neoECU AVB/TSN

AVB/TSN Endpoint Simulation (Talker/Listener)

Intrepid’s latest addition to the neoECU series integrates 100BASE-T1 and Gigabit Ethernet with a wide variety of multimedia interfaces to deliver a fully configurable AVB Endpoint.

Applications:
• Rapid Prototyping
  Quickly assemble prototype AVB systems to characterize performance and evaluate trade-offs well in advance of production prototypes.

• Accelerate System Level Troubleshooting
  Use as a “Known-Good” sample to replace suspect ECUs to aid in the process of elimination.

• Robustness Testing
  Observe your system under stress by quickly configuring additional endpoints to simulate high levels of network utilization.

AVB/TSN Standards Compliance
• 802.1Qat Stream Reservation Protocol (SRP)
• 802.1Qav Forwarding and Queuing for Time-Sensitive Streams (FQTSS)
• 802.1AS Precision Timing Protocol
• IEEE 1722 (AVTP)
• IEEE 1722.1 (AVDECC)

Scripting & Automation
This device is also well-equipped to integrate into a vehicle or test bench with a full featured scripting engine controlling 2 CAN FD channels and 4 programmable GPIO channels.

Function Blocks enable users to easily set up automated tasks and simulate nodes and ECUs without relying on a complicated, text-based computer language.

The C Code Interface guides you through building a C Project in Microsoft Visual C. This interface allows you access to anything accessible through Visual C. Imagine being able to access security DLL files, external hardware, or the Win32API and interface that information with your networks. The possibilities are endless!
Features:
- Standalone script execution with message RX/TX, expression evaluation, conditional logic, and GPIO control
- 4x Programmable GPIO channels (digital in/out, analog in)
- 8x Dual purpose LEDs for network status and device configuration
- Programmable DW CAN termination circuits
- Battery-backed real time clock (RTC)
- Field-upgradeable flash firmware
- Rugged aluminum case with shock-absorbing end caps

Supported Media Formats:
- Video: IEC 61883-6 (h264, 720p@30fps)
- Audio: IEC 61883-4 / AAF
- Firmware upgradeable to support additional formats

26 Pin Connector

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Ordering Information:

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<td>neoECU AVB/TSN device</td>
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*Specifications subject to change. Please contact Intrepid for the latest information.

Device Specifications
- Power supply: 4.5V - 40V operation
- Temperature range: -40°C to 85°C
- One-year limited warranty
- Fully-isolated USB with Microsoft-certified USB drivers
- Dimensions: 1.56” x 4.42” x 7.34” (3.98 cm x 11.22 cm x 18.65 cm)
- Weight: 1.31 lb (0.595 kg)

Network Specifications
- Ethernet configurations (mutually exclusive)
  - 100BASE-T1 endpoint (2-wire)
  - 1000BASE-T endpoint: (8-wire, limited to 480 Mbps)
- CAN (2 channels)
  - 1x CAN FD
  - 1x CAN FD/SW/LSFT

Supported Interfaces
- 1x HDMI output
- 2x Analog audio in (mini jack)
- 8x Analog audio out (mini jack)
- USB device (PC interface)
- USB host (camera)
- SD card slot