Bluetooth™ Ultra-Small UART Mini-Module

SMART's ultra-small Bluetooth UART mini-module has remarkably small footprint, 12mm x 14mm x 2.2mm, is Class 2 compliant with Bluetooth specification 1.1, and features 4Mb of flash memory. With firmware upgradeable, via UART or SPI interfaces, the mini-module is offered in UART version with software stack up to the HCI levels and can support variety of Bluetooth profiles.

SMART's ultra-small mini-module is designed to address small form-factor applications such as Personal Digital Assistants, Notebook Computers, and Cellular Telephones. With the addition of a host processor and Bluetooth Protocol Stack Software, the mini-module offers a complete Bluetooth solution.
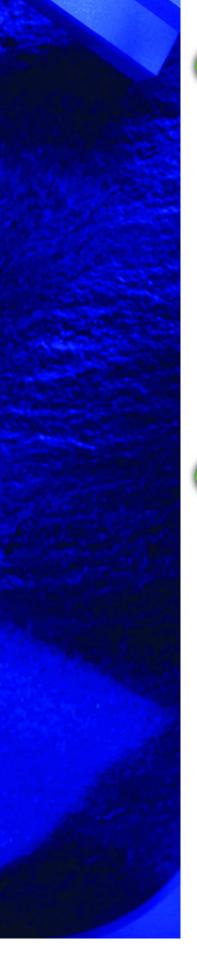
SMART Modular Technologies' Communications Products Division (CPD) has extensive experience & focus upon leading-edge, client-side personal communication sub-systems for wireless and wired Personal Area, Local Area and Wide-Area Networks.

SMART Modular Technologies, Inc., is a wholly owned operating company within Solectron Corporation's (NYSE: SLR) Technology Solutions Business Unit. SMART, a leading independent manufacturer of memory and communication sub-systems offers more than 500 products to premier OEMs in the computer, networking and telecommunications industries. Through its relationship to Solectron, SMART offers customers competitive outsourcing advantages, such as access to advanced manufacturing technologies, shortened product time-to-market, reduced total cost of ownership and more effective asset utilization.

FEATURES

- Size: 12mm x 14mm x 2.2mm

- Class 2 Bluetooth Device

- Receiver Sensitivity: Better than -82 dBm (raw BER 0.1% with any compliant transmitter)

- RF BGA pin connector to connect to an external antenna

- Link control function implemented in hardware compliant to Bluetooth Specification 1.1

- UART core up to 921.6Kbps.

- SPI

- Piconet and scatternet functions, including master/slave switch capabilities

- Power Supply: 3.0V to 3.75V

- 2.65V Regulator on chip

- Interfaces for external clock inputs, or external crystal

TECHNOLOGY ➔ PRODUCTS ➔ PROFITS

Get there faster with SMART.

turning technologies into products   *turning vision into reality*

SMART™
Modular Technologies

Specifications

General
- Bluetooth Specification 1.1 compliant
- Power Requirement
  - 2.65V (±5%) regulated voltage (or)
  - 3.0V - 3.75v unregulated voltage
- Power Consumption at 3.3V
  - 7mA at standby
  - 53mA (typical) 300µA at deep sleep mode

Radio
- Frequency Range: 2.402 - 2.480Ghz
- Transmit Power (Tx): +3dBm (typical)
- Receiver Sensitivity (Rx): Better than -82dBm @ 0.1% BER.
- Range: up to 30 meters

Antenna
- Onboard BGA pin out for direct 50 RF trace connection
- External antenna with typical gain 0dBi used

Temperature
- Operating temperature: -20°C to +95°C
- Storage temperature: -40°C to +150°C

Interfaces
- Full speed HCI UART
- Serial Peripheral Interface (SPI)

SMART Part Number
- 90146 : UART with HCI stack

Block Diagram-Bluetooth 90146 Mini Module

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