



# 2023.3 Software Release Highlights

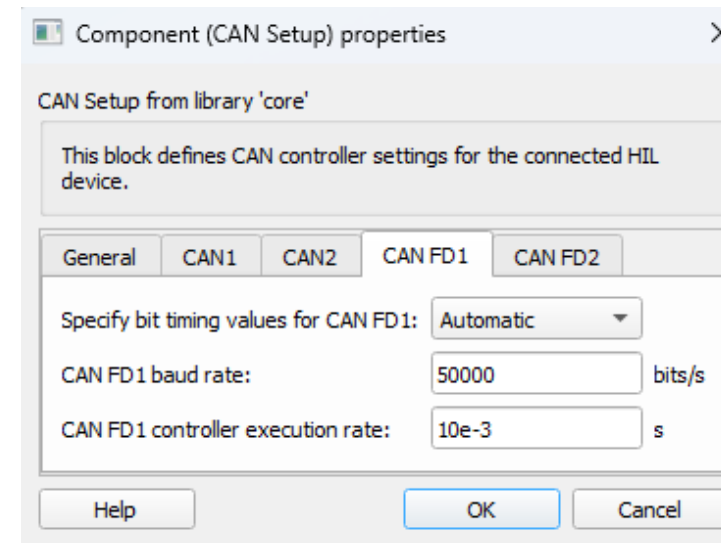
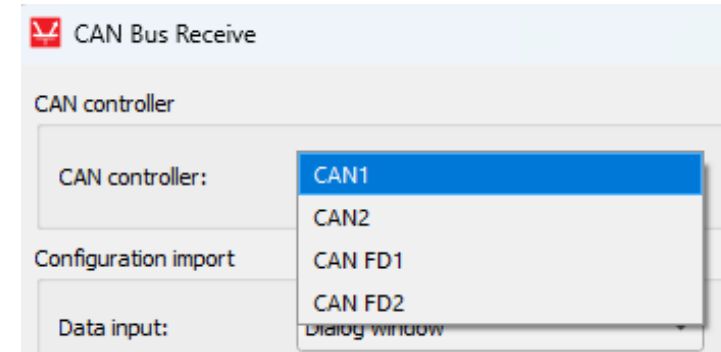
- **CAN Bus protocol over CAN FD controller**
- **OCPD protocol in HIL SCADA**
- **Additional features**
  - PWM modulator sawtooth carrier
  - PTP synchronization for IEC 61850 SV
  - HIL Connect Interface component



# CAN Bus protocol over CAN FD controller

*Make the most of your CAN ports*

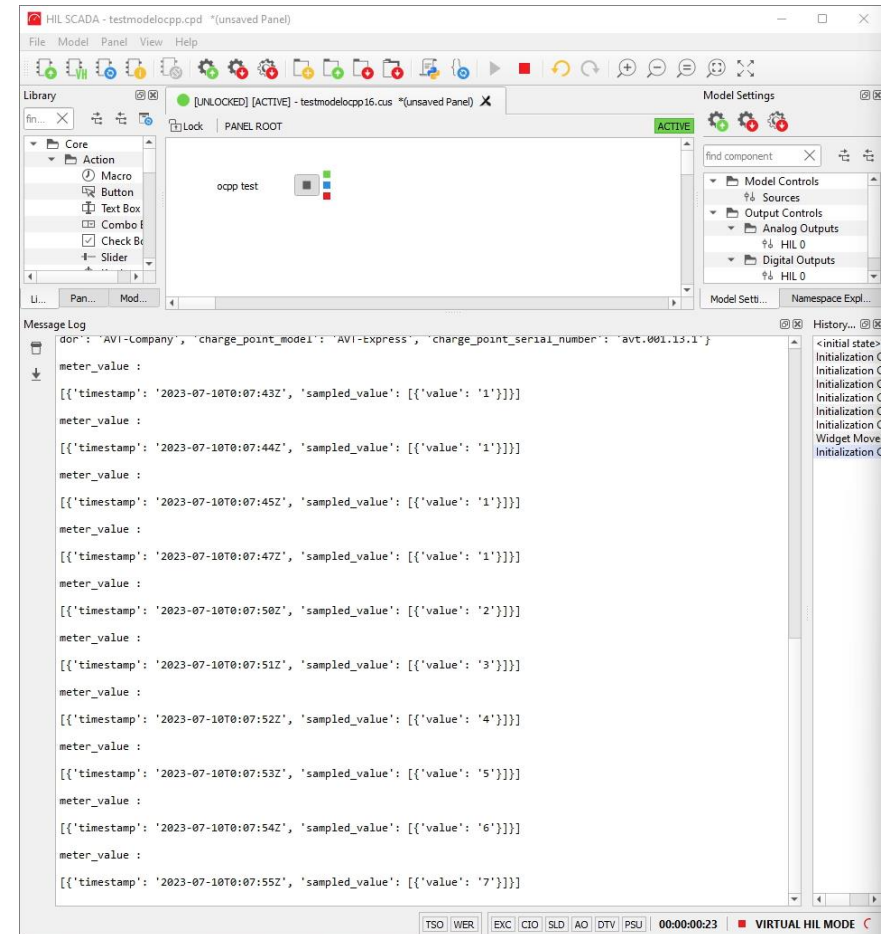
- ❑ CAN FD ports can now be utilized for regular CAN Bus protocol
- ❑ Extend CAN bus capacity from 2 to 4 controllers on a single HIL606 device
- ❑ Reduced testbed cost for ECU network testing



# OCPP protocol in HIL SCADA

*Expanded support for EV charging communication*

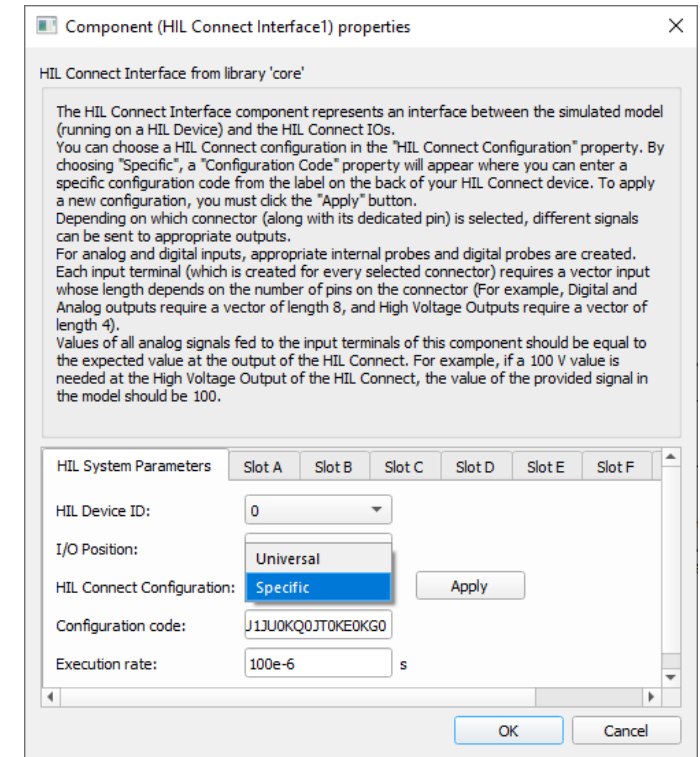
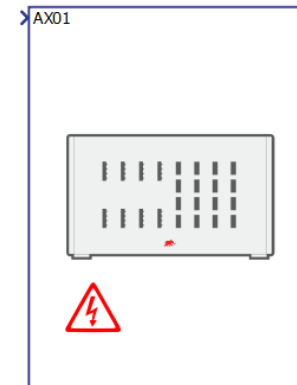
- ❑ HIL SCADA can now communicate with EV fast chargers
- ❑ Can runs in Standalone HIL SCADA without using HIL device
- ❑ Based on OCPP Python implementation by [The Mobility House](#)
- ❑ Test site-level interoperability, coordination and cyberattack mitigation for fast chargers



# HIL Connect Interface component

*Configure your model for your HIL setup in one place*

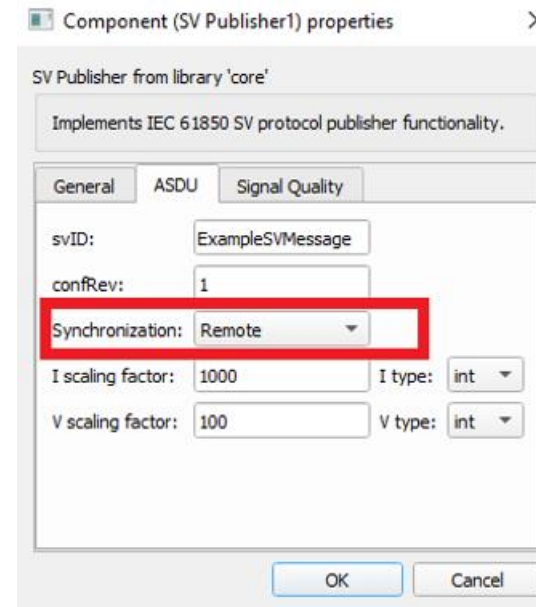
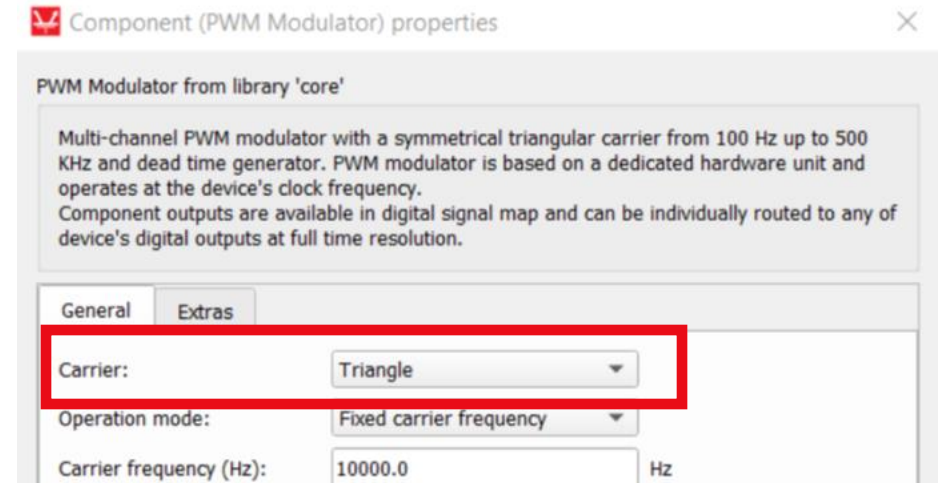
- Supports the following HIL Connect configurations:
  - Universal
  - Specific— configurations defined by Configuration Codes
- Easily configurable (IO mapping and scaling are handled by the component)



# Additional features

*Test your models even more precisely*

- PWM modulator sawtooth carrier
  - PWM modulator now supports both triangular and sawtooth carrier signals
  - Sawtooth carrier now runs on FPGA, no need to model it in Signal Processing and utilize ARM CPU
  
- PTP time synchronization for IEC 61850 SV
  - Improved Process bus testing capability
  - Supported on 4th generation devices



Time Synchronization Status



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# Learn More

- Visit: <https://www.typhoon-hil.com/products/2023-3-software-release>
- Contact Us: [info@typhoon-hil.com](mailto:info@typhoon-hil.com)

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