

CAST HDLC/SDLC IP Core Now Ready for DO-254 Compliance in Airborne Systems

Improved error resiliency and DAL-A Certification Data Package simplify standard conformance for safety-critical avionics developers

Woodcliff Lake, NJ — August 6, 2020 — Silicon intellectual property provider CAST, Inc. today announced a new version of its HDLC/SDLC IP core that helps avionics system developers achieve compliance with the DO-254 standard at the most stringent Design Assurance Level, DAL-A.

The new core variant was developed with rigorous conformance to the DO-254 safety assurance processes. It is available in Verilog source code format, and its deliverables include a complete DAL-A Certification Data Package (CDP). This version of the core uses triple modular redundancy (TMR) for all internal registers, improving flight-critical safety by providing full immunity to single-bit upsets and errors.

The company believes this [HSDLC HDLC & SDLC DO-254 Protocol Controller](#) is the only similar DO-254 compliant IP core commercially available.

“Our HDLC and SDLC IP has been in production use by nearly 50 customers over the past dozen years,” said Nick Sgoupis, engineering manager for CAST. “Now with greater fault-tolerance and the complete DO-254 DAL-A CDP, this core is an easy choice for avionics developers needing to use these communications protocols in a wide variety of safety-critical flight systems.”

The HSDLC core combines the High-Level Data Link Control (HDLC) and the Synchronous Data Link Control (SDLC) protocols in a single, full-featured, versatile controller. It operates as a peripheral that is easy to integrate with legacy or modern processors, and its flexible frame formatting and serial link interface enable a variety of serial link setups for broad application support. The base core and new DO-254 version are available now.

The DO-254 HDLC/SDLC core is part of the broad line of leading-edge and standards-based digital IP available from CAST, including compression engines; microcontrollers and processors; automotive interfaces; SoC security modules; and a variety of peripherals, interfaces, and other IP cores. Learn more by visiting www.cast-inc.com, emailing info@cast-inc.com, or calling +1 201.391.8300.

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