Express11-G3

11 Slot PCI Express Expansion Backplane
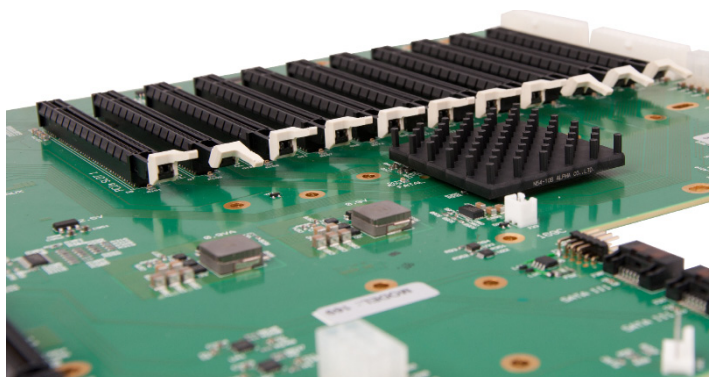### Advanced Graphics Display Technology

DESCRIPTION

The EMS PCIExpress11-G3 backplane provides 11 x8 lane PCI Express slots, all implemented as x16 physical connectors. For high density and high performance display controller systems. The PCIExpress11-G3 can be used with a standard PICMG 1.3 SBC as a stand alone system or in combination with multiple backplanes to provide a PCI Express expansion system for a standard PC.

FEATURES

- **11 slot, Gen.3 PCI Express backplane**
- **1 x PICMG 1.3 SBC slot**
- **Standard ATX form factor**
- **Support for multiple backplanes for large systems**
- **Supports 8GB/s full duplex links per slot**
- **Temperature sensors monitored by EMS Wall Monitor software**
- **96 lane PCI Express 3.0 switch**
- **Support for 2 x SATA connections**
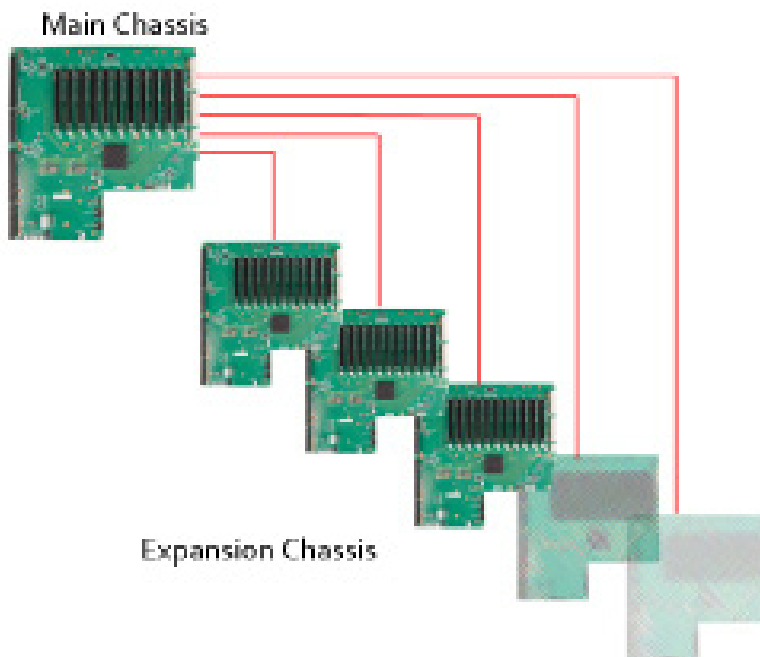- **Provides headers for (1,2 or 3) fans**

Expansion Link - HLink-G3, ExCable-G3 and SLink-G3

The SLink-G3 card can be used instead of a PICMG 1.3 SBC to configure the Express11-G3 as an expansion backplane from a standard PC or from other EMS backplanes. The cards are available with Gen.3 compatibility, fully supporting the EMS PCIExpress11-G3 backplane.

Star Configuration

Main Chassis

Expansion Chassis
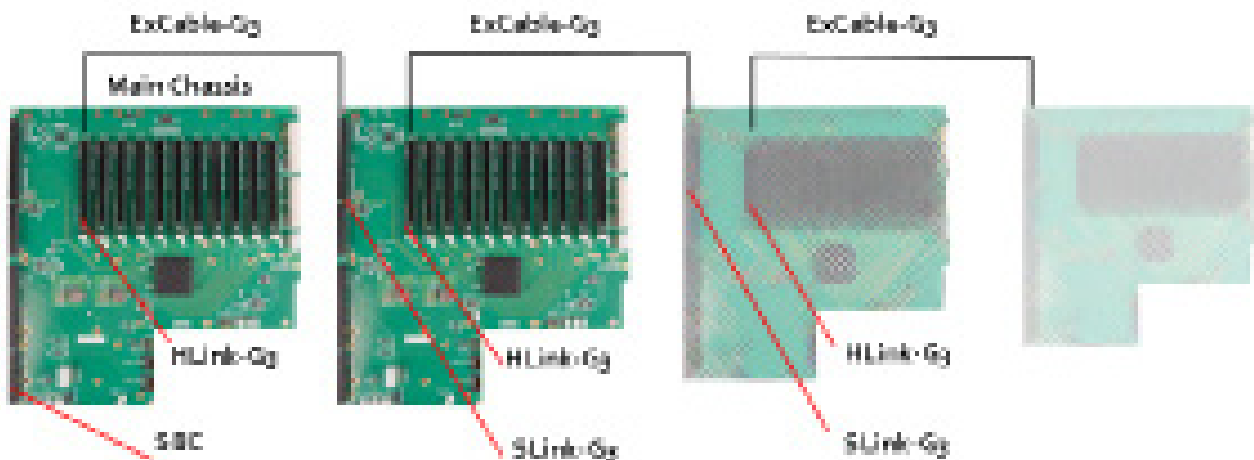
All PCI Express slots in the master chassis (containing the SBC) can be populated with a HLink-G3 card. Each HLink-G3 is then connected to an expansion chassis using an ExCable-G3 and SLink-G3 card. This configuration provides a high number of available PCI Express slots supporting low latency. The PCIExpress11-G3 can also be used to connect a mixture of multiple EMS PCIExpress9-G3 and PCIExpress11-G3 backplanes.
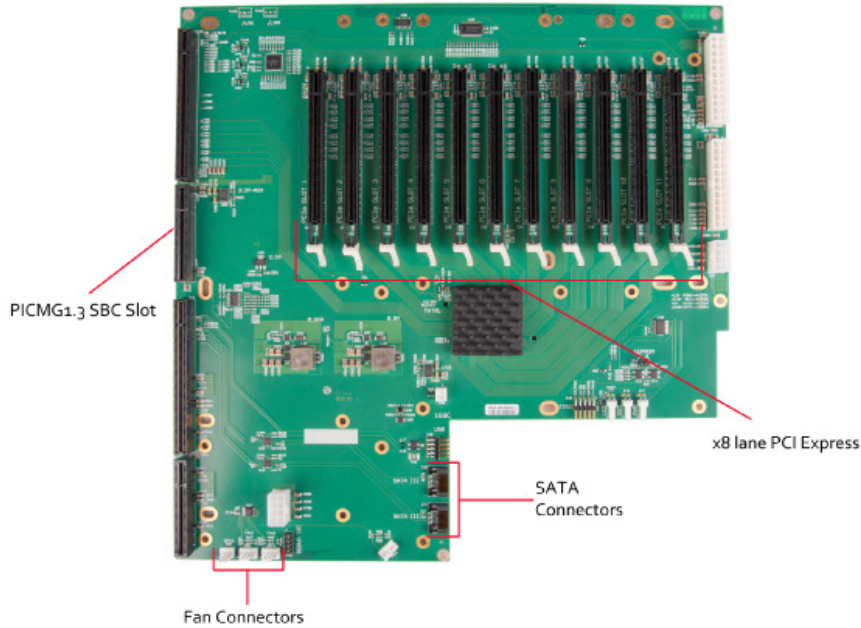
Each HLink and SLink card are factory installed into a system as a pair. When connecting systems please ensure that the cards labelled Link1 are joined using the ExCable, cards labelled Link2 are also joined together etc. In the event that this is not possible, please re-install the EMS driver to reset the pairings.

Daisy Chain Configuration

ExCable-G3   ExCable-G3   ExCable-G3

Main Chassis

HLink-G3   HLink-G3   HLink-G3

SBC   SLink-G3   SLink-G3

Multiple PCIExpress11-G3 or EMS PCIExpress9-G3 can also be daisy chained. For larger systems EMS recommends a Star Topology as illustrated above.

PCIExpress11-G3 LAYOUT

PICMG1.3 SBC Slot

x8 lane PCI Express

SATA Connectors

Fan Connectors

All PCI Express slots use a physical x16 connector and therefore will accept any PCI Express board type

SPECIFICATIONS

Max Power (without SBC)	25W
Power requirements	Max current at +3.3V < 0.5A
	Max current at +12V < 0.5A
	Max current at +5V <4A
Form Factor	PICMG1.3 Host SBC interface (x8 PCIe)
	11 x PCI Express (x8) expansion slot
ATX PSU	2 x 24 pin power connectors
	2 x 8 pin AUX power connectors
SATA Ports	2 x ports via PICMG1.3 interface
USB Port	2 x ports via PICMG1.3 interface, USB 2.0
Operating Temperature	0 to 35 deg C/32 to 95 deg F
Storage Temperature	-20 to 70 deg C/-4 to 158 deg F
Relative Humidity	5% to 90% non-condensing

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

Product Name/Order Code	Description
Express11-G3	11 slot PCI Express Gen.3 Expansion backplane PCIe 3.0 Switch

All products are shipped with the latest software available, unless stated otherwise.

Special requirements may be organised by contacting our Sales team.