



Features & Benefits:

- ▶ The HFC Enhance® SA 69XX Return Segmentation Solution allows users to segment Cisco/Scientific-Atlanta Model 69XX nodes, to a level not provided by the OEM both cost-effectively & with minimal customer service disruption
- ▶ Low noise, DFB-based Return Path Transmitters (RPTs) ensure optimum network performance is achieved
- ▶ Use of WDM / CWDM / DWDM technology allows for full segmentation up to full 4x4 without the requirement for additional fibers being run to the node
- ▶ Model 6940: traditionally limited to Dual Redundant Return Path Transmitter (RPT) configuration, HFC Enhance® SA 6940 Return Path Segmentation Solution allows for up to Four RPTs segmentation of the 6940 node without the requirement of additional fibers to the node

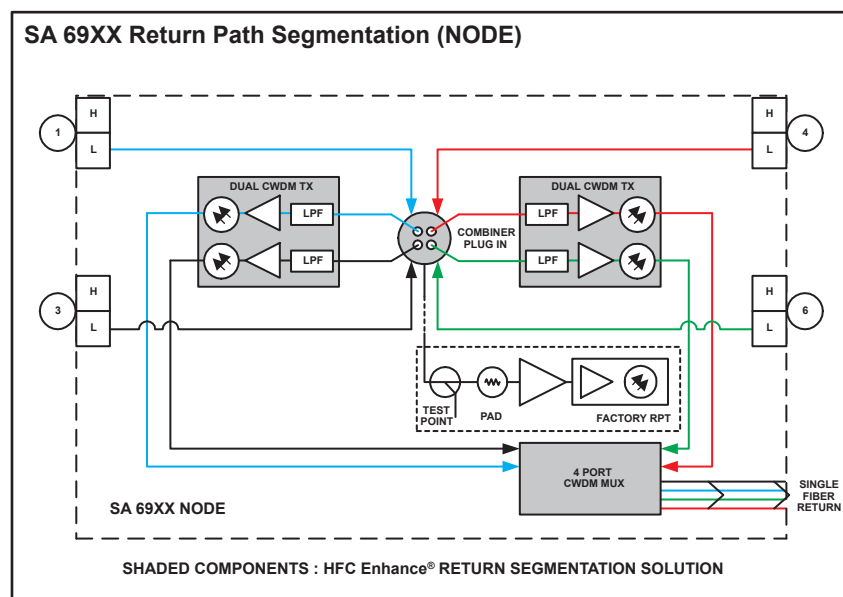
Bottom Line:

- ▶ HFC Enhance® SA 69XX Return Segmentation Solution for the SA 69XX nodes offers a solution which from a capital expenditure & labor standpoint is a far more cost-effective solution versus deploying new nodes
- ▶ HFC Enhance® SA 69XX Return Segmentation Solution is designed for easy installation so that customer service disruption time is minimized

SA 69XX Return Path Segmentation

The following diagram represents the return path portion of the SA 69XX node with the HFC Enhance® SA 69XX Return Path Segmentation Solution installed in order to achieve a 4x return segmentation. The SA 69XX Return Path Segmentation Solution replaces the original combiner/configurator with a new one that distributes the return signals from each quadrant of the node to a new set of dual return path CWDM transmitter modules. If required a compact & inexpensive CWDM MUX can be included so that all return path transmitters can be multiplexed onto a single fiber.

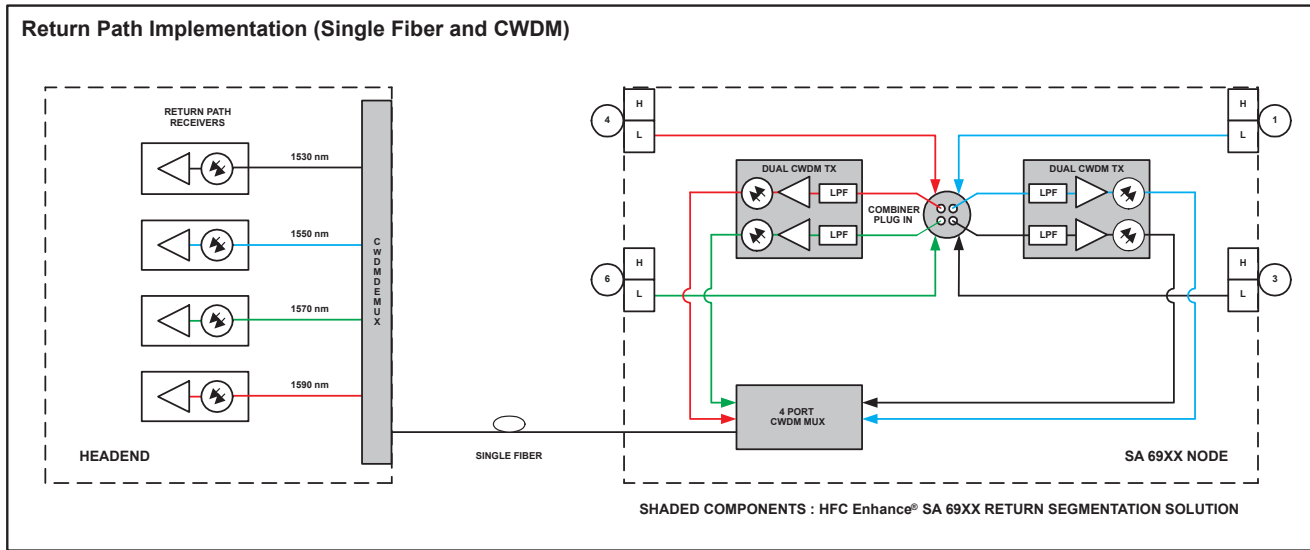
Return Path Segmentation Functional Schematic



Return Path Implementation:

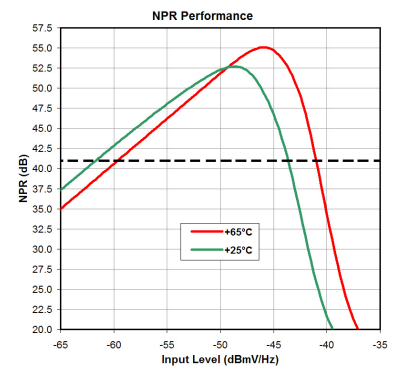
The following diagram shows the complete implementation of the *HFC Enhance® 69XX Return Segmentation Solution* from the node to the headend, where each of the 5-42 MHz segments from each quadrant of the node is received by a separate return path receiver after being demultiplexed with a CWDM DEMUX. ATX can also provide the LGX-style or 1RU rackmount CWDM DEMUX & optical accessories necessary for a complete end to end segmentation implementation.

Return Path Implementation Functional Schematic



Return Path Transmitter Specifications

SPECIFICATIONS	
RETURN TRANSMITTERS: DFB & CWDM	
RF INPUT & PERFORMANCE PARAMETERS	
FREQUENCY RESPONSE RANGE (+/- 1.0 dB)	5 - 220 MHz
NPR (DFB/CWDM)*	> 15 dB over 41 dB NPR*
NPR THRESHOLD (DFB/CWDM)*	-57 dBmV/Hz (@ 41 dB NPR Threshold)
INPUT RETURN LOSS	> 16 dB
INPUT LEVEL**	(see graph)**
OPTICAL OUTPUT PARAMETERS	
OPTICAL OUTPUT (DFB)	1.0, 2.0 or 3.0 mW @ 1310 nm / 2.5 mW @ 1550 nm
OPTICAL OUTPUT (CWDM)	2.5 mW @ 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610 nm
RETURN LOSS	> 60 dB with APC Connector
OPTICAL CONNECTOR	SC/APC Standard; FC/APC Optional (8° APC); SC/UPC Optional
USER INTERFACE	
OPTICAL OUTPUT LEVEL	1V/mW
OPTICAL POWER ALARM	Green / Red LED
INTERSTAGE RF PLUG-IN SXP PAD	7 dB to Control Input RF Signal Path to Laser
ELECTRICAL, ENVIRONMENTAL & MECHANICAL PARAMETERS	
OPERATING TEMPERATURE RANGE	-40°C to +70°C (-40°F to +158°F) (temperature at the mounting plate)
POWER DISSIPATION	< 4 W
NOTES:	
* Measured with 10 dB of fiber, full 35 MHz loading.	
** Call factory for assistance in determining optimum drive levels for your system.	



Ordering Information

Part Number	Description
--	Call Factory for Quote



Specifications subject to change without notice.