PRODUCT SUMMARY 030 097 000 007 / 008

Halo 300

5G intelligent edge antenna

5G intelligent edge antenna for Cellular 5G, Wi-Fi 5 for vehicle-to-ground services.
Managed edge compute platform with Fleet Connect advanced connectivity application software.

KEY FEATURES

- Simple Installation – single hole mounting
- Superior Omnidirectional RF performance
- 2 Cellular modems: Supports up to 4x4 MIMO Cellular with dual modems: 1 x 5G, 1 x 4G
- Wi-Fi modem: Wi-Fi 5
- Ethernet connection: 1 Gbps Ethernet cable (ethernet and power)
- PoE+ class 4
- 2 SIM slots, dual physical eSIM option. Optional Sim Bank with 8 Sims slots.
- GNSS receiver supports GPS L1 C/A, QZSS L1 C/A/S, GLONASS L1OF BeiDou B1I, Galileo E1B/C
- Real-time clock with backup supercapacitor
- Extended temperature capability: -40c to 85c
- EDGE Compute platform with monitoring, over the air updates, container environment for user apps
- Pre-installed with McLaren Applied Fleet Connect software for cellular aggregation

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COMMUNICATION SERVICES

Radio Modules:

Global:	1 x Telit 990A28, 1 x Sierra Wireless© EM7421. UKCA, CE approved. Multi-band support for Europe, Australia, Japan, Africa, APAC
NAM, North America	1 x Telit 990A28, 1 x Sierra Wireless© EM7411. FCC, IC, GCF and PTCRB approved. Carrier approvals including ATT, T-Mobile. B14 support for public safety applications.

Supported Bands:

5G	n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79 (617-5000 MHz)
LTE	1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29, 30, 32, 34, 38, 39, 40, 41, 42, 43, 46(LAA), 48, 66, 71*
HSPA+/WCDMA	1, 2, 3, 4, 5 ,6, 8, 9, 19
Wi-Fi	Wi-Fi 5: 802.11ac 2x2 MU-MIMO (2.4 / 5 Ghz)
GNSS	GPS L1 C/A, QZSS L1 C/A/S, GLONASS L1OF BeiDou B1I, Galileo E1B/C

ELECTRICAL

Processor	2x ARM® Cortex-A72 1.6 GHz, 4x Cortex-A53 1.26 GHz, 2x Cortex-M4F 266 MHz
Memory	4GB RAM
Storage	32GB eMMc
Operating System	Embedded Linux Debian 12
Ethernet	1 Gbps LAN RJ45 pigtail. Optional: M12 X-code female 300mm pigtail
Power input	PoE+ class 4 (802.3at)
Status	6x LED status indicators
SIMS	2x integrated SIM slots (2FF form factor) 2x eSIM (2FF) and Management platform available on request SIM Bank accessory with x8 SIMs available
Location	GNSS, Real-time clock

This Product is compliant with the Radio Equipment Directive 2014/53/EU EMC

- ETSI EN 303 413 V.1.2.1 (2021-02)
- ETSI EN 301 489-1 V2.2.3 (2019-11)
- ETSI EN 301 489-19 V2.1.1 (2022-09)

SOFTWARE

Application Software	McLaren Applied Fleet Connect application software pre-installed. For multi-MNO / Wi-Fi network aggregation for sustained network performance May require licence and additional monthly fee for ongoing service
Edge Platform	Container runtime environment for user applications Remote monitoring and Alerting Secure Over the air updates

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ENVIRONMENTAL DATA

Environmental conditions	outdoor
Operation temperature (°C)	-40 to 85
Storage temperature (°C)	-40 to 85
Transport temperature (°C)	-40 to 85
IP rating	IP69K
Flammability rating	ECE-R118
Solar radiation	DIN 75220
2011/65/EU (RoHS - including 2015/863 and 2017/2102)	compliant acc. Annex III
Lead-free soldered	yes
WEEE 2012/19/EU	no special marking needed
ELV 2000/53/EC	compliant
REACH 1907/2006/EC	compliant

ENVIRONMENTAL TESTS

Environmental tests: ISO 16750:2012/2010

EN 60068-2-1 Cold temperature test Ad, -55°C, 16h
EN 60068-2-2 Dry heat test Bd +85°C, 16h
EN 60068-2-30 Damp heat cyclic test Db, +25/55°C, 2 cycles EN 60068-2-11 Salt Mist test Ka, 96h
EN 61373 § 9 Mechanical Vibration test, Cat. 2
EN 61373 § 10 Mechanical shock test, Cat. 2
EN 60529 Ingress protection test, IP69
Suitable for installation on vehicles with a maximum speed of 160km/hr

Product is compliant with the Radio Equipment Directive 2014/53/EU EMC

MATERIAL DATA

Radome colour	White
Radome material	PC (Polycarbonate)
Back plate/base plate colour	grey
Back plate/base plate material	Aluminium

MECHANICAL

Dimensions (mm)	84.5 x 202 / 211.4 (Height x Footprint / Maximum Diameter)
Weight (kg)	1.75 (without packaging)

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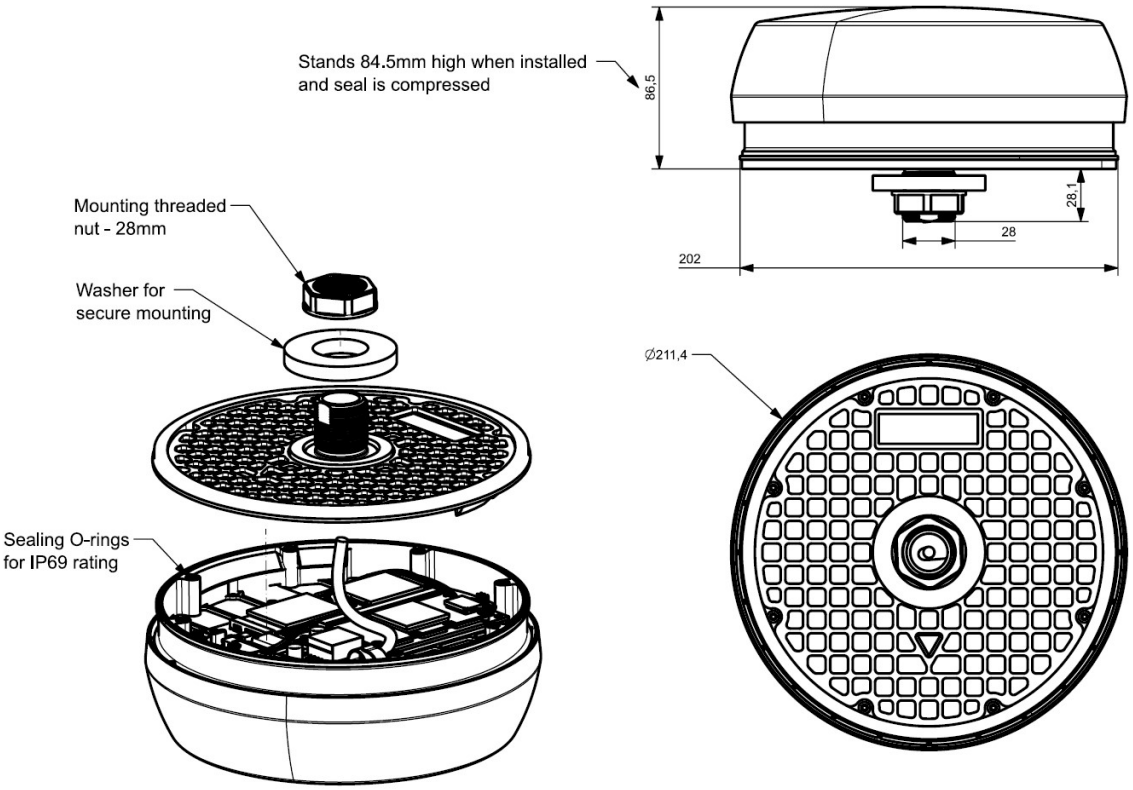

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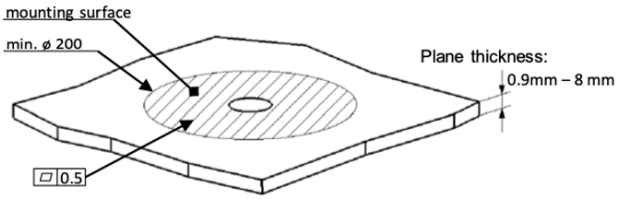
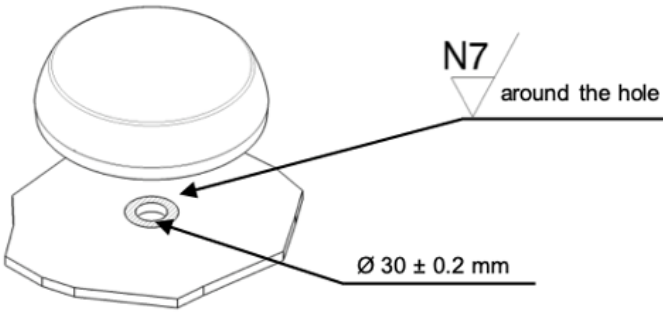
INSTALLATION



Dimensions in mm.

The area where the antenna will be mounted has to be stable and preferably flat.

The antenna may require a bracket when mounted on a curved roof.



Drill the mounting hole

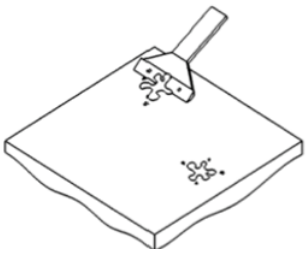
Clear the area around the hole from any corrosion, roughness, grease, oil, swarf or dust.

Loosen the nut from the shaft.

Pass the cables through the hole.

Replace the slotted washer with stepped face towards the hole.

Fasten the nut. Torque: 15 ± 2 Nm.



Use the flats on the antenna shaft to prevent the antenna from rotating when fastening.

Connect the cables. **Take ESD precautions!** Use cable holders to avoid tension on the connectors.

The cables can be recessed into the slot in the shaft to minimize installation depth.

Cable minimum bending radius; 8mm (static)

Unused connectors must be terminated.

General comments:

In the final position of the antenna, the draining hole and connectors need to be protected against environmental impacts (indoor environment). Otherwise, a cable conduit has to be used.

For more information, please contact
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