



# Link

## Extension Boards

[www.innova.no](http://www.innova.no)

**A wide range of extension boards with video and serial interfaces are available for the Link AV system. The AV system is the core system in the Link product family, and provides video and serial lines over a single fibre, as well as diagnostics interface for the other products in the family.**

The AV system is designed to be modular and flexible, by using a combination of motherboard and daughterboards to provide different signal interfaces. An AV board has 6 on board analogue video channels and extension connectors for up to 4 daughterboards with additional video and data channels.

The daughterboards can be combined so that they work as media converters; i.e. a topside RS-232 board can communicate with a remote RS-485 board, providing "on-the-fly" media conversion from RS-232 to RS-485.

## Key features

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

- All serial channels are galvanic isolated
- All video channels are fully AC coupled

Currently, daughterboards are available with:

- 2 additional ch. of AV
- 12 isolated ch. of RS-232, 115 kbps
- 12 isolated ch. of RS-485 Half duplex, 115 kbps
- 4 Tritech ArcNet ch.
- 9 ch. RS-232, RS-485, trigger

In addition, custom extension boards can be developed.

## INPUT AND OUTPUT BOARDS

Board size input board:	100 mm x 100 mm
Board size output board:	100 mm x 160 mm
Voltage:	6 – 12 V
Operating temperature range:	-20 °C to 70 °C

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.

## EXTENSION BOARD 2 CH. VIDEO

Sampling at 12.5 MHz, BW 6 MHz	
Latency < 3μS	
Typical idle power consumption:	25 mA @ 12 V
Connectors:	Radial MCX

Part No.:	21 11 101 Ext. 2 ch. Input, Standard
	21 11 301 Ext. 2 ch. Output

## EXTENSION BOARD 12 CH. RS-232

12 isolated channels of RS-232, 115 kbps	
Typical idle power consumption:	550 mA @ 12 V
Connectors: Input board:	2 x 40 pin Hirose
Output board:	RJ45

Part No.:	21 12 101 Ext. 12 ch. RS-232 Input
	21 12 301 Ext. 12 ch. RS-232 Output

## EXTENSION BOARD 12 CH. RS-485 HALF DUPLEX

12 isolated channels of RS-485 Half duplex, 115 kbps	
Typical idle power consumption:	560 mA @ 12 V
Maximum power consumption:	1130 mA @ 12V
Connectors: Input board:	2 x 40 pin Hirose
Output board:	RJ45

Part No.:	21 14 101 Ext. 12 ch. RS-485 HD Input, Standard
	21 14 301 Ext. 12 ch. RS484 HD Output

## EXTENSION BOARD 4 CH. TRITECH ARCNET

4 bi-directional Tritech ArcNet serial channels	
Typical idle power consumption:	10 mA @ 12 V
Connectors:	Phoenix MC 0.5/8-ST-2.5

Part No.:	21 15 101 4 ch. Tritech ArcNet Input
	21 15 301 4 ch. Tritech ArcNet Output

## EXT. BOARD 9 CH. RS-232, RS-485, TRIGGER

Power supply voltage:	12 VDC
(for on-board electronics)	
Typical idle power consumption:	450 mA @ 12 V
Channels:	
•	5 isolated RS-232
•	2 isolated RS-232 / RS-485 (selectable via control SW)
•	1 isolated trigger (input on output board and output on input board)
•	1 RS-485 communication port to a host system
Connectors: Input board:	RS-485 control Molex 43025-0400
	Trigger output Molex 43025-0200
	RS-232 Molex 43025-0400
	RS-232 / RS-485 Molex 43035-0600
Output board:	RJ45

Part No.:	21 16 101 Ext. 9 ch. Input, Standard
	21 16 301 Ext. 9 ch. Output