

BLE-Pmod (Azure Sphere Starter Kit accessory)

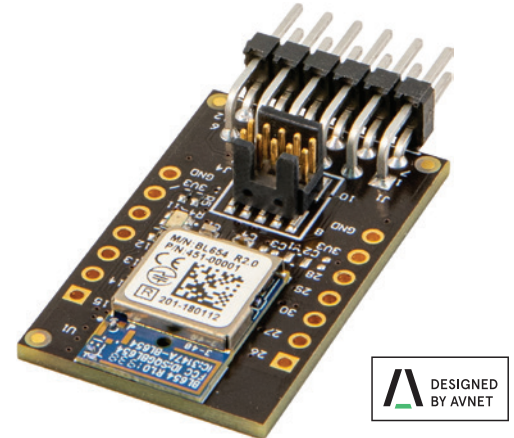
The BLE-Pmod is an optional wireless communication accessory for Avnet Azure Sphere MT3620 Starter Kits. The board is fitted with a Laird BL654 module (with integrated antenna), which is designed around the popular Nordic nRF52840 2.4GHz wireless SoC. The board supports a range of low-power wireless protocols including Bluetooth 5.1 BLE, Bluetooth Mesh, Thread, Zigbee and more. With an Arm Cortex M4F core, substantial memory plus pinned-out peripheral interfaces, this accessory opens up a range of new use cases including significant system-level implementations such as:

- Setup of Azure Sphere Starter Kit's Wi-Fi network credentials from a BLE-connected smartphone
- System expansion via BLE, BLE Mesh or 802.15.4-based wireless sensors or peripheral devices

FEATURE LIST

- ARM[®] Cortex[™]-M4F CPU @ 64MHz (1MB Flash, 256k RAM). Enables hostless operation
- Bluetooth v5.1 BLE / Bluetooth mesh. BLE Peripheral/Central roles with DTM embedded
- Thread/Zigbee 802.15.4 functionality (via Nordic SDK)
- Transmit Power: +8 dBm (max) configurable down to -40 dBm. Integrated PCB Trace antenna
- Receive Sensitivity: -95 dBm (typical @ BLE 1 Mbps), -103 dBm (typical @ BLE 125 kbps)
- Link Budget 103 dB (@ BLE 1 Mbps), 111 dB (@ BLE 125 kbps)
- 2Mbps & LE Long Range. Support for 2Mbps, 1Mbps, & 125 kbps coded
- User-configurable RGB LED
- Pmod 2x6-pin interface: Supports UART (4-pin) and GPIOs (4)
 - GPIOs map to MT3620 WAKEUP, nRF RESET, nRF AUTORUN, nRF OTA functions
- Configurable I/O expansion headers (2x7-pin headers). J2: GPIO/I2C/AIN, J3: GPIO
- Application Development: Laird smartBASIC, or Nordic SDK, or simple AT Command Set
- Optional RTOS: Zephyr RTOS or FreeRTOS
- Firmware upgrade via UART (Pmod connector) or JTAG (mini 10-pin header)
- Temperature Rating: Industrial (-40° to +85° C)
- PCB dimensions: 32mm x 20mm
- Supply Voltage: 1.7V – 5.5V operation (power connection via Pmod interface or I/O headers)

To purchase this kit, visit <http://avnet.me/ble-pmod>



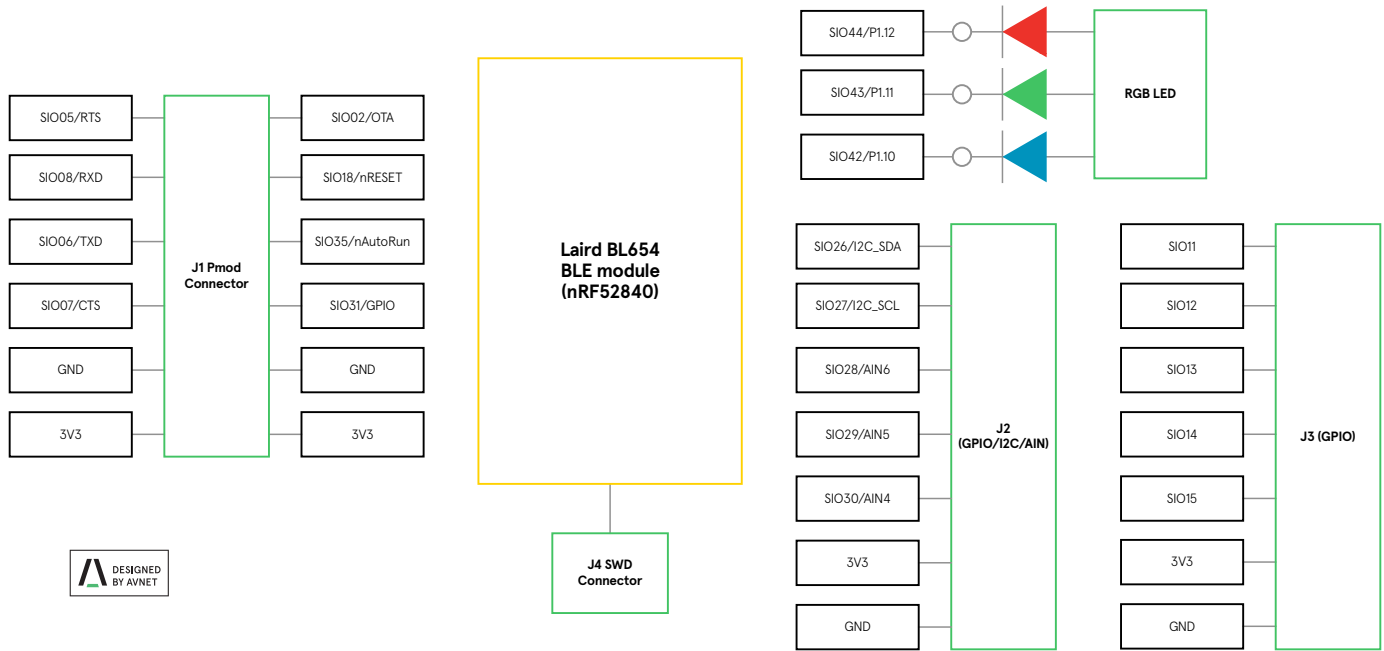
KIT INCLUDES

- BLE-Pmod wireless multi-protocol SoC communication board (for Azure Sphere Starter Kit)
- Pmod 2x6 right-angle female connector (must be soldered onto Avnet Azure Sphere Starter Kit)

TARGET APPS

- Medical equipment and fitness applications
- Industrial monitoring
- IoT devices
- Smart home automation
- Smart energy

BLOCK DIAGRAM



FEATURED MANUFACTURERS



PARTS

Part Number	Description	Resale
AES-PMOD-NRF-BLE-G	BLE-Pmod Bluetooth LE multi-protocol wireless add-on board for the Avnet Azure Sphere Starter Kit	\$49.00 USD

RELATED PARTS

Part Number	Description	Resale
AES-MS-MT3620-SK	Azure Sphere MT3620 Starter Kit	\$75.00 USD
AES-MS-MT3620-M-G	Azure Sphere MT3620 Module	CALL

Countries available for purchase: United States

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