QUICK START GUIDE

PowerBox Systems®
Industrial

CAN-ASA

High precision Airspeed and Altitude Sensor with CAN-Bus Interface

PRODUCT DESCRIPTION

The **CAN-ASA** is an airspeed and altitude sensor that works with two high-precision digital barometric sensors. The static pressure is used to calculate altitude and rate of climb. The speed is calculated from the difference to the dynamic pressure. This results in a large measurable speed range up to over 850 km/h and an altitude measurement with 100 mm relative resolution.

The CAN-BUS interface enables simple integration into all common flight computers. In addition, the most common RC telemetry protocols such as P²-BUS or EX-BUS can be operated in parallel with the CAN-BUS interface.

Two 3 mm Festo connectors are installed for the connection to the pitot tube. The **CAN-ASA** can be updated.

SPECIFICATION

Operating voltage:	4,0 V - 9,0 V
Consumption Power ON:	max. 32 mA
Supported bus systems:	Drone-CAN, PowerBox P²-BUS, Jeti-EX, Futaba S.BUS2
Resolution Speed:	1 km/h (from 10 km/h)
Max. speed:	850 km/h
Resolution height:	0.1 m
Dimensions:	45 x 19 x 11 mm
Weight:	14 g
Temperature range:	-40°C to +85°C

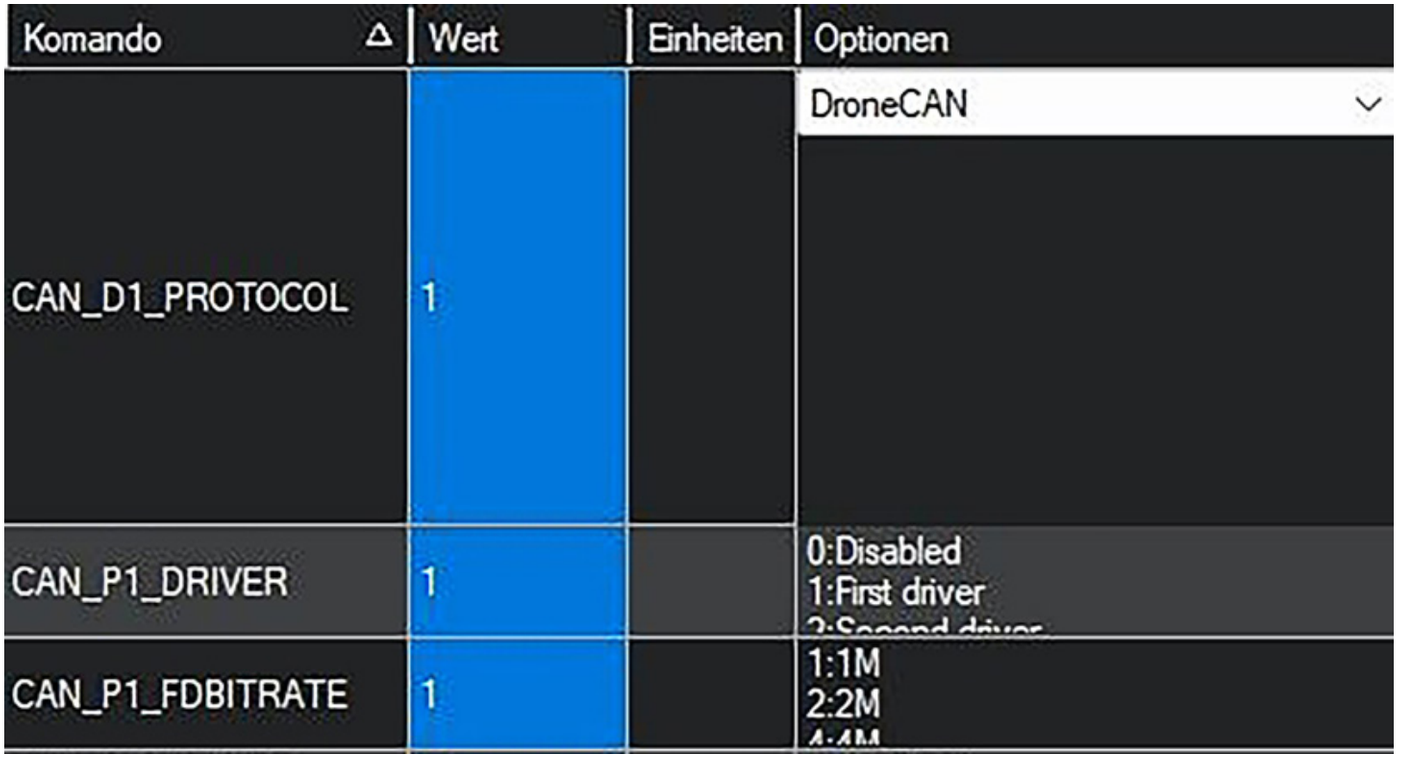
FEATURES

+ Precise measurement of speed, altitude, climb rate and distance
+ Two high-precision separate pressure sensors with the latest MEMS sensor technology
+ Speed measurement up to approx. 850 km/h
+ Altitude measurement accurate to 10 cm
+ High-precision climb rate measurement 0.1 m/s
+ Fast digital filters for delay-free data acquisition without noise
+ CAN-BUS interface for easy integration
+ Aluminum housing with two separate pressure chambers
+ Festo connectors suitable for 3 mm Festo tubes
+ Automatic detection of the optionally connected RC system
+ Supported RC systems: PowerBox P²BUS, Jeti-EX, Futaba S.BUS2
+ Works with all types of pitot tubes
+ Can be updated with the Mobile Terminal

1. QUICK SETUP

This short manual shows how to get the **CAN-ASA** ready to use with ArduPilot. The manual includes the parameters setup in ArduPilot Mission Planer for the communication between the flight computer and the **CAN-ASA**.

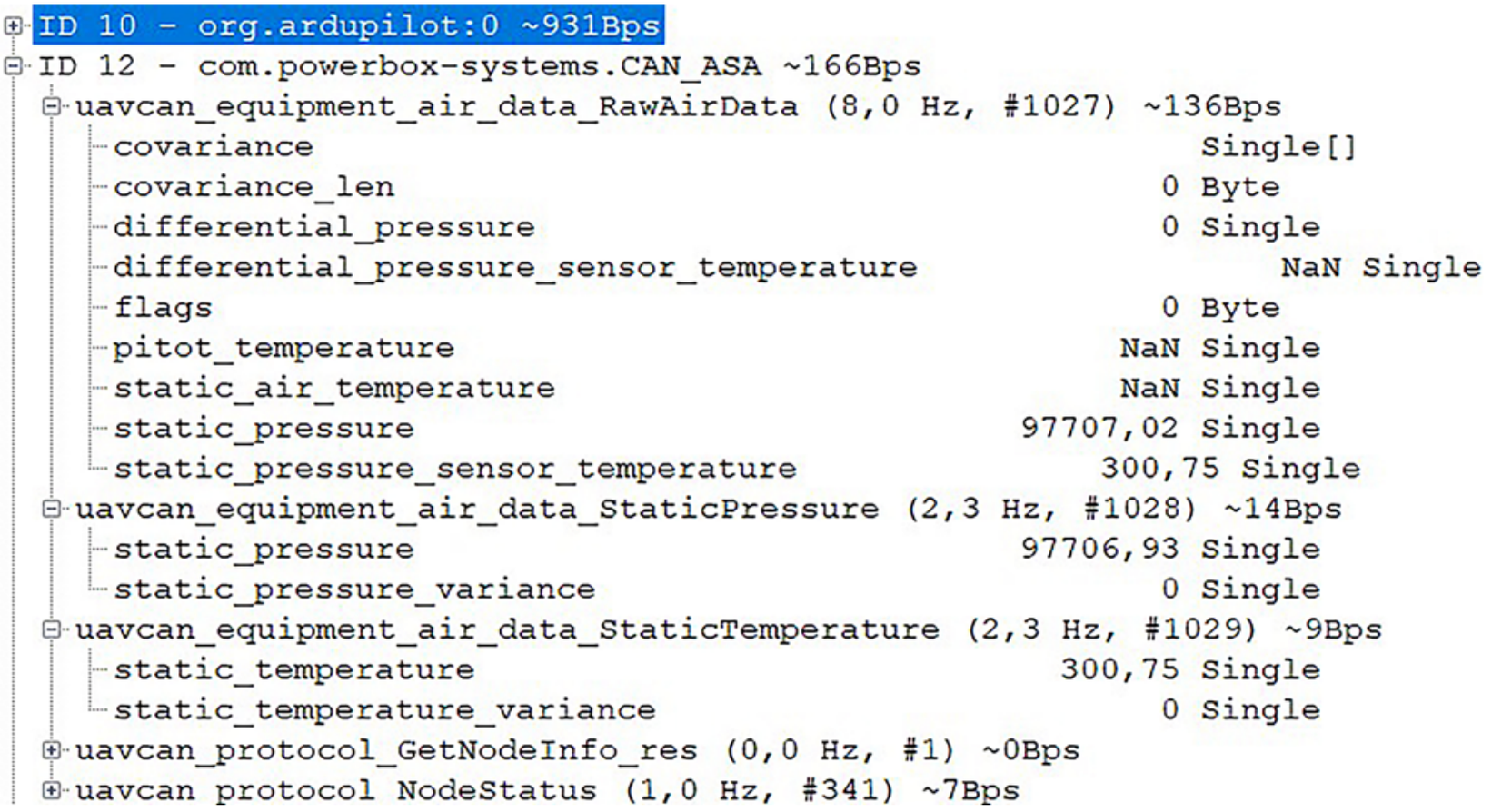
First of all, please activate the Drone-CAN driver. Store this Parameter. After this step you have to restart the Flight computer, to see the other settings. After the restart finish the settings according this list:



Once the CAN-Bus is setup, make these settings in the airspeed (ARSPD) settings. The ARSPD_RATIO is a tested value and might differ in your system because of different pitot tube usage or installations.

Komando △	Wert	Einheiten	Optionen
ARSPD_AUTOCAL	0		
ARSPD_BUS	1		0:Bus0 1:Bus1 2:Bus2 3:Bus3
ARSPD_RATIO	2,13		
ARSPD_SKIP_CAL	2		0:Disable 1:Do not require offset calibration before flight. Manual calibration should be performed during initial setup. 2:Do not calibrate on start up. Manual calibration must be performed once per boot.
ARSPD_TYPE	8		DroneCAN
ARSPD_USE	1		0:Do Not Use 1:Use 2:Use When Zero Throttle

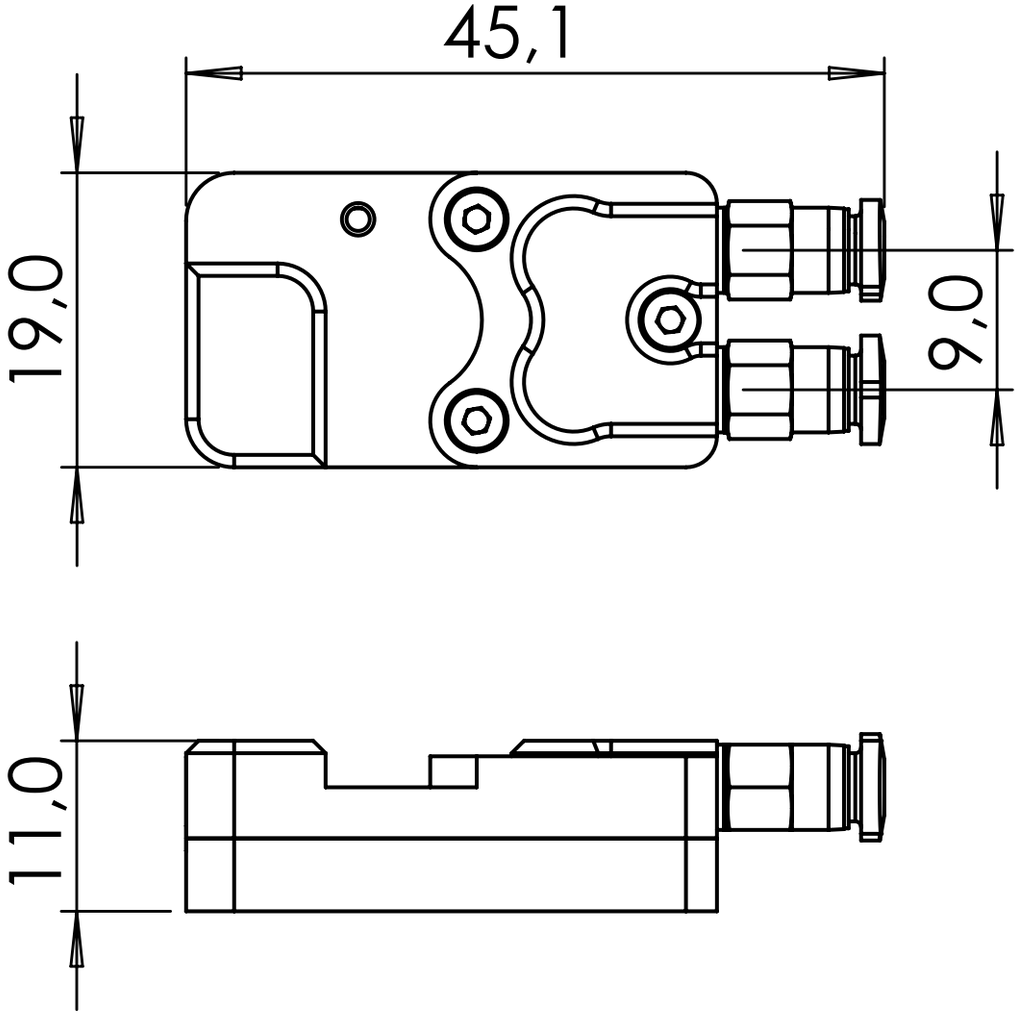
The **CAN-ASA** is now ready to use. The data shows up in the UAVCAN Inspector like this:



2. SET CONTENTS

- **PowerBox CAN-ASA**
- Black tube
- Adhesive pad
- Quick start guide

3. DIMENSIONS



4. SERVICE NOTE

For technical questions you can contact us here:
industrialsupport@powerbox-systems.com

SERVICE ADDRESS

PowerBox-Systems GmbH
Dr.-Friedrich-Drechsler-Str. 35
86609 Donauwörth
Germany

5. EU DECLARATION OF CONFORMITY

This device complies with the essential requirements and other relevant provisions of Directives 2011/65/EU + 2015/863/EU (RoHS) and 2014/30/EU (EMC). The EU Declaration of Conformity for the **PowerBox CAN-ASA** can be found under the following link:

www.powerbox-systems.com/en/content/certificates

6. GUARANTEE CONDITIONS

At **PowerBox-Systems** we insist on the highest possible quality standards in the development and manufacture of our products. They are guaranteed **“Made in Germany”**!

That is why we are able to grant a **24 month guarantee** on our **PowerBox CAN-ASA** from the initial date of purchase. The guarantee covers proven material faults, which will be corrected by us at no charge to you. As a precautionary measure, we are obliged to point out that we reserve the right to replace the unit if we deem the repair to be economically unviable.

Repairs which our Service department carries out for you do not extend the original guarantee period.

The guarantee does not cover damage caused by incorrect usage, e.g. reverse polarity, excessive vibration, excessive voltage, damp, fuel, and short-circuits. The same applies to defects due to severe wear.

We accept no liability for transit damage or loss of your shipment. If you wish to make a claim under guarantee, please send the device to our service address, together with proof of purchase and a description of the defect.

7. SAFETY AND APPLICATION INSTRUCTIONS

a) Intended use

The CAN-ASA is intended exclusively for use in model aeroplanes or UAVs for measuring speed and altitude. Any other use is not permitted.

b) General safety instructions

- Only operate in a dry environment and in accordance with the technical specifications (4.0 - 9.0 V, -40°C to +85°C).
- The device is not suitable for safety-critical or vital applications.
- Before commissioning, ensure that the cabling is correct and firmly connected.
- Modifications to the device will result in loss of conformity and may be dangerous.

c) Installation and handling

- Ensure that there is no mechanical tension during installation
- Only use Festo hose connections with suitable 3 mm Festo hoses.
- Avoid contact with water or a damp environment.

d) Electrical safety

- Only operate with power supplies that provide a stable voltage within the specified range.
- Avoid short circuits and reverse polarity.
- The device must not be opened or modified.

e) Disposal

- Electronic components must be disposed of in accordance with local regulations (observe the WEEE Directive).

8. LIABILITY EXCLUSION

We are not in a position to ensure that you observe our instructions regarding installation of the **PowerBox CAN-ASA**, fulfil the recommended conditions when using the unit, or maintain the entire radio control system competently.

For this reason we deny liability for loss, damage or costs which arise due to the use or operation of the **PowerBox CAN-ASA**, or which are connected with such use in any way. Regardless of the legal arguments employed, our obligation to pay damages is limited to the invoice total of our products which were involved in the event, insofar as this is deemed legally permissible.

We wish you every success using your new **PowerBox CAN-ASA**!

Donauwörth, July 2025

07/2025

PowerBox-Systems GmbH

Dr.-Friedrich-Drechsler-Straße 35
86609 Donauwörth
Germany

+49 906 99999-200
@ sales@powerbox-systems.com

www.powerbox-systems.com