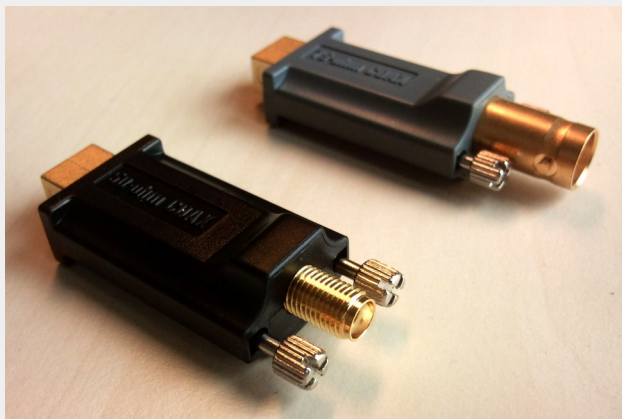# EqcoLogic 1394b dongles for long-haul over Coaxial Cable

Extend 1394b links up to 60 meters with power over cable

EqcoLogic's EQCO-FW7501 and EQCO-FW5001 are two extender solutions for FireWire over coaxial cable, operating with 75Ω and 50Ω coax cable respectively.

Each unit contains a 1394b transceiver (EQCO875SC or EQCO850SC) that can transmit up to S800 speeds (1.0Gbit/s) fully duplex over a single coax cable; the transceiver includes an adaptive equalizer that supports up to 60m cable length.

In addition to the long-haul fully duplex data transmission, power can be transmitted simultaneously from the host side to a target (such as camera or hard drive) over the coax cable.

The EqcoLogic coaxial extenders fully support the IEEE1394b Standards.

Implementation

1394b over coax dongles are ideal for simple and easy implementation of long-haul connections. Due to the secure shielding of coaxial cable EqcoLogic's 1394b dongles can be used within electrically noisy environments such as factories.

The EQCO-FW7501 supports up to 60 meters of 75Ω coaxial cable; the EQCO-FW5001 supports up to 30m of 50Ω coaxial cable. In both cases, the range is specified at a data-rate of 1.0Gbit/s (S800).

When using the dongles, customers can determine the best cable lengths for their applications. The EqcoLogic transceiver contains an equalizer that is fully adaptive and adjusts for various cable lengths as well as age and environmental conditions like temperature, without any need for programming. The dongles have a standard 1394b 9-pin connector on one end and a 75Ω BNC or 50Ω SMA connector on the opposite end.

These dongles are ideal for laboratory and Industrial applications, such as Machine Vision and Factory Automation, where robust cable cabling is required. They can also be used with high flex small diameter coaxial cable with rotating joints, if necessary, for applications where multiple rotations are required.

*Subject to maximum cable attenuation, see over for details

Technical Specifications

IEEE 1394B interface	
Connector	9-Pin 1394b
Coax Interface/cable	
EQCO-FW5001—50Ω ohm EQCO-FW7501—75Ω ohm	50Ω rated SMA 75Ω rated BNC
Power over cable	
Max Voltage Max Current Max Transmitted Power	32V (1394b bus voltage) 1.0A (limited by coax dongle linear power supply) 32W(before cable losses)
Power supply – to remote device	
Voltage Available	V_{IN} (bus voltage) -1V -Coax DC drop (varies with cable type/length)
Environmental	
Operating Temperature Relative Humidity Storage Temperature	0 – 50C Up to 85% - non-condensing -20 – +70C

Performance Specifications

Performance by Product and Cable Type			
(All cable information at S800/1.0Gbit/s data-rate)		EQCO-FW7501 (75Ω)	EQCO-FW5001 (50Ω)
RG174	50Ω/2.8mm dia		15 meters/49 feet
RTK	50Ω/2.8mm dia		25 meters/81 feet
RG58	50Ω/5mm dia		30 meters/67.5 feet
RG179	75Ω	20 meters/65 feet	
RG59	75Ω	40 meters/130 feet	
RG6	75Ω/5mm	60 meters/195 feet	

Sales Contact:
Zeph Freeman: phone +1-972-607-4113
Email: zfreeman@eqcologic.com

EqcoLogic NV
VUB Campus/K
Pleinlaan 2
1050 Brussels, Belgium

Sales Contact:
Peter Helfet: phone +32 2 629 1301
Email: phelfet@eqcologic.com

EqcoLogic