

Expansion Chassis User Manual



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Safety Instructions

Safety Instructions (UK)

To prevent damage to your Datapath product or injury to personnel operating the equipment, please read the following safety precautions prior to operation. These instructions should be made available to all those who will use and operate Datapath products.

Power Supply

All Datapath products require a mains power supply. This power supply must be disconnected when equipment is being upgraded or relocated.

Cables

Do not expose cables to any liquids; doing so may cause a short circuit which could damage the equipment. Do not place heavy objects on top of any cables as this can cause damage and possibly lead to exposed live wires.

Ventilation

All computer equipment should be located in a well ventilated area. All ventilation holes on the computer casing must be kept clear of any obstruction at all times. Failure to do so will result in the system over heating and damaging your equipment.

Working Environment

The equipment should be located in an environment free from dust, moisture and extreme changes in temperature and should be placed on a stable and solid work surface. Liquids (hot/cold drinks etc) should not be placed near the equipment as spillage could cause serious damage.

Gas/Flammable Liquids

Electronic equipment should never be used in the presence of gas or any flammable liquid, doing so could result in an explosion or serious fire.

Smoke/Unusual Smells

Should you notice smoke or unusual smells being emitted from your computer, turn off and unplug the system from the mains supply. The system should then be passed to a qualified technician for inspection. Continued operation could result in personal injury and damage to property.

Maintenance

Maintenance should only be carried out by competent technicians, any Datapath plug-in cards that are physically damaged should be returned to Datapath for repair using Datapath RMA procedures.

Disposal

At the end of life all Datapath products should be disposed of as per local laws and regulations dictate. In UK contact Datapath to arrange disposal. Our WEEE registration number is WEEE/AA0005ZR.

Consignes de sécurité (Fr)

Afin de ne pas endommager votre produit Datapath et d'éviter tout risque de blessure du personnel exploitant le matériel, veuillez lire les consignes de sécurité suivantes avant toute utilisation. Ces instructions doivent être mises à disposition de toute personne souhaitant utiliser et exploiter les produits Datapath.

Alimentation électrique

Tous les produits Datapath requièrent une alimentation électrique principale. Cette alimentation électrique doit être interrompue en cas de mise à jour ou de relocalisation du matériel.

Câbles

Ne pas exposer les câbles à un liquide quelconque car cela pourrait provoquer un court-circuit susceptible d'endommager le matériel.

Ne pas placer d'objets lourds sur les câbles car cela pourrait causer des dommages et conduire éventuellement à des fils électriques dénudés.

Ventilation

Tout matériel informatique doit être disposé dans un endroit bien ventilé. Veiller à ne jamais obstruer les orifices de ventilation du boîtier de l'ordinateur ; sinon, il y a risque de surchauffe du système et votre matériel peut être endommagé.

Environnement de travail

Le matériel doit être placé sur une surface de travail stable et solide, dans un environnement exempt de poussière et d'humidité et non exposé à des variations extrêmes de températures. Ne pas placer de liquides (boissons chaudes/froides, etc.) près du matériel, car un déversement accidentel pourrait causer de graves dommages.

Gaz/Liquides inflammables

Le matériel électronique ne doit jamais être utilisé en présence de gaz ou de liquide inflammable ; cela pourrait entraîner une explosion ou un grave incendie.

Fumée/odeurs inhabituelles

Si vous constatez la présence de fumée ou d'odeurs inhabituelles émanant de votre ordinateur, éteignez-le et débranchez le système de l'alimentation secteur. Dans ce cas, le système devra être confié à un technicien qualifié pour inspection. Une poursuite de son utilisation risquerait de provoquer des blessures corporelles et des dommages matériels.

Entretien

L'entretien doit impérativement être effectué par des techniciens compétents, toute carte enfichable Datapath physiquement endommagée est à retourner à Datapath pour réparation via la procédure Datapath RMA.

Élimination

En fin de vie, tous les produits Datapath seront éliminés conformément aux législations et réglementations locales. Au Royaume-Uni, veuillez contacter Datapath pour organiser l'élimination. Notre numéro d'enregistrement de Déchets d'équipements électriques et électroniques : WEEE/AA0005ZR.

Instrucciones de seguridad (Esp)

Rogamos leer las siguientes instrucciones de seguridad antes de poner en funcionamiento el equipo, a fin de evitar daños en su producto de Datapath o lesiones al personal encargado de su manejo. Poner estas instrucciones a disposición de todos aquellos que vayan a utilizar y/o manejar los productos de Datapath.

Alimentación eléctrica

Todos los productos de Datapath requieren una fuente de alimentación eléctrica. Esta fuente de alimentación eléctrica debe ser desconectada durante las tareas de renovación o traslado.

Cables

No exponer los cables a líquidos, ya que ello puede causar un cortocircuito y, por consiguiente, daños en el equipo. No colocar objetos pesados sobre los cables, ya que esto puede ocasionar daños y poner al descubierto los cables vivos.

Ventilación

Todos los equipos informáticos deben estar situados en un área bien ventilada. Mantener todos los orificios de ventilación de la carcasa del ordenador siempre libres de obstrucciones de cualquier tipo. En caso contrario, podría producirse un sobrecalentamiento del sistema y daños en el equipo.

Entorno de trabajo

El equipo debe estar emplazado en un ambiente sin polvo, humedad ni cambios bruscos de temperatura y debe ser situado sobre una superficie estable y sólida. No colocar líquidos (bebidas calientes/frías, etc.) cerca del equipo, ya que un derrame podría causar graves daños.

Gas/líquidos inflamables

El equipo electrónico nunca debe ser usado en presencia de gas o líquido inflamable, ya que esto podría causar una explosión o un incendio grave.

Humo/olores inusuales

En caso de percibir humo u olores inusuales provenientes de su ordenador, apagar y desenchufar el equipo de la red eléctrica. El sistema debe ser confiado entonces a un técnico cualificado para su inspección. Si el equipo continuara funcionando, esto podría ocasionar lesiones personales y daños materiales.

Mantenimiento

El mantenimiento solo debe ser ejecutado por técnicos capacitados. Las tarjetas insertables (plug-in) de Datapath que estén físicamente dañadas deben ser devueltas a Datapath para su reparación según los procedimientos RMA (Return Merchandise Agreement) de Datapath.

Eliminación

Al final de su vida útil, todos los productos de Datapath deben ser eliminados de acuerdo con las leyes y normativas locales. En el Reino Unido, contactar a Datapath para organizar la eliminación. Nuestro número de registro WEE (Waste Electrical and Electronic Equipment) es WEEE/AA0005ZR.

Sicherheitsanweisungen (D)

Die folgenden Sicherheitsanweisungen dienen der Vermeidung von Schäden an Ihrem Datapath-Produkt und Verletzungen der Nutzer. Bitte lesen Sie sie sorgfältig durch, bevor Sie Ihr Produkt in Betrieb nehmen. Diese Anweisungen sollten allen Personen zugänglich gemacht werden, die mit der Nutzung und der Bedienung von Datapath-Produkten betraut sind.

Stromversorgung

Alle Datapath-Produkte müssen an die Hauptstromversorgung angeschlossen werden. Die Stromversorgung muss unterbrochen werden, wenn Geräte ausgetauscht oder an einer anderen Stelle platziert werden sollen.

Kabel

Kabel dürfen nicht mit Flüssigkeiten in Berührung kommen, da dadurch ein Kurzschluss und somit ein Schaden an dem Gerät ausgelöst werden könnte. Stellen Sie außerdem keine schweren Objekte auf die Kabel, um Schäden und offen liegende stromführende Leitungen zu vermeiden.

Lüftung

Computerausrüstung sollte in einem gut gelüfteten Bereich aufgestellt werden. Die Lüftungslöcher am Computergehäuse müssen stets freigehalten werden, um eine Überhitzung und somit einen Geräteschaden zu vermeiden.

Arbeitsumgebung

Die Geräte sollten in einer staubfreien und trockenen Umgebung, in der keine extremen Temperaturänderungen zu erwarten sind, auf einer stabilen Arbeitsfläche aufgestellt werden. In der Nähe der Geräte sollten keine Flüssigkeiten (heiße/kalte Getränke etc.) platziert werden, die verschüttet werden und schwerwiegende Schäden anrichten könnten.

Gas/brennbare Flüssigkeiten

Elektronische Geräte sind nicht in Umgebungen zu verwenden, in denen Gas oder brennbare Flüssigkeiten vorhanden ist/sind und somit Brand- und Explosionsgefahr besteht.

Rauch/ungewöhnliche Gerüche

Schalten Sie das System aus und trennen Sie es von der Hauptversorgung, wenn von Ihrem Computer Rauch ausgeht oder dieser ungewöhnliche Gerüche abgibt. Lassen Sie das System anschließend von einem qualifizierten Techniker prüfen. Bei fortgeführtem Betrieb besteht die Gefahr von Verletzungen und Sachschäden.

Wartung

Wartungsarbeiten sollten nur von qualifizierten Technikern durchgeführt werden. Physisch beschädigte Plug-in-Karten von Datapath sollten zur Reparatur unter Einsatz der RMA-Verfahren von Datapath an Datapath übergeben werden.

Entsorgung

Am Ende ihrer Nutzungsdauer sollten Datapath-Produkte gemäß den lokalen Gesetzen und Bestimmungen entsorgt werden. Für Nutzer in Großbritannien: Bitte kontaktieren Sie Datapath, um Vorkehrungen zur Entsorgung von Datapath-Produkten zu treffen. Unsere WEE-Registrierungsnummer lautet WEEE/AA0005ZR.

+ Introduction

The Datapath range of expansion chassis are solutions that allow system builders and integrators the flexibility to extend a PCIe based PC or motherboard enabling a larger, distributed system architecture. The optical expansion chassis can be used to create systems with distances of up to 100m between the host PC and the expansion chassis.

The expansion link is created using a combination of Host Link (HLink) and Slave Link (SLink) cards connected together using a cable or a series of cables (copper or optical), these combined provide a high bandwidth PCI Express link from an upstream host to a distributed expansion unit.

Expansion Chassis Models	Backplane	Number of Available PCIe Slots
VSN900X	Express9-G3 (SLink-G3 installed)	9
VSN1100X	Express11-G3 (SLink-G3 installed)	11
VSN900X-Optical	Express9-G3 (SLink-Optical installed)	9
VSN1100X-Optical	Express11-G3 (SLink-Optical installed)	11

Connecting multiple expansion chassis vastly increases the number of available PCI Express slots capable of running large, complex video walls supporting high bandwidth and low latency video capture.

Features

VSN900X/VSN900X-Optical

- 9 slot PCI Express backplane 1 x 8 lane and 8 x4 lane slots
- 1 x PICMG 1.3 slot
- Support for daisy chaining multiple backplanes
- Supports 8GB/s full duplex links between chassis.
- 48 lane PCI Express 3.0 switch

VSN1100X/VSN1100X-Optical

- 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 Datapath Wall Monitor software
- 96 lane PCI Express 3.0 switch



+ Unpacking

The expansion chassis is heavy, lifting precautions should be taken.

Inspect items for damage. Should any items show any signs of damage, report it immediately to your vendor.

Normal electrostatic handling precautions should be observed when installing PCIe cards and cables, these items incorporate sensitive electronic components. Care should be taken to avoid dust ingress to the cable connectors or excessive voltage or current surges.

All packaging should be retained for future shipping requirements.

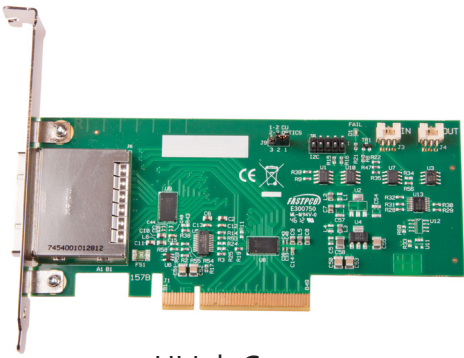
Packing List

Depending on the solution ordered, your packing box should contain a combination of:

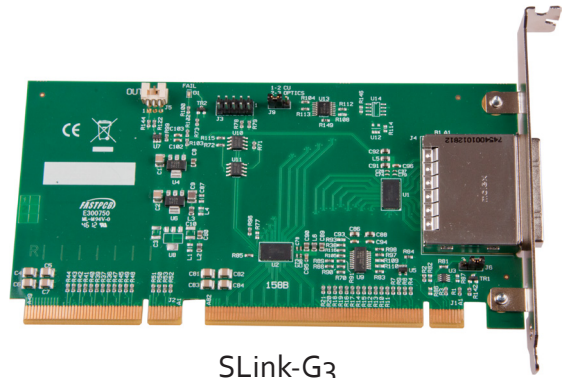
VSN900X	9 slot expansion system providing 8 PCIe Gen3 x4 slots & 1 PCIe Gen2 x8 slot & 1 x8 PCIe Gen3
VSN900X-Optical	9 slot expansion system providing 8 PCIe gen3 x4 slots & 1 PCIe gen2 x8 slot & 1 x8 PCIe Gen3
VSN1100X	11 slot expansion system providing 11 PCIe Gen3 x8 slots
VSN1100X-Optical	11 slot expansion system providing 11 PCIe Gen3 x8 slots
ExCable	1 metre copper cable
ExCable-Optical/50	50 metre optical cable
ExCable-Optical/100	100 metre optical cable
HLink-G3	Gen.3 host link card*
HLink-Optical	Optical Gen.3 host link card*
SLink-G3	Gen.3 slave link card. (The SLink-G3 is pre-installed in all VSN900X/1100X chassis)
SLink-Optical	Optical Gen.3 slave link card. (The SLink-Optical is pre-installed in all VSN900X-Optical/1100X-Optical chassis)
Half Size Bracket	Supplied with HLink-Optical card
User Manual	

** If the VSN expansion chassis is supplied as part of a completely configured system with a VSN host machine then the HLink-G3/HLink-Optical card will be pre-installed.*

+ Components



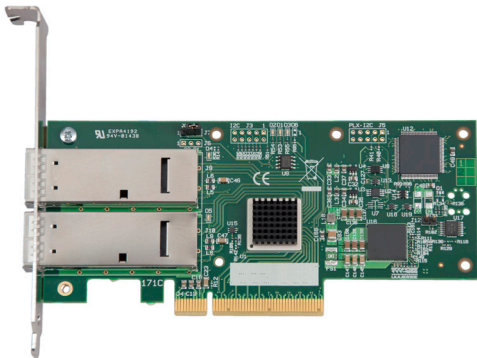
HLink-G3



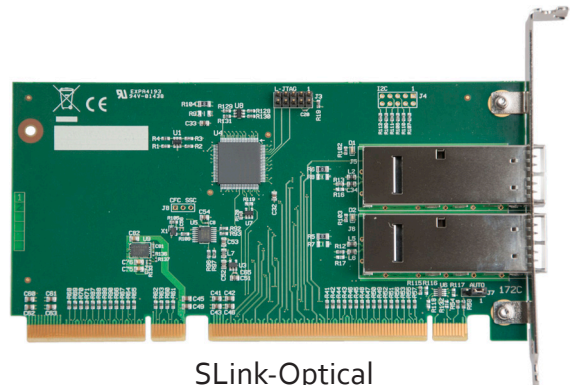
SLink-G3



ExCable-G3



HLink-Optical



SLink-Optical



ExCable-Optical

+ Slots and Bandwidths - Optical Systems

The optical solutions offer a variety of configurations and bandwidths depending on customer requirements. Each HLink-Optical is capable of transferring up to PCIe Gen.3 x8 bandwidths across distances up to 100m. To achieve this the HLink-Optical must be installed in a x8 PCIe slot on the host backplane and connected to the corresponding SLink-Optical card pre-installed in the PICMG 1.3 slot in the expansion chassis using two ExCable-Optical cables.

A x4 bandwidth can also be achieved by connecting the HLink-Optical (installed in a x8 PCIe slot) to two separate SLink-Optical cards. If the HLink-Optical is installed in a PCIe x4 then it can only be connected to one SLink-Optical card.

Nine Slot System

HOST						EXPANSION		
PCIe Slot Number	Bandwidth		ExCable-Optical		HLink-Optical		SLink-Optical	
	X8	X4	1 Cable	2 Cables	Top Connector	Bottom Connector	Top Connector	Bottom Connector
1	x			x	x	x	x	x (1)
1		x	x		x		x (2)	
2	N/A	x	x		x		x	
3	N/A	x	x		x		x	
4	N/A	x	x		x		x	
5	N/A	x	x		x		x	
6	N/A	x	x		x		x	
7	N/A	x	x		x		x	
8	N/A	x	x		x		x	
9	N/A	x	x		x		x	

(1) SLink-Optical card is pre-installed in the PICMG 1.3 slot in the expansion chassis.

(2) Two ExCables-Optical connecting to two separate SLink-Optical cards (see section: Creating the Link -x4 optical on page 15)

Eleven Slot System

HOST						EXPANSION		
PCIe Slot Number	Bandwidth		ExCable-Optical		HLink-Optical		SLink-Optical	
	X8		1 Cable	2 Cables	Top Connector	Bottom Connector	Top Connector	Bottom Connector
1	x		(3)	x	x	x	x	x
2	x			x	x	x	x	x
3	x			x	x	x	x	x
4	x			x	x	x	x	x
5	x			x	x	x	x	x
6	x			x	x	x	x	x
7	x			x	x	x	x	x
8	x			x	x	x	x	x
9	x			x	x	x	x	x
10	x			x	x	x	x	x
11	x			x	x	x	x	x

(3) All 11 slots in the VSN1100X-Optical expansion chassis are PCIe x8 lane therefore two ExCables-Optical are required. If the requirement is for x4, only one ExCable-Optical is required, however this reduces the available bandwidth by 50% and therefore reduces the amount of video signal that can be transferred.

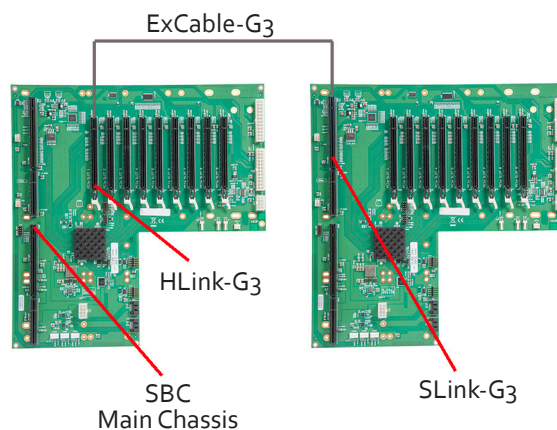
+ Connecting a VSN900X Expansion Chassis

If your expansion chassis is supplied as part of a wall controller system the HLink-G₃ card will be pre-installed in the host machine which contains the SBC. If the expansion chassis has been supplied separate to a host machine the HLink-G₃ card provided needs to be installed in the host PC.

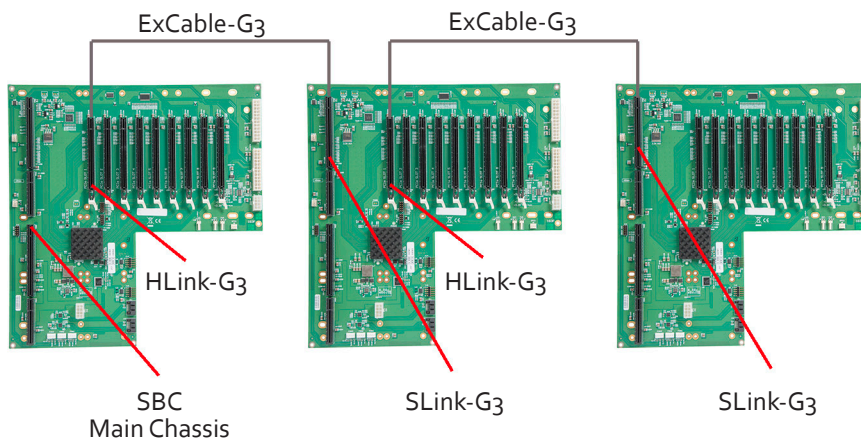
You are likely to need a flat blade and/or a cross head screwdriver for the installation of the HLink-G₃ card; it would be useful to have these to hand before you begin. Power down the PC (including peripherals), switch off at the mains and disconnect all the cables connected to the computer and expansion chassis. Remove the PC cover. Locate a vacant PCIe slot (x8 on the motherboard and remove the backing plate (retain all screws) .

Remove the HLink-G₃ card from its packaging and secure it firmly into the empty PCIe slot. Screw the bracket to the back panel of the PC and replace the cover.

Connect the HLink-G₃ and SLink-G₃ using the ExCable-G₃ provided. If more than one expansion chassis is supplied, ensure the cards are paired correctly by connecting the cards labelled "Link1" together, the pair labelled "link2" are connected together and so on. In the event that this is not possible i.e. the expansion chassis are shipped separately and the cards are not labelled, connect the cards using the ExCables-G₃ provided and re-install the Datapath Driver Install package to reset the pairings.



Host PC with a single VSN900X expansion chassis providing up to 17 PCI Express slots



Host PC with two VSN900X expansion chassis providing up to 25 PCI Express slots

+ Connecting a VSN900X-Optical Expansion Chassis

The Optical Solution

The Datapath optical solution allows expansion chassis to be located up to 100m away from the main controller. The Optical solution can support up to PCIe Gen 3 x8 bandwidths between an HLink-Optical, located in the host machine and an SLink-Optical, located in the expansion chassis. Full bandwidth is achieved by using two ExCable-Optical cables between each HLink and SLink-Optical card.

Alternatively, PCIe Gen3 x4 bandwidth can be achieved using only one ExCable-Optical between each HLink-Optical and SLink-Optical. This will reduce the total amount of video signal that can be transferred between the chassis. If x4 bandwidth is acceptable, one HLink-Optical can be connected to two SLink-Optical cards, providing that the HLink-Optical is located in a x8 slot.

See *Creating the link x4 and x8* on page 15.

If your optical expansion chassis is supplied as part of a complete wall controller system the HLink-Optical card will be pre-installed in the host machine which contains the SBC. If the expansion chassis has been supplied separate to a host machine the HLink-Optical card provided needs to be installed in the host PC.

You are likely to need a flat blade and/or a cross head screwdriver for the installation of the HLink-Optical card; it would be useful to have these to hand before you begin. Power down the PC (including peripherals), switch off at the mains and disconnect all the cables connected to the computer and expansion chassis. Remove the PC cover. Locate a vacant PCIe slot (x8 on the motherboard and remove the backing plate (retain all screws).

Remove the HLink-Optical card from its packaging and secure it firmly into the empty PCIe slot. Screw the bracket to the back panel of the PC and replace the cover.

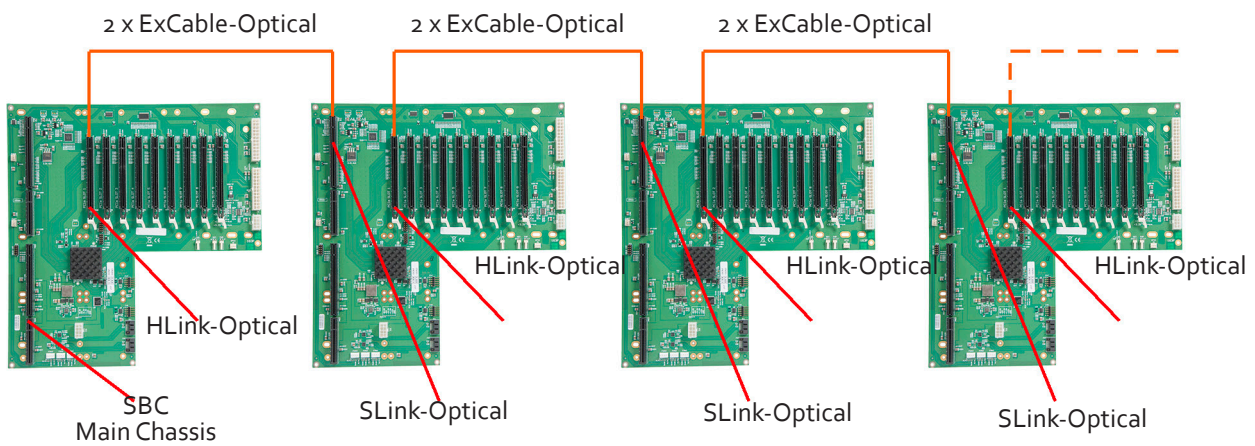
Connect the HLink-Optical and SLink-Optical using the ExCable-Optical provided. If more than one expansion chassis is supplied, ensure the cards are paired correctly by connecting the cards labelled "Link1" together, the pair labelled "link2" are connected together and so on. In the event that this is not possible i.e. the expansion chassis are shipped separately and the cards are not labelled, connect the cards using the ExCables-Optical provided and re-install the Datapath Driver Install package to reset the pairings.

PCI Express Gen.3 technology supports one directional data transfer speeds of up to 8GB/s of raw data (6.4GB/s effective data rate) ensuring smooth, full frame rate video distribution over great distances.

Connecting to a VSN970/VSN990 Wall Controller

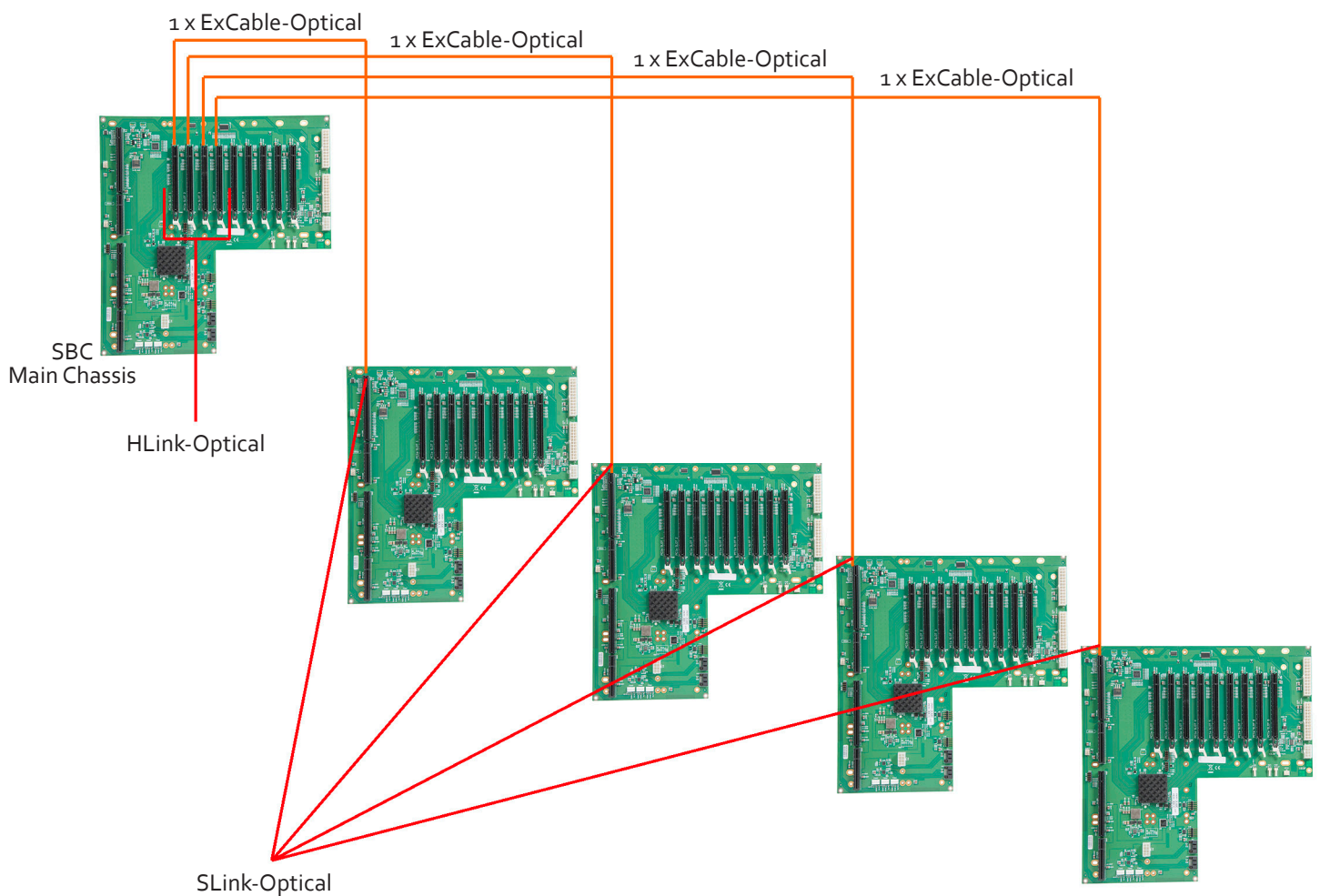
If the VSN900X-Optical is being connected to a VSN970 or VSN990 and the full bandwidth (x8) is required then dual optical cables should be used and the "Daisy Chain" configuration adopted. This is achieved by installing the HLink-Optical card on the first slot of the VSN970/VSN990 and the first slot of each subsequent VSN900X expansion chassis. Only the first slot of the Express9-G3 backplane is able to support the full x8 Gen.3 connection. Using other slots on the backplane or adopting a "Star" configuration i.e. a single HLink-Optical in a host system connected to 2 x SLink-Optical in separate expansion chassis will still work but at a reduced bandwidth (x4).

Daisy Chain Configuration (x8)



This is the recommended configuration for achieving the highest bandwidth when using multiple VSNgooX-Optical expansion chassis.

Star Configuration (x4)



+ Connecting a VSN1 100X Expansion Chassis

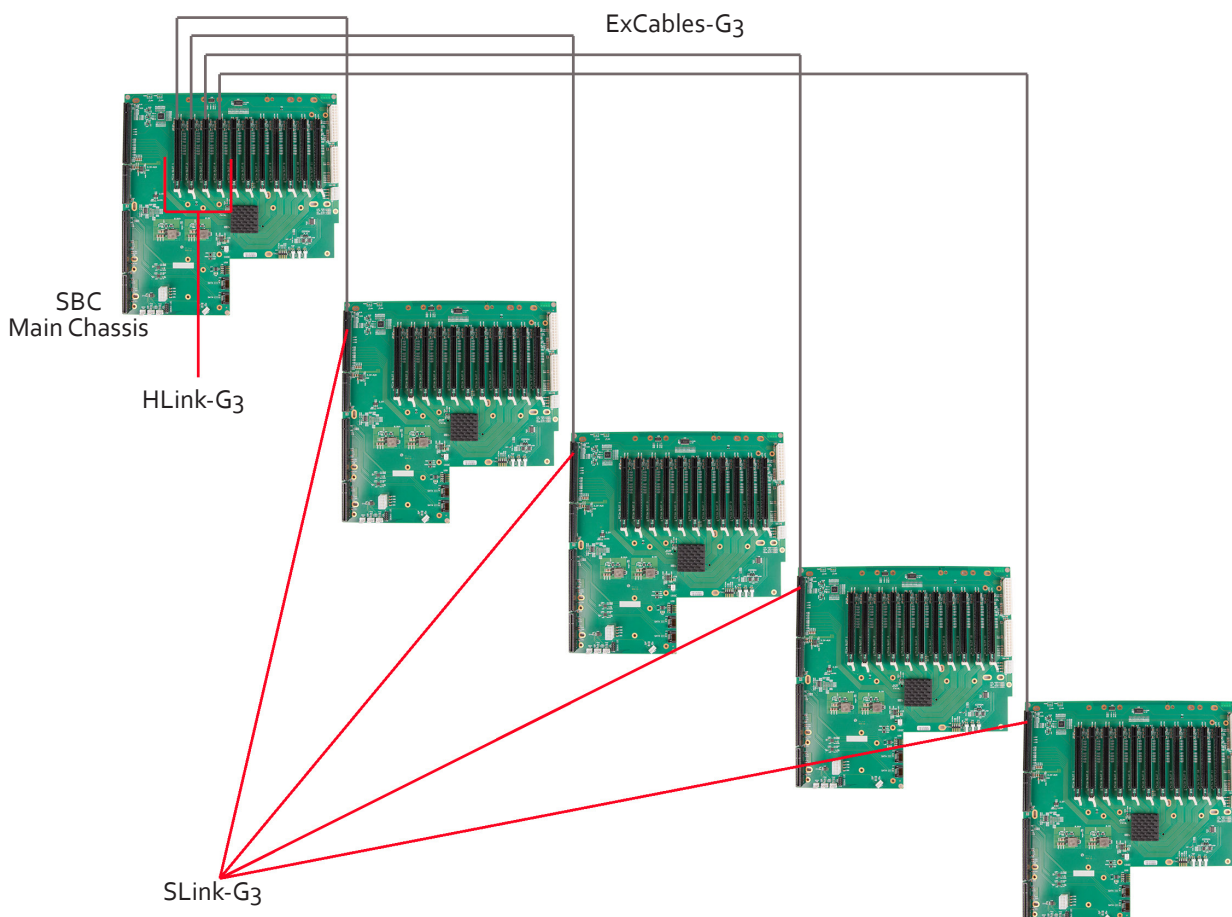
If your expansion chassis is supplied as part of a wall controller system the HLink-G3 card will be pre-installed in the host machine which contains the SBC. If the expansion chassis has been supplied separate to a host machine the HLink-G3 card provided needs to be installed in the host PC.

You are likely to need a flat blade and/or a cross head screwdriver for the installation of the HLink-G3 card; it would be useful to have these to hand before you begin. Power down the PC (including peripherals), switch off at the mains and disconnect all the cables connected to the computer and expansion chassis. Remove the PC cover. Locate a vacant PCIe slot (x8) on the motherboard and remove the backing plate (retain all screws) .

Remove the HLink-G3 card from its packaging and secure it firmly into an empty PCIe slot. Screw the bracket to the back panel of the PC and replace the cover.

Connect the HLink-G3 and SLink-G3 using the ExCable-G3 provided. If more than one expansion chassis is supplied, ensure the cards are paired correctly by connecting the cards labelled "Link1" together, the pair labelled "link2" are connected together and so on. In the event that this is not possible i.e. the expansion chassis are shipped separately and the cards are not labelled, connect the cards using the ExCables-G3 provided and re-install the Datapath Driver Install package to reset the pairings.

The flexibility of the Express11-G3 technology allows multiple backplanes to be arranged in a "Star" configuration, providing the ability to create very large systems comprising of several chassis each with 11 available, x8 slots for video capture inputs and/or graphics outputs.



+ Connecting a VSN1 100X-Optical Expansion Chassis

The Optical Solution

The Datapath optical solution allows expansion chassis to be located up to 100m away from the main controller. The Optical solution can support up to PCIe Gen 3 x8 bandwidths between an HLink-Optical, located in the host machine and an SLink-Optical, located in the expansion chassis. Full bandwidth is achieved by using two ExCable-Optical cables between each HLink and SLink-Optical card .

Alternatively, PCIe Gen3 x4 bandwidth can be achieved using only one ExCable-Optical between each HLink-Optical and SLink-Optical. This will reduce the total amount of video signal that can be transferred between the chassis. If x4 bandwidth is acceptable, one HLink-Optical can be connected to two SLink-Optical cards, providing that the HLink-Optical is located in a x8 slot.

See creating the link x4 and x8 on page 15.

If your optical expansion chassis is supplied as part of a complete wall controller system the HLink-Optical card will be pre-installed in the host machine which contains the SBC. If the expansion chassis has been supplied separate to a host machine, the HLink-Optical card provided needs to be installed in the host PC.

You are likely to need a flat blade and/or a cross head screwdriver for the installation of the HLink-Optical card; it would be useful to have these to hand before you begin. Power down the PC (including peripherals), switch off at the mains and disconnect all the cables connected to the computer and expansion chassis. Remove the PC cover. Locate a vacant PCIe slot (x8) on the motherboard and remove the backing plate (retain all screws) .

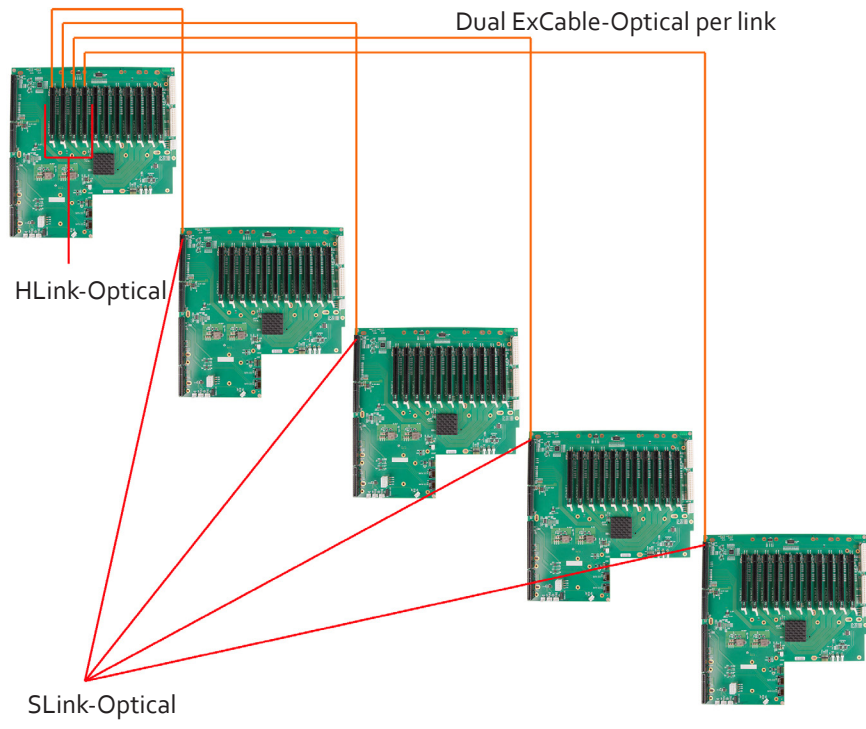
Remove the HLink-Optical card from its packaging and secure it firmly into the empty PCIe slot. Screw the bracket to the back panel of the PC and replace the cover.

Connect the HLink-Optical and SLink-Optical using the ExCable-Optical provided. If more than one expansion chassis is supplied, ensure the cards are paired correctly by connecting the cards labelled "Link1" together, the pair labelled "link2" are connected together and so on. In the event that this is not possible i.e. the expansion chassis are shipped separately and the cards are not labelled, connect the cards using the ExCables-Optical provided and re-install the Datapath Driver Install package to reset the pairings.

PCI Express Gen.3 technology supports one directional data transfer speeds of up to 8GB/s of raw data (6.4GB/s effective data rate) ensuring smooth, full frame rate video distribution over great distances.

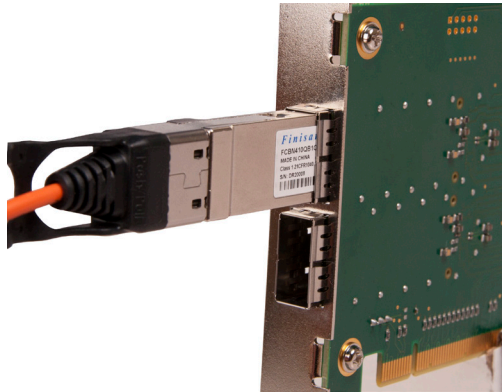
Connecting to a VSN1 170/VSN1 190 Wall Controller

If the VSN1100X-Optical is being connected to a VSN1170 or VSN1190 the full bandwidth (x8) is available in all PCIe slots. When using the Datapath VSN1170 as a host machine it is recommended to connect multiple expansion chassis in a "Star" configuration (i.e place all HLink-Optical cards in the VSN1170 host machine). This is because each slot of the VSN1170 is capable of supporting the full x8 Gen.3 connection to the HLink-Optical card. Other host machines that support multiple x8 or greater slots should also be configured this way.

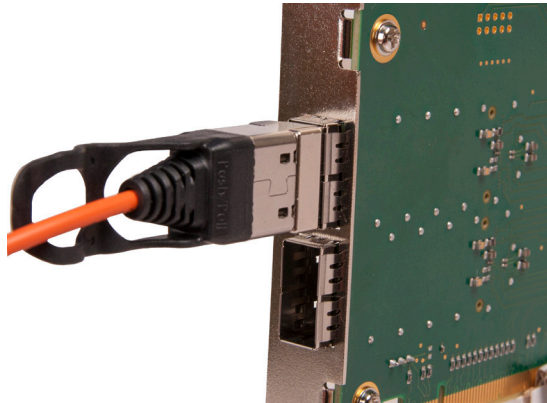


+ Inserting and Removing the ExCable-Optical

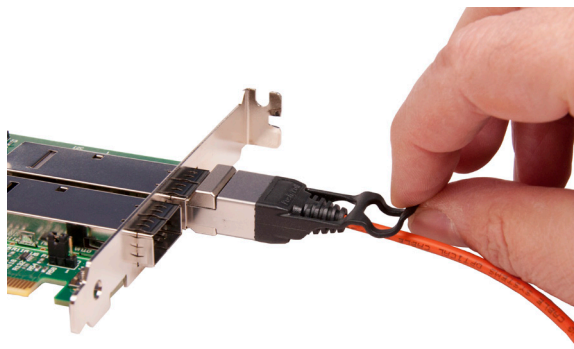
The ExCables-Optical should be inserted firmly into the connector on the HLink and SLink-Optical cards.



The correct way to insert the cable is to have the manufacturers label facing the card as shown above.



The rectangular connector needs to be fully inserted into the card until a definite click can be felt. This locks the cable in place. Failure to lock the connector in place can result in the ExCable-Optical becoming separated from the card and the link between chassis being lost.



To remove the connector gently pull the ring pull tab to unlock the connector from the card then slide the connector out fully.

Normal fibre handling precautions should be observed to avoid tight loops or kinks in the ExCable-Optical. Bend radii below 75mm are not recommended and may result in fibre breakage.

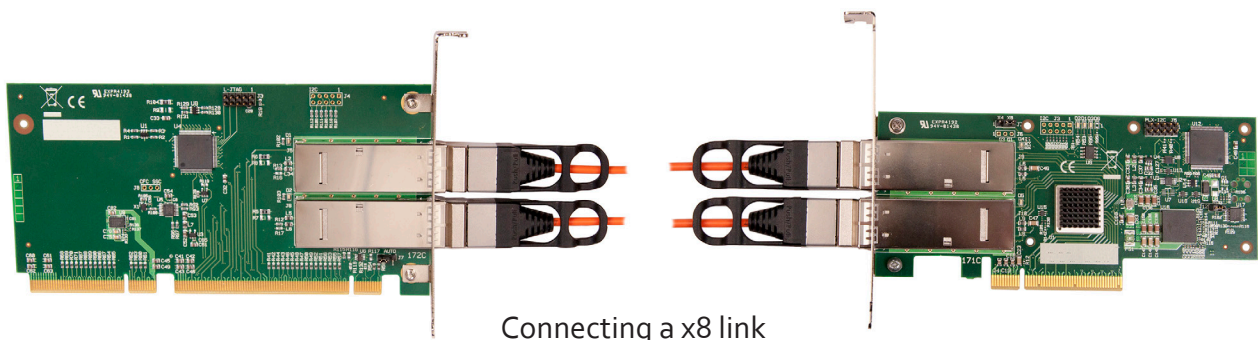
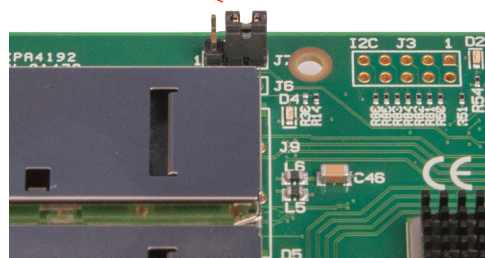
Creating the Link - x8 (Optical)

For maximum bandwidth, the HLink \SLink -Optical cards should be connected using two optical cables to form an eight-lane ("x8") link, capable of 64G-transfers/sec (approx 6.4GB/s effective data rate in each direction).

In "x8" mode the Jumper Link "J7" on the HLink-Optical card must be set to position 2-3 as shown below.

When creating the "x8" link, the ExCable-Optical connected into the top connector on the HLink-Optical card must also be connected to the top connector on the SLink-Optical card. Similarly the second ExCable-Optical must connect between the lower card connectors.

Jumper Link "J7"



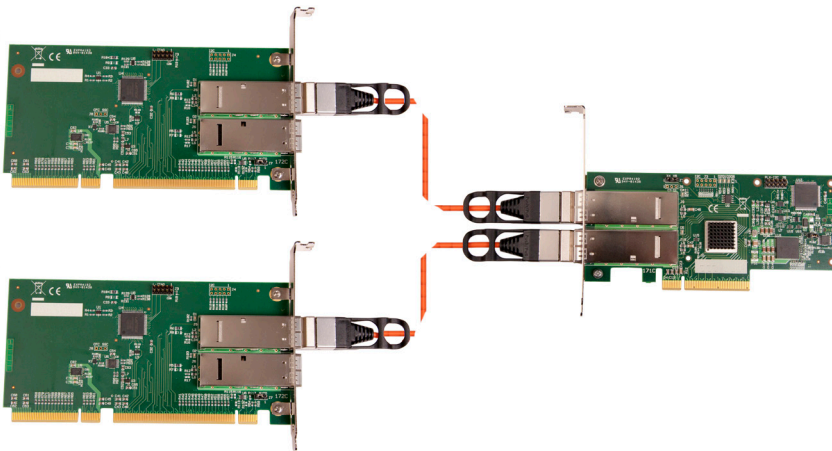
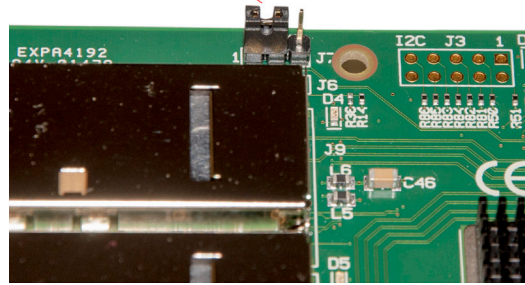
Creating the Link - x4 (Optical)

For a reduced bandwidth connection or where a single HLink-Optical is used to connect to two separate SLink-Optical cards (i.e. "Star" connection of two expansion chassis). In this configuration, for a single ExCable-Optical link the PCIe connection is "x4" and the bandwidth is reduced to 3.2GB/s.

In "x4" mode the Jumper Link "J7" on the HLink-Optical card must be set to position 1-2 as shown below.

Either (or both) connectors on the HLink-Optical card can be used, but only the top connector of the SLink-Optical card.

Jumper Link "J7"



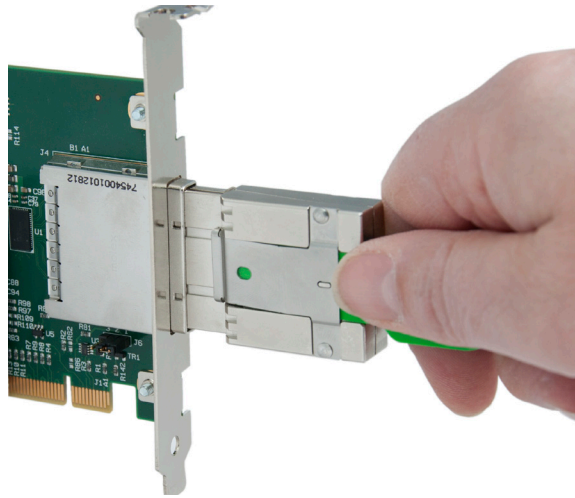
Connecting x4 links

Frame Locking

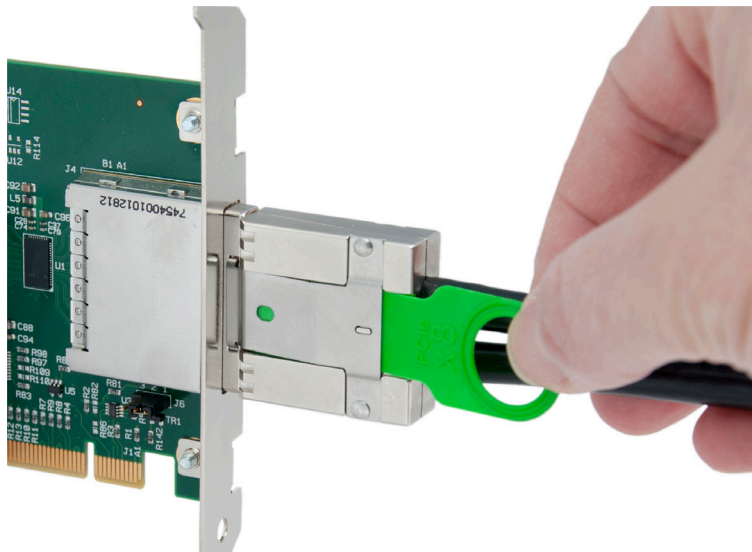
When using the Datapath Optical Expansion Link it is not possible to maintain display frame locking. It is assumed that displays controlled from the expansion chassis would be sufficiently far away from the host machine that this will not be a problem. It should be noted that all displays within an expansion chassis (or cluster of chassis) connected using a standard HLink-G3 and ExCable-G3 will remain frame-locked to each other.

+ Inserting and Removing the ExCable-G3

The ExCable-G3 should be inserted firmly into the connector on the HLink-G3 and the SLink-G3 cards.



The correct way to insert the cable is to have the release tab facing away from the card. The rectangular connector needs to be fully inserted into the card until a definite click can be felt. This locks the cable in place. Failure to lock the connector in place can result in the ExCable-G3 becoming separated from the card and the link between chassis being lost.



To remove the connector gently pull the ring pull tab to unlock the connector from the card then slide the connector out fully.

Normal copper cable handling precautions should be observed to avoid tight loops or kinks in the ExCable-G3.

+ Specifications

BACKPLANES

	Express9-G3 PCIe backplane providing 1 x 8 lane slot and 8 x4 lane slots
	Express11-G3 PCIe backplane providing 11 x 8 lane slots

POWER

	600W Redundant PSU
	500W ATX
	800W Redundant PSU(VSN1100X only)

ENVIRONMENT

Operating Temperature	0 to 35 DegC (32 to 95 DegF)
Storage Temperature	-20 to 70 DegC (-4 158 DegF)
Relative Humidity	5% to 90% non-condensing
Noise	48.6dB(A) upto 67.9dB (A)*

**Dependent on system configuration & ambient temperature*

DIMENSIONS

Length	500mm (including handles)
Height	175mm
Width	482.1 mm
Weight	19-25kg (shipped 30-33kg)

COMPLIANCE

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

Datapath has a long and very successful history in the computer graphics industry. Datapath has been designing and supplying high performance, high quality graphics display systems to the world's largest and most demanding companies and institutions since 1982. Datapath was one of the founding companies of multi-screen Windows acceleration using single and multi board solutions. Now using the very latest display technology Datapath offers some of the world's leading multi screen graphics accelerators for the most demanding applications.

As new technology advances, so we at Datapath improve the performance and functionality of both our hardware and software to give our customers more. Following a continuous development program, we pride ourselves on our support and responsive nature towards all our customers and their changing needs. As more sophisticated equipment and techniques become readily available, so we are there to exploit the power and potential that this technology presents.

Technical Support

Registered Users can access our technical support line using, email, and the Support page on the Datapath Web Site, usually with a response within 24 hours (excluding weekends).

Via Email

Send an email to support@datapath.co.uk with as much information about your system as possible. To enable a swift response we need to know the following details:

Specification of the PC - including processor speed

Operating System

Application Software

Datapath Hardware / Software

The exact nature of the problem - and please be as specific as possible.

Please quote version and revision numbers of hardware and software in use wherever possible.

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