

**Honeywell**

THE POWER OF **CONNECTED**

## **Next Generation APN-209 Radar Altimeter System**



# Industry challenges

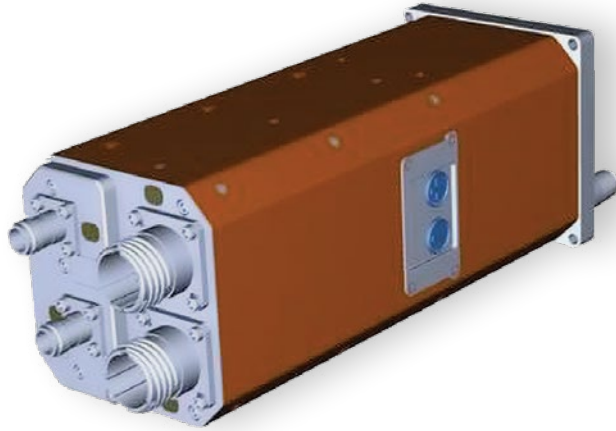
Honeywell's line of legacy Radar Altimeters have been in use by the U.S. Army and U.S. allies around the world since they were first introduced in 1975. Over the years, the product family has undergone obsolescence refreshes, the last of which was completed in 1996.

Voice of the Customer campaigns have indicated that customers are seeking increased field reliability, better environmental sealing, higher altitude capability and improved built-in test capabilities. The next-generation APN-209 Radar Altimeter meets these customer requirements.

Honeywell is responding to this challenge by replacing the radar altimeter function with a common design to eliminate obsolete components and standardize around one altimeter design for all of the Army's standard configurations. Approximately 90 percent of the design will be common across all configurations with changes confined to a single personality circuit card tailored to the unique requirements of the configuration.

The Next Generation APN-209 incorporates the latest technology developments as well as the enhanced features and functionality identified during extensive "Voice of the Customer" (VOC) campaigns. At its core, the product is based on the Radar Altimeter Common Core (RACC) engine which has been customer-fielded and extensively flight tested on the Joint Strike Fighter.

THE HONEYWELL NEXT GENERATION APN-209 CAN PROVIDE	
<b>Track Rate</b>	2000 ft/sec
<b>Zero Adjust</b>	Auto Adjust (1 to 255 ft)
<b>BIT Functions</b>	IBIT, SBIT, PBIT
<b>Static Accuracy</b>	±(3ft + 3%)
<b>Recapture Time</b>	1.0 sec
<b>Digital Range</b>	MIL-STD-1553: 0 to 8,000 ft ARINC 429: 0 to 8,000 ft Auxiliary: 0 to 1,500 ft (for remote indicator)
<b>Analog Range</b>	0 to 7,900 ft (1.25mV/ft) Auxiliary: 0 to 1,500 ft (7mV/ft) (for remote indicator)
<b>Data Resolution</b>	1 ft of altitude
<b>Sensitivity</b>	82 ± 5 dB at 0 ft (0°C and 40°C) / 82(+7/-5) dB over all other temperatures
<b>Bank Angles</b>	Up to a ±40° pitch or ±40° roll at 8000 ft
<b>Transmitter</b>	32.5 dBm ±2.5 dB peak power
<b>MTBF (Arw +55°C)</b>	20,000 hours RT (without indicator) - 16,000 operating hours. IRT (with indicator) - 8,000 operating hours
<b>I/O</b>	Analog, MIL-STD-1553 and ARINC 429



A revolutionary concept that will not only produce a modern, state-of-the-art altimeter, but will also facilitate voice of the customer needs identified previously. Honeywell is utilizing the Radar Altimeter Common Core (RACC) as the main building block and packaging it into a Radar Altimeter that is form fit and enhanced function replacement for all APN-209 standard configurations.



### **Why Honeywell?**

- Honeywell's over sixty years of in-house experience designing, manufacturing and servicing a wide variety of Radar Altimeter systems
- Honeywell has delivered over 150,000 Radar Altimeter Systems in the Military/Space market and over 40,000 in the Air Transport Market
- Honeywell's strategy to drive commonality and reuse across the product line will enable Honeywell to significantly reduce sustainment costs

**For more information**

about Radar Altimeter Systems,  
please visit [aerospace.honeywell.com](https://aerospace.honeywell.com).

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