



GE Aerospace

# Aero ES-EVM

Gigabit TSN Bridged  
End System

Lab evaluation unit for Time-Sensitive Networking (TSN) based end system for deterministic and safety-critical applications

## Flexible Test Platform

- Featuring Zynq Ultrascale+ MPSoC ZCU102 hardware platform
- Flexible IO for prototype and evaluation
- Embedded OS for evaluation of customer applications
- Supports both deterministic or non-deterministic use cases
- Support star, ring, and daisy-chained topologies

## Capable TSN IP Core

- Features highly capable TSN IP core on the FPGA
- Dual port bridged end system enabling flexible network configurations
- IEEE 802.1 Time Sensitive Network (TSN)
- IEEE P802.1DP/SAE AS-6675 TSN Aerospace Profile
- IEEE 802.3 Standard for Ethernet

Base development platform allows for easy transition to one of GE's airborne capable end systems.



## Supported TSN Standards and Features

- Time Synchronization with Grand Master capability
- Time-aware scheduling of up to 256 streams on the end station
- Frame replication and elimination for redundancy
- Static forwarding and queue assignment of streams
- Per-stream policing and filtering for stream isolation\*
- Rate-constrained shaping for asynchronous traffic\*
- Full featured Layer-2 switch

\*Available in 4Q 2023

## Configuration Simplified

- Fully configurable with GE Chronos
- Easy configuration of both end system and bridge
- Independent configuration of each TSN function

## New User Starter Kit

- One step setup of TSN end system
- Traffic generator applications
- Capture and analysis utilities
- gPTP software stack

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## Board Specifications

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### Physical Characteristics

Dimensions: 9.350 in. x 9.600 in. x 0.104 in.

Power: 12V wall adapter or ATX

Environmental Temperature Operating: 0°C to +45°C

### Network Ports

2x TSN ports: 1000Base-T

1x Ethernet management port – 10/100/1000 Mbps

Evaluation board features USB, Display, HDMI, SATA, and other I/O

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