

The new Kathrein RTLS-N-1000 series set a new IoT standard based on the real-time location and tracking solution. The unique combination of UWB with RAIN RFID and NFC technology allow an easy and seamless integration into the existing RFID infrastructure.

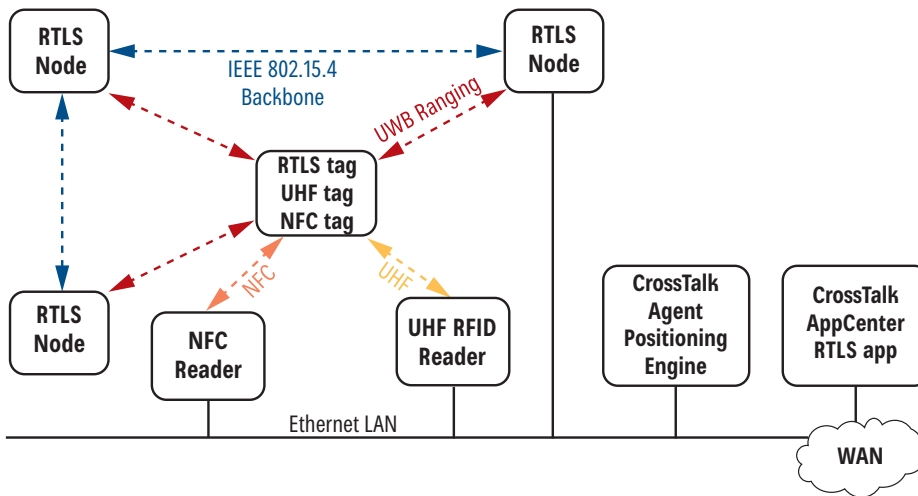
Based on the latest generation of wireless technology, the RTLS-N-1000 series provide a localisation precision of up to 10 cm. Due to the fact the nodes are fully integrated into the powerful Kathrein CrossTalk IoT platform, it is possible to achieve the next level of industrial revolution.



> Features

- 3D localisation
- Real-time tracking
- Range per node: up to 80 m
- Precision: up to 10 cm
- 2.4 GHz backbone communication link
- Ready for more than 1000 tags
- PoE
- Multi-colour user LED
- Industrial housing

> Schematic Diagram



> Key Applications

- Logistics
- Industrial Automation
- Vehicle Identification
- Container Tracking
- Healthcare
- Asset Tracking

> Accessories

- RTLS-N-WPM wall/pole mount (order no. 53010006)
- R-RPA 24DC-18W, AC/DC adapter, 24 V/18 V, AC 110-230 V, plug (order no. 52010474)
- R-CC3 10 ETH RRU/ARU Ethernet Cable M12/RJ45 (order no. 52010360)
- R-CC3 03 ETH RRU/ARU Ethernet cable M12/RJ45 (order no. 52010361)

RTLS Node Series

RTLS-N-1000-40 | RTLS-N-1000-67

> General Specifications

Type	RTLS-N-1000-40		RTLS-N-1000-67	
Order number	53010000		53010001	
UWB RTLS				
Frequency range	[MHz]	3244–6999		
Channel 1		3493.4 MHz (BW:500 MHz)		
Channel 2		3993.6 MHz (BW:500 MHz)		
Channel 3		4492.8 MHz (BW:500 MHz)		
Channel 4		3993.6 MHz (BW:900 MHz)		
Channel 5		6489.6 MHz (BW:500 MHz)		
Channel 7		6489.6 MHz (BW:900 MHz)		
Antenna port output power	[dBm]	–41.3/MHz		
RX sensitivity	[dBm]	–93 to –106/500MHz (1% packet error rate)		
Coverage		approx. 80 metres in the line of sight		
Standards		IEEE 802.15.4 UWB, EN301489-3, EN50364, EN62368-1, EN60529 FCC Part15, UL, IC		
2.4-GHz communication link				
Frequency range	[MHz]	2400–2483.5		
RX sensitivity	[dBm]	–117 (100 kHz)		
Standards		IEEE 802.15.4:2006, IEEE 802.15.4:2011, IEEE 802.15.4:2012, IEEE 802.15.4:2015		
Voltage				
Local supply	[VDC]	10–24		
Connector		Printed circuit board connector 2-pole, screw connection with tension sleeve	M12, X-coded, 8-pin, female	
Remote feed	[VDC]	PoE according to 802.3af (10–57)		
Connector		RJ45	M12, X-coded, 8-pin, female	
Power consumption				
Local supply	[W]	2.5		
Remote feed	[W]	IEEE 802.3af PoE Class 0; 0.44–12.06		
Ethernet				
Number of Ethernet ports		1		
Datarate	[Mbit/s]	10/100		
Connector		RJ45	M12, X-coded, 8-pin, female	
LED visualisation				
Status indication		1 multi-colour LED		
Mechanical properties				
Weight	[g]	313		
Degree of protection		IP40	IP67	
Operating temperature range	[°C]	–40 to +60		
Storage temperature range	[°C]	–40 to +85		
Dimensions (L x W x H)	[mm]	160 x 135 x 37		

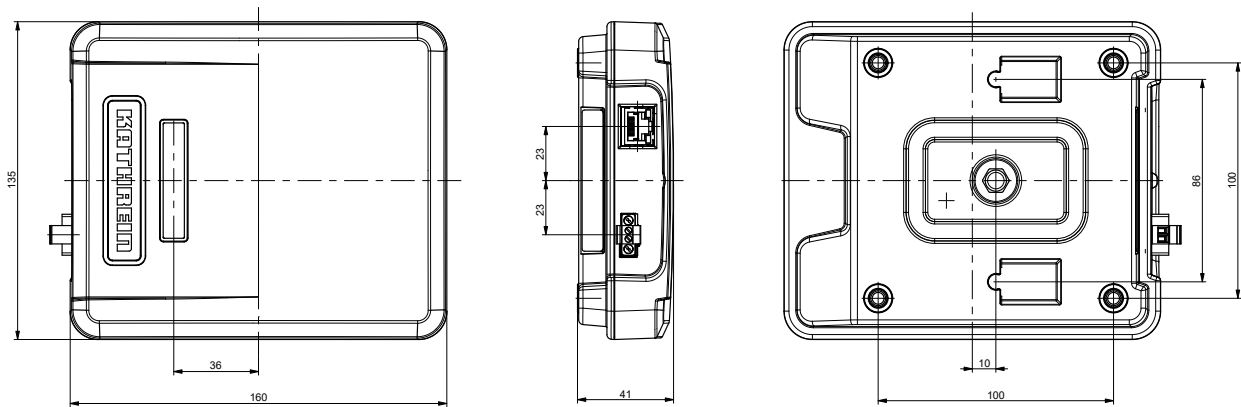
> **Dimensions [mm]**

> **Note**

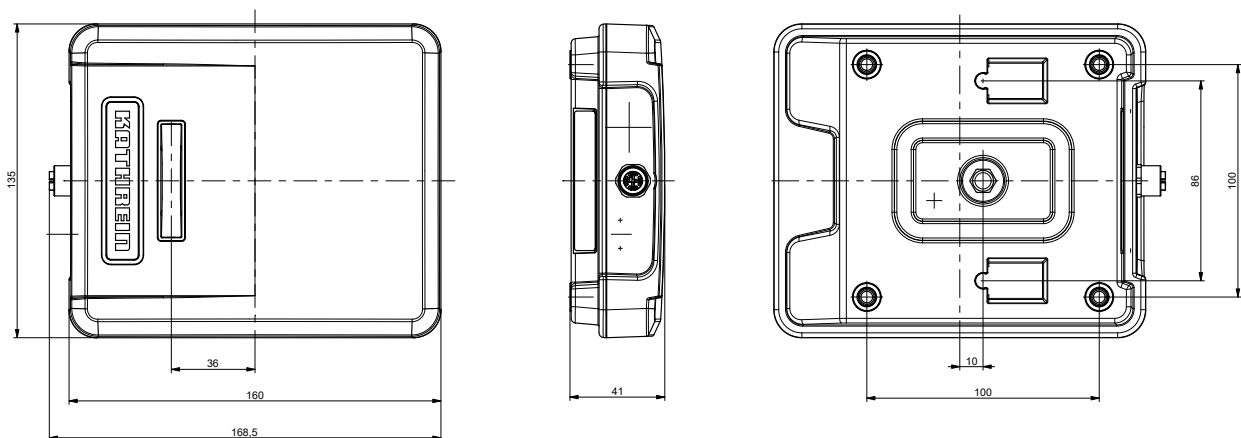
Risk of material damage!

- ▶ Make sure that the depth at which the screws are put into the housing of the reader does not exceed 10 mm (the tightening torque is 5 Nm).

RTLS Node 40



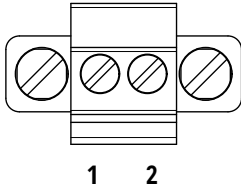
RTLS Node 67



> Power Supply

RTLS Node 40

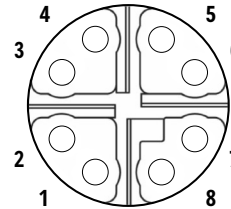
Printed circuit board connector 2-pole, screw connection with tension sleeve



Pin	Allocation
1	GND
2	+24 V DC

RTLS Node 67

M12, X-coded, 8-pin, female

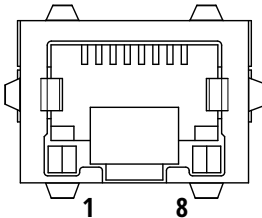


Pinout PoE

Pin	Allocation
1	PoE-A
2	PoE-A
3	PoE-B
4	PoE-B
5	PoE-B
6	PoE-B
7	PoE-B
8	PoE-B

RTLS Node 40

RJ45, 8-pole



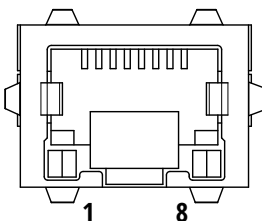
Pinout PoE

Pin	Allocation
1	PoE-A
2	PoE-A
3	PoE-A
4	PoE-B
5	PoE-B
6	PoE2-A
7	PoE2-B
8	PoE2-B

> Ethernet

RTLS Node 40

RJ45, 8-pole

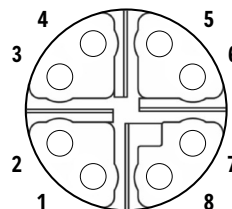


Pinout communication

Pin	Allocation
1	TX+
2	TX-
3	RX+
4	
5	
6	RX-
7	
8	

RTLS Node 67

M12, X-coded, 8-pin, female



Pinout communication

Pin	Allocation
1	TX+
2	TX-
3	RX+
4	RX-
5	
6	
7	
8	