



Quick Guide – AssetTAG Micro (UWB5010)

Inpixon RTLS

26th September 2022, v1.2

ENGLISH

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Inpixon® (Nasdaq: INPX) is the innovator of Indoor Intelligence®, delivering actionable insights for people, places and things. Combining the power of mapping, positioning and analytics, Inpixon helps to create smarter, safer, and more secure environments. Inpixon customers can take advantage of industry leading location awareness, RTLS, workplace and hybrid event solutions, analytics, sensor fusion, IIoT and the IoT to create exceptional experiences and to do good with indoor data.

Revisions

Version	Date	Author	Change
0.1	25.05.2020	Ersan Günes [EG]	Initial
0.2	20.08.2021	Ersan Günes [EG]	Update
1.0	07.02.2022	Ersan Günes [EG]	Update
1.1	18.08.2022	Ersan Günes [EG]	Update
1.2	26.09.2022	Julian Clemens [JC]	Update

Table of Contents

Legal notice.....	5
Warnings	5
Qualified personnel	6
Intended use of INTRANAV products	6
Brands	7
Disclaimer	7
Overview	8
General	8
Scope of delivery and accessories	8
Power supply	8
Areas of application.....	9
Product dimension.....	9
Assembly, commissioning, maintenance and safety	9
General information.....	10
Assembly and operation	10
Replacing the batteries	10
Operation of the device	11
Cleaning and maintenance.....	11
Technical data.....	11
Signal states and marking	13
Admissions	13
EU Declaration of Conformity	13
RoHS	14
RED (Radio Equipment Directive)	14
Recycling and disposal	17
Troubleshooting.....	17

Legal notice

Warnings

These instructions contain information that you must observe for your personal safety and to avoid damage to property. The instructions for your personal safety are highlighted by a warning triangle. Information on damage to property alone is not indicated by a warning triangle. Depending on the hazard level, the warnings are shown in decreasing order as follows.



DANGER: means that death or serious injury will occur if the appropriate precautions are not taken.



WARNING: means that death or serious injury may occur if the appropriate precautions are not taken.



CAUTION: indicates that minor personal injury may occur if proper precautions are not taken.

CAUTION: means that property damage may occur if the appropriate precautions are not taken.

If several hazard levels occur, the warning for the highest level is always used. If the warning triangle is used in a warning against personal injury, then a warning against property damage can also be added to the same warning.

Qualified personnel

The product/system associated with this documentation may only be handled by personnel qualified for the respective task and in compliance with the associated documentation for the respective task, in particular the safety and warning instructions contained therein. Due to their training and experience, qualified personnel are capable of recognizing risks and avoiding possible hazards when handling these products/systems.

Intended use of INTRANAV products

Consider the following:



WARNING: INTRANAV products may only be used for the applications specified in the catalogue and in the associated technical documentation. If third-party products and components are used, they must be recommended or approved by INTRANAV. Faultless and safe operation of the products requires proper transport, storage, assembly, installation, commissioning, operation and maintenance. The permissible ambient conditions must be observed. The instructions in the relevant documentation must be observed.

WARNING: Please use appointed battery in case of explosion risk, Kindly dispose of lifeless battery under guidance.

WARNING: Fire, explosion and severe burn hazard. Do not recharge, short circuit, crush, disassemble, incinerate or expose content to water.

WARNING: Recycle your device.

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment may only be operated indoors.
Operation outdoors is in violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties.

This devices may not be employed for the operation of toys. Operation onboard an aircraft, a ship or a satellite is prohibited.

Brands

All designations marked with ® are registered trademarks of INTRANAV GmbH. The other designations in this document may be trademarks whose use by third parties for their own purposes may infringe the rights of the owner.

Disclaimer

We have checked the contents of this publication for conformity with the hardware and software described. Nevertheless, deviations cannot be ruled out, so that we cannot guarantee complete

conformity. The information in this publication is checked regularly and any necessary corrections are included in subsequent editions.

Overview

General

The INTRANAV AssetTAG Micro (UWB5010) is a mobile device (active sensor TAG) for real-time indoor positioning. This so-called "TAG" is located by means of radio positioning based on Ultra-Wideband radio technology. For this purpose, the TAG transmits an identification signal at a periodic time interval or in the event of movement. In addition to the unique CHIP ID, this so-called "blink" also contains further data for diagnostic, status and sensor values. The signals are received by the INTRANAV RTLS NODEs and calculated in coordinates or position data.

Scope of delivery and accessories

1 Unit

INTRANAV AssetTAG Micro
Model: UWB5010
Order & item number: 10101012

Accessories (not included in delivery)

1 Unit

Battery for AssetTAG Micro (UWB5010)
Voltage: 3V CR2477

Power supply

The device can be operated with a voltage of 3 volts direct current (DC).

Only use the specified battery types for this purpose. If other batteries are used that are not within the specified specifications, the device may be destroyed and the warranty and guarantee will be voided.



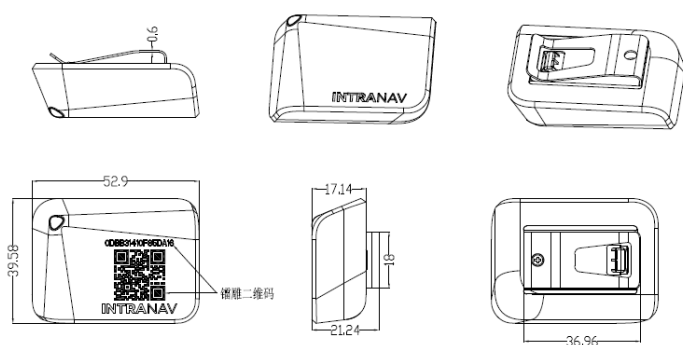
WARNING: Improper use or reversed polarity can cause the battery to explode and seriously injure people!

Areas of application

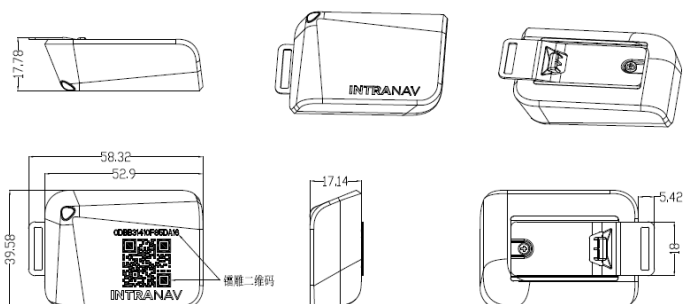
The device is designed to be operated in an environment of -10°C to +60°C. For this reason, it is essential to ensure that the screw connections of the housing are correctly tightened and that the sealing elements have not been removed, damaged or modified. Over-tightening can damage the seal and the housing. Therefore, only have it opened and closed again by qualified personnel.

Product dimension

Dimensions approx. 52.9 x 39.58 x 21.24 (mm) & weight approx. 40 (gr.)



Dimensions approx. 58.32 x 39.58 x 17.78 (mm) & weight approx. 40 (gr.)



Assembly, commissioning, maintenance and safety

General information

- Before installing the equipment, carefully read all the points listed in the section "Assembly, Commissioning, Maintenance and Safety" to ensure proper installation and operation.
- The devices can only be used in conjunction with the INTRANAV RTLS solution.
- The correct setup, installation and use of the tools and clients of the localization system are described in the corresponding manuals.
- In the event of a return, remove the batteries from the device.

Assembly and operation

- To achieve optimal indoor positioning, the device must be mounted in such a way that there is a direct line of sight to the infrastructure devices (INTRANAV NODE).
- The device must be installed by appropriately qualified and trained personnel in accordance with the installation instructions.
- Before using the device, make sure that the device is not damaged and cannot be damaged during use.
- Never cover the antenna with metallic or shielding objects.
- The specified ambient temperatures of the devices must be observed.
- The device contains lithium batteries. Improper handling of batteries can cause fire and burns.
- The housing of the device must never be crushed, punctured or subjected to other mechanical force. Opening is only permitted to change the batteries. When doing so, observe the polarity of the batteries (marking on the battery compartment cover).
- The ambient temperature of the device must not exceed 60 °C. Avoid mounting locations with direct sunlight.
- The installation of the devices must be carried out according to the respective instructions for the installation of electrical systems and supply devices.

Replacing the batteries

1. To change the batteries of the AssetTAG, you must remove the protective cover, open the device via by opening the clip mechanism.



2. Insert a new battery into the battery compartment provided. Never use used or half-full batteries, only new ones!
3. The AssetTAG should now be flashing. You can use this to check the function of the TAG.
4. Replace the cover on the Asset TAG. Make sure that the components have been inserted in the correct orientation and are not damaged.

Operation of the device

- The AssetTAG will automatically log on to your INTRANAV.IO platform (default setting).

Cleaning and maintenance

- The device may only be opened for battery replacement.
- Repairs to the device may only be carried out by an authorized service center or trained key user.
- Unauthorized opening and improper repairs may result in considerable danger to the user.
- Unauthorized opening of the devices will result in the exclusion of warranty and liability of INTRANAV GmbH.
- Never use liquids, scouring agents, alkaline cleaning agents, sharp or abrasive tools to clean the housing.

Technical data

Property	Description
Radio procedure	IEEE 802.15.4-2011 UWB (Ultra-Wideband)
Frequency range	UWB Channel 5 (6.4GHz)
Transmitting power	-2.47 dBm/50MHz
Antenna	Omnidirectional integrated antenna (max. 50m range)

Sensors	3-axis accelerometer Integrated temperature sensor
Supply voltage	CR2477 coin cell
Operating time at 20°C	Standby up to 5 years (max.) 3 years typical Battery life time in average usage 1 years at 1 Hz with motion standby
Protection class	IP 54
Dimensions	Approx. 40 x 53 x 18 mm
Weight	Approx. 40 g
Temperature range	-10°C ... +60°C

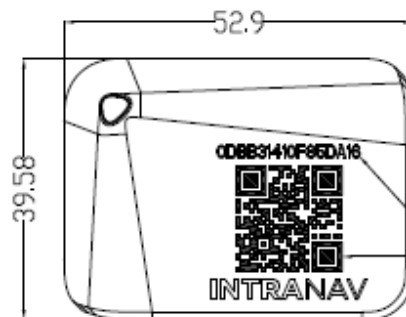
Signal states and marking

TAG front panel with dual RGB LED



Signal light (LED)	Description
Red (fast flashing)	"Blink" signal is sent.
Green (short rapid flashing)	Receive diagnostic data and configuration.

The signal states may change or expand slightly depending on the TAG configuration and software release.



Barcode consisting of
TAG-ID information

Admissions

EU Declaration of Conformity

The current EU declaration of conformity for this product is available on request or by e-mail to support@inpixon.com.

The products described in this document meet the requirements of the following EU directives:

- RoHS Directive 2011/65/EU

Directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment; Official Journal of the EU L174, 01/07/2011, p. 88-110.

- Radio Equipment Directive 2014/53/EU (RED)

Directive of the European Parliament and of the Council of 16 April 2014 on the harmonization of the laws of the Member States relating to the making available on the market of radio equipment; Official Journal of the EU L153, 22/05/2014, pp. 62-106.

RoHS

RoHS Directive (Restriction of the use of certain Hazardous Substances)

The products described in these operating instructions comply with the requirements of EU Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Applied standard:

- EN 50581

Technical documentation for the assessment of electrical and electronic equipment with regards to the restriction of hazardous substances

RED (Radio Equipment Directive)

Protection of health and safety

The products described in this document meet the requirements according to the attracted standards:

Art. 3 (1) a) Protection of health and safety

- EN 62368-1
Equipment for audio/video, information and communication technology - Part 1: Safety requirements
- EN 62479, EN 50663
Evaluation of electrical and electronic equipment in relation to limitations of exposure of persons to electromagnetic fields (0 Hz to 300 GHz)

The products described in these operating instructions meet the requirements of the Art. 3 (1) b) EMC Harmonized Standards:

- ETSI EN 301 489-1
Electromagnetic compatibility and Radio spectrum Matters (ERM) - ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 1: Common technical requirements
- ETSI EN 301 489-33
Electromagnetic compatibility and Radio spectrum Matters (ERM) - ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 33: Specific conditions for Ultra-Wideband (UWB) equipment
- EN 55011
Industrial, scientific and medical equipment - Radio disturbance characteristics - Limits and methods of measurement
- EN 55032
Class A, Class B Electromagnetic compatibility of multimedia equipment and devices - Emission requirements
- EN 55035
Electromagnetic compatibility of multimedia equipment - Immunity requirements
- EN 61000-6-1
Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments
- EN 61000-6-2
Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
- EN 61000-6-3
Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission for residential, commercial and light-industrial environments
- EN 61000-6-4
Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission requirements for industrial environments

Art. 3 (2) Efficient use of radio spectrum

- ETSI EN 302 065-2
Short Range Devices (SRD) using Ultra-Wideband (UWB) technology - Harmonized EN covering the essential requirements of Article 3.2 of the EU Directive 2014/53/EU; Part 2: Requirements for Ultra-Wideband Site Surveillance



BE	BG	CZ	DK	DE	EE	IE	EL
ES	FR	HR	IT	CY	LV	LT	LU
HU	MT	NL	AT	PL	PT	RO	SI
SK	FI	SE	NO	IS	LI	CH	TR

Note

The specified approvals are only valid if the corresponding symbol is printed on the device.

Recycling and disposal



The products are low in pollutants, recyclable and meet the requirements of the WEEE Directive 2012/19/EU for the disposal of waste electrical and electronic equipment.

Do not dispose of the products at public disposal points.

For environmentally sound recycling and disposal of your old device, contact a certified electronic waste disposal company or your INTRANAV contact.

Note different country-specific regulations.

Troubleshooting

Q: TAG no longer logs into the platform and no longer sends data.

A: If the AssetTAG stops working, you can reboot the hardware by removing and reinserting the device's battery. If the LED does not flash, please replace the batteries of the device.

Q: Unstable position data or strong jumping of the position.

A: Ensure that the TAG has a line of sight to the INTRANAV RTLS NODE antenna infrastructure. Also ensure that the TAG is not surrounded directly by any metallic or shielding materials such as copper, aluminum, stainless steel or zinc.