

@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.

@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 FT234 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



Retail



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
---------	-------------------

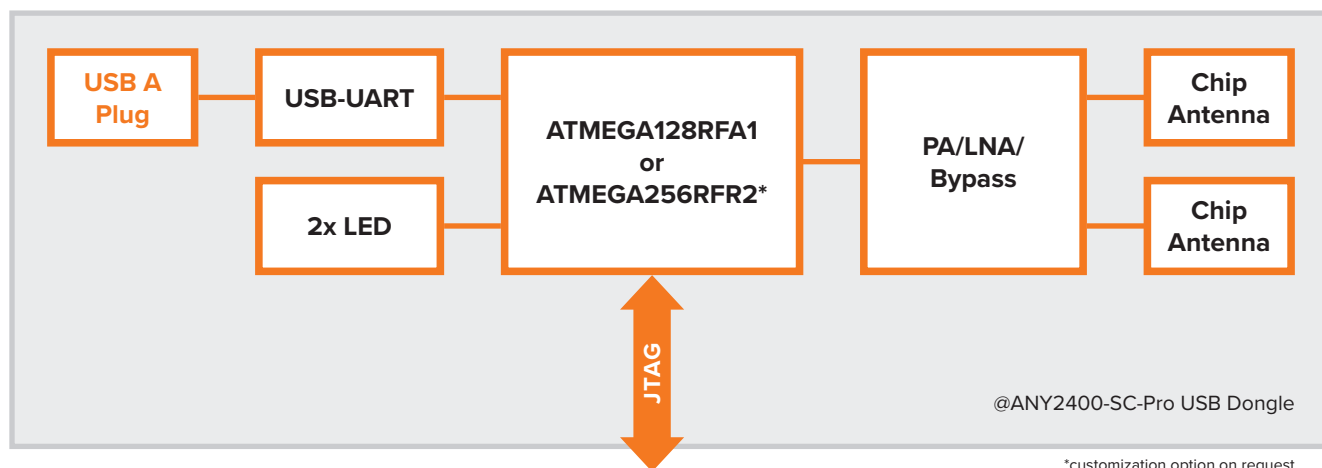
Certification

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

Ordering Information

Order Number	ANY2400-SC-Pro USB Dongle
	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.

