

# SENT Protocol 12-Channel I/O Card

Concurrent Real-Time's SENT protocol I/O card is ideal for use in high-performance hardware-in-the-loop (HIL) simulation and test applications. The PCIe card supports the Single Edge Nibble Transmission (SENT) protocol as specified by SAE J2716. The card provides 12 SENT input (decoder) and output channels. The number of data nibbles per message can be configured between 1 and 6. The basic SENT protocol tick length, which defaults to 3 microseconds, can be varied on the fly. The card supports both legacy and current CRC-4 calculations as well as optional pause pulse. Additionally, the implementation supports both short and enhanced-format messages with 4-bit and 8-bit IDs.

The SENT protocol I/O card is fully supported by Concurrent's RedHawk Linux operating system on iHawk Simulation Workbench platforms. Multiple cards can be installed in a single system. A Molex LFH-60 connector is mounted on each card for connection to external devices.



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## Specifications:

### SENT CARD

- 12-channel TTL SENT output
- 12-channel TTL SENT input (decoder)
- 66 MHz base frequency
- Fast Channel, 1 to 6 nibbles
- Short Format - data communicated in a 16-bit sequence
- Enhanced Format - data communicated in a 18-bit sequence
  - 12-bit data and 8-bit message
  - 16-bit data and 4-bit message

### GENERAL

- FPGA-based SENT protocol I/O board
- PCIe x1 form factor, full-height, half-length
- Supports multiple cards per system
- External Connectors: Molex LFH-60
- Power Consumption: ~5 watts

## Pin Assignment:

LFH60 pin assignments



## Ordering Information:

- CP-SENT-12  
12-channel SENT protocol I/O card
- ICS-SWB-1280  
Simulation Workbench SENT card license
- CX-LFH60  
I/O interface assembly w/6-foot cable
- CX-LFH60-DIN  
I/O interface assembly w/6-foot cable with DIN mounting

## Accessories:

Cable and breakout board

