4150
ASI/310M Relay Point DA with CRC Support

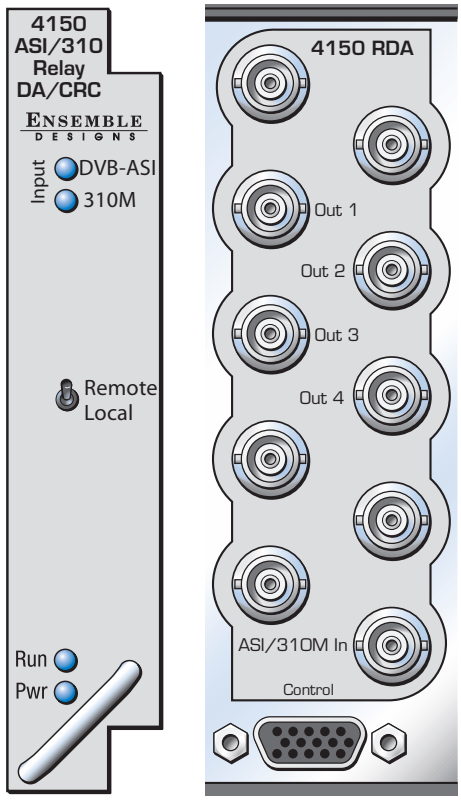
The 4150 module is for use in ASI and 310M broadcast and transmission applications and provides CRC insertion for checking data path integrity.

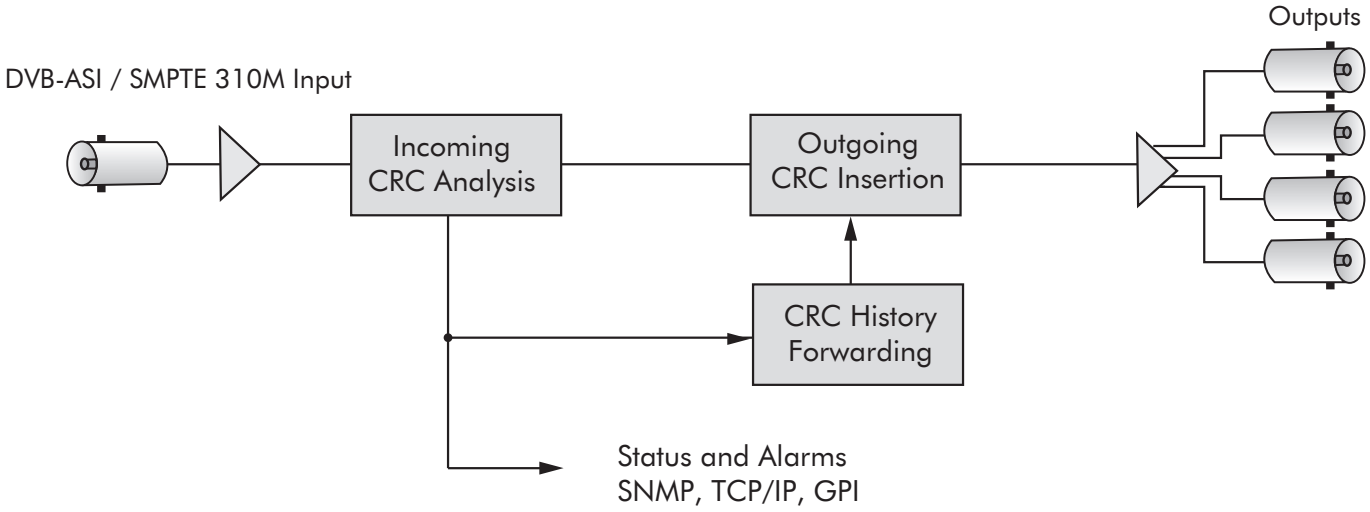
A CRC and Data Checksum packet can be seamlessly inserted into the stream by the 4150 to provide data path integrity testing at downstream points. Monitoring of these special packets can be performed by a second 4150 or an Avenue 4500 MPEG Processor or by one of the Avenue ASI/310M Protection Switches. Data integrity history is carried forward through the system to facilitate fault finding. These CRC packets provide an unequivocal test of data integrity on a transmission link by transmission link basis.

This is easier, more accurate, and less expensive than using a complex MPEG analysis tool to troubleshoot a data path problem.

The 4150 is often used in system that includes one or more Avenue 4500 MPEG Transport Stream Processor modules or an Avenue ASI/310M Protection Switch such as the 4445, 4450, 4455, or 7455.

Controls are easily accessed through an Avenue Control Panel, Avenue PC, GPIs, or front edge module controls. Alarms can be generated via SNMP, Avenue PC, and contact closure outputs.





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Features

- **CRC and Checksum insertion and integrity testing for ASI and 310M transmission paths**
- **CRC history forwarding to next hop on the transmission path**
- **Stream monitor alarms via TCP-IP, SNMP, RS-232 and GPI**
- **Remote control and monitoring**

Input Signal

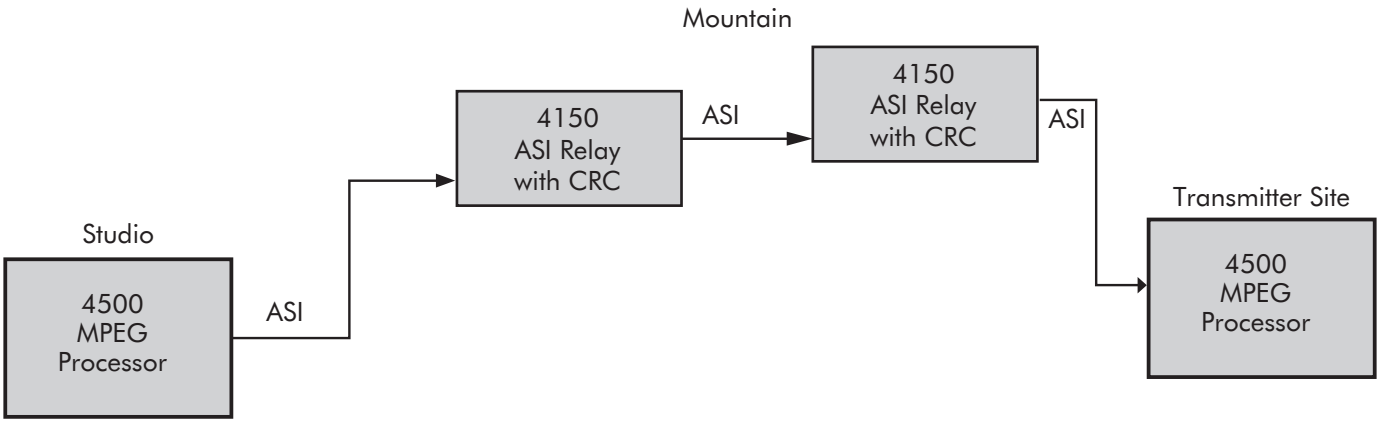
Number	One
Signal Type	DVB-ASI at 270 Mb/s or SMPTE 310M

Output Signal

Number	Four
Signal Type	Follows input
Impedance	75 Ω

General Specifications

Power Consumption	<7.0 watts
Temperature Range	0 to 40°C ambient (all specs met)
Relative Humidity	0 to 95%, noncondensing
Altitude	0 to 10,000 ft



Application Example

A 4500 is used at the studio origination point where the 4500 cleans up the ASI or 310M clock and reduces jitter. CRCs are inserted into the stream at this point, too.

The relay points on the mountain each have a 4150 where the stream's CRCs are read and history is forwarded to the next hop.

The transmitter site has another 4500 where the CRC history is read and evaluated for signal path integrity. If there is a problem in the signal path it will be revealed in the data. The 4500 then removes the CRCs from the signal prior to transmission.

If the 4150s are connected to the Avenue Control System then signal integrity can be reported at the relay points. If the 4150s are not on the Avenue Control System, the signal integrity can be read at the transmission path via the 4500 module. The history will indicate which hop had a fault, if any.