

The QPG6100 Development Kit provides a complete hardware and software solution for building Bluetooth® Low Energy, Bluetooth Mesh, Zigbee and Thread connected products with the QPG6100 IoT SoC. The DK enables quick time-to-market with a complete set of software, development boards, tools and documentation

Benefits

- **Fast time-to-market** by leveraging reference applications as basis for turn-key product solutions.
- **Easy building of single SKU products** with standard agnostic solutions that seamlessly integrate in a Bluetooth Low Energy Mesh and Zigbee network using Qorvo's patented ConcurrentConnect™ technology.
- **Interoperable** with major Smart Home eco-systems: IKEA Home Smart, Philips Hue, Samsung SmartThings and Amazon Alexa.

Turn-key Applications

Turn-key applications can be used as is, or with only minimal changes. They are the perfect starting point for building certifiable applications with minimum application developer effort. All reference applications can perform over-the-air Firmware updates over Zigbee, Bluetooth Low Energy and Bluetooth Mesh and use secure boot to load only authenticated images.

Lighting

- Color and dimmable white light bulb
- Dimmer and on/off light switch
- Zigbee + Bluetooth Mesh combo, using QPG6100's unique ConcurrentConnect™ technology with an easy-to-use API.
- Touchlink commissioning
- Bluetooth connectivity for onboarding

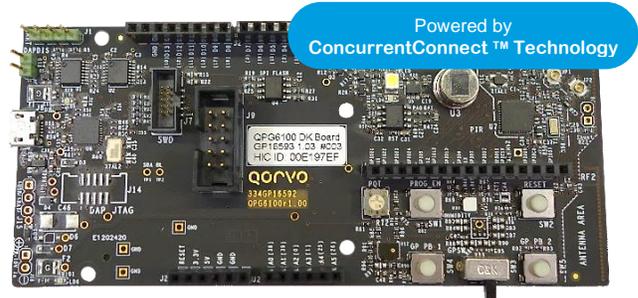


Sense and Control

- Zigbee IAS Zone Security Device (door/window or motion sensor).
- Contact sensor; generates an alarm when a door is opened. Uses Zigbee to communicate with a hub and trigger notifications and alarms.

Development Kit

The development kit contains 3 development boards to quickly prototype applications. These boards combine QPG6100, peripherals, LEDs, buttons, power supply and a program/debug interface



Zigbee

The development kit includes a Zigbee communication stack, and reference applications supporting sleepy/non-sleepy end-device and router products.



Zigbee Cluster Library – Client ✓ / Server ✓		
Basic ✓	Thermostat ✓	OTA Upgrade ✓
Power Configuration ✓	Fan Control ✓	Poll Control ✓
Device Temp. Configuration ✓	Dehumidification Control ✓	Door lock ✓
Identify ✓✓	Color Control ✓✓	Window Covering ✓
Groups ✓	Ballast Configuration ✓	Touchlink ✓
Scenes ✓	Illuminance Measurement ✓	Manufacturer Specific ✓✓
On / Off ✓✓	Temperature Measurement ✓	IAS Warning Device ✓
On/Off Switch Configuration ✓	Relative Humidity Measurement ✓	Metering ✓
Level Control ✓✓	Occupancy Sensing ✓✓	Key Establishment ✓
Time ✓	Carbon Monoxide ✓	Electrical Measurement ✓
RSSI Location ✓	Carbon Dioxide ✓	Diagnostics ✓
Commissioning ✓	IAS Zone ✓	

Thread and Connected Home over IP

QPG6100 supports Thread and Connected Home over IP applications through their respective open source SW repositories. Documentation on how to use and integrate these open source software components is available (see: Contact Information).



Bluetooth Low Energy and Bluetooth Mesh

A certified Bluetooth Mesh stack is included, which can be used for onboarding the smart home device in connected networks using Android™ based device.



The Bluetooth Low Energy Peripheral role is supported in this configuration. An example of this use case is included.

Included features for the Bluetooth Mesh stack:

- Node and Provisioner role
- Legacy GATT device support (for smartphone connectivity)
 - Concurrent GATT and Mesh operations
 - Proxy (Client/Server) role support
- Broadcast flooding mesh with configurable Relay role and configurable Time-To-Live
- Persistent network and configuration data storage
- Highly customizable node capabilities
- Vendor specific model support.

Point-to-point Over-the-Air FW updating is supported. Remote provisioning and Mesh Over-the-Air FW update features, that are included in the upcoming Bluetooth Mesh v1.1.0 specification, are also included (development level quality).

The following Bluetooth Mesh models are included (client/server):

Generic OnOff	Health Model
Generic Level	Light Lightness
Generic Default Transition Time	Light CTL
Generic Power OnOff	Light HSL
Generic Battery	Configuration Model
Scene	

Development Environment and Tools

The development kit uses the IAR compiler and IDE. A 30-day IAR trial license is included.

Several development tools are included:

- Bluetooth Mesh Network Manager (Provisioner) to set-up, tune and control a Bluetooth Mesh network. The provisioner tool supports all provisioning bearers, including Remote Provisioning.
- Mesh Scene and Groups Generator
- Zigbee and Bluetooth Mesh OTA FW Update Image Generator
- Android smartphone applications to provision, configure and control Bluetooth Mesh devices and networks
- RF Performance and Mass Production Test Tool including support for Bluetooth Direct Test Mode.

Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:



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