

GENERAL INFORMATION

FCCID: 2AFCS-PAL20

1.1. Product description



HIKOB AZURE LION
Version 2.0-2466

2 General description of the HIKOB AZURE LION

2.1 HIKOB wireless sensor network acquisition system

The HIKOB AZURE LION is one of the elements that constitutes the HIKOB wireless sensor radio network. This system is a set of wireless sensors doing multi-point distributed measures in various domains. These sensors radiotransmit their acquired data to the HIKOB GATEWAY, possibly via HIKOB AZURE LION routers, depending on environment constraints for radio transmission. This local radio network operates in the 2.4GHz ISM bandwidth and implements the standardized IEEE 802.15.4e protocol. The HIKOB GATEWAY provides the user with these acquisitions through its embedded software: HIKOB NET PULSE, which makes the interface to any TCP/IP network.

HIKOB systems cover data acquisitions such as vehicle detection for controlled traffic or parking management, various measurements in civil engineering structures from stress gauges to crack/inclino-meters, and vibrations from industrial machines for diagnostic purpose, providing tools for predictive maintenance for example.



2.2 HIKOB AZURE LION overview



Figure 1: External view of HIKOB AZURE LION

HIKOB AZURE LION is a wireless and energy autonomous router for the HIKOB radio network operating in the 2.4GHz ISM bandwidth. It leverages the radio coverage both in terms of range and signal quality. It relays bi-directional information: from any HIKOB sensor to the HIKOB GATEWAY and vice versa.

Its antenna is embedded in the casing, as well as its solar panel providing the source for rechargeable batteries. The HIKOB AZURE LION casing is water resistant with an IP67 protection: it is suitable for outdoor installations.

It is delivered all assembled, ready to be fastened on a pole or a wall with provided accessories, please refer to the Installation section for details.



3 Data sheet

Power supply	Rechargeable battery Li-ion 3,6V 2250mAh
Packaging	IP67 according to EN 60529
Dimensions	8 x 8 x 2.5 cm
Weight	150g
Temperature	Operating and Storage 0°C +40°C

Radio

Frequency Band	2.4GHz ISM
Protocol	IEEE 802.15.4e
Antenna gain	+3dB
Input level sensitivity	-111dBm
Output power	+11dBm
Range	between 100 and 300m to HIKOB GATEWAY or another router. 50m to sensor, 30m to a buried sensor ¹

¹Radio range given for a connection to a HIKOB WISE COW or HIKOB POLAR BEAR sensor, these sensor types are installed in road pavement, this alters radio transmission quality.



1.2. Tested System Details

See test report

1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.10-2013, FCC Part 15 Subpart C.

Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.4. Test facility

Tests have been performed from June 3rd to June 14th, 2015.

This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.10-2013 (registration number 94821).

This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, accreditation number 1-1633 as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.