Anaren Integrated Radio (AIR)

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

MSDK Series

The Multi-Sensor Development kit (A20737A-MSDK1) and *Atmosphere* the innovative online development tool is designed to create all the embedded code and target mobile device applications needed to wirelessly connect and communicate to an embedded Anaren *Bluetooth*® Smart module. It features the A20737A AIR module, which uses Broadcom's BCM20737 chip. The A20737A AIR module is Globally certified*, and is *Bluetooth* SIG qualified.

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

A20737A-MSDK1

Features

- Includes Multi-Sensor Development Board featuring an Accelerometer, a Magnetometer, an IR Temperature Sensor, a Buzzer, a Tri-color LED, a Joy Stick, and a Coin Cell Battery holder
- One USB 2.0 cable (Type A to Micro-B)
- Two Single row pin headers can be soldered down to gain access to all the pins in the A20737A module
- Incorporates Broadcom's BCM20737
- Tiny 11x13x2.5 mm footprint of the A20737A AIR module
- Pre-certified to FCC/IC and ETSI compliant
- Low power consumption
- Anaren's exclusive online development tool, *Atmosphere*
- *Atmosphere* generates and loads the embedded code on the Multi-Sensor Development Board, and creates an app that can be loaded onto a *Bluetooth* Smart mobile device

Benefits

- Provides GOOBE "great out of the box" wireless connectivity for easier development of applications based on the *Bluetooth* Smart standard.
- Provides an excellent educational/development tool for all levels of *Bluetooth* Smart expertise – as well as a clear, easy-to-understand migration path from development to production.
- Part of *Atmosphere*, a total solution from Anaren that includes development tools, firmware, applications support, and more.

Applications

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

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Applications are written with an easy-to-use graphic programming tool that includes a method for designing the layout of the app screen and the on board software

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, Inc. | **6635 Kirkville Road** | **East Syracuse, NY 13057**
800.411.6596 | **www.anaren.com/air** | **AIR@anaren.com**

Module family overview

General:

- 2.4-GHz RF transceiver incorporating *Bluetooth* Smart technology
- 1.7 to 3.6V operation
- Operating temperature –30°C to +85°C
- Integrated ARM Cortex-M3 microprocessor core
- 512-Kbit EEPROM
- Programmable output power up to +3dBm
- Low Current Consumption (3.3V)
  - ♦ 25mA in Rx and 20mA in Tx @ +3dBm
  - ♦ 17mA in Tx @ -1dBm
- Typical sleep current 2µA @ 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, I²C, PWM, UART and GPIO peripheral interfaces
- RoHS Compliant
- Shielded package with an integrated antenna
- LGA Footprint
- Small package size: 11mm x 13mm x 2.5mm
- Approximate weight 0.5 grams
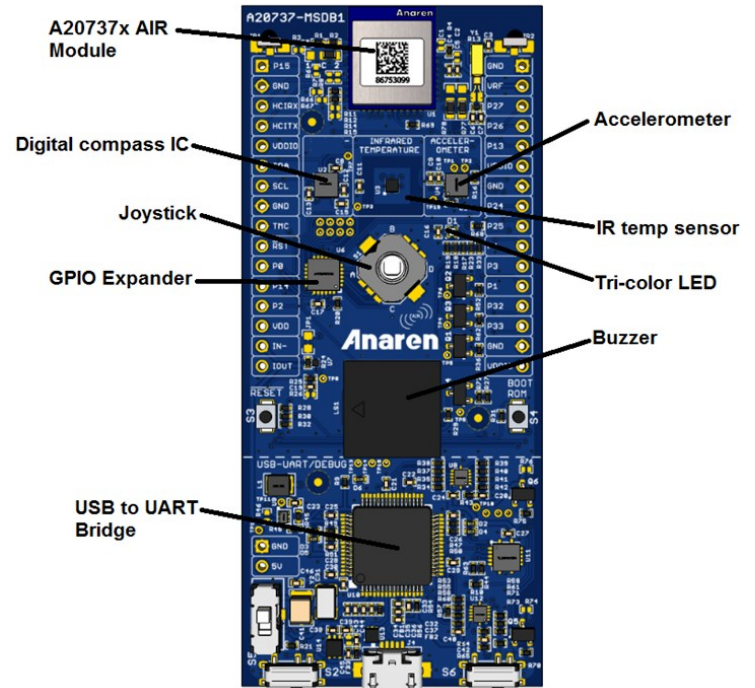- Certified/compliant for use Worldwide*

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IMPORTANT: *The Multi-Sensor Development (A20737x-MSDK1) kit is a tool to aid in the development and testing of wireless communication applications; please contact Anaren if you will be using in the production of wireless end-products.*

Layout information

Multi-Sensor Development Board features shown below; see User's Manual for more information.

PLEASE NOTE:

- Additional information on Anaren's exclusive development tool, *Atmosphere* can be found at https://atmosphere.anaren.com
- Additional information on the Broadcom's BCM20737 can be found at http://www.broadcom.com/wiced

Nomenclature

A20737A-MSDK1

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A	Manufacturer	Anaren
1	Chip series	20737
2	Form factor	A = Internal Antenna, C = Connector
3	Description	MSDK = Multi-Sensor Development Kit

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