

TTEnd System A664 Core IP Pro Integration Kit

Ready to Run Kit for Certifiable TTEthernet End System A664 Core IP Pro



Key Benefits

- Integration example for DO-254 DAL A certifiable TTEnd System A664 Core IP Pro.
- Time saving with simple out-of-the-box setup and comprehensive user and integration manuals.
- Cost saving with a pre-configured hardware and software development environment.

TTEnd System A664 Core IP Pro Integration Kit helps to avoid the time consuming and costly process of acquiring and integrating hardware and software components from different vendors. This out-of-the-box product provides a ready to use integration example for DO-254 DAL A certifiable TTEnd System A664 Core IP Pro with pre-configured hardware and software development environment.

Three traffic classes on one chip

TTEnd System A664 Core IP Pro Integration Kit supports three Ethernet traffic classes:

- Standard (IEEE 802.3) traffic
- Rate Constrained (ARINC 664 part 7) traffic
- Time-triggered (SAE AS6802A) traffic

Integrated platform for development

TTEnd System A664 Core IP Pro is delivered as a high-end netlist wrapped by peripheral IP blocks to provide a functional End System example. It is demonstrated on a Xilinx Zynq UltraScale+ MPSoC FPGA that communicates with the Host computer via PCIe interface and the Ethernet network via two redundant 100/1000 Mbit/s channels with RGMII interface.

Up to 1 Gbit/s of safety-critical traffic

TTEnd System A664 Core IP Pro supports the transmission of all three traffic classes over the network with up to 1 Gbit/s speeds in a deterministic way. Additionally, the SAE AS6802A traffic class provides fixed transmission latency and jitter in the sub-microsecond range and unmatched bandwidth efficiency while maintaining full determinism (up to 95% utilization of available network bandwidth). The redundant Ethernet network interface allow the integration of TTEnd System A664 Core IP in fault-tolerant networks.

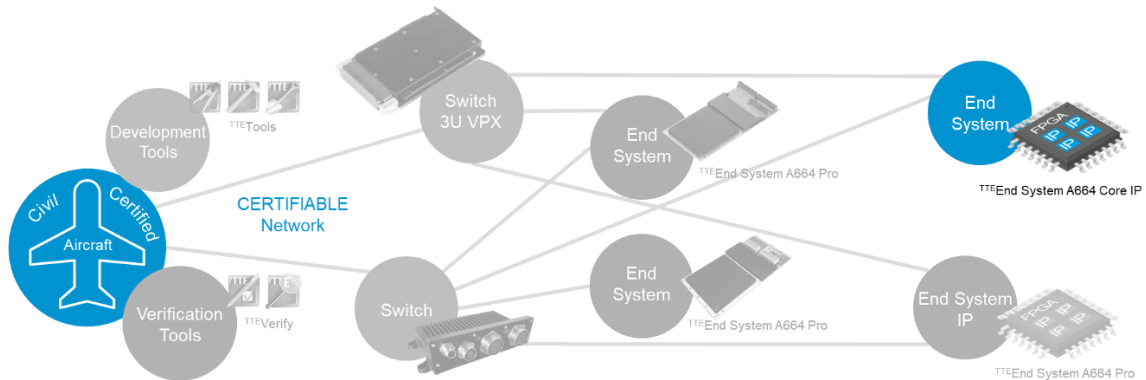
SWaP Optimization

The possibility to utilize MPSoC platforms allows the integration of the TTEnd System A664 Core IP Pro solution on high circuitry density PCBs. This provides flexibility in the hardware design and leads to significant SWaP improvements.



Application Fields

- Technology evaluation
- Architecture development
- Flight programs



<p>General Product Features</p>	<ul style="list-style-type: none"> - Ready to run integration example for DO-254 DAL A certifiable TTEnd System A664 Core IP Pro - End System Core IP netlist for Xilinx US+ Family (Development License) <ul style="list-style-type: none"> o 256 Tx VLs o 512 Rx VLs o 2,048 Tx ports o 4,096 Rx ports - Example Peripheral IP in RTL - Pre-compiled End System IP as bitstream - Demo application software (source code)
<p>Hardware</p>	<ul style="list-style-type: none"> - Zynq UltraScale+ MPSoC ZCU106 Evaluation Kit - 4-port Gigabit Ethernet FPGA mezzanine card (FMC)
<p>Standards Compliance</p>	<ul style="list-style-type: none"> - IEEE 802.3 - ARINC 664 part 7 - SAE AS6802A
<p>Interfaces</p>	<ul style="list-style-type: none"> - Zynq UltraScale+ MPSoC ZCU106 <ul style="list-style-type: none"> o Host interface: PCIe® 3.0 x4 o Network interface: supports two RGMII channels - TTEnd System A664 Core IP Pro <ul style="list-style-type: none"> o Host interface: AXI4, 32-bit at 125 MHz o Network interface: supports two GMII channels
<p>Documentation</p>	<ul style="list-style-type: none"> - User & integration manuals
<p>Drivers (non-certified) support</p>	<ul style="list-style-type: none"> - TTE-COM Driver middleware image for Linux Ubuntu 20.04 - Other driver options upon request
<p>Order Number</p>	<ul style="list-style-type: none"> - 13380
<p>Tools Support</p>	<ul style="list-style-type: none"> - TTETools Development Suite – for device configuration creation
<p>Related Products</p>	<ul style="list-style-type: none"> - 13869 - TTEnd System A664 Core IP Pro Certification Data Package, Project License - 13056 - TTETools 5 Development Suite - Starter Edition - 13823 - Integration support

