

# nanoANQ RTLS Anchor

## High throughput location and monitoring solutions

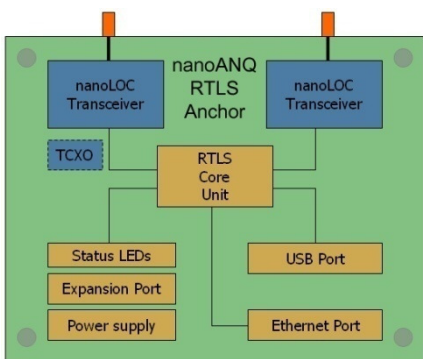
### Flexible Monitoring and Location Solutions

The *nanoANQ RTLS Anchor* has been originally developed for professional child care applications servicing more than 200 pre-school students and care givers. Together with nanoLOC based tags and Nanotron's Location Server, it forms the basis for monitoring attendance, movement, and care center service delivery.



nanoANQ

At only 119 mm x 98 mm x 18 mm, the compact design simplifies system deployment and eliminates the need for dedicated antennas. It features SMA antenna connectors, an Ethernet port with PoE to connect to the transport network and a USB port. Through its air interface, the *nanoANQ RTLS Anchor* supports bidirectional payload exchange between the Location Server and individual tags.



nanoANQ RTLS Anchor Block Diagram

Services and functionality can be updated by simply upgrading the firmware of the device.

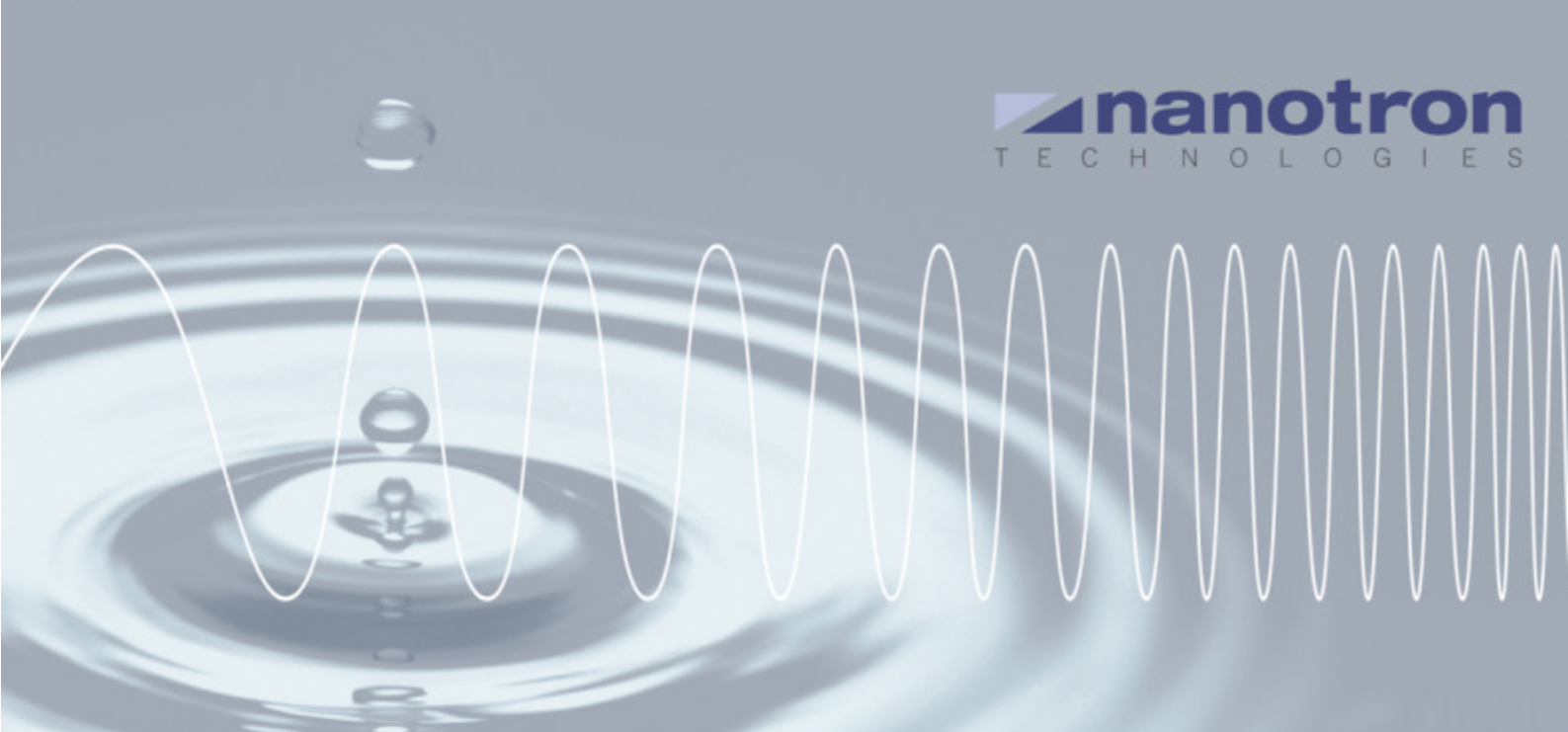
An expansion port allows for custom-functionality. It features an SPI data interface and a 4.5 V, 100 mA power supply.

The device provides a power amplifier that is adjustable from 0 to +19 dBm for robust range, wide area coverage and compliance with regulations.

Easy to install and maintain, the anchor is configurable in software remotely via a TCP/IP connection.

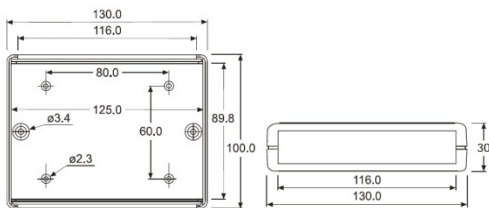
### Key Features

- Location acquisitions ..... > 200 Hz
- Position acquisition time ..... 500 µs
- Typical range ..... 50 m
- Typical location accuracy ..... 1-3 m
- Minimum RTLS infrastructure ..... 6 nanoANQ
- RF technology ..... Chirp Spread Spectrum (CSS)
- Power supply ..... USB, DC-IN, PoE
- DC-IN voltage ..... 8 to 36V DC
- RF output power ..... Configurable 0 to +19 dBm
- Operating temperature range ..... -30 to 65 °C
- Transport Network ..... Ethernet 100 base TX
- Receive sensitivity (22MHz, 250kbps) ..... -95 dBm
- Dimensions of the module ..... 119 x 98 x 18 mm
- IP Addressing ..... Automatic, DHCP
- Expansion Port ..... SPI, DC-OUT: 100mA, 4.5V



### Optional Housing

The *nanoANQ RTLS Anchor* provides an optional protective housing suitable for indoor use.



nanoANQ housing - physical dimensions

### Power Supply

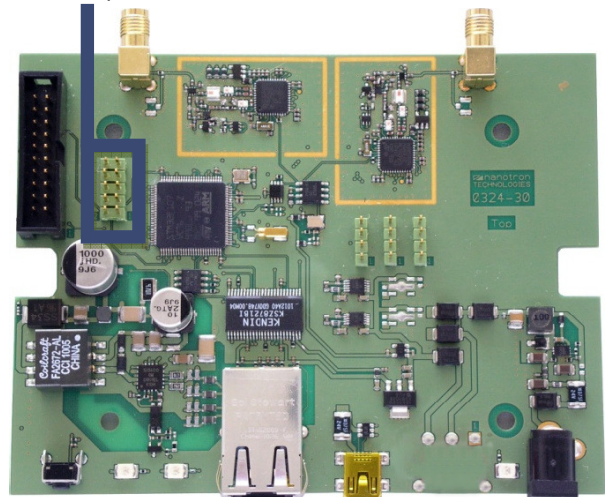
Three power supply options are available: DC IN, USB, and Power-Over-Ethernet (PoE). The DC IN supply can be provided by a wide range of voltages from 8 to 36 V.

### Expansion Port

Pin	Signal	Function	Pin	Signal	Function
1	GND	Ground	6	SPI2_SSN	Slave select
2	RESET	Reset	7	SPI2_MOSI	MOSI
3	+2.65 V	Internal +2.65 V board voltage	8	SPI2_CLK	Clock
4	SPI_MR	Master reset	9	5VINT	+3.8 to 5 V for external use
5	--	Not connected	10	SPI2_MISO	MISO

Expansion Port Pin Assignments

### Expansion Port



nanoANQ RTLS Anchor Module, PoE

### Ordering Information

The Anchor is available complete with housing and antennas or alternatively as a bare-board module for mounting in a user-selected housing.

Number	Description
BNAR02P	nanoANQ RTLS Anchor, PoE
BNAR02PM	nanoANQ RTLS Anchor Module, PoE
KNRTB01	nanoPAL - RTLS Tool Box

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