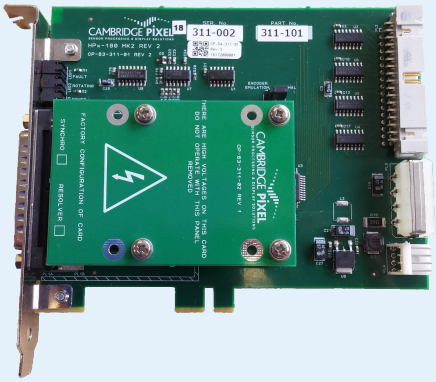
DATASHEET

HPx-180 PCI/PCIe

Synchro/Resolver Card



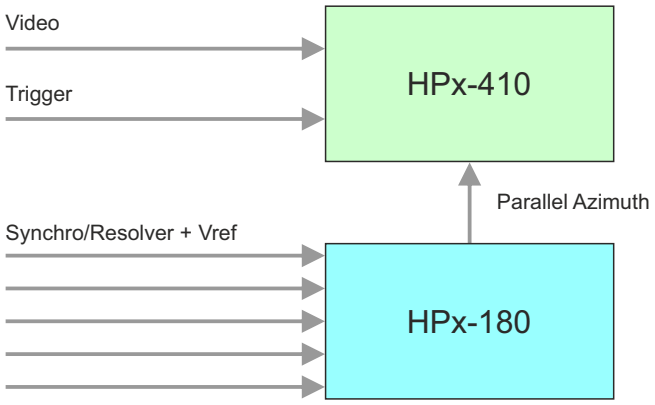
Features:

- PCI/PCIe dual form-factor
- Power from standard PC PSU connector
- No connection to PCI power/data
- Supports both synchro (3-wire) and resolver (4-wire) input
- Data + strobe parallel azimuth output compatible with HPx radar input cards
- 12-bit resolution (4096 values per rotation)
- Emulated ACP/ARP output for use with legacy systems
- Input frequency DC to 40kHz
- Rotation period 5 rpm to 120 rpm
- Reference voltage 115V (P/N 311-101), 26V (P/N 311-102)
- Synchro/resolver voltage 90V (P/N 311-101), 12V (P/N 311-102)

The HPx-180 is a dual form-factor PCI/PCIe synchro/resolver converter card. Designed to interface with most standard synchro and resolver units, the card provides digitisation of the input signals, comparing them with the supplied reference signal to generate a 12-bit resolution parallel azimuth output (data and strobe) as RS-422. This output is compatible with Cambridge Pixel's range of radar input cards. The card can also generate emulated ACP and ARP output signals for use with radar input cards that do not accept parallel azimuth (e.g. the HPx-346) or for legacy display systems that expect ACP/ARP radar antenna signals.

The HPx-180 supports high voltage and low voltage reference and synchro/resolver inputs, making it suitable for use with a wide variety of installed systems. It is a PCI/PCIe form factor card, but the bus connector is for mechanical location only and does not take power or data from the PCI/PCIe bus. Power to the card is supplied using a standard PC power connector from the computer's power supply unit (either 4-pin Molex connector or 4-pin floppy drive auxiliary connector). All inputs to the card and the emulated ACP/ARP are available on the card's front panel via a D-type connector, while parallel azimuth is supported via an IDC socket. A ribbon cable between the HPx-180 and a radar input card such as the HPx-410 is used to provide parallel azimuth to the radar input card.

The HPx-180 has front panel status indications including power, conversion error (i.e. input signals out of specification) and turning (LED turns on/off once per revolution).



HPx-180 PCI/PCIe Synchro/Resolver Card Specification

CP-16-311-01, Issue 1.2

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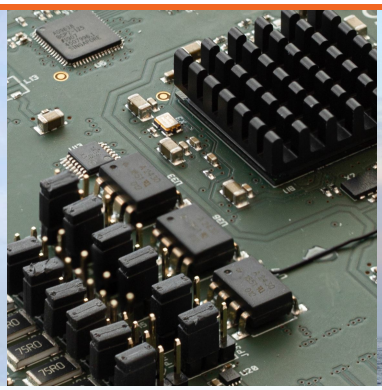

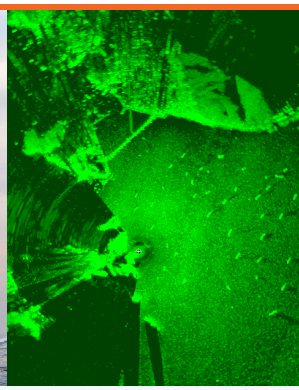

Architecture

Form Factor:	PCI/PCIe (less than half length, full height)
Platform:	OS independent

Inputs

Synchro: or **Resolver:** (configurable through hardware links on card)	3 wire + reference 4 wire + reference
Vref Reference Voltage:	115 V (Model 311-101) 26 V (Model 311-102)
Vref Input Frequency:	DC to 40 kHz
S1, S2, S3, S4 Signals:	90V (Model 311-101) 11.8V (Model 311-102)
Rotation Period:	5 rpm to 120 rpm

Outputs

Parallel Azimuth:	12-bit parallel azimuth + strobe Azimuth data is valid on rising edge of strobe
Signal Type:	RS422
Emulated ACP / ARP:	RS422
Resolution:	12 bits (4,096 values per rotation)

Connectors

Front Panel:	25W D Male on card.
Parallel Azimuth:	34W IDC pins on card. Compatible with HPx-200, HPx-200e, HPx-400e and HPx-410 cards. Interconnection cable is supplied with card.
Power:	4-pin peripheral connector (“4-pin Molex”) 4-pin floppy drive connector

Status LEDs

Conversion Error:	Red
Power:	Green
Conversion Active (MSB azimuth):	Yellow

Environmental

Cooling:	Forced air cooling
Temperature:	0° to 55°C

Ordering Information

The following versions of the card are available (**note the voltage difference**):

311-101	115V Reference, 90 V signals (Synchro or Resolver inputs)
311-102	26V Reference, 11.8V signals (Synchro or Resolver inputs)

For more information, please contact:

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