Ariadne ToFu

Empowering Smart Spaces with Wi-Fi and ToF-Based Crowd Analytics

PRODUCT OVERVIEW

The AR201mToF is a compact, high-performance sensor that integrates Wi-Fi technology and Time-of-Flight (ToF) sensing to deliver precise, real-time crowd analytics. Designed for dynamic environments such as retail stores, event venues, public transport stations, and smart buildings, it enables accurate people counting and behavioral analysis for data-driven decision-making.

KEY FEATURES

Dual-Technology for Enhanced Accuracy:
Combining Wi-Fi connectivity and the VL53L8CX ToF sensor, the Ariadne ToFu provides reliable people detection and movement insights. The ToF sensor supports multizone ranging (4x4 or 8x8 configurations), with a range of up to 300 cm and a frame rate of 60 Hz, delivering granular spatial analytics.

High-Performance Processing:
Powered by the Dual-core Xtensa® 32-bit LX6 microprocessor, the device handles large data streams efficiently, supporting real-time analytics and fast edge processing.

Robust Wireless Connectivity:
Equipped with dual-band IEEE 802.11 a/b/g/n/ac Wi-Fi, Ariadne ToFu offers high-speed wireless communication:
Integrated 2T2R internal antennas ensure strong and stable connections in high-density environments.

Plug-and-Play Integration:
The sensor includes a USB power input and USB-to-Ethernet converter, offering flexible deployment options across varied infrastructures. Whether through USB-C or PoE (via a compatible adapter), Ariadne ToFu is designed for simple integration.

Compact, Low-Power Design:
Measuring just 88 x 45 x 15 mm and consuming under 7W, the sensor is ideal for discreet installations, with minimal impact on existing aesthetics or power budgets.

HARDWARE SPECIFICATIONS

Size	88 mm x 45 mm x 15 mm
Weight	145 g (including housing & optional battery)
Interface	USB-C (Power and Serial Communication)
Memory / Storage	520 KB SRAM / 448 KB ROM / 16 MB external SPI Flash
CPU	Dual-core Xtensa® 32-bit LX6 microprocessor @ 240 MHz
Antennas	2.4 GHz internal onboard antenna
Protocol	IEEE 802.11 b/g/n (2.4 GHz); Bluetooth v4.2 BR/EDR and BLE
Wi-Fi Speed	Up to 150 Mbps (HT40 supported)
TX Power	Max 20 dBm (2.4 GHz)
Ethernet Port	None
LEDs	Power / Status indicators
Time-of-Flight Sensor	VL53L8CX – Multizone ranging (4×4 or 8×8 configuration), up to 400 cm range, 60 Hz frame rate
Power Input	5V DC via USB-C
PoE Support	Not supported
Power Consumption	0.5–2 W (depending on Wi-Fi/Bluetooth activity)
Battery (optional)	900 mAh rechargeable (Li-ion)
Working Temperature	-40 °C to +50 °C
Storage Temperature	-40 °C to +50 °C
Housing	UV-stabilized plastic; mounting options available (ceiling mount / wall mount)
SAFETY Standards	CE: EN IEC 62368-1:2020 + A11:2020; EN IEC 62311:2020; RCM: AS/NZS 62368.1:2022; CB: IEC 62368-1:2018