

Passive Isolation Module

Description

The Passive Isolation Module (IM) is used with the Multi-Room™ Digital Video Recorder (MR-DVR) system to isolate the CATV network from the MR-DVR signals. In addition, the IM reflects the MR-DVR FSK and QAM signals, minimizing the loss seen by these signals.

The MR-DVR system allows MSOs to provide end users with DVR functionality for multiple TVs without the expense of “High End” subscriber terminals for each TV. The system also allows broadcast, on-demand, and other traditional services to all TVs.

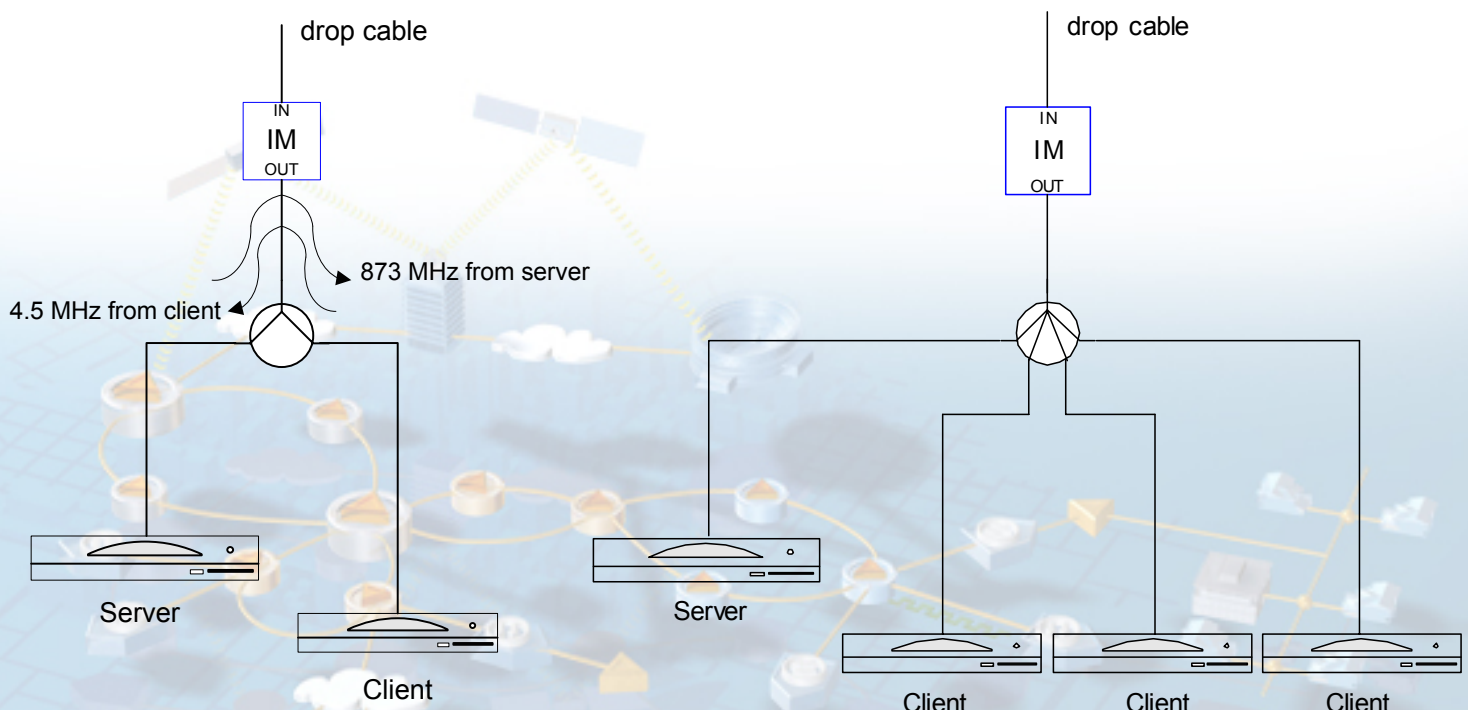
The IM allows an Explorer® 8300™ Multi-Room Server set-top with an internal QAM modulator to play programs off its hard drive on up to 3 auxiliary set-tops in the home while continuing to perform all other Explorer 8300 set-top functions. The client set-tops transmit FSK commands associated with DVR functions to the Explorer 8300-server set-top. The client set-tops continue to run all existing applications and tune other channels. A user interface design allows the client set-tops to play the programs stored on the Explorer 8300 Server hard disk drive (HDD). The IM contains two trap filters, at 4.5 MHz and 873 MHz. The trap filters in the IM prevent the MR-DVR signals from leaking onto the CATV system.



Features

- Provides isolation in 2 frequency bands
- Has low insertion loss in the broadcast pass band (6 to 858 MHz)
- Reflects the MR-DVR FSK and QAM signals, minimizing the loss seen by these signals

System Diagram Examples



Passive Isolation Module



Specifications

Description	Units	Specification
Isolation (In - Out) (min): 4.35 - 4.65 MHz 870 - 876 MHz	dB	25 24
Insertion Loss (In - Out) (typical): 6 -8 MHz 8-550 MHz 550-852 MHz 852-858 MHz	dB	1.5 1.0 2.0 3.0
Return Loss (min): 6 -8 MHz 8-852 MHz 852-858 MHz	dB	10 14 9
MR-DVR Output Return Loss (max) 4.35 - 4.65 MHz 870-880 MHz	dB	2 2
In - Out Delay: 6-6.5 MHz 6.5-8 MHz 8 -14 MHz Any 6 MHz band, 14-852 MHz 852-858	ns	150 100 40 10 20
EMI Shielding: 5-1000 MHz	dB	115
Surge Resistance: All ports - (combination wave) All ports - (Ring wave)	kV	2 6
Operating temperature	°C °F	-40 to +65 -40 to +149
Electromagnetic Compatibility	EN 50083-2: 2001 - 4.4 Shielding Effectiveness for Passive Equipment	
Environmental	ASTM G 53 - weathering specification ASTM B 117 - salt spray specification ASTM D 31 - chip resistance specification Bellcore GR-63-CORE – vibration/transportation ANSI/EEE C62.41 – surge IEC 60529 2.1: 2001 IP68	

Ordering Information

Description	Part Number
Passive Isolation Module	4008261



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