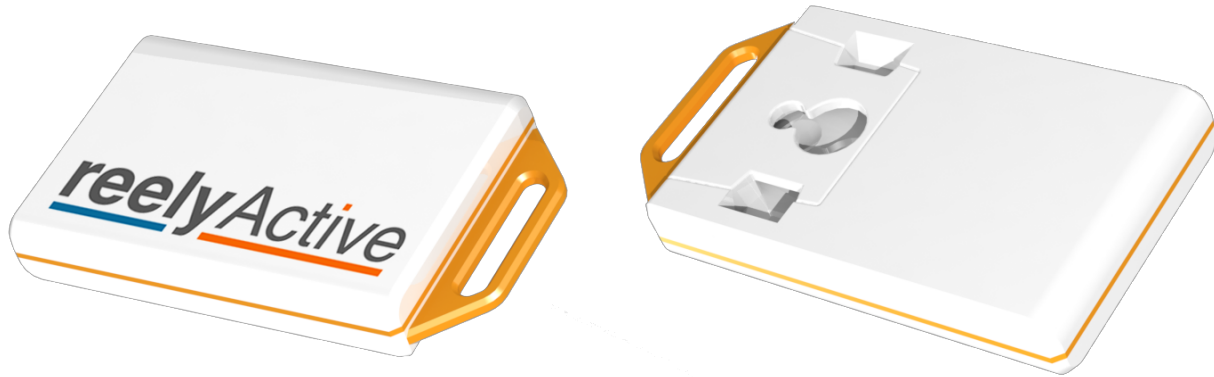# RA-T411 Datasheet

Description

The RA-T411 is a compact, cost-effective and versatile active RFID tag which transmits a unique identifier at a configurable period. Typical battery life is one year at one transmission per second.

Device Photos

Enclosure Features

Removable clip enables the following mounting options:
- Keyring
- Nail, screw or suction cup via keyhole
- Tie-wrap or strap

Technical Specifications

Radio

Frequency:	915MHz ISM band
Modulation:	GFSK (Gaussian Frequency Shift Keying)
Sensitivity:	-93dBm
Bitrate:	250kbps
Receive-capable:	Yes
Transmit-capable:	Yes, with configurable power

Range

Open field:	>50 m (typical)
Indoors:	>10 m (typical)

Compliance

Canada:	IC (10707A-RAT41102)
USA:	FCC (QASRA-T411-02)

Antenna

Type:	Internal ceramic antenna
Radiation pattern:	Omnidirectional
Peak gain:	-1dBi

Security and Authentication

Unique identifier:	28-bit plus 36-bit implicit OUI (EUI-64)
Authentication:	Challenge-response
Encryption:	AES

Configuration

ID transmission:	Periodic, configurable from 0→∞ in 30ms increments Factory default: 1 second

Sensor transmission: Periodic, configurable as every n^{th} transmission
Factory default: 60 seconds

Sensors

Temperature: -40C to +85C in 0.5C increments, ±4C uncalibrated

Battery voltage: Level and low battery detection

LQI: Radio link quality indication

Physical

Dimensions (LxWxH): 49mm x 32mm x 8.25mm (excluding keyring)

Weight: 6 g (PCB and battery only)

Enclosure material: ABS plastic

Clip material: ABS plastic

Ring material: ABS plastic

Enclosure colours: White

Keyring colours: Orange

Custom colours: Available with minimum order quantity

Power

Battery type: Single CR2032 lithium coin cell, 3V

Typical battery life: One year @ one transmission per second

Environmental

Temperature: -40C to +85C (Industrial grade)

Outdoor-capable: Yes, except for water immersion

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