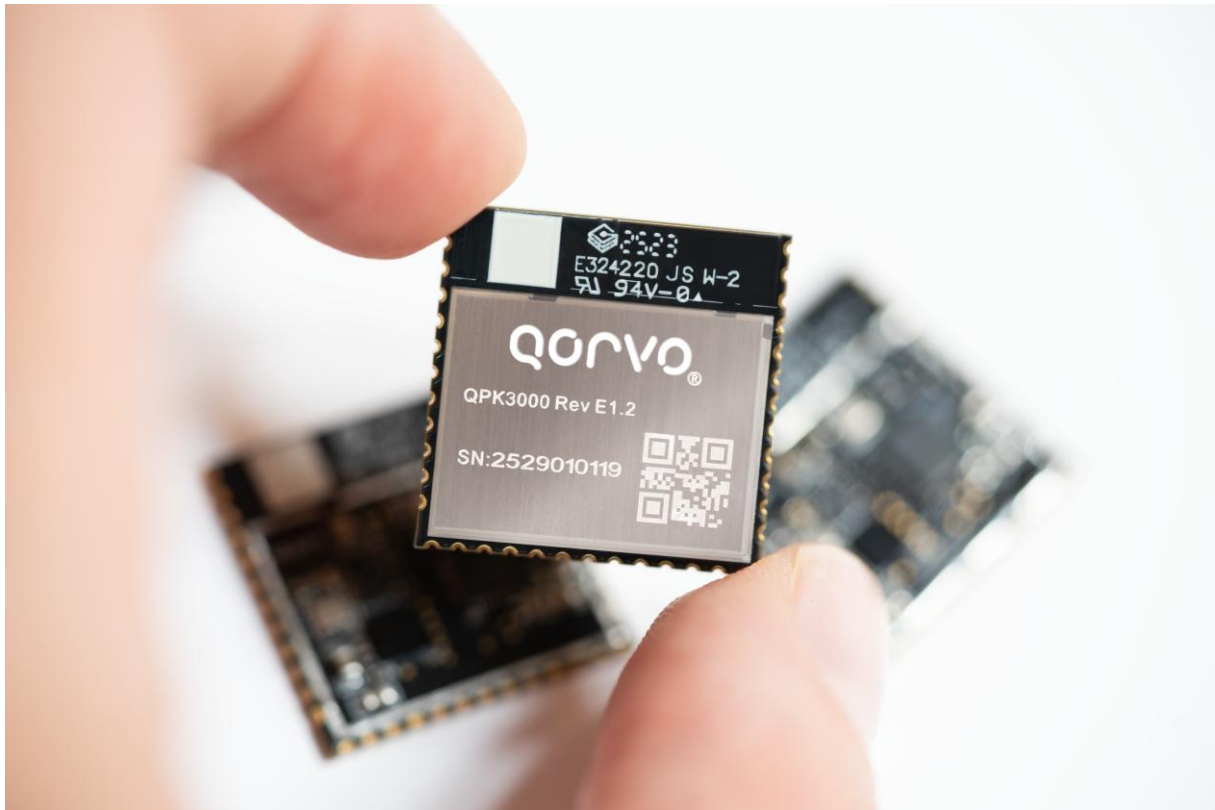


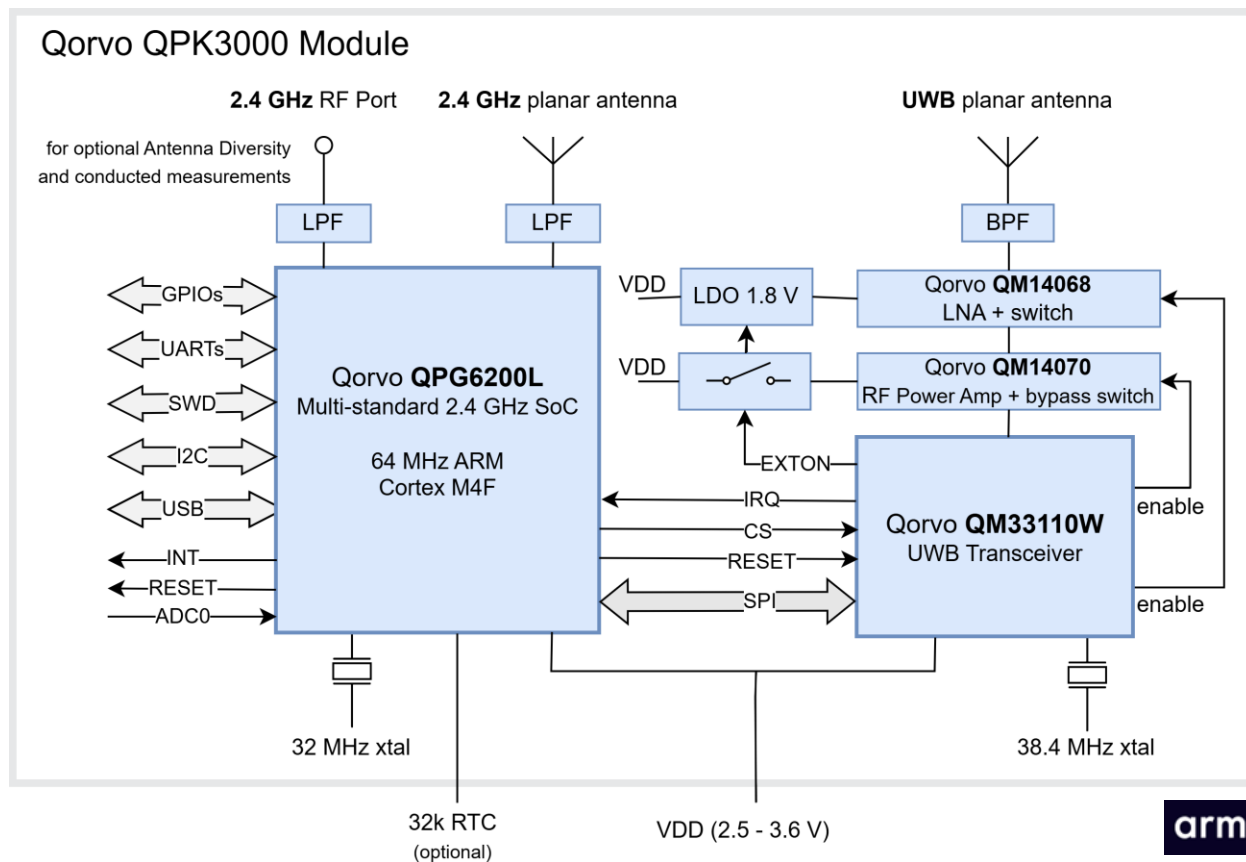
Add high-precision UWB RTLS to your product with an integrated module designed for fast integration and guaranteed interoperability.



Applications

- **High-precision Real-Time Location Systems (RTLS)** and asset tracking using Uplink TDoA or Two-Way Ranging—enabling real-time visibility of assets and operations.
- **Last-meter positioning** (“Find My Asset”) using FiRa™ compliant UWB with Bluetooth LE for seamless user experiences. Following Apple Nearby Interaction Accessory Protocol and Android equivalent.
- **Location-aware wireless sensor networks**, combining communication and precise ranging in a single infrastructure.
- **Industrial positioning with omlox™ compliance**, ensuring interoperability across multi-vendor RTLS deployments.

Functional Block Diagram



Product Overview

- Add UWB RTLS to new or existing products without redesign, reducing development time and complexity.
- Ensure interoperability with UWB-enabled enterprise infrastructure, including leading Access Points, for immediate ecosystem compatibility (Omlox and coming soon for Cisco Spaces).
- Develop custom or differentiated RTLS solutions using a flexible Zephyr-based software environment.
- Achieve reliable, high-performance wireless operation with a fully optimized, tested, and calibrated RF design.
- Enable multi-year battery-powered operation with optimized low power consumption.
- Support for TDoA and UWB Two-Way ranging architectures, giving flexibility in system design.
- Build FiRa™ compliant products to ensure interoperability across the growing UWB ecosystem.
- Enable Omlox-compliant industrial tag solutions for standardized, multi-vendor deployments.
- Accelerate certification timelines with pre-certified RF design: FCC (USA), ISED (Canada), ETSI (EU), listing pending.

Key Features

- IEEE 802.15.4z UWB BPRF compliant, enabling secure and precise ranging.
- Aligned with FiRa and omlox standards, allowing development of interoperable or proprietary RTLS solutions.
- Supports UWB channels 5 (6.5 GHz) and 9 (8 GHz), ensuring global deployment flexibility.
- Integrated Narrow-Band Multi-standard 2.4 GHz radio support (BLE and IEEE 802.15.4) for control, provisioning and hybrid use cases.
- High RF link budget and sensitivity, delivering robust performance in challenging environments.
- Optional +10 dB transmit power (EU indoor) to extend range and coverage where needed (per CEPT ECC/DEC/(06)04 amendment).
- Integrated antennas for UWB and 2.4 GHz, reducing design complexity and BOM effort.
- Optional antenna diversity, improving RX sensitivity by up to 8–12 dB for even more reliable connectivity.
- SESIP Level 2 Cybersecurity compliance, supporting secure IoT deployments.
- Compact 20 × 20 × 3.2 mm form factor, enabling easy integration into space-constrained RTLS Tag designs.
- Wide operating conditions (2.5–3.6 V, -40°C to +85°C) for industrial-grade applications.
- Castellated module (37 pins, 1.5 mm pitch) for simplified PCB integration and manufacturing.

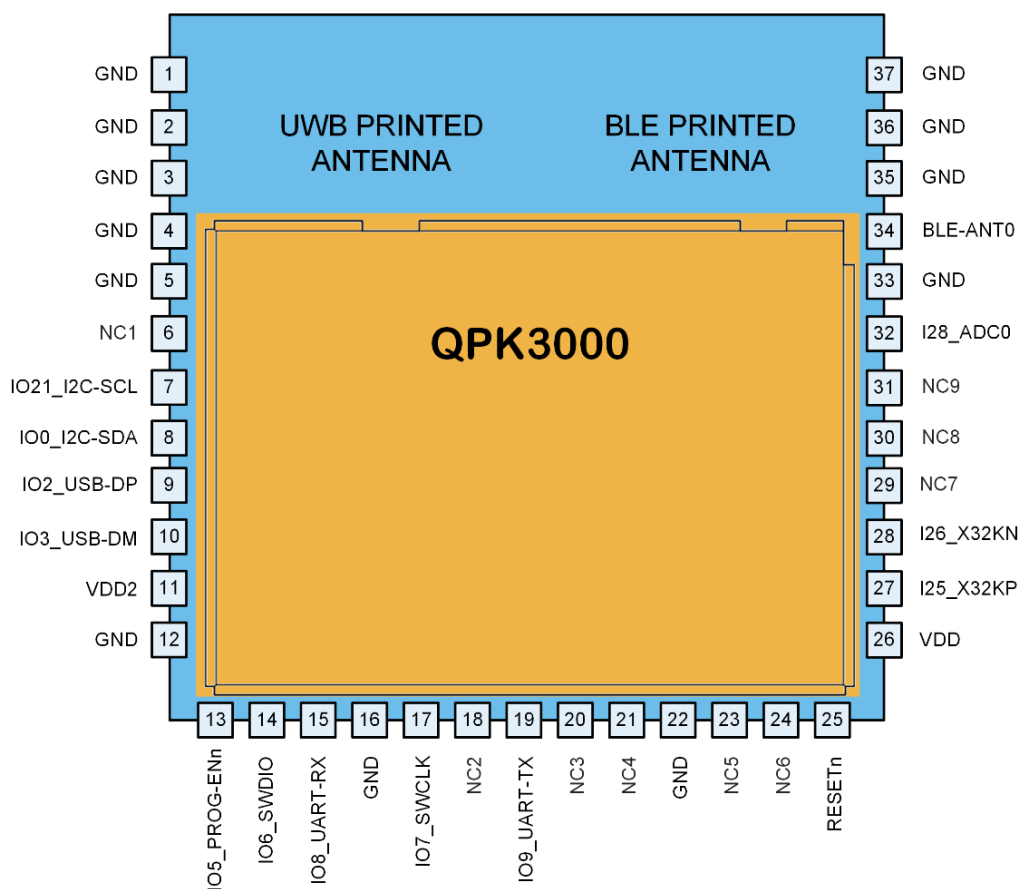


Figure 1: QPK3000 Pin-Out

Software Support

Flexible software options to match your development strategy:

- Zephyr-based SDK for full customization and differentiation
- Cisco Spaces software binary for rapid deployment of interoperable FiRa-based solutions
- omlox based software binary for standardized industrial RTLS deployments.

Please contact Qorvo for access and support details.

Mechanical Dimensions

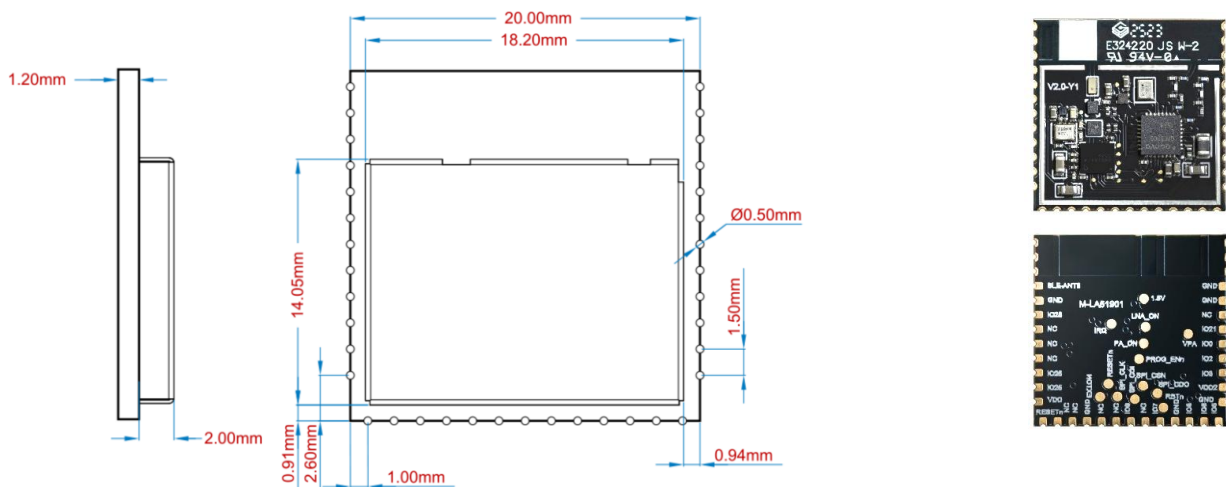


Figure 2: Mechanical Dimensions

Ordering Information

Part Number	Description
QPK3000TR13	RTLS Module with access to programmable SDK or FiRa-based software for Cisco Spaces, 500 pcs on 13" reel
QPK3000ATR13	RTLS Module with access to omlox-based software, 500 pcs on 13" reel

Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

Web: www.qorvo.com

Tel: 1-844-890-8163

Email: customer.support@qorvo.com

Revision History

Data Sheet Revision	Changes
A	Preliminary version.
B	Module height updated.
	Block diagram updated.
	Footers updated.
	Minor text and format updates.

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The module's color and marking is subject to change.