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Actisense W2K-1
NMEA 2000 Wi-Fi
Gateway

# Actisense W2K-1 NMEA 2000 Wi-Fi Gateway User Guide

**Contents**

**Actisense W2K-1 NMEA 2000 Wi-Fi Gateway**

**Specifications:**

- **Product Name:** W2K-1 NMEA 2000 Wi-Fi Gateway
- **Intended Use:** Transfer data from an NMEA 2000 backbone to any compatible device via Wi-Fi
- **Features:** Compact, low-power, NMEA 2000 certified, internal micro SD card for data logging
- **Safety Precautions:** Must be followed to prevent personal injury and ensure correct operation
- **Mounting Requirements:** Do not mount while powered, internal antenna, avoid metal surfaces

## Product Usage Instructions

1. **Installation:**

   Ensure the device is installed by a competent person with knowledge of NMEA 2000 networking.

2. **Safety Precautions:**

   Follow all safety precautions and warnings to prevent personal injury and ensure correct operation.

3. **Installation Code of Practice:**

   When wiring the power supply, ensure the isolation switch is off to prevent damage. Follow local regulatory requirements for power connections.

4. **Mounting Requirements:**

   Do not mount while powered or cable harness connected. Mount on a flat location away from metal surfaces for best range.

5. **Safe Distance:**

   Do not mount within 5m of a compass or within 20cm of a human body. Mount at a height of less than 2m from floor level.

6. **Product Disposal:**

   Dispose of the product according to the European WEEE Directive or local regulations for electrical equipment disposal. Recycle the product packaging.

**FAQ:**

- **Q: Can the W2K-1 be used with any NMEA 2000 backbone?**

  A: Yes, the W2K-1 is designed to work with any NMEA 2000 backbone.

- **Q: What devices can connect to the W2K-1 via Wi-Fi?**

  A: Any compatible device such as a laptop, tablet, or smartphone can connect to the W2K-1 via Wi-Fi.

W2K-1
NMEA 2000 Wi-Fi Gateway

**USA**: Federal Communications Commission (FCC) Statement
This device complies with FCC part 15 FCC Rules.Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference, including interference that may cause undesired operation of the device.

## FCC Warning

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

This device meets the FCC and IC requirements for RF exposure in public or uncontrolled environments.

- Suppliers Declaration of Conformity  47 CFR § 2.1077 Compliance Information
- Unique Identifier : Actisense W2K-1
- Responsible Party – US Contact Information

- GEMECO Marine Accessories
- 1141 S.Ron McNair Boulevard
- Lake City, SC 29560
- Phone : **803-693-0777** / Fax **803-693-0477**
- **https://www.gemeco.com/**
- Canada: Industry Canada (IC) Statement
- IC Notice to Users English/French in accordance with RSS GEN Issue 3:
- This device complies with Industry Canada license exempt RSS standard(s).

Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

**European Union:**

The full text of the EU declaration of conformity is available at the following internet address:
**https://www.actisense.com/acti_download/w2k-1-declaration-of-conformity/**
Hereby, Active Research Ltd declares that the W2K-1 is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
Intended Use:
The W2K-1 is a compact and low-power NMEA 2000 to Wi-Fi Gateway intended to transfer data from an NMEA 2000 backbone to any compatible device (e.g. laptop, tablet or smartphone) connected to it via Wi-Fi. All the data received can be logged to its internal micro SD card for later downloading. It is NMEA 2000 certified and should be installed by a competent person with a knowledge of NMEA 2000 networking.

## Safety Precautions and Warnings

All Safety Precautions and Warnings must be followed prevent personal injury and to ensure the correct operation of the W2K-1. Incorrect installation may invalidate the guarantee.

- **Installation and Operation:** Warning: This product must be installed and operated in accordance with the instructions provided. Failure to do so could result in personal injury, damage to your boat and/or poor product performance. It is to be used as a navigational aid only and must never be used in preference to sound navigational judgement.
- **Installation Code of Practice:**
  **Warning:** When wiring the power supply to the W2K-1 ensure the isolation switch is o? to prevent damage the W2K-1. Any connection to a battery or power supply must meet the mandatory essential safety requirements that may be imposed by local regulatory agencies, this should include suitable fusing. All wiring should be in accordance with the requirements of the
- NMEA 0400 installation specification.
- **Mounting Requirements:**
  **Warning:** Do not mount the W2K-1 while the device is powered, or the cable harness is connected. Select a flat location to mount the W2K-1. Mounting on a contoured surface may cause damage to the case.
- The W2K-1 has an internal antenna which is located on the end opposite to the NMEA 2000 connector and should not be mounted on a metal surface. To ensure best range it should be mounted vertically and located

centrally on the boat as high as possible, avoiding other metallic objects.

- **Safe Distance**: Warning: The W2K-1 should not be mounted within 5m of a compass or operated within 20cm of a human body. To avoid potential injury it should be mounted at a height of less than 2m from floor level.
- **Product Disposal:**
- Please consider the environment when disposing of this product. It should be disposed of according to the European WEEE Directive, or according to the applicable local regulations for the disposal of electrical equipment. The product packaging is recyclable.
- **Radio Transceiver:**
- The W2K-1 contains a Wi-Fi / Bluetooth Radio Transceiver operating in the 2400 – 2483.5 MHz band with a maximum transmit power of 81mW.
- **Guarantee:**
- The product is covered by a 5 year "return to base" guarantee if registered. (else it is 3 years) Please refer to the full user manual at **www.actisense.com**

## Operating Instructions

- A full user manual is available at **www.actisense.com** or else via the "Help" menu on the device's built-in web application.
- The W2K-1 should be connected to a correctly powered and terminated NMEA 2000 network which has at least 2 NMEA certified devices attached. The Blue "Power" LED will pulse showing correct operation.
- Connecting to Wi-Fi:
- The W2K-1 will power up in Access Point mode and it will broadcast it's SSID as "w2k-<serial number>" The serial number and default password can be found printed on the back of the case. Connect to it using a Web browser on the connected device and type the IP address 192.168.4.1 into the address bar.
  Configuring:
- The device can be configured using the devices built-in web application. The default login Username is "admin" and the default password is printed on the back of the case. If no default password is found then use "admin".
- **Note**: The W2K-1 can be configured to use Client (Station) mode to join an existing Wi-Fi network.

**Manufactured by:**
Actisense / Active Research Ltd. 21 Harwell Road Poole Dorset United Kingdom BH17 0GE
**www.actisense.com**
+44 (0) 1202 746682
**support@actisense.com**

## Technical Specifications

| | |
|---|---|
| Supply Voltage (NMEA 2000 Port) | 9 to 30V DC |
| Supply Current (NMEA 2000 Port) | <ul><li>70mA (avg.) @ 12V DC</li><li>100mA (avg.) @ 9V DC</li></ul> |
| Load Equivalent Number (LEN) | 2 |
| Frequency Band | Wi-Fi: 2412 -2472MHz |
| Max Output power | Wi-Fi: 17.56dBm (802.11b) 19.06dBm (802.11g) 18.69dBm (802.11n) |
| Weight | 80g |
| Dimensions | 106mm (L) x 73mm (W) x 24mm (H) |
| Operating Temperature | -20°C to +55°C |
| Environmental Protection | IP67 |

**Importer Details:**

## Documents / Resources

| | |
|---|---|
| | **Actisense W2K-1 NMEA 2000 Wi-Fi Gateway** [pdf] User Guide<br>W2K-1, W2K-1 NMEA 2000 Wi-Fi Gateway, NMEA 2000 Wi-Fi Gateway, Wi-Fi Gateway, Gateway |

## References

- **A Actisense | Marine Network Technology & Vessel Monitoring**
- **A actisense.com/acti_download/w2k-1-**
- **G gemeco.com/**
- **User Manual**