

Xtensa Challenger

CXP Single Connection Repeater

CXP-HBHB-01-0000
Issue 1.4

General Description

The in-line CoaXPress repeater is designed to transmit and receive signals on 75 ohm coaxial cable. In one direction an 8b/10b coded downlink signal is transmitted between 1.25 Gbps and 12.5 Gbps. In the opposite direction, a lower speed 8b/10b coded uplink signal is transmitted at 21Mbps or 42Mbps.

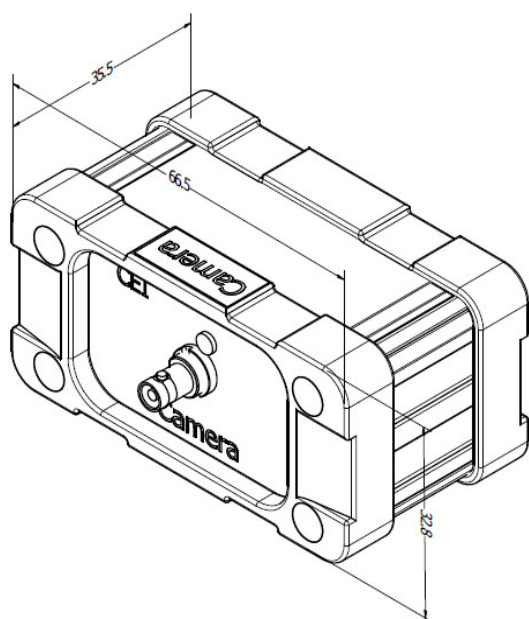
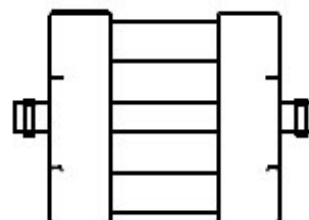
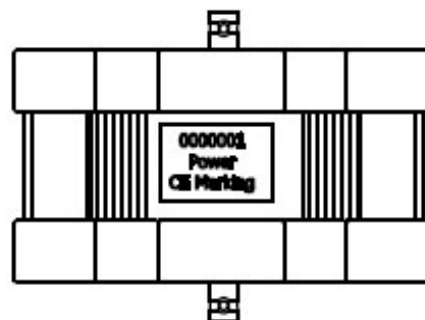
The repeater performs equalising, re-clocking and cable driving functions for both the up and downlinks. Multiple repeaters can be used in a single connection to extend cable distance to suit individual applications. The repeater requires power over CoaXPress (PoCXP) to operate, negating the need for an external power source. The repeater is directional and must be inserted into the transmission line as indicated on the coaxial ports. An LED indicator is lit when the port is in use.

Features

- Increase transmission distance of CoaXPress
- Downlink/Uplink of up to 12.5Gbps and up to 42Mbps respectively per connection
- Bi-directional CoaXPress communication
- Micro BNC connector for CoaXPress connection
- Plug and Play, no need to configure
- Multiple repeaters can be used in a single connection
- Power over CoaXPress (PoCXP) support
- -40°C to 70°C operating environment temperature
- Relative Humidity: 10% to 90% non-condensing (operating and storage)



Xtensa
CHALLENGER



CoaXPress[®]



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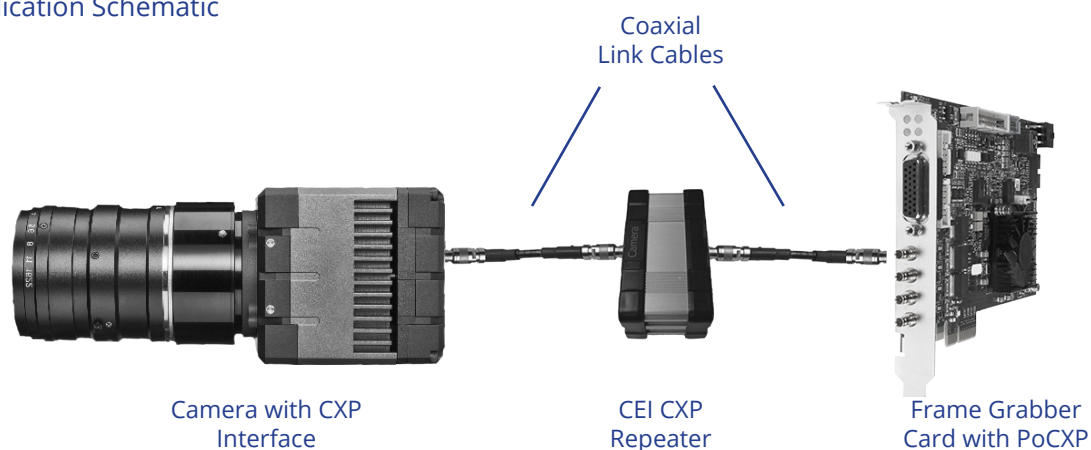
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Typical Connection Performance Table - Without Repeater

Bit Rate (Gbps)	Belden 1694A	Belden 4694R	Belden 4855R	Belden 4794R
1.25	130m	137m	75m	210m
2.50	110m	118m	64m	180m
3.125	100m	108m	60m	160m
5.00	65m	70m	40m	105m
6.25	55m	60m	33m	90m
10.00	32m	38m	26m	70m
12.50	30m	35m	24m	60m

Application Schematic



Power Consumption Table (per Connection)

Down Link Frequency (Gbps)	Up Link Frequency (Mbps)	Power Consumption (mW)
12.5	40	460
10	40	430
6.25	40	340
1.25	20	310

A wall mounting bracket for the CXP Repeater is also available (part number CXP-Mounting Bracket)

Cambridge Electronic Industries can also supply coaxial cables to complete your system.