TTEDevelopment System A664 (Linux) v4.3

Ready-to-Run TTEthernet Evaluation & Development System

Key Benefits

- Completely pre-configured and ready-to-run system
- Example applications providing a step by step guide
- Support for three standard traffic classes: standard Ethernet (IEEE 802.3), rate-constrained (ARINC 664 part 7) and time-triggered traffic (SAE AS6802)

The TTEDevelopment System A664 (Linux) v4.3 provides a full development environment for hard real-time- and non-real-time Ethernet communication on the same network using different quality of service traffic classes. Standard Ethernet traffic seamlessly integrates with fully deterministic synchronous hard real-time Ethernet traffic on the same physical media. The system allows evaluating and developing real-time applications leveraging the benefits of the TTEthernet products in an out-of-the-box system.

Guaranteed Real-Time Performance and Determinism in Ethernet Networks

TTEthernet consolidates features used in aerospace, automotive and industrial automation applications. It allows to implement mixed critical applications by partitioning the communication media and therefore scales from non-safety critical to safety-critical fault-tolerant applications.

Open Environment for Hard Real-Time Ethernet Applications

The System provides a development platform allowing the integration of real-time applications, innovative Ethernet-based architectures for on-board systems, fault-tolerant networks and infotainment applications.

TTEthernet Design Tool Suite

The design tools included in the system allow the user to create configurations for the network devices (switches and end systems). They provide a convenient way to define network level communication requirements such as devices used, network topology, messages and timing constraints.

In a multi-step process, the configuration files for TTEthernet switches and end systems are generated. The design tools are based on an open XML database, supporting the customer's unique work flow by allowing a flexible combination of design steps.

Application Fields

- Technology evaluation
- Product testing
- Architecture development

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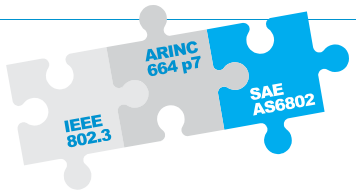
Packaging Contents	4x TTEEnd System A664 Lab PCIe (3x Ports) 4x TTED-IO Module (12 IO signals) 2x TTESwitch A664 Lab v2.0 (24x Ports) 1x TTETools Bundle Starter 4x High-performance PCs (HP) 1x USB switch box (to use 1 screen for 4 PCs) 1x LCD Monitor 1x USB keyboard and 1 USB mouse 1x Driver (Linux-based for standard PC) and API for PCIe-based end system controller
D-IO Module Features	The End System A664 Lab provides IO signals that can be accessed via the TTE-D-IO-Module. For example connect an oscilloscope and measure - Message end-to-end latency - Message jitter - Synchronization precision
End System Controller Features	3x 10/100/1000 Mbit/s full-duplex Ethernet links (up to 3 redundant channels) Supported standard traffic classes: - IEEE 802.3 Ethernet - ARINC 664 part 7 - SAE AS6802 Standard PCIe form factor for use in lab environments Software driver for Ubuntu Linux 18.04 DMA support Passive cooling
Switch Features	24 full-duplex Ethernet ports (6 x 10/100/1000 Mbit/s; 18 x 10/100 Mbit/s) Supported standard traffic classes: - IEEE 802.3 Ethernet - ARINC 664 part 7 - SAE AS6802 Table top setup or 19" Rack mountable ARINC 665, 615A, SNMP, TFTP and ICMP fully supported ARINC 664 part 7 jitter configuration 0 - 10.24 ms (10 us granularity) Mechanical dimensions: - 19” rack housing 1 height unit - 44 x 483 x 356 (in mm)
PC	The 4x PCs which are part of the TTEDevelopment System (Linux) v4.3 have the following mechanical dimensions: - 19” rack mountable - 4U height - Weight: 4,7 kg
Software Tools	TTEPlan (Starter) for generation of the demo application schedules TTEBuild Device Configuration TTEBuild Network Configuration (Starter) to create device configurations for this lab setup TT615A3-Loader for loading switch configurations
Power Supply	AC voltage: 100 to 240 V, 60 to 50 Hz
Order Number	13801: TTEDevelopment System A664 (Linux) v4.3
Recommended additional services	12052: Software Maintenance Service for TTEDevelopment Systems 12053: Support Package comprising one-day on-site installation quick-start and 32-hours on-demand off-site support (email or telephone)



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