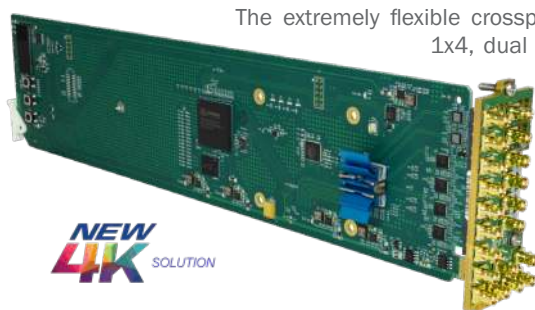


9915DA-4x16-XPT-12G • 12G/6G/3G/HD/SD Quad-Channel Multi-Rate Reclocking DA with x4 Output Crosspoint

The Cobalt® 9915DA-4x16-XPT-12G 12G/6G/3G/HD/SD Quad-Channel Multi-Rate Re-clocking DA with x4 Output Crosspoint supports four input channels which can be crosspoint-routed to up to 16 DA outputs.

As demand for 4K continues to rise, distribution of 12G-SDI signals within a rack-space becomes increasingly important. The 9915DA allows for copper runs of up to 45 meters, reaching most equipment within a rack room or truck. For longer runs, the optional optical inputs and outputs allow the 9915DA to connect distribution from zones of much greater distances.



The extremely flexible crosspoint (which is user-configurable via DashBoard™ GUI remote control) allows quad 1x4, dual 1x8, single 1x16 and other routing possibilities. Any of the four input channels can be distributed or duplicated across four groups of 1x4 DA's. The quad-input capacity provides a one-card solution for distribution of 8K quad-link content over 12G-SDI interfaces. A failover function allows going to secondary backup inputs should the primary input lose lock.

Up to 10 of the 9915DA-4x16-XPT-12G cards can be installed in a frame to provide 40 channels of input, with distribution to up to 160 outputs. Full user DashBoard™ or Remote Control Panel remote control allows full status and control access locally or across a standard Ethernet network.

Features

Flexible output crosspoint allows card to function as quad-channel 1x4, dual-channel 1x8, single-channel 1x16, or numerous other routings with re-clocking DA

Full support of 12G/6G/3G/HD/SD-SDI and ASI/DVB

Input data rate auto-detection for all industry-standard data rates

Supports all popular formats: 480i, 576i, 720p, 1080i, 1080PsF, 1080p, 2160p

Hot-swappable

Added fiber inputs/outputs via optional SFPs

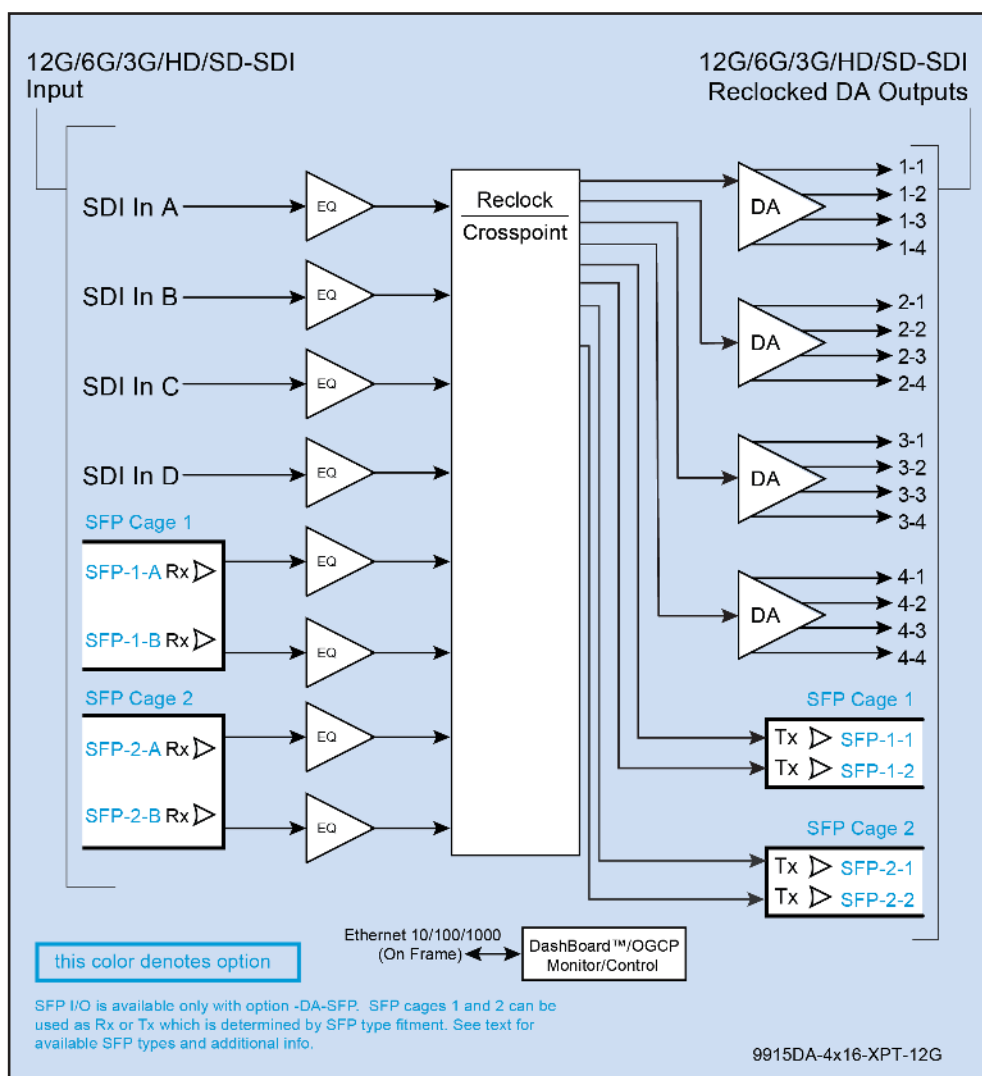
One-card solution for distribution of 4K/8K content over 12G-SDI interfaces

Card display and DashBoard status input lock indicators

Failover provides backup to selected secondary inputs if primary input loses lock, Available for both coax and (optional) fiber inputs.

Five year warranty

NOTE: SFP option is not available on -B rear I/O modules.



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Options

- DA-SFP Adds daughter card to support two externally-accessible SFP cages to the 9915DA-4x16-12G card	- SFP-E0-CWDM SFP Optical Single CWDM Transmitter (see Ordering Info for wavelengths and corresponding ordering codes)
- SFP-0E-12G SFP Optical UHD Single Receiver	- SFP-2E0-CWDM SFP Optical Dual CWDM Transmitter (see Ordering Info for wavelengths and corresponding ordering codes)
- SFP-20E-12G SFP Optical UHD Dual Receiver	- SFP-IP-SWD Software-Defined EmSFP; 2110 or 2022-6 Encapsulator/De-Encapsulator (See Ordering Info for full descriptions and details.)
- SFP-E0-12G SFP Optical UHD Single Transmitter	- SFP-0E SFP Optical Single Receiver
- SFP-2E0-12G SFP Optical UHD Dual Transmitter	- SFP-20E SFP Optical Dual Receiver
- SFP-E0 SFP Optical Single Transmitter	- SFP-S-TO-H SFP HD/SD-SDI-to-HDMI Transmitter
- SFP-2E0 SFP Optical Dual Transmitter	- SFP-H-TO-S SFP HDMI-to-HD/SD-SDI Receiver
- SFP-E00E SFP Optical Transceiver	

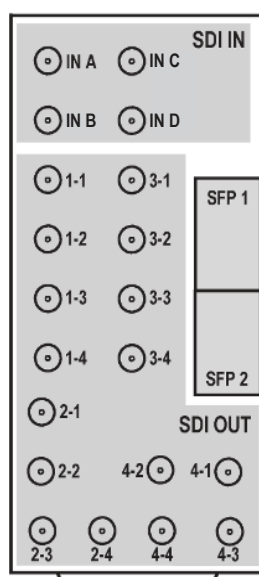
Rear I/O Module output designations here correlate to output numbers for four DA quadrants as shown in the card block diagram. As such, SDI outputs within a quadrant group can only be sourced from a particular input at one time (for example, if the card is set to feed SDI IN A to quadrant SDI Out (1-4), the rear module outputs 1 thru 4 will all output SDI IN A). Dissimilar inputs cannot be routed within a quadrant group (for example, SDI OUT 1 sourced from SDI IN A and SDI OUT 2 sourced from SDI IN B).

All four SDI IN A thru SDI IN D are functional only when mated to quad input card models. Dual and single card models omit SDI IN D as NC and progressively omit SDI IN C and SDI IN B as NC.

NOTE: Applicable only where -SFP options are offered. SFP 1 and SFP 2 details show SFP receptacle cage is included factory-installed on rear module (plug-in SFP modules are available with respective options).

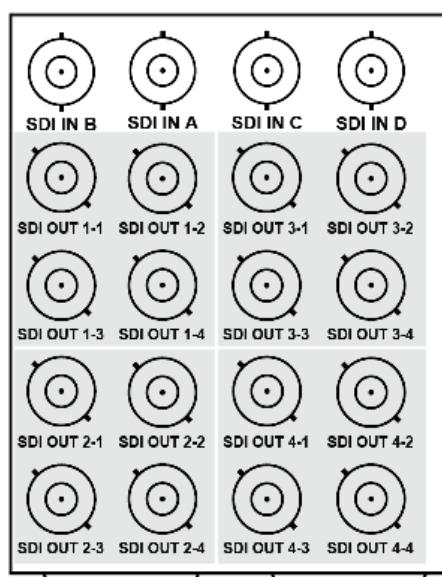
NOTE: MPN 1144 / RM20-9915-B-4x16 may have reduced receive performance due to the larger IO size.

RM20-9915-A-4x16



MPN 1114D

RM20-9915-B-4x16



MPN 1144

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Specifications

Note: All specifications are subject to change. Inputs/outputs are a function of the rear I/O module used.

Fiber specifications are typical, and only applicable for card fitted with optional Tx or Rx (as applicable) fiber SFP module.

Power

< 10 Watts

12G / 6G / 3G / 1.5G / 270M Serial Digital Interface Input/Output

(4) 75Ω Connectors Input (max). (16) 75Ω Connectors Output (max).

SDI Formats Supported: SMPTE ST2082-1,10, 424M, 292M, SMPTE 259M-C. All inputs/outputs 12G compliant and SDQS/2SI quad 3G compliant.

Coaxial Receive Performance (Cable Length; Belden 4694)

50m/70m/150m/180m (12G/6G/3G/HD)

Fiber Transmit Output (typ. with optional fiber Tx SFP)

LC connector

Fiber Wavelength, Tx: 1310 nm

Tx Power: -5.0 dBm (min)

Fiber Receive Input (typ. with optional fiber Rx SFP)

LC connector

Receive Sensitivity: -23 dBm; 1260 to 1620 nm

Receive Sensitivity: (-12G SFP models; 12G/6G/3G/HD/SD): -9/-10/-10/-10/-10 dBm

Ordering Information

9915DA-4x16-XPT-12G 12G/6G/3G/HD/SD-SDI Quad-Channel Multi-Rate Re-clocking DA with x4 Output Crosspoint

Rear Modules:

RM20-9915-A-HDBNC 20-Slot Frame Rear I/O Module (Standard Width) (4) 12G/6G/3G/HD/SD-SDI Inputs, (16) 12G/6G/3G/HD/SD-SDI Outputs (All coaxial connectors HD-BNC)

Note: SFP modules, when inserted into rear module SFP receptacles, can dimensionally extend past the right “boundary” of the rear module. In rare cases, this can present interference issues if a rear module to the right of SFP rear module also has adjacent large-footprint connectors that can extend across the rear module boundary. Plan frame build-out accordingly in these cases.

RM20-9915-B 20-Slot Frame Rear I/O Module (Standard Width) (4) 12G/6G/3G/HD/SD-SDI Inputs, (16) 12G/6G/3G/HD/SD-SDI Outputs (All coaxial connectors BNC)

Options (Hardware-based):

-DA-SFP Adds daughter card to support two externally-accessible SFP cages to the 9915DA-4x16-XPT-12G card

-SFP-0E-12G 12G/6G/3G/HD/SD-SDI UHD Single Receiver SFP Module; 1260 nm - 1620 nm; type LC connector

-SFP-20E-12G 12G/6G/3G/HD/SD-SDI UHD Dual Receiver SFP Module; 1260 nm - 1620 nm; type LC connector

-SFP-E0-12G 12G/6G/3G/HD/SD-SDI UHD Single Transmitter SFP Module; 1310 nm; type LC connector

-SFP-2E0-12G 12G/6G/3G/HD/SD-SDI UHD Dual Transmitter SFP Module; 1310 nm; type LC connector

-SFP-0E 3G/HD/SD-SDI Single Receiver SFP Module; 1260 nm - 1620 nm; type LC connector

-SFP-20E 3G/HD/SD-SDI Dual Receiver SFP Module; 1260 nm - 1620 nm; type LC connectors

-SFP-E0 3G/HD/SD-SDI Single Transmitter SFP Module; 1310 nm; type LC connector

-SFP-2E0 3G/HD/SD-SDI Dual Transmitter SFP Module; 1310 nm; type LC connectors

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Ordering Information

-SFP-E00E 3G/HD/SD-SDI Transceiver SFP Module; 1260 nm - 1620 nm; type LC connectors

-SFP-H-TO-S HDMI-to-HD/SD-SDI Receiver SFP Module

-SFP-S-TO-H SFP HD/SD-SDI-to-HDMI Transmitter SFP Module

-SFP-E0-CWDM-WX Single CWDM Transmitter SFP Module; type LC connector

-SFP-2E0-CWDM-WX Dual CWDM Transmitter SFP Module; type LC connectors

Use fiber wavelength codes below for CWDM SFPs when ordering. Available wavelengths (in nm) are as follows: 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610. In "WX" places in part number, substitute code for wavelengths in each place as listed below:

-27: 1270nm -29: 1290nm -31: 1310nm

-33: 1330nm -35: 1350nm -37: 1370nm

-39: 1390nm -41: 1410nm -43: 1430nm

-45: 1450nm -47: 1470nm -49: 1490nm

-51: 1510nm -53: 1530nm -55: 1550nm

-57: 1570nm -59: 1590nm -61: 1610nm

(Example: -SFP-E0-CWDM-27 has 1270 nm Tx wavelength)

-SFP-IP-SWD Software-Defined EmSFP; 2011/2022-6 Encap/De-Encap Host. 10GigE Multi-Mode Optical Interface with Female LC Duplex Connectors. The following I/O purposing software options are available for cards using SFP type -SPF-IP-SWD (Up to 3 software licenses can be added to the -SFP-IP-SWD, but only 1 license can be active at a time):

+ADD-SFP-2SDI-TO-IP-2022-6 SFP Software License; Dual-Channel Encapsulator 2SDI-to-IP-2022-6

+ADD-SFP-2SDI-TO-IP-2110 SFP Software License; Dual-Channel Encapsulator 2SDI-to-IP-2110

+ADD-SFP-IP-TO-2SDI-2022-6 SFP Software License; Dual-Channel De-Encapsulator IP-2022-6-to-2SDI

+ADD-SFP-IP-TO-2SDI-2110 SFP Software License; Dual-Channel De-Encapsulator IP-2110-to-2SDI

+ADD-SFP-IP-TO-SDI-2022-6 SFP Software License; Single-Channel De-Encapsulator IP-2022-6-to-SDI

+ADD-SFP-IP-TO-SDI-2110 SFP Software License; Single-Channel De-Encapsulator IP-2110-to-SDI

+ADD-SFP-SDI-TO-IP-2022-6 SFP Software License; Single-Channel Encapsulator SDI-to-IP-2022-6

+ADD-SFP-SDI-TO-IP-2110 SFP Software License; Single-Channel Encapsulator SDI-to-IP-2110