	3.7 × 3.5 x 1.25 in (94.1 × 90.1 x 31.8 mm)	4.12 x 3.94 x 1.25 in (104.7 x 100 x 31.8mm)	
Life	N/A PHYSICAL	3.7 × 3.5 x 1.25 in (94.1 × 90.1 x 31.8 mm)	4.12 x 3.94 x 1.25 in (104.7 x 100 x 31.8mm)	
Life Length × Width	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm)	3.7 × 3.5 x 1.25 in (94.1 × 90.1 x 31.8 mm)	4.12 x 3.94 x 1.25 in (104.7 x 100 x 31.8mm)	
Life Length × Width Housing Material	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate	3.7 × 3.5 x 1.25 in (94.1 × 90.1 x 31.8 mm) 5.82 oz (165g)	4.12 x 3.94 x 1.25 in (104.7 x 100 x 31.8mm) 4.02 oz (114g)	
Life Length × Width Housing Material Color	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate White			
Life Length × Width Housing Material Color	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate White 4.13 oz (117 g)			
Life Length × Width Housing Material Color Weight	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate White 4.13 oz (117 g) THERMAL			
Life Length × Width Housing Material Color Weight	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate White 4.13 oz (117 g) THERMAL -4° to +158° F (-20° to +70° C)	5.82 oz (165g)		
Life Length × Width Housing Material Color Weight	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate White 4.13 oz (117 g) THERMAL -4° to +158° F (-20° to +70° C) -4° to +158° F (-20° to +70° C)	5.82 oz (165g)	4.02 oz (114g)	
Life Length × Width Housing Material Color Weight Storage Operating Temperature	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate White 4.13 oz (117 g) THERMAL -4° to +158° F (-20° to +70° C) -4° to +158° F (-20° to +70° C) OTHER	5.82 oz (165g) -4° to +149° F (-20° to +65° C)	4.02 oz (114g)	
Life Length × Width Housing Material Color Weight Storage Operating Temperature	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate White 4.13 oz (117 g) THERMAL -4° to +158° F (-20° to +70° C) -4° to +158° F (-20° to +70° C) OTHER FCC/CE; Bluetooth LE; WiFi 2.4 GHz	5.82 oz (165g) -4° to +149° F (-20° to +65° C)	4.02 oz (114g)	
Life Length × Width Housing Material Color Weight Storage Operating Temperature Standards Flame Resistance	N/A PHYSICAL 3.4 x 3.2 x 1.25 in (86.1 x 82.2 x 31.8 mm) Polycarbonate White 4.13 oz (117 g) THERMAL -4° to +158° F (-20° to +70° C) -4° to +158° F (-20° to +70° C) OTHER FCC/CE; Bluetooth LE; WiFi 2.4 GHz UL-2043 Wall or ceiling / plenum mounting kit	5.82 oz (165g) -4° to +149° F (-20° to +65° C) FCC/CE/IC; BLE; WiFi 2.4 GHz + 5 GHz; TLS 1. Wall or ceiling / plenum mounting kit (P/N: BVBFB2) DC Power Harness (P/N:	4.02 oz (114g)	



