THOMMEN is a leading manufacturer of Air Data Systems and aircraft instruments that are used worldwide on many aircraft types. These include helicopters, corporate turbine aircraft and commercial airliners.

A recent innovation introduced the AC32 Digital Air Data Computer to the Aviation market. The AC32 has integrated vibrating cylinder pressure sensors that give very high degree of accuracy and stability for pitot and static ports.

The AC32 easily complies with the 1000 ft. vertical separation-minimums required for aircraft to operate in RVSM airspace.

In fact, it providing up to 2x16 SSEC curves which makes it quite unique among all Air Data Computers in the market today.

The highly commended THOMMEN AC32 Digital Air Data Computer exceeds the FAA Technical Standard Order (TSO) requirements for accuracy.

The computed air-data parameters are transmitted via the configurable ARINC 429 interface data bus. This has two ARINC 429 transmit and receive-channels where you can adjust the baro-setting.

The AC32 meets the requirements for multiple platforms. This includes TAWS, ACAS/TCAS, EGPWS or FMS systems. It also supports the Air Data for enhanced safety infrastructure capabilities of Transponders. Additionally, an ICAO encoded altitude-output is also available as an option.

The AC32 uses the aircraft standard 28 VDC to guarantee a low consumption of less than 7 watts. The Thommen AC32 also has an extensive Built-In-Test (BIT) that guarantees safe operation.

The low weight of only 2.0 lb (910 grams) is another plus point that optimizes it for use in different state-of-the-art avionic systems. You can easily configure the AC32 for different applications. The AC32 has hosting capabilities that can supply data to other nextgeneration equipment. It can do all of this without changing the system architecture.

**PARAMETERS**

<table>
<thead>
<tr>
<th>Label</th>
<th>Parameter</th>
<th>Min</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>203</td>
<td>Pressure Altitude</td>
<td>-1,000</td>
<td>+53,000</td>
<td>feet</td>
</tr>
<tr>
<td>204/220</td>
<td>Baro Corrected Altitude</td>
<td>-1,000</td>
<td>+53,000</td>
<td>feet</td>
</tr>
<tr>
<td>212</td>
<td>Vertical Speed</td>
<td>-32,768</td>
<td>+32,768</td>
<td>ft/min.</td>
</tr>
<tr>
<td>353</td>
<td>Indicated Airspeed IAS</td>
<td>0/20*</td>
<td>750</td>
<td>knots</td>
</tr>
<tr>
<td>206</td>
<td>Computed Airspeed CAS</td>
<td>0/20*</td>
<td>750</td>
<td>knots</td>
</tr>
<tr>
<td>210</td>
<td>True Airspeed TAS</td>
<td>0/100*</td>
<td>1,000</td>
<td>knots</td>
</tr>
<tr>
<td>207</td>
<td>Max. Allowable Airspeed VMO</td>
<td>150</td>
<td>750</td>
<td>knots</td>
</tr>
<tr>
<td>205</td>
<td>MACH Number</td>
<td>0/0.200*</td>
<td>1.200</td>
<td>MACH</td>
</tr>
<tr>
<td>211</td>
<td>Total Air Temperature TAT</td>
<td>-60</td>
<td>+99°C</td>
<td></td>
</tr>
<tr>
<td>213</td>
<td>Static Air Temperature SAT</td>
<td>-99</td>
<td>+60°C</td>
<td></td>
</tr>
<tr>
<td>235/237</td>
<td>Baro Setting QNH 20.67</td>
<td>20.67</td>
<td>31.48</td>
<td>inHg</td>
</tr>
<tr>
<td>234/236</td>
<td></td>
<td>700</td>
<td>1,066</td>
<td>mbar</td>
</tr>
<tr>
<td>221/241</td>
<td>AOA</td>
<td>-60°</td>
<td>+60°</td>
<td>degree</td>
</tr>
</tbody>
</table>
**DIGITAL AIR DATA COMPUTER**

**TYPE AC32 RVSM WITH AOA INPUT (OPTIONAL)**

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**INTERNAL BLOCK DIAGRAM**

**AC32 Digital Air Data Computer**

- Static Port S
- Pitot Port P
- TAT Probe
- AOA Sensor Input
- ARINC 429 Serial Data Bus, 2 Receive Channels
- ARINC 429 Serial Data Bus, 2 Transmit Channels
- Power Supply
- RS232 Maintenance Interface
- ICAO Encoded OUT
- WARNING FLAG

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**CHARACTERISTICS**

**FEATURES:**
- Vibrating Cylinder Pressure Sensors
- RVSM Compliant
- Static Source Error Correction, 2 x 16
- Continuous Built-In-Test
- BIT Failure Memory
- RS232 Maintenance Interface

**SIGNAL INPUTS:**
- Primary Power 28 VDC (< 7 Watts)
- Emergency Power 28 VDC
- ARINC 429 Serial Data Bus, 2 Receive Channels
- TAT Probe 500 Ω @ 0°C (Optional 50 Ω)
- AOA Sensor Input (2 KΩ)

**SIGNAL OUTPUTS:**
- Encoded Altitude ICAO Per TSO C-88a
- Warning Flag Valid 28 VDC
- ARINC 429 Serial Data Bus, 2 Transmit Channels

**OPERATING SPECIFICATIONS:**
- Altitude Scale Error
  - -1,000 to 20,000 feet ±10 feet
  - -20,000 to 29,000 feet ±20 feet
  - -29,000 to 41,000 feet ±30 feet
  - 41,000 to 53,000 feet ±50 feet
- FAA TSO-C106
- FAA TSO-C88a
- RTCA/DO-178B Level A
- RTCA/DO-160D
  - Operating Temperature -55 ... 70 °C
  - Storage Temperature -55 ... 85 °C
- Reliability: MTBF 21,000 hours (est.)

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**DATA COMMUNICATION BLOCK DIAGRAM**

**Pilot**

- Display
- ARINC 429
- Digital Autopilot
- Discrete I/O’s

**Co-pilot**

- Display
- ARINC 429
- Transponder

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**MECHANICAL DRAWING**

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**THOMMEN AIRCRAFT EQUIPMENT AG** is a certified company:
EASA Part-21 G + O | EASA Part-145 | AS / EN 9100

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