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HPx-550

VME Synchro/Resolver Converter Card

Features:

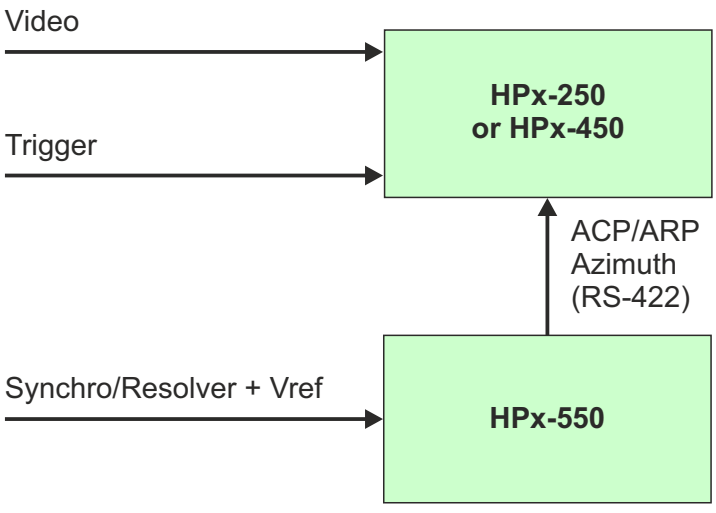
- Converts synchro/resolver signals to ACP/ARP format azimuth signals
- 115V or 26V reference voltage
- 90V or 11.8V signal voltage
- DC to 40kHz input frequency
- 3-wire synchro or 4-wire resolver input
- 5 to 120 rpm rotation rate
- 4096 ACPs per rotation
- Fully compatible with Cambridge Pixel's HPx-250 (PMC) and HPx-450 (XMC) radar input cards
- Standard 6U VME form factor single slot card
- Power via VME P1 connector
- Signal I/O via VME P2 connector

The HPx-550 is Cambridge Pixel's 6U VME form factor synchro/resolver converter card. It is designed to interface with most standard synchro and resolver units. The card digitises the 3-wire synchro signals (or 4-wire resolver signals) and compares them with the reference voltage to calculate azimuth position. The card generates emulated ACP/ARP azimuth output signals that are fully compatible with Cambridge Pixel's HPx series of PMC (e.g. HPx-250) and XMC (e.g. HPx-450) radar input cards.

To address the wide variety of installed systems, there are four standard versions of the HPx-550 card. There are two single channel versions of the card that support either high-voltage (115V/90V) or low-voltage (26V/11.8V) reference and synchro/resolver input signals. Similarly, there are two dual-channel versions of the cards which support either the high-voltage or low-voltage types of input signals. All four standard versions of the card can support either synchro or resolver operation by adjustment of jumper links on the card.

The HPx-550 card has a 6U VME form factor and is powered via the +5V and +12V pins on the VME P1 connector. The card uses none of the address or data lines on either the VME P1 or P2 connectors. The user-defined pins of the VME P2 connector are used to receive either one set (single channel cards) or two sets (dual channel cards) of reference voltage and synchro/resolver signals. The emulated ACP/ARP azimuth output signals are provided on the same connector.

The HPx-550 card has front panel status LED indicators for power status (i.e. "power good"), conversion error/fault (i.e. synchro/resolver input signals out of specification) and rotation status (LED turns on and off once per revolution).



HPx-550 VME Synchro/Resolver Converter Card Specification

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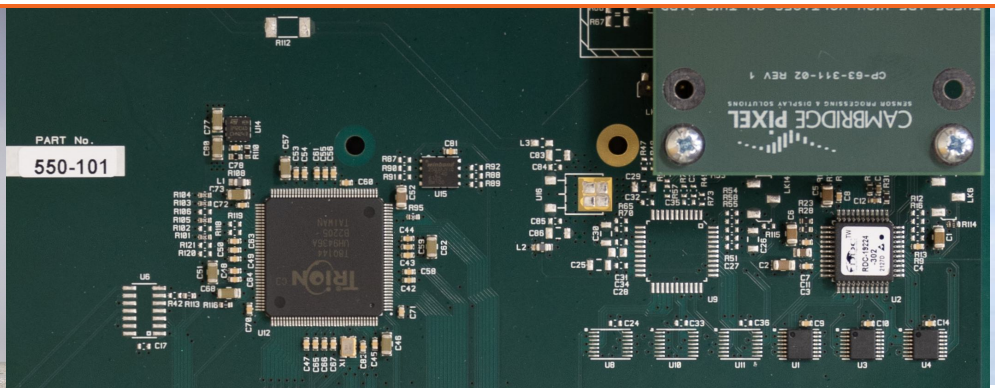

Architecture

Form factor: 6U VME (single width slot)

Platform: N/A – operating system independent

Inputs

Channels: Single channel (Versions 550-101 & 550-102) or Dual channel (Versions 550-103 & 550-104)

Signal format*: Synchro (3 signal wires) or Resolver (4 signal wires)

Reference voltage (Vref): 115V (Versions 550-101 & 550-103) or 26V (Versions 550-102 & 550-104)

Vref frequency: DC to 40kHz

Signal voltage: 90V (Versions 550-101 & 550-103) or 11.8V (Versions 550-102 & 550-104)

Rotation rate: 5 to 120 rpm

*Note: configurable for synchro or resolver input via jumper links on the card

Outputs

Azimuth: Emulated ACP/ARP signals

Signal type: RS-422 (compatible with HPx-250 and HPx-450 radar input cards)

Resolution: 4096 ACPs per rotation

Connectors

Front panel: None

Backplane: P1 (VME 3 row) used for power only (+5V & +12V)
P2 (VME 3 row) used for synchro/ resolver inputs & ACP/ARP outputs

Status LEDs

Power status (PWR): Green

Conversion error/fault (FLT): Red

Rotation status (ROT): Yellow

Environmental

Cooling: Forced air cooling

Temperature: 0°C to +55°C

Ordering Information

The following versions of the card are available:

550-101 HPx-550 VME Synchro/Resolver Converter Card (1 ch, 115V/90V input, ACP/ARP output)

550-102 HPx-550 VME Synchro/Resolver Converter Card (1 ch, 26V/11.8V input, ACP/ARP output)

550-103 HPx-550 VME Synchro/Resolver Converter Card (2 ch, 115V/90V input, ACP/ARP output)

550-104 HPx-550 VME Synchro/Resolver Converter Card (2 ch, 26V/11.8V input, ACP/ARP output)

For more information, please contact:

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