A.N.Solutions
INDUSTRIAL GRADE WIRELESS

WIRELESS MICROCHIP DESIGNPARTNER

MADE IN GERMANY

@ANY2400-SC USB Dongles

A plug-and-play USB-hosted gateway for IEEE 802.15.4 wireless networks. Using versatile @ANY2400-SC modules for international 2.4 GHz ISM band, these dongles combine exceptional transmission characteristics and out-of-the-box connectivity to IEEE 802.15.4-based networks.

Based on the robust @ANY2400-SC modules, the @ANY2400-SC USB Dongles are reliable, host-powered gateway solutions in a compact size form factor. Optimal RF characteristics are achieved using on-chip ceramic antenna (@ANY2400-SC-1) or U.FL connector (@ANY2400-SC-2) option, thus providing maximum flexibility of external antenna adaptations. The on-board UART chip allows for an easy setup of a serial connection 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. Upgrades can be performed via an on-board bootloader or an integrated JTAG interface. 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
- Outdoor range (line of sight) ≤ 250 m (@ANY2400-SC-1 USB Dongle) and ≤ 500 m (@ANY2400-SC-2 USB Dongle)
- Network topology:
  - P2P, P2MP, Star, Tree, Mesh (IEEE802.15.4 and Zigbee PRO)
- Other IEEE 802.15.4-based stacks are applicable
- Smart MAC Suite is provided for easy prototyping and quick setup
- Integrated JTAG interface enables OTAU and serial flashing
- Data rate: up to 2 Mbps, e.g. Zigbee: 250 kbps gross

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 preprogramed 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
- ✓ Upgradeable via on-board bootloader or integrated JTAG interface

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	≤ 1.0 dBm EIRP for @ANY2400-SC-1 ≤ 3.5 dBm for @ANY2400-SC-2
Receiver Sensitivity (per 1%)	≤ -101 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

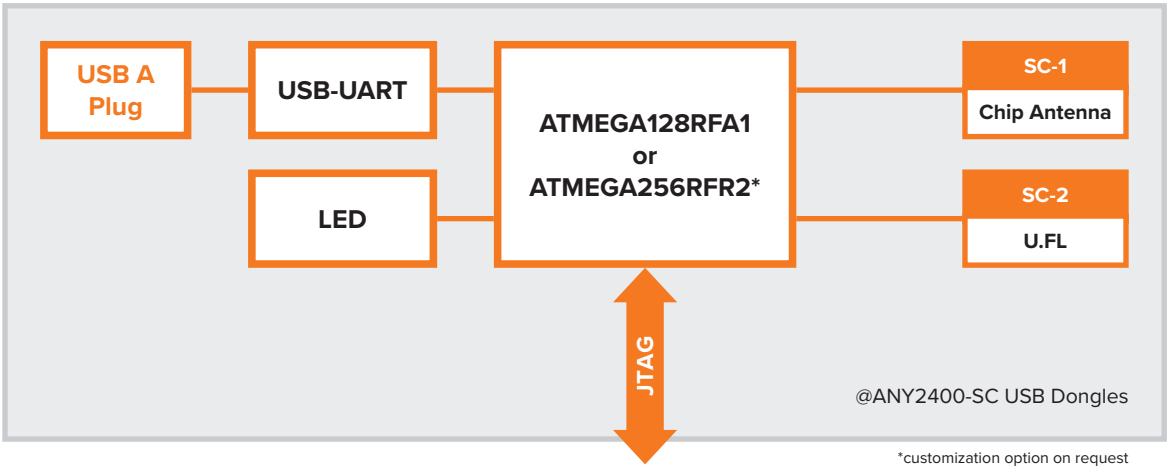
Certification

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

Ordering Information

Order Number	ANY2400-SC-1 USB Dongle
	ANY2400-SC-2 USB Dongle
	ANY2400-SC-USB Enclosure Pack (white enclosure and cap)

Block Diagram



*customization option on request

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.

A.N.Solutions

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