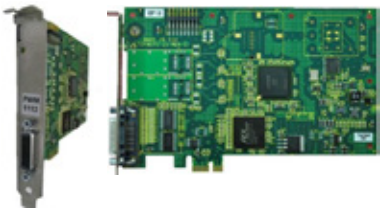
Pulse Width Modulation I/O Cards

Concurrent's FPGA-based Pulse Width Modulation (PWM) cards are ideal for use in high-performance hardware-in-the-loop (HIL) simulation and test applications. The PWM input card is designed for capturing pulse width modulated signals with high accuracy. It features a timing resolution of 15 nanoseconds and the ability to measure the frequency and duty cycle. The PWM output card can autonomously generate TTL pulse width modulation signals with a timing resolution of 50 nanoseconds and has the ability to program sine frequencies, PWM frequencies, dead-band and duty cycle in real-time.

The PWM input and output cards are fully supported by Concurrent's RedHawk Linux operating system on iHawk simulation 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.

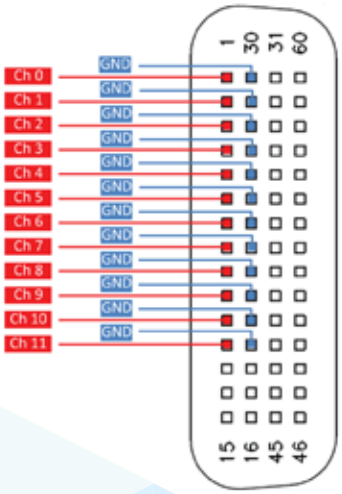


More Information:

concurrent-rt.com
wiki.simwb.com
info@concurrent-rt.com
800.666.4544
954.974.1700

Pin Assignment:

LFH60 pin assignments and Location



Specifications:

INPUT CARD

- 12-channel TTL inputs
- 66 MHz measurement base frequency
- Minimum pulse width of 15 ns
- Minimum period of 30 ns
- Pulse-width/period accuracy of 2 internal clock cycles (30 ns)
- Programmable pulse width averaging (max 127 pulse average)
- Measurement frequency range of 0.05 Hz to 660KHz
- Measurement duty cycle of 0-100%
- Programmable digital debouncing filters on every channel

OUTPUT CARD

- 3 modes of operation (12 outputs)
  - 2 channel, 3 phase complementary PWM outputs
  - 1 channel, 6 phase complementary PWM outputs
  - 12 channel PWM outputs
- 66 MHz board frequency
- 20 MHz PWM base frequency i.e. timing resolution of 50 nanoseconds
- 12-bit PWM signal resolution

GENERAL

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

Ordering Information:

- CP-PWM-1112
  12-channel PWM input card
- CP-PWM-1012
  12-channel PWM output card
- WC-PWM-1112
  RedHawk Linux input card driver
- WC-PWM-1012
  RedHawk Linux output card driver
- ICS-SWB-1243
  SIMulation Workbench input card license
- ICS-SWB-1238
  SIMulation Workbench output card license
- CX-LFH60
  PWM interface assembly w/6-foot cable

Accessories:

Cable and breakout board