Press article

New era for airport communication

Siemens is the first vendor globally to achieve AeroMACS certification

Siemens is expanding its portfolio for industrial communication with the new AeroMACS certified RUGGEDCOM WIN base station and subscriber devices. AeroMACS, or Aeronautical Mobile Airport Communication System, is a wireless technology validated by Eurocontrol, the Federal Aviation Administration (FAA), and the International Civil Aviation Organization (ICAO) to support the growing need for secure, scalable, and reliable high bandwidth ground communications for airlines, air traffic control, and airport operations. Siemens is the first vendor globally to achieve full AeroMACS certification for the RUGGEDCOM WIN 4G broadband private wireless solution.

The aviation industry has come a long way in the last few decades, with thousands of passenger and cargo flights handled daily by large airport hubs all over the world. This has led to exponential growth in the number and complexity of airport operations. However, the communication infrastructure supporting them has not evolved at the same pace. AeroMACS was developed to drive forward the digitalization of this industry. This wireless technology standard provides the high performance and bandwidth required for simultaneous fixed and mobile applications at airports. It is based on the IEEE 802.16e - 2009 Standard (broadband

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standard defined by the Institute of Electrical and Electronics Engineers) and operates in the globally allocated licensed frequency band from 5091 to 5150 Megahertz.

Improved performance at reduced costs

AeroMACS certification is awarded by the WiMAX Forum, an industry-led non-profit organization. RUGGEDCOM WIN devices from Siemens are the first in the world to be certified by the WiMAX Forum. The Siemens solution consists of a private wireless network designed with the AeroMACS-certified base station, the RUGGEDCOM WIN7251, and the AeroMACS-certified fixed and vehicular subscriber units, the RUGGEDCOM WIN5251 and RUGGEDCOM WIN5151. This field-proven scalable system is already in use and has demonstrated significant improvements in network performance in terms of availability, capacity, and cost efficiency in major airports around the world. It also outperforms the existing ACARS technology (Aircraft Communications Addressing and Reporting System), a digital datalink system for transmission of messages between aircraft and ground stations used in airports by offering better control, improved information security, and greater reliability. These rugged devices are designed to be compact, secure, and scalable. Its stand-alone configuration eliminates the need for a separate ASN (Access Service Network) gateway, which makes it very easy to install, manage, and scale the network at a low initial capital outlay. Airports can also unlock new revenue opportunities by commercializing high bandwidth connectivity, logistics support, runway condition monitoring, etc. as value-added services.

The WiMAX Forum is an industry-led, non-profit organization which certifies and promotes the interoperability of broadband wireless products based on the IEEE 802.16 Standard. Siemens is part of its Aviation Working Group (AWG), which has worked tirelessly to define the global AeroMACS standard based on strict international conformance standards and profiles developed by European Organization for Civil Aviation Equipment (EUROCAE), ICAO, and Radio Technical Commission for Aeronautics (RTCA).

The portfolio consists of AeroMACS certified RUGGEDCOM WIN base station and subscriber devices.

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