

SIERRA VIDEO SYSTEMS, INC.

Digilinx Equalizing Digital Video Distribution Amplifier Family User's Guide

507112-04
507112-08
507112-12

Introduction

This product equalizes a customer provided serial digital video signal, producing 4, 8, or 12 copies of the equalized input signal; depending on the version purchased.

The equalizer accepts data rates ranging from the 19.39Mbps ATSC 'transport stream' to 540Mbps serial digital video. The four output product consumes one Digilinx frame 'slot', while the 8 and 12 output products use two adjacent frame 'slots'.

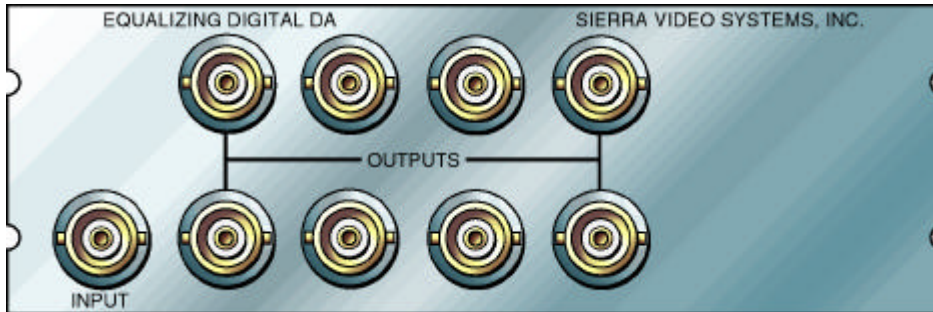
These products do not provides Smartlinx monitoring of the signal status. For Smartlinx versions of this family, refer to the 507116-xx product family, which allows Smartlinx hosts to monitor signal presence and standard.

Peripheral Connections

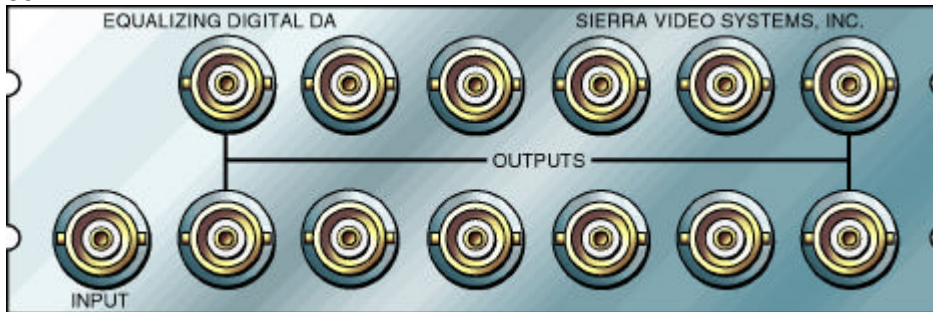
507112-04:



507112-08:



507112-12:



The rear panel provides the following signal connections to the user:

INPUT - This is a 75 Ohm BNC connector to which the incoming video signal is applied. For 270Mbps signals, this should be less than 50 meters from the source of the signal.

OUTPUTS - These are 75 Ohm BNC connectors which provide equalized, amplitude controlled copies of the INPUT signal.

Application Notes

Equalizing DA's boost the high frequency content of incoming digital pulse streams until flat topped pulses result. This compensates for the frequency dependent dispersion of signals along coaxial cable. While significantly less expensive than reclocking DA's, equalizing DA's do not reduce jitter over long source to DA cable runs as well as reclocking DA's.

The maximum distance from a source to the input of a reclocking DA depends on many things. The jitter intrinsic in the source, the type of cable used, the proximity of the input cable to other 'noisy' cables, the length and type of output cables used, and the jitter tolerance of the destination devices all help define maximum cable length. If quality cables are used, input sources provide <300psec jitter, and the load tolerates 740psec. jitter(at 270Mbps), 50 meters of cable can be placed between the video source and the input of the equalizing DA.

Specifications

Data Rate Range-	50-600Mbps(NRZI), 19-50Mbps(ATSC transport stream)
Return Loss(in & out)-	>15db from 100KHz to 500MHz
Jitter-	<400p seconds with input driven through < 200M of Belden 8281
Operating Temperature-	0 to 70C(non condensing)
Guaranteed Calibrated Temperature-	20 to 40C(non condensing)
Operating Humidity-	5-95% RH(non-condensing)