

# YAT-ADS201

## Air Data System

The YAT-ADS201 is a compact and reliable air data system that uses state-of-the-art MEMS pressure sensors. It provides accurate true airspeed and pressure altitude using measurements of total and local static pressure from the pitot-tube. The cost effective, yet reliable design makes this system an ideal choice for high performance UAVs and general aviation aircraft.

### Features

- Real-Time Airspeed and Pressure Altitude Outputs
- High Stability MEMS Pressure Sensors
- Noise reduction using Butterworth 4<sup>th</sup> Filter with Cut-off Frequency of 5Hz
- Low Power Consumption
- Temperature and Pressure Calibrated
- High sampling rate (50Hz)
- Serial communication - RS-232(115,200 bps) or RS-485(750,000 bps)
- Wide operating environment : -20°C ~ 50°C
- Two ADC channel (option)

### Applications

- Autopilot Systems
- Unmanned Aircraft Systems
- Ultra-light and General Aviation Airplane

### Architecture

The YAT-ADS201 consists of a sensor/processing board and a two-piece pitot tube. The processing board features a C8051 micro-processor, MEMS pressure sensors, and communication devices. The pitot tube consists of two pieces. Each of them is replaceable separately, which will save maintenance cost.

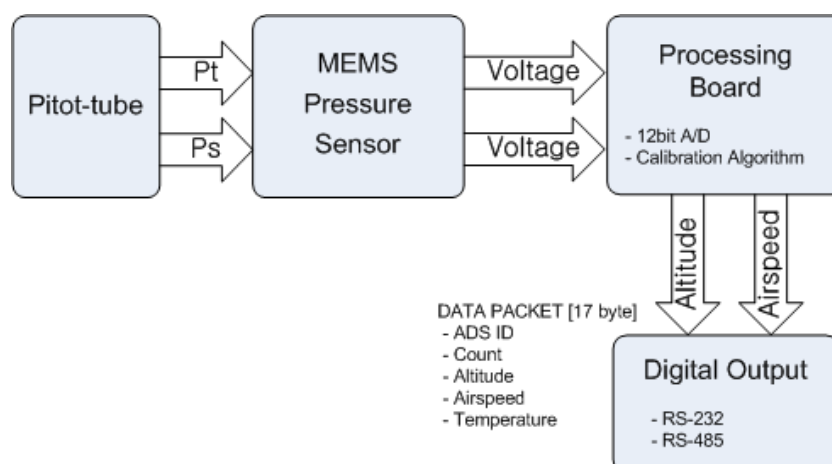


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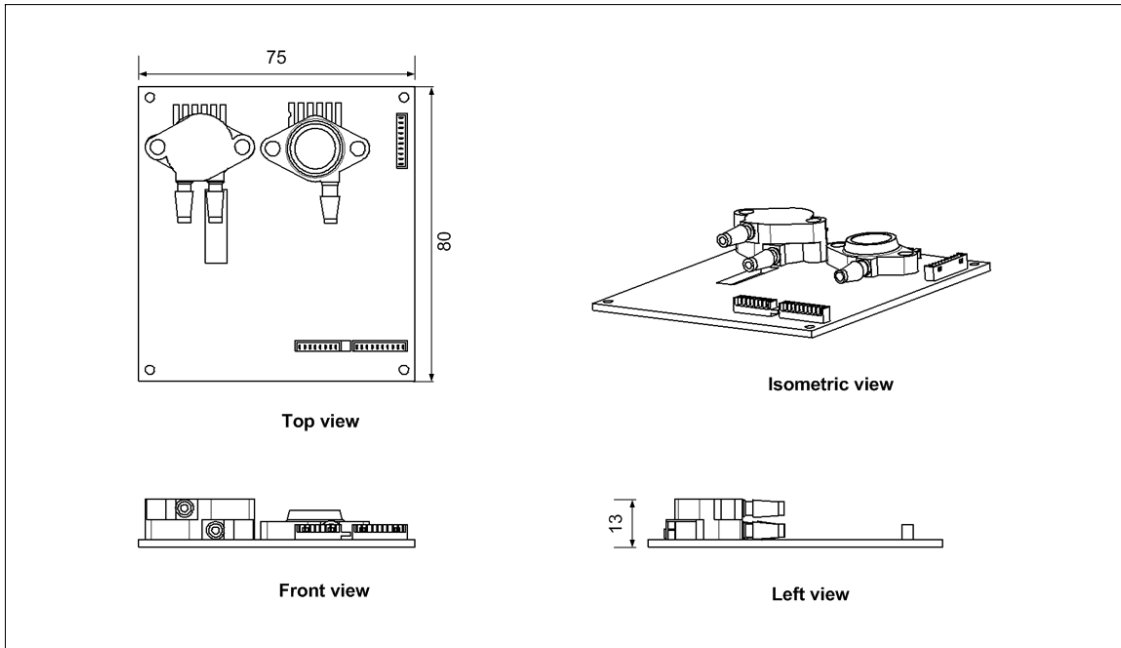
## Specification

YAT - ADS201	
<b>Performance</b>	
Update Rate (Hz)	50Hz , Programmable
Start-Up Time (sec)	1
Operating Temperature	-20℃ ~ 50℃
<b>Airspeed</b>	
Range (km/h)	400
Accuracy (km/h)	< 5 [@Pressure Calibrator]
Resolution (km/h)	< 0.3 [@100km/h]
<b>Altitude</b>	
Range (m)	10,000
Accuracy (m)	< 6 [@Pressure Calibrator]
Resolution (m)	< 2.2
<b>Physical</b>	
PCB Size(mm)	75 × 13 × 80 [W × H × D]
PCB Weight(g)	50
CASE Size(mm)	90 × 35 × 110 [W × H × D]
CASE Weight(g)	175
Pitot-tube Size(mm)	530 × ϕ18
Pitot-tube Weight(g)	130
<b>Electrical</b>	
Supply voltage(Vdc)	9 ~ 12
Consumption current(mA)	100 [@9Vdc]
Interface	RS-232, RS-485
Connector type	D-SUB (9pin)
<b>Option</b>	
ADC channel	2channel (12bit)

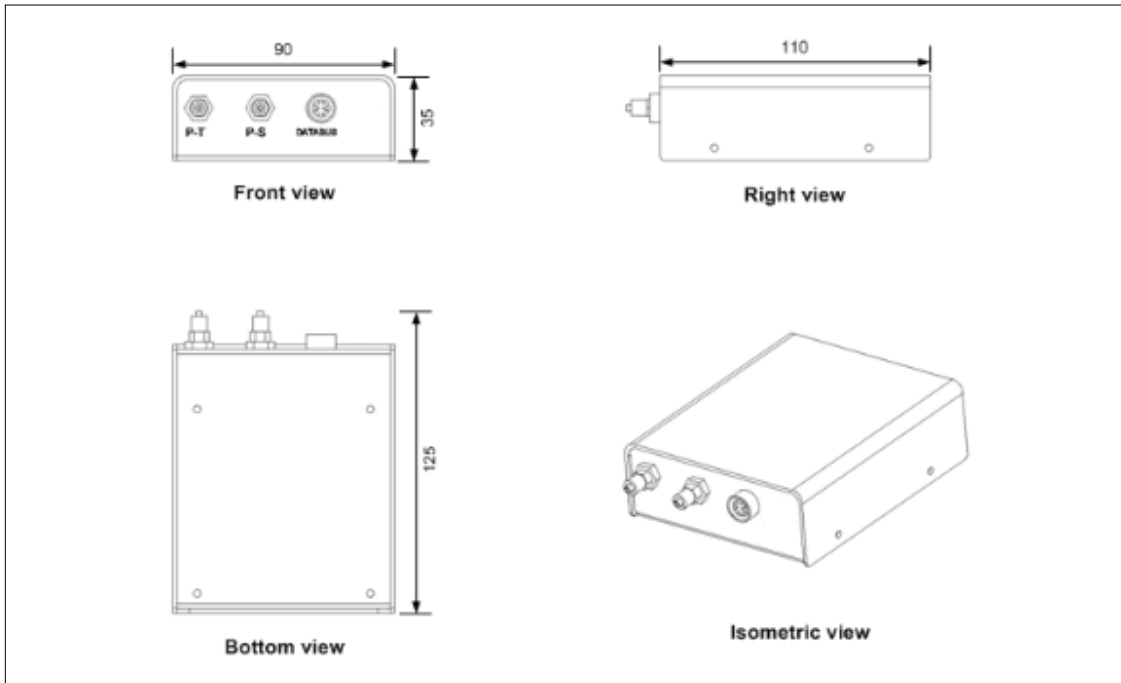
## Block Diagram



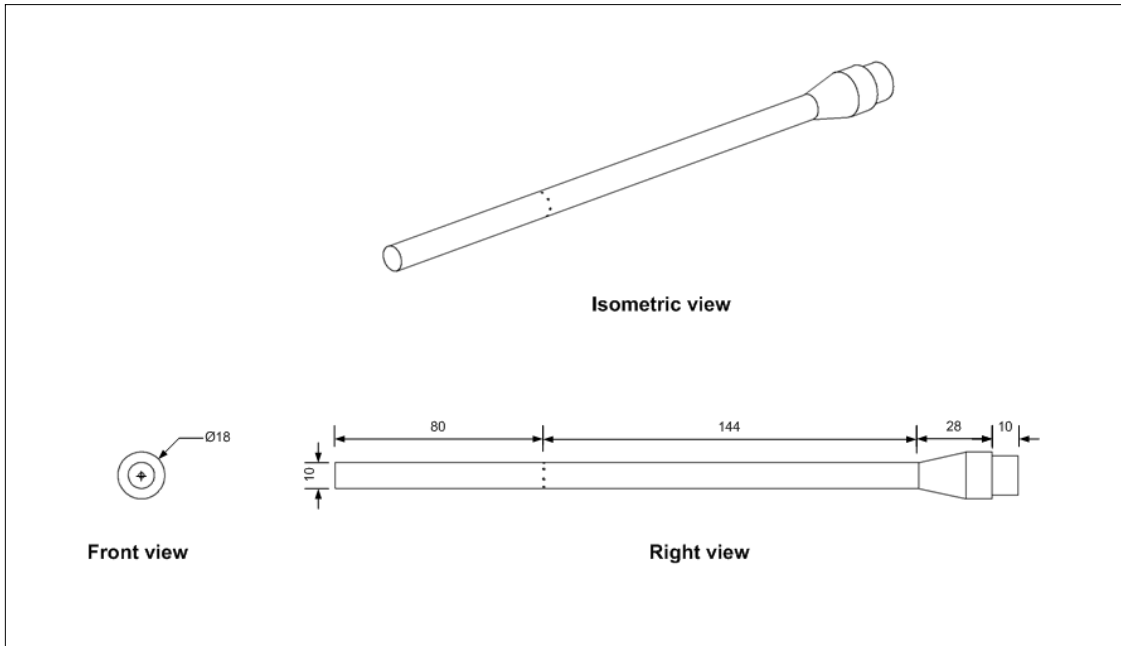
ADS PCB



ADS CASE



ADS PITOT-TUBE



ADS PICTURE

