

IOT REFERENCE PLATFORM



The **Connected Development Reference Platform** is a feature rich reference design that is well suited for most IOT applications – particularly those that are size/power/cost constrained. The core of the design is Silicon Lab’s BG21 Bluetooth SOC which includes a BLE 5.0 stack, built-in security features, and flexible application processing capabilities. The BG21 is combined with a Telit ME310 LTE CAT-M1/ NB-IOT cellular modem, enabling the usage of cellular connectivity for a wide range of IOT target applications.

Connected Development has added a broad array of value-added cloud service SDKs and drivers as well as sensor drivers to this platform to accelerate the design and deployment of edge devices for our clients. This powerful combination of pre-tested hardware and software building blocks allows us to focus engineering time on our client’s most important need – their specific application – rather than on base platform design.

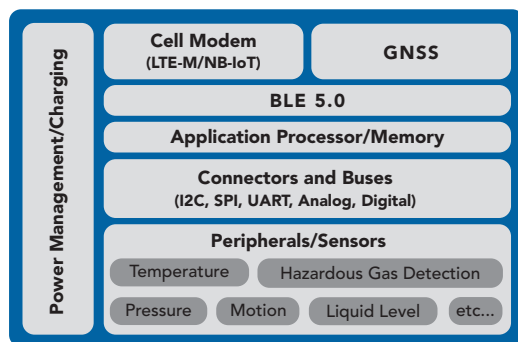
The platform and all components used for it are also specifically chosen to be applicable for cost effective volume manufacturing, so the transition from initial prototyping to custom product production is seamless.

BENEFITS

- Proven/pre-tested IOT software building blocks
- Pre-tested connectivity with leading cloud services
- **Rapid prototyping** using the exact same components and software that will go into a volume production build
- Reference schematics/layout available to kick start any customer hardware design
- Ultra low power consumption design
- Design can be **customized** to meet customer’s exact needs (form factor, sensors, etc)
- Reference design has been FCC and cellular carrier certified, easing final customer certification activities
- Cellular design can be used for all major cellular MNOs and regions
- 20 dBm output power capability enables **best** in class BLE range
- Software and hardware IOT security is designed into the core platform from the start

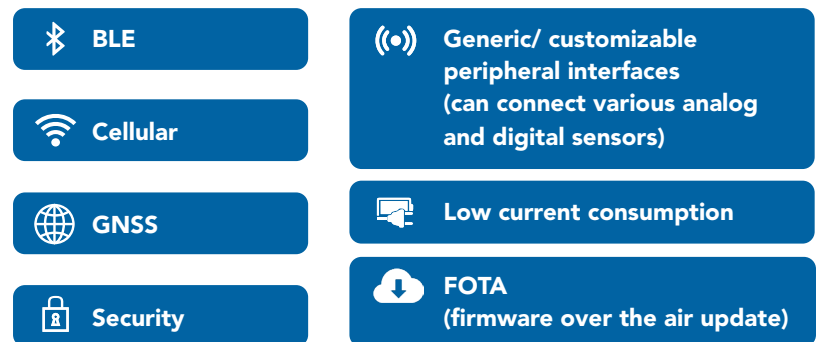
DESIGNED BY	POWERED BY	WORKS WITH		CELLULAR CARRIERS

COMPONENTS



Customization options upon request

SERVICES



SPECIFICATIONS

Cellular	LTE CAT M-1
	LTE NB-IOT
	Verizon
	AT&T
BLE	BLE 5.0
	BLE Mesh Support
	Up to 20 dBm BLE Output power for extended range
	BLE central/peripheral support
	BLE client/server support
Cloud Support	Amazon Web Services (AWS) IOT connectivity
	Azure IOT connectivity
	Zipit Wireless connectivity
	AT&T Dataflow
Security	TLS 1.2 Communications to ensure all network communications are secure
	Secure Key Management and Storage using hardware secure element
	Secure boot verification to ensure executable code has not been tampered with
	Bluetooth secure pairing and encryption
	Secure debugging interfaces
	Tamper detection
Sensor interfaces and Support	Support for external devices connected via GPIO, I2C, UART, or SPI
	4-20 mA loop support
	0-10 V sensor support
	RTD (Resistance Temperature Detector) sensor support
Current Consumption	Ultra-low power consumption states available
	Modem Power Save Mode (PSM) and Discontinuous Reception (eDRX)
	Wake on Bluetooth pattern for provisioning/ commissioning
Misc Features	Built in JSON Parser
	MQTT stack
Firmware Updates and Debugging	FOTA over cellular
	FOTA over Bluetooth
	Cellular module FOTA support
	Secure Bluetooth debugging support
	Secure device provisioning over Bluetooth
GNSS	GPS
	GLONASS
	Beidou
	Galileo
Target applications and Verticals	Industrial IOT
	Asset Tracking
	Sensor monitoring and reporting
	Remote asset control
	Motion detection and reporting
Power Options	Battery operated IOT devices
	5-24 V DC
	Lithium Battery
	Solar Powered

Services

Connected Development's comprehensive service program offers a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through deployment, troubleshoot issues, and help you with product configurations.

Customization Support

With Connected Development you have the ability to work one-on-one with an experienced engineer, to tailor the product to your individual needs.

Headquarters

Connected Development
1001 Winstead Drive, Suite 130
Cary, North Carolina 27513

Tel: +1 919-234-6501

Email: info@connecteddev.com
www.connecteddev.com

