The Genesys Bluetooth Low Energy Module is a modular integrated wireless communications solution for creating low power Personal Area Networks.

**AN INTEGRATED SOLUTION**
The Bluetooth LE Module is a one-board solution for Bluetooth communication and control. It houses a capable 32-bit Arm Cortex-M0 microcontroller featuring 256KB of flash memory, 16 KB of RAM and an integrated 2.4GHz software defined radio. The module’s capabilities can be expanded with an STM8 8-bit microcontroller to act as a co-processor or GPIO expander.

**POWERFUL IO CAPABILITIES**
The Bluetooth LE Module features up to 31 user-configurable GPIO bringing you an unprecedented level of user-configurable M2M Wireless control.

**FULL GENESYS M2M IoT CAPABILITIES**
The Bluetooth LE Module provides qualified Bluetooth communications in Genesys M2M equipment. This provides a low-cost, low-power bridge between Smartphones and Tablets and Genesys M2M equipment.

**CHARACTERISTICS OVERVIEW**
- **DIMENSIONS**: 32mm x 34mm
- **CPU & Memory**: 32MHz 32-bit ARM Cortex-M0 with 16KB RAM
- **Connectivity**: Genesys Modular Stack dual 40-pin connector UFL and SMA radio Antenna connector

Genesys Modular Stack is a technology allowing for the easy interconnection of expansion modules. Genesys Modular Stack compliant modules feature a characteristic pair of board-to-board feedthrough connectors, so that they are infinitely stackable with each module adding new functionality. The Bluetooth LE Module is fully Genesys Modular Stack Compatible.
CHARACTERISTICS

BLUETOOTH NETWORK
- Bluetooth Smart PAN
- Maximum Data Transfer Rate 2Mbps
- Master and/or Slave roles available

PROCESSOR SPECIFICATIONS
- CPU: 32MHz 32-Bit ARM Cortex-M0
- Memory: 16KB RAM, 256KB FLASH

RADIO SPECIFICATIONS
- Bluetooth 4.1 compliant stack
- Transmit Power: +4dBm
- Receiver Sensitivity: -93dBm
- On-board chip antenna with external antenna attachment via an optional UFL connection

I/O INTERFACES
- Genesys Modular Stack Dual 40-pin connector
- 3V3 Power
- 2 UARTs
- Serial Peripheral Interface (SPI)
- 8 Analogue/Digital Converters
- Timer/Counter IO
- General Purpose Inputs/Outputs
- SWDIO Programmer

MEMORY
- 2kb Serial EEPROM with Factory-Programmed EUI-48™ Address and Embedded Unique 128-bit Serial Number

ENVIRONMENTAL
- Temperature (operating): -25 to 70C
- Temperature (survival): -25 to +70C
- Humidity (operating): 95% at 50C

POWER
- Genesys Modular Stack 3V3 Power Incremental Loads:
  - 29mA (Radio TX Active)
  - 26mA (Radio RX Active)
  - 5mA (Idle)
  - <1mA (Dozing)
  - 157uA (Hibernating)

PHYSICAL
- Dimensions: 32mm x 34mm

MOUNTING DIMENSION DRAWING