Aviation Radio Maker Turns to MtronPTI for RF Design Expertise

Business Wire

MtronPTI has announced the TF0111 Tunable Filter for aviation radio.

Paul Dechen, Vice President of Aero/Defense Sales, says, "Commercial aircraft radio makers increasingly prefer to focus their energies on architecture and data integration, turning to MtronPTI for RF design help." For the TF0111, MtronPTI applied years of RF filter expertise to enhance the design: offering temperature compensated performance, lower distortion, and a plug-and-play solution compared to an in-house approach.”

In their Current Market Outlook 2012 – 2031 report, Boeing forecasts commercial aviation growth at about 5% per year with long-term demand of 34,000 new planes. Passenger traffic grew 6% in 2011, which is expected to continue. Air cargo moderated somewhat in 2011. However Boeing analysts believe emerging country economies will demand fast, efficient transport, supporting the projection of 5.2% CAGR through 2031. At the same time air traffic is rising, broadcast radio continues to shift to FM, with station count increasing.

Paul explains, "Given the longstanding concerns about aviation band interference from FM stations near airports, aircraft radio designers incorporate input pre-selector filters to ensure clear communication. Recently, an industry leading radio OEM and long time client approached MtronPTI to take over their front-end pre-selector filters. Not only did MtronPTI improve the design but also provided a reliable solution based on years of RF design and critical production tuning expertise."

Dechen concludes, "The TF0111 Tunable Filter is another example of MtronPTI being recognized as a trusted partner in the Aero/ Defense market; creating value by bringing deep design experience, environmental condition understanding and AS9100 rev C certified production to the table."

FM stations broadcast at 50,000 Watts or more compared to the 5 – 25 Watts typical for aviation voice radios. As strong FM signals distort in the aircraft receiver’s mixer, they create interference that can prevent tuning lock on the desired channel or garble the AM modulated signal – in this case, critical tower to cockpit instructions or location data. The TF0111 uses a unique temperature compensated approach to maintain about 1 MHz bandwidth and accurate center frequency while tuning the entire 118 – 137 MHz aviation band. The TF0111 has a very low intermodulation (IP3) specification of 30 dBm and can handle power levels up to +20 dBm without damage. Tuned by a single analog control line, the TF0111 comes in a 1.25” x 0.5” x 0.35” reflow hardened sealed package for wash proof automated assembly.

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