

MODEL NAME

Afero Secure Radio Module

AFERO MODEL NUMBER

ASR-1

BLUETOOTH RADIO

Bluetooth® Smart Wireless Technology (4.1)

BLUETOOTH ANTENNA CONFIGURATION

RF pin

MAXIMUM TRANSMIT POWER

+3.5dBm (at antenna port)

RECEIVE SENSITIVITY

-92dBm

POWER CONSUMPTION

Tx/Rx peak 15.5/14.5 mA

SECURITY FEATURES

Cryptographic co-processor with secure, hardware-based key storage

HOST INTERFACE

SPI

INTERFACE PINS

4 × GPIO (1 × comparator with optional external voltage reference), debug UART

COMPLIANCE

Bluetooth, RoHS

DIMENSIONS

7.5 × 8.0 × 1.8 mm

WEIGHT (EARTH MSL)

< 1 g

PACKAGE

LGA

POWER (VCC)

2.1 - 3.6V DC

OPERATING TEMPERATURE

-20 to 75° C

STORAGE TEMPERATURE

-40 to 85° C

OPERATING HUMIDITY

10 to 80% non-condensing

STORAGE HUMIDITY

5 to 90% non-condensing

The **Afero Secure Radio Module (ASR-1)** transforms any product, new or existing, into a smart product. Inside each ASR-1 is a Bluetooth® Smart radio and a dedicated Hardware Security Module (HSM) that work in concert to bring secure and reliable connectivity to any device.

The dedicated HSM brings added layers of security and authentication to every device. Features include:

Extremely low-power, secure, hardware-based cryptographic key storage, and crypto-acceleration

Private keys that never leave the module, are not accessible externally, and are unique to each device

Afero proprietary IoT countermeasures designed to address and mitigate various attack classes, such as device characterization (“pattern of use”), man-in-the-middle, device impersonation, and denial-of-service (DoS)



ASR-1 is especially suited for small form factor devices and low-power applications. By leveraging Bluetooth® Smart technology in smart devices with the Afero Dynamic Hub™, ASR-1 provides reliable connectivity in diverse environments.

Integrating ASR-1 into any product is straightforward. Connect ASR-1 to the product’s hardware (either directly using the four configurable GPIO ports or to an external MCU via SPI, UART, or I²C), configure it using the Afero Profile Editor, and that’s it!

ASR-1, combined with the Afero IoT Platform, provides a turnkey, end-to-end solution for bringing connected products to customers.