

aSense ADC

PRESSURE TRANSDUCER · AIR DATA COMPUTER

The aSense ADC-TRD series, based on high-precision temperature-compensated pressure sensing, delivers superior accuracy and reliability in critical flight parameters. Integrated absolute and differential pressure sensors precisely compute Mach number, static/dynamic pressure and airspeed — the ADC-TRD-106 adds angle of attack and sideslip. Each unit can be configured as a pure pressure transducer or a full ADC, with 20–2000 Hz output and 24-bit resolution.



	aSense ADC-TRD-102	aSense ADC-TRD-106
Pressure sensors	Absolute 0–15 psi · differential ± 15 psi	Absolute 0–15 psi · differential ± 15 psi
Over pressure	30 psi abs · 60 psi diff	30 psi abs · 60 psi diff
Total error band after auto-zero	± 0.25 %FSS	± 0.25 %FSS
Effective resolution (ENOB)	24 bit	24 bit
Outputs	Static, dynamic & total pressure · Mach number	Static, dynamic & total pressure · Mach number · angle of attack · angle of sideslip
Data rate	20–2000 Hz	20–2000 Hz
Pressure ports	2 — brass barbed or stainless Swagelok female (1/8")	6 — brass barbed or stainless Swagelok female (1/8")
Digital interface	RS-485	RS-485
Power	5–36 V · 0.2 A	5–36 V · 0.3 A
Connector	PT02A10-6P	PT02A10-6P
Temperature (op/storage/comp)	–40 °C to +85 °C	–40 °C to +85 °C
Physical	42.2 × 45 × 26.7 mm · 80 g	78.7 × 70.1 × 26.1 mm · < 210 g

PRECISION AIR DATA FOR FLIGHT CONTROL

The aSense ADC-TRD-102 and ADC-TRD-106 serve as the primary source of atmospheric data for UAVs, fixed-wing platforms and munition systems. Instead of raw sensor data, the ADC series performs onboard computation to deliver fully compensated, linearized outputs – enabling the flight control computer to perform vital functions.



aSense ADC-TRD-102

FLIGHT ENVELOPE PROTECTION

Real-time monitoring of stall speed (via angle of attack) and overspeed limits (via Mach number) to prevent structural damage or loss of control

ALTITUDE HOLD & SEPARATION

High-precision barometric altitude for maintaining assigned flight levels and vertical separation

BALLISTIC CALCULATIONS

Accurate air density and airspeed data for weapon release and payload delivery accuracy

UAV / FIXED WING

Primary atmospheric source for flight control

MUNITION SYSTEMS

Air data for guidance and ballistic accuracy

HIGH DYNAMICS

Low-noise data flow up to 2000 Hz

CLEAN AIR DATA FOR YOUR FCC

Tell us your platform – we'll configure transducer or full-ADC operation around it.