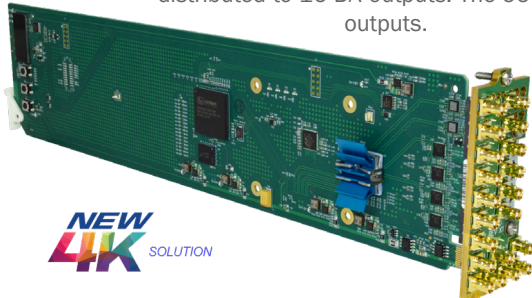# 9915DA-1x16-XPT-12G ● 12G/6G/3G/HD/SD Reclocking Distribution Amplifier with x4 Output Crosspoint

The Cobalt® 9915DA-1x16-12G 12G/6G/3G/HD/SD-SDI 1x16 Reclocking Distribution Amplifier supports an input channel which is distributed to 16 DA outputs. The 9915DA-1x16-12G also, as an option, can support an SFP-based fiber input and fiber DA outputs.
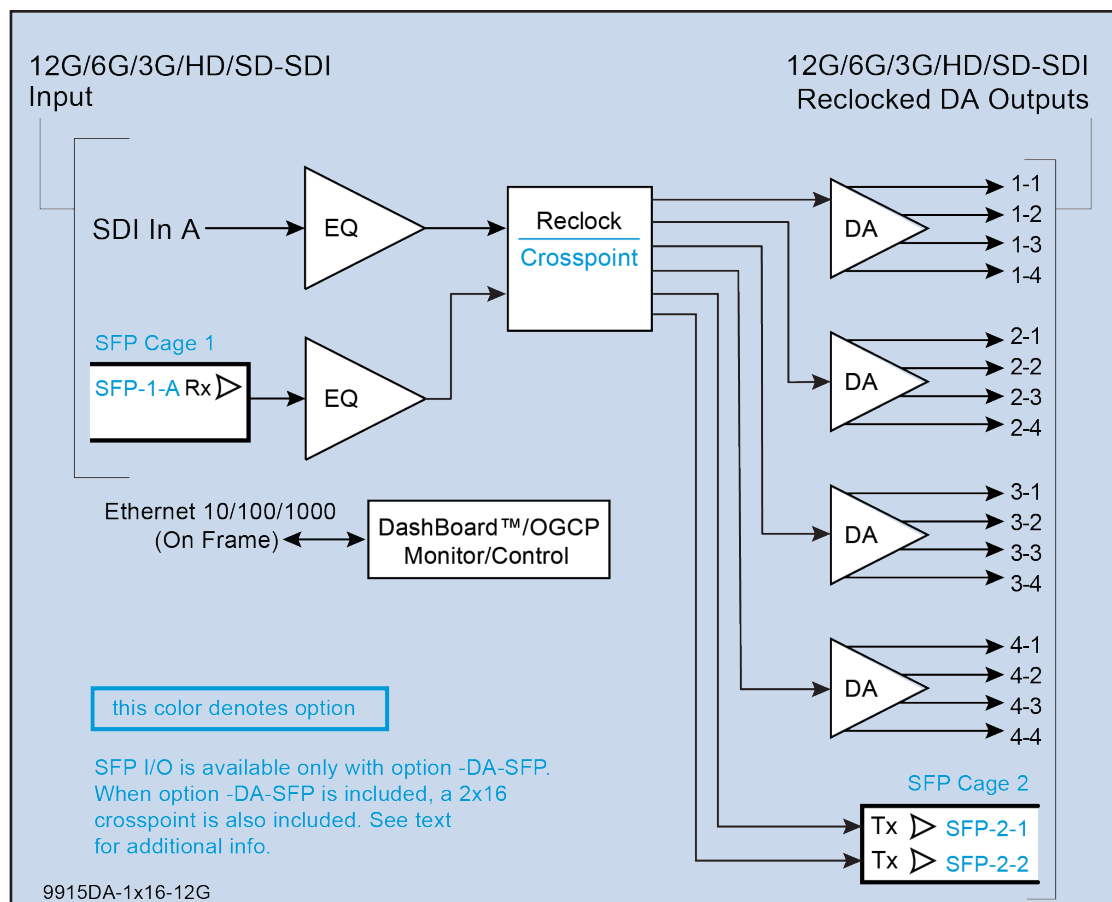
NEW 4K SOLUTION

As demand for 4K continues to rise, distribution of 12G-SDI signals within a rackspace becomes increasingly important. The 9915DA-1x16-12G allows for copper runs of up to 45 meters, reaching most equipment within a rack room or truck.

Up to 10 of the 9915DA-1x16-12G cards can be installed in a frame to provide 10 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

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, 4K	Card display and DashBoard status input lock indicators
One-card solution for distribution of 8K/4K content over 12G-SDI interfaces	Five year warranty
Hot-swappable	

12G/6G/3G/HD/SD-SDI Input

12G/6G/3G/HD/SD-SDI Reclocked DA Outputs

SDI In A → EQ → Reclock / Crosspoint → DA → 1-1, 1-2, 1-3, 1-4

SFP Cage 1
SFP-1-A Rx → EQ

DA → 2-1, 2-2, 2-3, 2-4

DA → 3-1, 3-2, 3-3, 3-4

DA → 4-1, 4-2, 4-3, 4-4

Ethernet 10/100/1000 (On Frame) ↔ DashBoard™/OGCP Monitor/Control

this color denotes option

SFP I/O is available only with option -DA-SFP. When option -DA-SFP is included, a 2x16 crosspoint is also included. See text for additional info.

SFP Cage 2
Tx → SFP-2-1
Tx → SFP-2-2

9915DA-1x16-12G

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

9915DA-1x16-XPT-12G ● 12G/6G/3G/HD/SD Reclocking Distribution Amplifier with x4 Output Crosspoint

Options

-DA-SFP Adds daughter card to support two externally-accessible SFP cages to the 9915DA-1x16-12G card

Note: When option -DA-SFP is included, a second input (fiber OE) is in turn added to the card. As such, this exposes a full 2x16 crosspoint that allows both the coax and fiber inputs to be independently and simultaneously routed to various card outputs.

-SFP-2EO SFP Optical Dual Transmitter

-SFP-OE-12G SFP Optical UHD Single Receiver

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

-SFP-EO-12G SFP Optical UHD Single Transmitter

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

-SFP-2EO-12G SFP Optical UHD Dual Transmitter

-SFP-EO-CWDM SFP Optical Single CWDM Transmitter (see Ordering Info for wavelengths and corresponding ordering codes)

-SFP-OE SFP Optical Single Receiver

-SFP-2EO-CWDM SFP Optical Dual CWDM Transmitter (see Ordering Info for wavelengths and corresponding ordering codes)

-SFP-EO SFP Optical Single Transmitter

-SFP-IP-SWD Software-Defined EmSFP; 2110 or 2022-6 Encapsulator/De-Encapsulator (See Ordering Info for full descriptions and details.)

Specifications

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

Power

< 10 Watts

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

(1) 75W Connector Input (max). (16) 75W 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

Note: On 9915DA-1x16-12G model, SFP cage 1 supports only Rx (OE) type SFPs. SFP cage 2 supports only Tx (EO) type SFPs. (See Ordering Information.)
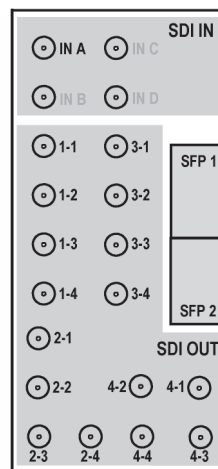
Rear I/O Module output designations here correlate to output numbers for four DA quadrants as shown in the card block diagram. As such, SDI outputs within a quadrant group can only be sourced from a particular input at one time (for example, if the card is set to feed SDI IN A to quadrant SDI Out (1-4), 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 funcational 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).
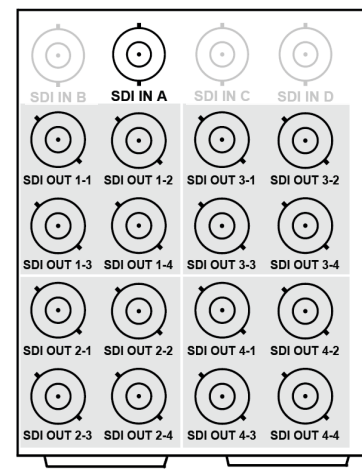
NOTE: MPN 1144 may have reduced receive performance due to the larger IO size.

RM20-9915-A-1x16

MPN 1114D

RM20-9915-B-1x16

MPN 1144

Ordering Information

9915DA-1x16-12G 12G/6G/3G/HD/SD-SDI 1x16 Reclocking Distribution Amplifier

Rear Modules:

RM20-9915-A-HDBNC 20-Slot Frame Rear I/O Module (Standard Width) (1) 12G/6G/3G/HD/SD-SDI Input (IN B thru IN D NC), (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 buildout accordingly in these cases.

RM20-9915-B 20-Slot Frame Rear I/O Module (Double Width) (1) 12G/6G/3G/HD/SD-SDI Input (IN B thru IN D NC), (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-1x16-XPT-12G card

Note: When option -DA-SFP is included, a second input (fiber OE) is in turn added to the card. As such, this exposes a full 2x16 crosspoint that allows both the coax and fiber inputs to be independently and simultaneously routed to various card outputs.

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

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

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

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

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

-SFP-2EO 3G/HD/SD-SDI Dual Transmitter SFP Module; 1310 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-EO-CWDM-WX Single CWDM Transmitter SFP Module; type LC connector

-SFP-2EO-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-EO-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-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