

PCI Express Expansion Link

HLink-G3, ExCable-G3 and SLink-G3



DESCRIPTION

Datapath PCI Express expansion link solution consists of HLink (Host Link) card, the ExCable and the SLink (Slave Link) card. This provides connectivity for multi PCIe motherboards and backplanes to enable large system builds.

The HLink-G3 card is used to provide a high bandwidth PCI Express link from an upstream host to a downstream expansion unit. Used with the SLink-G3 and Datapath Expansion backplanes, this card allows the construction of larger systems comprising of many more PCI Express card slots than can be accommodated in a single chassis.

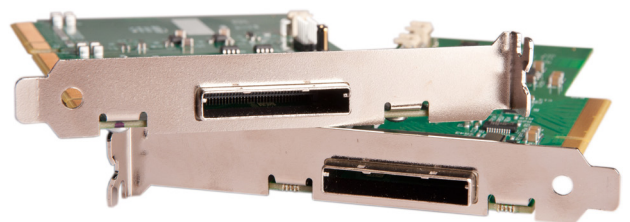
The Gen.3 PCI Express technology and support for 8 lanes, allows for very high data rates to be supported between system components, which has applications wherever there is a need for distributed computing across a PCI Express fabric. For data wall systems, this bandwidth equates to very high pixel transfer speeds, ensuring smooth, full frame rate video distribution between chassis. Peak bandwidths of up to 8GB/s can be achieved on both upstream and downstream links simultaneously.

When plugged into an Express9 backplane, the extended PCI Express bus will link at PCIe 2.1 (Gen.2) signalling rates, providing a peak link bandwidth of 4GB/s both upstream and downstream.

To benefit from the full performance, we recommend that the SLink-G3 is used in conjunction with the Datapath family of Gen.3 backplanes which allows the full 8GB/s link speed, assuming the host slot (that accepts the HLink-G3 card) is capable of Gen.3 operation.

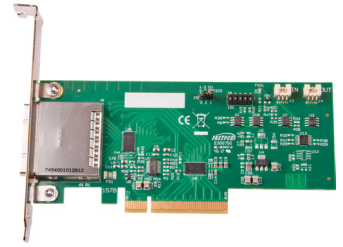
FEATURES

- PCI Express 3.0 bus extension across 8 lanes
- Peak bandwidth of 8GB/s both upstream and downstream
- Transparent to PCI Express fabric (no additional bus hierarchy introduced)
- Automatically adjusts between PCIe Gen.1, Gen.2 and Gen.3 operation depending on endpoint capabilities
- Can be used with systems based on the Datapath backplanes to provide up to 41 x4 slots
- For display wall systems the HLink-G3 also transmits the pixel reference clock over the link cable to allow graphics card frame-locking across multiple chassis.



HLink-G3

The low profile PCI Express plug-in card format allows the HLink-G3 to be used in compact server cases offering standard x8 PCIe slots, as well as in a full height slot in a Datapath VSN host.



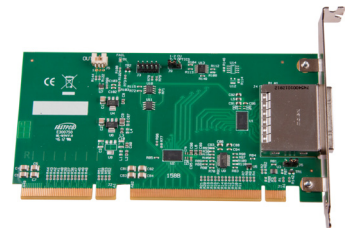
ExCable

A fully locking cabling system has been developed specifically for PCI Express expansion, and can support the full PCIe 3.0 signalling speeds over the 1m copper ExCable.



SLink-G3

The SLink-G3 card plugs into a standard PICMG 1.3 system board slot in a downstream system backplane board. Typically the SLink-G3 would be used with the Datapath family of active backplanes that are available either as card products or as the heart of the Datapath VSN family of wall controllers.



SPECIFICATION

Board format	HLink-G3 <ul style="list-style-type: none">• PCI Express x8 plug-in card, 150mm x 85mm (half height and full height bracket options) SLink-G3 <ul style="list-style-type: none">• Half Size PICMG 1.3, 168mm x 85mm
Connectors	HLink-G3 <ul style="list-style-type: none">• 1 x Locking IPass™ connector (8 lane)• 1 x 6 way 2mm header for GENLOCK clock input• 1 x 6 way 2mm header for GENLOCK clock output SLink-G3 <ul style="list-style-type: none">• 1 x Locking IPass™ connector (8 lane)• 1 x 6 way 2mm header for GENLOCK clock output
Power Consumption	5 watts
Operating temperature	0 to 35 deg C / 32 to 96 deg F
Storage temperature	-20 to 70 deg C / -4 to 158 deg F
Relative humidity	5% to 90% non-condensing
Warranty	3 years

We are continuously developing the technology used within our product ranges delivering outstanding innovative solutions, therefore the specification may change from time to time.

MODELS AVAILABLE

Code	Description
SLink-G3	Gen.3 expansion card receiver
HLink-G3	Gen.3 host link card
Ex-Cable- G3	1 mtr copper cable