

Deterministic TTP databus standard released

The SAE **AS-2D Time Triggered Systems and Architecture Committee** (subcommittee of **AS-2 Embedded Computing Systems**), has completed a new industry standard for deterministic high-speed communication in safety-critical systems. The new standard, **SAE AS6003–TTP Communication Protocol**, can be downloaded [via this link](#).

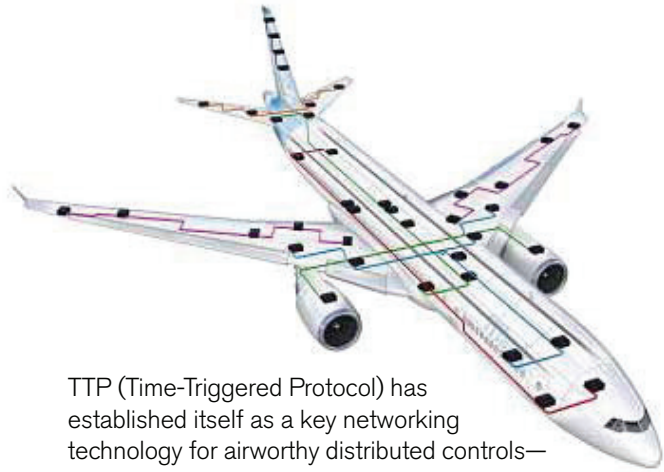
Over the past 10 years, TTP (Time-Triggered Protocol) has established itself as a key networking technology for airworthy distributed controls—from engine controls, cabin systems, and power generation to flight controls. It has been selected for airworthy systems in **Boeing B787**, **Airbus A380**, **Bombardier C Series**, **Embraer Legacy**, and other modern aircraft.

TTP offers at least an order of magnitude increase in communication bandwidth compared to ARINC429 (>50x), MIL-1553(>5x) and CAN (>10x). Beyond its enhanced deterministic communication capability, TTP provides distributed platform services that simplify design of advanced integrated system, thus reducing software and system life cycle costs for time- and safety-critical applications.

TTP (SAE AS6003) is the first in a series of deterministic time-triggered networking technologies to be standardized by SAE International. Ongoing standardization projects for TTP physical layers based on MIL-1553 (AS6003/1) and RS-485 (AS6003/2) will enhance effective design of complex distributed architectures operating in harsh environments.

The SAE AS-2D committee is also working on a deterministic high-bandwidth unified ethernet networking standard (SAE AS6802 TTEthernet) that will simplify design of advanced avionics and net-centric applications based on complex ethernet-based networks.

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