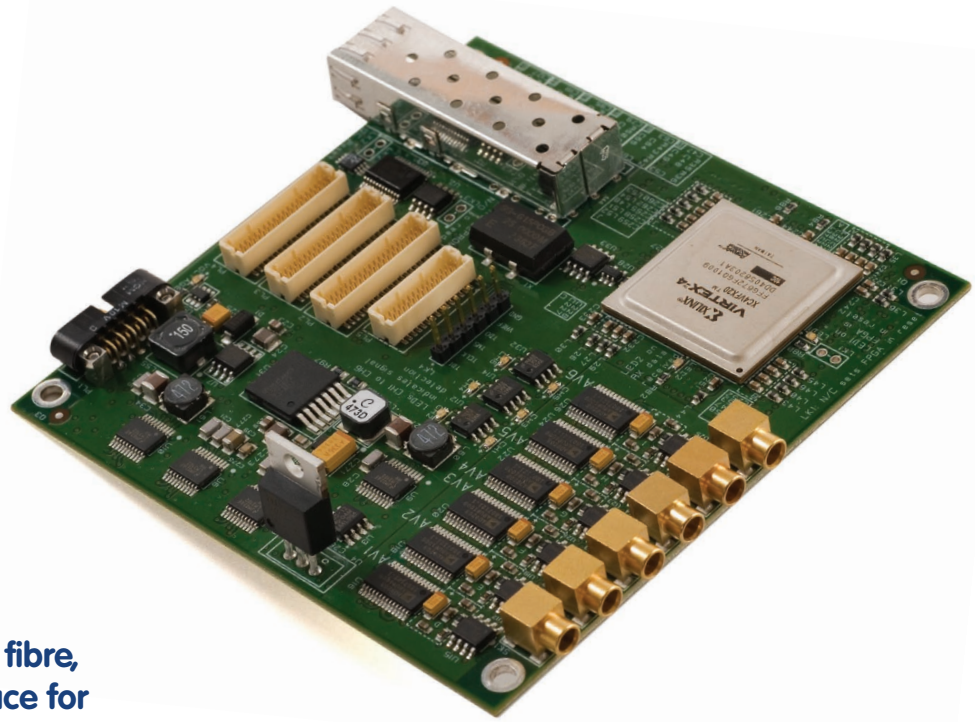
# LINK AV and Serial Communication



**The Innova Link AV video and serial multiplexer is the core system in Innova's fibre optic product family. The system provides video and serial lines over a single fibre, as well as diagnostics interface for the other products in the Link family.**

The flexible and modular design aims to meet the requirements of all types of remotely operated systems, from small observation vehicles to fulll survey spreads. This flexibility also makes it easy to upgrade older systems to increase capacity and bandwidth in a cost efficient manner.

The system consists of a motherboard with video, optics and diagnostics interface, and add-on boards for additional video and serial data channels. All video and serial data are transmitted over one single fibre.

The design is based on Innova's long experience with remotely operated vehicle systems and provides a wide range of features, including;

- Up to 8 channels of high quality analogue video
- Up to 36 channels of serial data channels
- All serial channels are galvanic isolated
- All video channels are fully AC coupled
- Self-test and diagnostics for all boards
- Single mode and multi mode fibre options
- Pressure tolerant electronics and optics option
- Can be combined with other boards in the Link Family over single fibre with the use of CWDM optical multiplexers

The AV board has 6 on board analogue video channels and extension connectors for up to 4 daughter boards with additional video and data channels. Currently, daughter boards are available with:

- 2 additional channels of Analogue Video
- RS-232, 115 kbps 12 isolated channels
- RS-485 Half duplex, 115 kbps, 12 isolated channels

In addition, custom extension boards can be developed.

All the boards in the Link Family are designed to be mounted into a rack where boards can be removed separately. A backplane distributes power and diagnostics signal to all boards in the rack.

The output boards can be mounted into a topside rack, including backplane, power supply, and user interface.

A version of the boards and optics are available for operation in oil-filled, pressure compensated environments. Typical applications for this version are for use in sub-sea systems or in other harsh environments.

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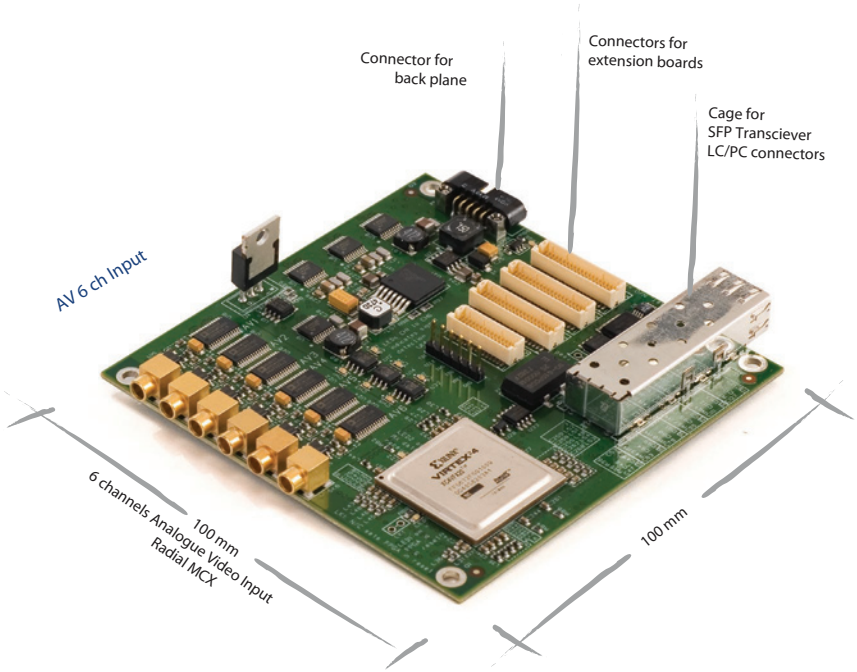
## Analogue Video and serial communications system

- 6 ch NTSC or PAL on motherboard
- Self test and diagnostics for all boards
- Sampling at 12.5 MHz. BW 6MHz. 10 bit.
- Latency < 20µS

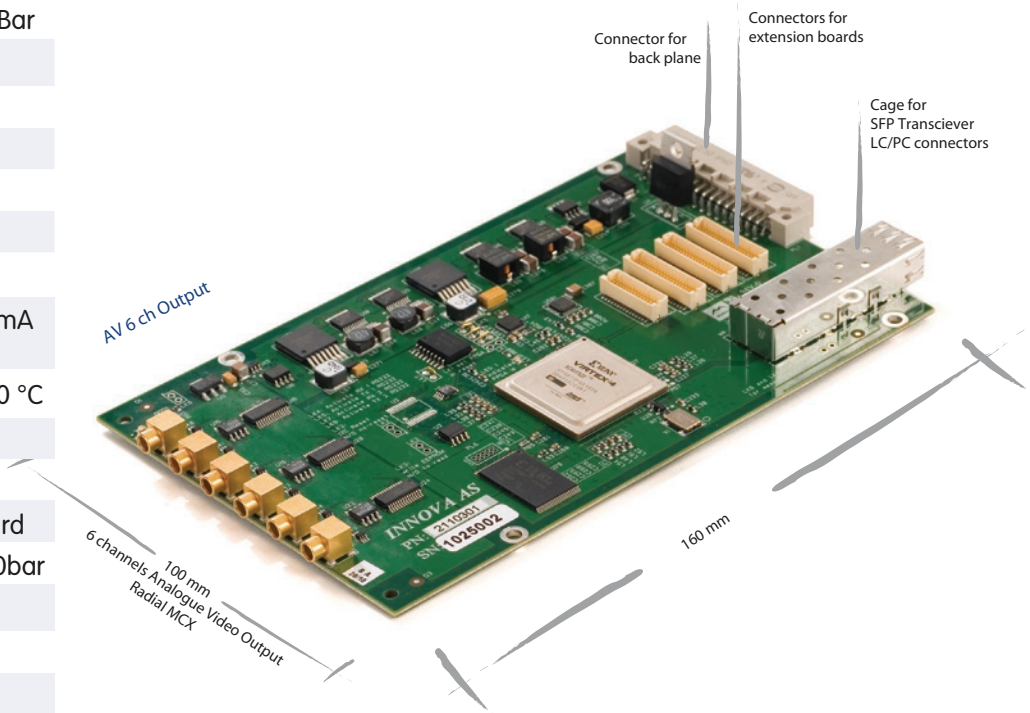
## Input Board

- One SFP cage
- Video connection – Radial MCX
- Board size: 100mm x 100mm
- Voltage: 6 – 12 V
- Typical idle power consumption: 530mA @12V Ex. Ext.boards
- Operating temperature range: -20–70 °C
  *SFP temp range may be different
- Two versions of Input boards:
  - Standard
  - Pressure compensated oil (PC) 300 Bar




## Output Board

- One SFP cage
- Video connection – Radial MCX
- Board size: 100mm x 160mm
- Voltage: 6 -12 V
- Typical idle power consumption: 750mA @12V
- Operating temperature range: -20–70 °C




## Part no

- 21 10 101 AV 6 ch Input Board, Standard
- 21 10 201 AV 6 ch Input Board, PC 300bar
- 21 10 301 AV 6 ch Output Board

## Extension boards

- AV 2 additional channels
- 12ch of RS-485, half duplex
- 12ch of RS232

Version: Rev.3/GGT 29.01.2014



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