

AT-ANY2400-SC-Pro USB Dongle

An advanced plug-and-play USB-hosted gateway for IEEE 802.15.4 2.4 GHz wireless networks. The product provides exceptional transmission characteristics by combining innovative RF technologies with advantageous antenna diversity for seamless IEEE 802.15.4 infrastructure setup.

AT-ANY2400-SC-Pro USB dongles are reliable, advanced, host-powered gateway solutions. Integrated design offers leading edge RF characteristics within a compact sized form factor. Antenna diversity mechanisms implemented via two on-chip ceramic antennas are perfectly matched, while minimizing RF interference losses. A special low noise amplifier front end module fires up the transmitters output power to 18 dBm, so that the incoming signal with even a minimal strength of -121 dBm becomes receivable.

The on-board UART chip facilitates easy serial connection setup via USB interface. Supported with off-the-shelf drivers by the commercially maintained FTDI Driver Suite, the USB 2.0 compliant interface ensures a seamless integration to various operating systems. White plastic enclosures are available as accessories on demand.

Ensure the quick setup by ordering the product preprogrammed with either our AT-command-based Smart MAC Suite firmware, your own firmware, or common stacks such as 6LoWPAN, Zigbee PRO or Lightweight Mesh.



Mechanical module size 53.5 x 17 x 5 mm

Key Features

- USB 2.0 compliant IEEE 802.15.4 -2006 based hardware platform within compact USB dongle format
- Supports international 2.4 GHz ISM band
- Commercially maintained FTDI Driver Suite ensures a seamless OS integration and support
- Exceptional transmission characteristics by combining innovative RF technologies with advantageous antenna diversity
- Outdoor range (line of sight) ≤ 2.5 km
- Network topology:
 - P2P, P2MP, Star, Tree, Mesh (IEEE802.15.4 and Zigbee PRO)
- Other IEEE 802.15.4-based stacks are applicable
- Power and data transmission via standard USB connector and on-board FT232 UART/USB converter
- Data rate: ≤ 2 Mbps, e.g. Zigbee: 250 kbps gross
- Smart MAC Suite is provided for easy prototyping and quick setup

Benefits

- ✓ Self-contained, host-powered infrastructure solution to accelerate bring up, testing, monitoring and controlling of your IEEE 802.15.4 based wireless network
- ✓ Easy development with ready-to-use AT-command-based Smart MAC Suite firmware, app examples, Development Kits and full technical support
- ✓ Full EN300328, FCC CFR Part 15, RoHS and REACH compliance
- ✓ USB connectivity is in line with maintained commercial driver suite by FTDI to ensure seamless infrastructure bring up and customization
- ✓ Fast prototyping with preprogrammed firmware (SMS or other common stacks specifically preconfigured for modules, e.g. Zigbee)
- ✓ Simple data exchange via human readable console output is available to speed-up the system design
- ✓ Integrated JTAG interface enables OTAU and serial flashing
- ✓ Complementary enclosures pack available

Applications



Smart Buildings



Smart Energy & Metering



Industrial Automation



Healthcare & Fitness



Agriculture



Automotive & Transport



Smart Cities & Environment



Event Management

Specifications

RF Characteristics

Max. Transceiver Output Power	≤ 18 dBm EIRP
Receiver Sensitivity (per 1%)	≤ -121 dBm
Data Rate	≤ 2 Mbps (proprietary), e.g. 250 kbps @ Zigbee
Frequency	international 2.4 GHz ISM band, 16 channels
Data Encryption	AES 128 supported
Modulation	O-QPSK (IEEE 802.15.4 compliant)
Applicable Network Topologies	P2P, P2MP, Tree, Star, Mesh and other IEEE 802.15.4 based topologies

Hardware Characteristics

Operating Temperature Range	-40°C to +85°C
Platform	ATmega128RFA1 or ATmega256RFR2*
On-Chip Flash	128 kB (256 kB*)
On-Chip RAM	16 kB (32 kB*)
On-Chip EEPROM	4 kB (8 kB*)
Interfaces	JTAG, USB 2.0

*customization option on request

Extensions

USB Interface	FT234 USB
Optical Elements	Status LED (programmable)
Connectivity	USB Type-A plug

Electrical Characteristics

Voltage	5.0 V USB-powered
---------	-------------------

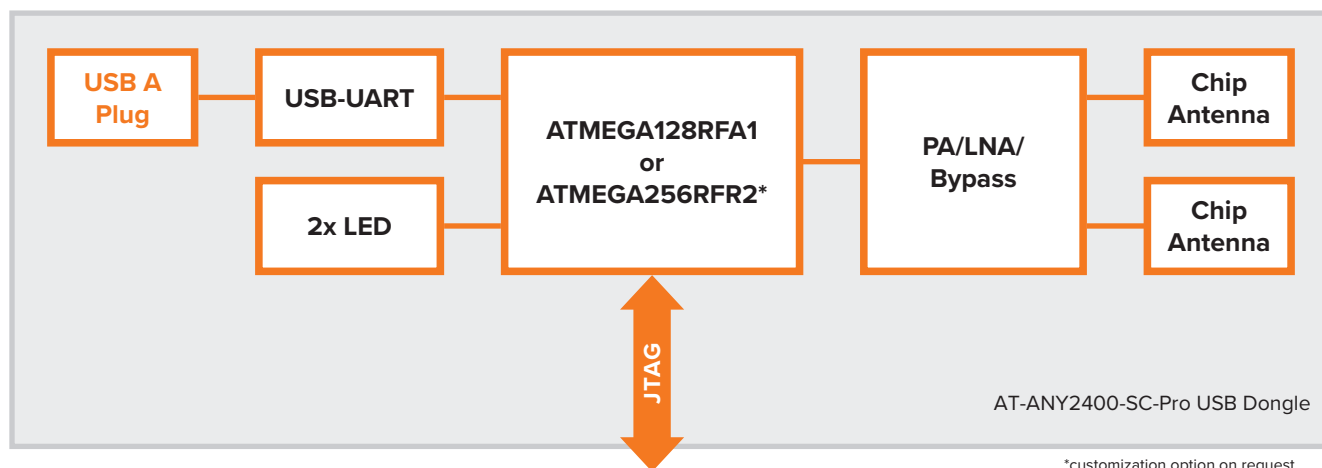
Certification

Radio Compliance	EN300328, FCC CFR Part 15
Manufacturing	RoHS & REACH

Ordering Information

Order Number	AT-ANY2400-SC-Pro USB Dongle AT-ANY2400-SC-Pro Enclosure Pack (white enclosure and cap)
--------------	--

Block Diagram



Further Information

For additional information or support, see www.an-solutions.de or contact us at support@an-solutions.de.
For more product details and ordering information, see the product data sheet.

