

5. DroneCAN Airspeed Sensor

5.1. About

The TBS LUCID DroneCAN Airspeed Sensor features CAN JST-GH connector, DroneCAN Protocol and direct I2C support. It comes with a stainless steel pitot tube and silicone tubing, ready to be installed in your project.



5.2. Specification

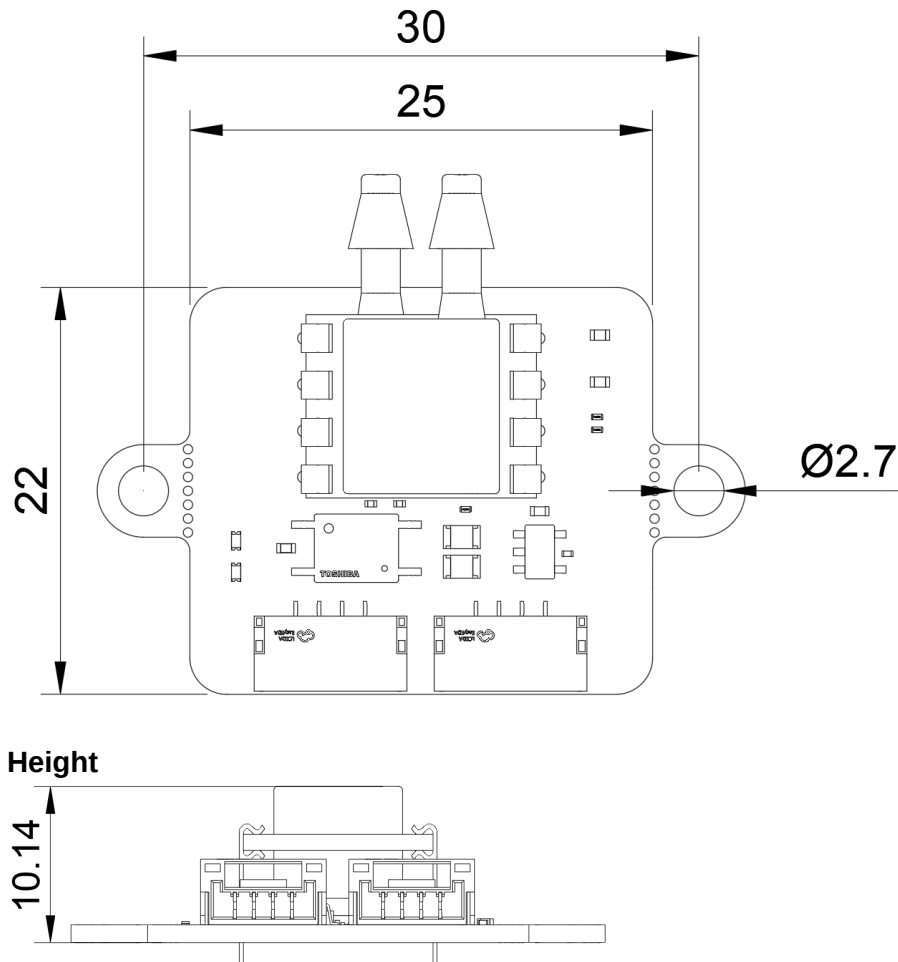
Connections:	CAN 2x Serial 1x SWD 1x I2C 1x
Connector Type:	JST-GH 4-pin, 1.25 mm Solder-Pads
Size	35 x 22 x 11 mm
Operation Temperature:	-20 - 80 °C
Weight	4 g ⁽⁶⁾
Input Voltage:	4.5 - 5.5 V
Power Consumption:	60 mA
BEC Voltage:	5 V: 4 A 12 V: 4 A 9 - 16 V: 20 A
Sensor:	Standard: MS4525DO Pro: DLVR-L10D
Airspeed range:	Standard: 100 m/s; 360 km/h; 223 mp/h Pro: ± 70 m/s; 250 km/h; 155 mp/h
Pressure Range:	Standard: 300 psi / 2068 kPa Pro: 362 psi / 2500 kPa
Accuracy:	Standard: ± 2.0 % Pro: ±0.30 %

(6) excl. Pitot tube and tubing

5.3. Mounting - Dimensions



Note: All dimensions are given in millimeters (mm)



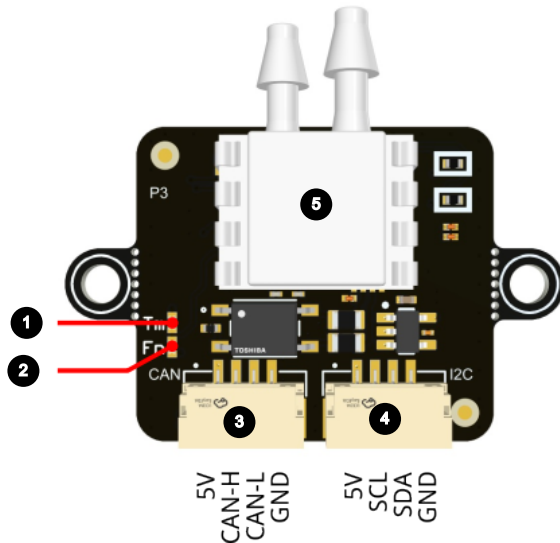
5.4. Firmware

Firmware	Target	Min. FW Version
ArduPilot	TBS-L431-airspeed	1.8.0



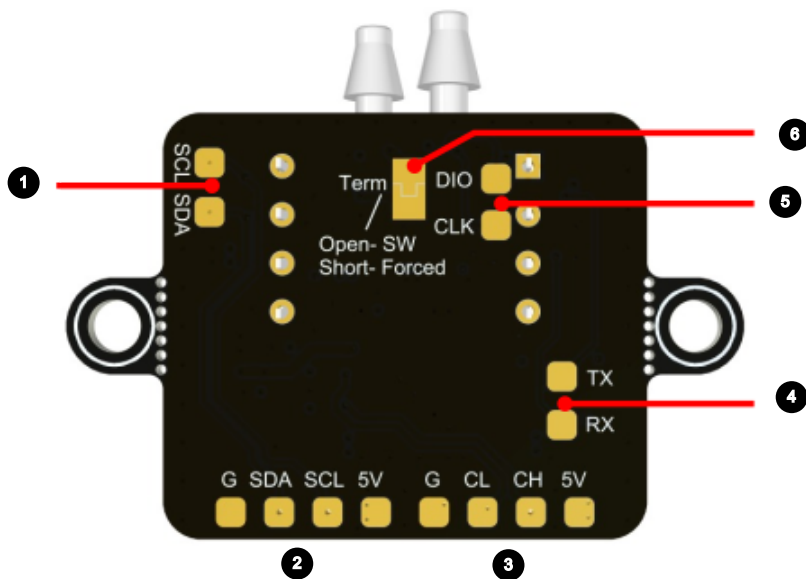
5.5. Pinout

Top View



1 - CAN Terminator Status LED	2 - CAN FN Status LED	3 - CAN-Connector
4 - I2C Connector	5 - Sensor	

Bottom View



1 - I2C-Solder Pads	2 - CAN-Solder Pads	3 - CAN-Solder Pads
4 - Serial	5 - SWD	5 - CAN-Hardware Terminator

5.6. ArduPilot Setup

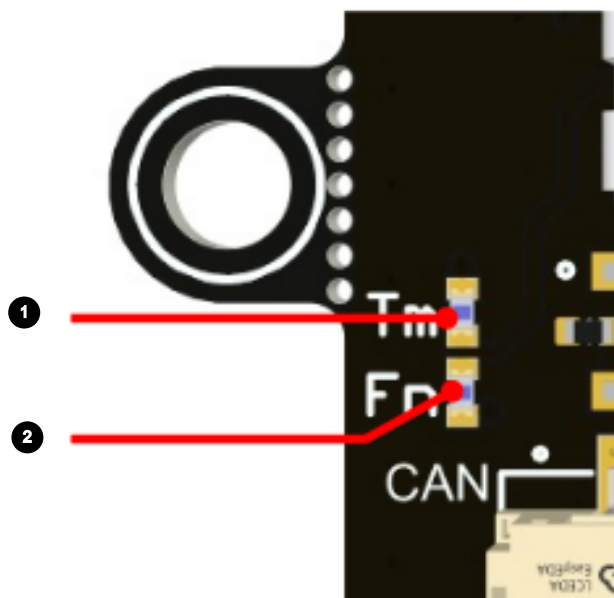
General Settings

Setting	Value
DEBUG	0
FLASH_BOOTLOADER	0
FORMAT_VERSION	2
OPTIONS	0
BRD_SERIAL_NUM	0
CAN_BAUDRATE	1000000
CAN_NODE	0
CAN_TERMINATE	0
CAN_P1_DRIVER	1
CAN_D1_PROTOCOL	1

Sensor Settings

Setting	Value
ARSPD_TYPE	8
ARSPD_USE	0

5.7. Status LEDs

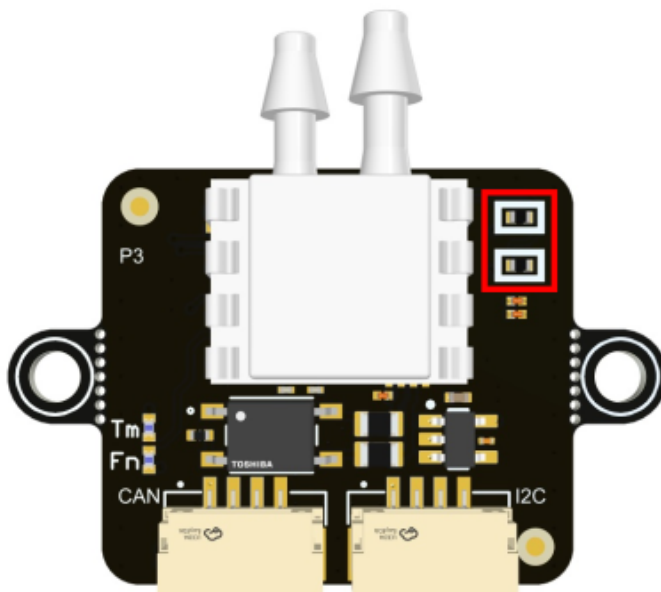


LED	Pattern	Meaning
TM (1)	Solid	Termination active
	Off	Termination inactive
FN (2)	Slow Blinking	No communication between CAN node and Flight Controllers
	Fast Blinking	Communicating between CAN node and Flight Controllers

5.8. I2C Mode

 **Note:** The two resistors must be removed to set the sensor in I2C mode

Remove Resistors



 **Note:** Sensor I2C address = 0x28

ArduPilot Settings I2C Mode

Setting	Value
ARSPD_TYPE	9
ARSPD_USE	1