Hitelecom®

RADAR DISTANCE SENSOR

H Series | Non-contact Radar

H200 LoRa | H300 4G | H500 NB



KEY INDICATORS

Measuring Range	Accuracy	Wireless	Protection	Battery Life
300-12,000 mm	±1 mm* 25°C, laboratory	4G / NB-IoT / LoRa	IP68 Body & ingress	Over 10 years* 4-hour reporting

OVERVIEW

The H310-MW012 is a high-precision radar distance sensor, integrating advanced mmWave technology with industrial-grade design for reliable performance in harsh environments. Ideal for industrial automation, sewer water level detection, storage tank monitoring, solid position measurement, displacement monitoring, and deformation detection. It supports NFC local configuration and remote OTA updates for easy maintenance. With smart OTA upgrades, the sensor enables cloud-based firmware updates without on-site visits, offering optimized algorithms, security patches, and new features for enhanced adaptability.

FEATURES

CLOUD

Connect distance records to Hitelecom Cloud or a compatible customer / private platform.

GREEN

Ultra-low-power operation. Over 10 years with reporting every 4 hours.*

IP68

IP68 body and ingress protection for demanding indoor and outdoor installations.

NFC

NFC activation and local maintenance configuration on supported variants.

OTA

Remote firmware updates through the compatible platform and configured data path.

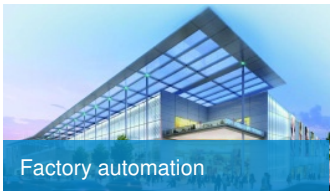
CUSTOMIZATION

Match the radar range, mounting, wireless variant and reporting profile to the installation.

APPLICATIONS


Sewer levels


Storage tanks


Factory automation


Bulk material levels


Tunnel joints


Bridge bearings


Heritage structures

Representative radar applications; align the beam with the liquid, material or fixed reference target.

Item		Description
Physical Characteristics	Product models	H200 (LoRa) / H300 (4G LTE) / H500 (NB-IoT)
	Power supply	Battery-powered; H300 reference: 19,000 mAh.
	Battery life	More than 10 years with reporting every 4 hours.*
	SIM card	H300 / H500: standard IoT SIM or eSIM option; H200: not required.
	Antenna	Built-in
	Size	130 × 66 × 66 mm (H300 reference); other models by configuration.
	Sleep consumption	25 µW (H300 reference configuration)
	Data protocol	MQTT platform interface; H200 uses a compatible gateway.
	Local configuration	NFC activation and local setup on supported variants.
	Mounting	Wall / pole / DIN rail, depending on configuration.
Connectivity	Wireless options	H200: LoRa; H300: 4G LTE; H500: NB-IoT.
	H300 LTE-FDD bands	B1 / B2 / B3 / B4 / B5 / B7 / B8 / B12 / B13 / B18 / B19 / B20 / B25 / B26 / B28 / B66
	H300 LTE-TDD bands	B34 / B38 / B39 / B40 / B41
Radar Sensor	Measuring range	300-12,000 mm; other ranges by configuration.
	Accuracy	±1 mm (25°C, Hitelecom Lab)*
	Resolution	±1 mm
	Beam angle	Less than 20°
	ATC	Supported

H300 dimensions, battery, sleep power and LTE bands refer to the supplied radar reference. H200 / H500 radio settings and hardware follow the selected configuration.

SPECIFICATIONS

Item		Description
Waterproof Rating	Physical body protection	IP68
	Ingress protection	IP67/IP68
Reliability	Electrostatic discharge immunity	Contact discharge: 6 kV; air discharge: 8 kV
	Surge immunity	Differential mode: 1 kV; common mode: 2 kV
	Fast transient burst	Power supply circuit: 2 kV
Environmental Range	Operating temperature	-30°C to +75°C
	Operating humidity	5% to 95% RH (non-condensing)
	Storage temperature	-40°C to +85°C
Integration	Data destination	Hitelecom Cloud or a compatible customer / private platform.
	LoRa integration	H200 uses a compatible LoRa receiver / gateway for platform access.
	Threshold alerts	Configure distance / level limits and the notification workflow.
Certification References CCC / CE / FCC / RoHS	Safety	EN IEC 62368-1:2020+A11:2020
	Health	EN IEC 62311:2020
	EMC	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-52 V1.2.1 (2021-11)
	Radio	ETSI EN 301 908-1 V15.2.1 (2023-01) ETSI EN 301 908-13 V13.2.1 (2022-02)
	Frequency range	FDD B1: 1920-1980 MHz TX; 2110-2170 MHz RX FDD B3: 1710-1785 MHz TX; 1805-1880 MHz RX FDD B8: 880-915 MHz TX; 925-960 MHz RX TDD B40: 2300-2400 MHz TX / RX
	Maximum output power	FDD B1: 22.89 dBm max. FDD B3: 23.23 dBm max. FDD B8: 24.02 dBm max. TDD B40: 22.24 dBm max.
	Modulation	QPSK, 16QAM

* Range / accuracy: 300-12,000 mm and ±1 mm are the supplied radar configuration reference; accuracy is specified at 25°C in Hitelecom Lab. Align the beam with a suitable target and keep obstructions outside the measurement path.

* Battery life: more than 10 years with reporting every 4 hours. Actual service life depends on battery configuration, measurement interval, network conditions and temperature.

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