OpenSource BLE 5/Thread/Zigbee Dongle & to WiFi Gateway
Market Ready Enclosure, Just Add Your Firmware

FANSTEL™
Since 1990

Gateway for Home/Small Mesh

BWG832F is a low cost Bluetooth 5-WiFi gateway for point to point or small mesh network where security is not required or limited decryption and authentication can be implemented in firmware. Its range to other node is 280 meters, enough for home and typical office implementation.
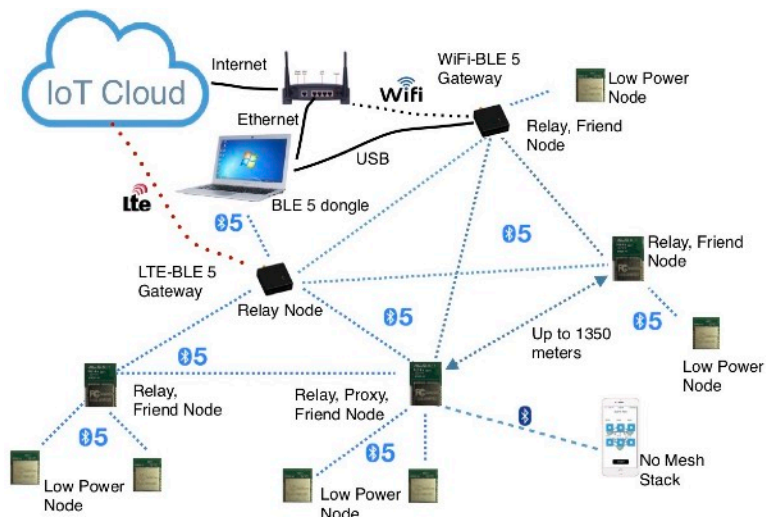
BWG832X to Penetrate Multiple Walls

Using BT832X with +20 dBm TX, BWG832X can penetrate multiple walls or be used in wide area Bluetooth mesh applications. With an external antenna,

Industrial Gateway, Secure and Longer Range

CryptoCell-310 co-processor in BWG840 gateways can offload decryption and authentication of messages, required in Bluetooth SIG mesh. Cortex M4F MCU can relay messages in a large mesh network efficiently. Its range is 500 to 1170 meters at 1Mbps and higher at 125 Kbps. In addition to Bluetooth 5, Thread and Zigbee are also supported.

Nordic nRF52 Development Environment

Nordic nRF52 SoC in Bluetooth module communicates with a cloud server in message layers. Nordic nRF52 development environment should be used. An nRF52DK is required.

Source codes specific to gateway interfacing with Fanstel BLE 5 sensors are available at:
http://www.fanstel.com/download-opensource/

Over-The-Air DFU

The Bluetooth module is supported by an Over-The-Air Device Firmware Upgrade (OTA DFU) feature. This allows for in the field updates of application software and SoftDevice.

WiFi Module development-Mongoose OS

Development Kit (e.g., DK BWG832F) is required to load codes into WiFi module. DK is preloaded with codes for connection to Fanstel development server.
Mongoose OS OpenSource codes for connecting to Fanstel development server and to **Google IoT Core** are available. They can be used as base to develop interface with other servers.
Link to download additional document and source codes:
http://www.fanstel.com/download-opensource/

Miscellaneous

- Size: 60x60x22mm
- Desk and wall mountable
- Power supply and USB cable included
- 2 LED indicators defined by user

USB840F USB Dongle

- Uses Fanstel BT840F long range module
- Support Bluetooth 5, Thread and Zigbee radio protocols
- Vertical antenna for near-omni directional range coverage
- Use Nordic nRF52 DK and Tag-Connect cable TC2050-IDC-NL-050-ALL to re-program codes
- 2 LED indicators defined by user

	Low Cost	Long Range	Industrial Grade Bluetooth 5/Thread/Zigbee		USB Dongle
Gateway	BWG832F	BWG832X	BWG840F	BWG840X	USB840F
WiFi Module	ESP 8266	ESP 8266			N/A
BLE Module	BT832F	BT832X	BT840F	BT840X	BT840F
BT range,1Mbps	280 meters	1170 meters	500 meters, est.	1170 meters, est	500 meters, est.
BT range,125 Kbps			800 meters, est	>1350 meters	800 meters, est
Thread, Zigbee			Yes	Yes	Yes
1K price, each	$22.49	$36.65			
Development Kit	DK BWG832F	DK BWG832X	DK BWG832F	DK BWG832X	
Availability	Production	5/2018	7/2018	9/2018	7/2018