



# Anaren Integrated Radio (AIR)

Low-power RF modules, firmware & development tools that make it easy to 'go wireless'

## A20737 Module Series

The A20737C is a low cost surface-mount radio module featuring *Bluetooth*® Smart technology that incorporates the Broadcom ultra-low-power BCM20737 SoC, 24MHz crystal, a U.FL connector for an external antenna and an EEPROM, all in one package measuring: 11x13x2.5mm. The module is Globally certified\*, and is *Bluetooth* SIG qualified.



A20737C

\* Global certification is an ongoing process, please call for confirmation regarding your specific locations

### Features

#### General:

- 2.4-GHz RF transceiver incorporating *Bluetooth* Smart technology
- 1.7 to 3.6V operation
- Operating temperature  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}^{**}$
- Integrated ARM Cortex-M3 microprocessor core
- 512-Kbit EEPROM
- Programmable output power up to +3dBm
- Low Current Consumption (3.3V)
  - ◆ 25mA in Rx
  - ◆ 17mA in Tx @ -1dBm
  - ◆ 20mA in Tx @ +3dBm
- Typical sleep current  $2\mu\text{A}$  @ 3.3V
- Excellent receiver sensitivity, -94dBm average with <1% BER
- Infrared modulator
- 10-Bit auxiliary ADC with nine analog channels
- Support for secure OTA updates
- Integrated LDO
- Supports SPI, I<sup>2</sup>C, PWM, UART and GPIO peripheral interfaces
- RoHS Compliant
- Shielded package
- U.FL Connector
- LGA Footprint
- Small package size: 11mm x 13mm x 2.5mm
- Approximate weight 0.5 grams

\*\* The operating temperature spec for Broadcom chipset is  $-30^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  but module passed BLE standards when limited testing was done from  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ .

#### Module Development Kit:

- Available as a *Multi-Sensor Development Kit* including access to Anaren's innovative and exclusive online development tool, *Atmosphere*
- The *Atmosphere* tool enables the creation of all the embedded code and target mobile device applications needed to wirelessly connect and communicate to an embedded Anaren *Bluetooth* Smart module

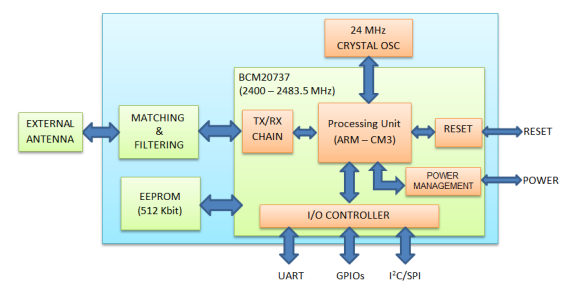
### Benefits

- Minimal RF engineering experience necessary
- Minimal *Bluetooth* Smart experience necessary
- Easy to implement, short design cycle when utilizing Anaren's *Atmosphere* development tool
- No additional "Intentional Radiator" certification required (FCC 15.247, IC RSS-210, EN 300 328)  
FCC ID: X7J-A14070701  
IC: 8975A-A14070701
- Minimal real estate required
- Only requires a 2 layer Host PCB implementation
- No additional harmonic filtering required
- 100% RF-tested in production

### Applications

Industrial controls and monitoring, remote controls, home/building automation, lighting systems, low power wireless sensor networks, and consumer electronics, sports monitoring, health & wellness

### Block diagram



#### PLEASE NOTE:

- Additional information on Anaren's exclusive development tool, *Atmosphere* can be found at <https://atmosphere.anaren.com>
- Additional information on the Broadcom WICED Smart can be found in the company's website at <http://www.broadcom.com/products/wiced>



This member of the AIR family of wireless solutions is supported by Anaren's *Atmosphere* online development tool and features semiconductor technology from Broadcom.



# Anaren®

What'll we think of next?®

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