

May 27, 2016

HD-TVI is capable of supporting RG59 coaxial cable runs of up to 1600' on RG59 and 700' on CAT5. However the 1600' over coax must be continuous – no splices or BNC T-Connectors. HD-TVI **WILL** work with splices and BNC T-Connectors but the transmission distance will be greatly reduced. The HD-TVI signal strength drops significantly roughly 200~250 feet AFTER a BNC splice (female to female connector) or a BNC T-Connector. The problem for mills and larger installations will be knowing how many T-Connectors and splices exist on an existing cable run and where these connections are located. In some cases it may be easier to pull new cable.

Installation Steps:

1. Replace the existing Analog DVR with an Opticom HD-TVI DVR. The new HD-TVI DVR's are backwards compatible with analog, meaning that existing analog cameras can be connected as well. This will allow the installer to replace analog cameras with HD-TVI cameras one at a time rather than having to change all cameras over at once.
2. When installing HD-TVI cameras it is recommended to first install and connect the camera and check at the DVR end to see if there is a signal. In many instances, particularly shorter runs, the HD-TVI cameras will work without installing any other HD-TVI parts (distributors or amplifiers).
3. If there is no video at the DVR then the cable run likely has multiple connections or the length of cable after a connection is more that 200~250 feet. In this case there are two options:

- A. If the BNC T-connector can be located it can be replaced with a 1 IN / 2 OUT HD-TVI video distributor shown to the right. The CD102HD-1 will eliminate signal loss at the connection point. The unit requires 12VDC power and a UL approved 500mA adaptor is included. A 1 IN / 4 OUT HD-TVI video distributor is also available – Part no. CD104HD-1.



CD102HD-1

- B. If the number and location of connections are uncertain then a pair of HD-TVI video amplifiers can be installed at each end of the cable run. In many cases this will resolve the signal strength issues. However there will be cable runs that simply have too many connections or there has been too much wear and tear to the cable over time. The CA101HD-1 uses 12VDC power and a UL approved 500mA adaptor is included with each unit. Note that 2 CA101HD-1's are required for each cable run.



CA101HD-1

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Spot Monitors & Quad Splitters

Most BNC T-Connectors are installed to either feed out to a spot (display only) monitor or into a quad splitter that provides a 4 camera display on one monitor. To date there is no quad splitter equivalent that is HD-TVI compatible. Existing quad splitters can be replaced with a 4 channel DVR that has no hard drive installed. (See chart below for Part Number) HD-TVI cameras can be connected to LCD monitors by installing a video converter as shown below. For example, anywhere a BNC T-connector is used to feed out to a display monitor, an HD-TVI video converter will need to be installed at the monitor. Again, in most cases, the BNC T-Connector will work and will not need to be replaced with a video distributor. Always test the monitor feed after installing the video converter to determine if the signal strength is adequate using the T-Connector.

The AD001TVI video converter has 1 HD-TVI input and provides 3 outputs: 1 Composite (BNC), 1 VGA and 1 HDMI. The unit requires 12VDC power and a UL approved 500mA adaptor is included.



AD001TVI

Quick Reference Chart - Analog to HD-TVI Equivalents

Analog Equipment	HD-TVI Replacement or Add-ons	
CC02 Series Cameras	CC02TVI Series	Lens Sizes are the same; ie: CC02-43 is replaced with CC02TVI-43
QS4-8 Quad Splitter	SVD-2404	4 Channel HD-TVI DVR (No Hard Drive Installed)
BNC T-Connector	CD102HD-1	HD-TVI 1 in 2 out Video Distributor
	CD104HD-1	HD-TVI 1 in 4 out Video Distributor
Coaxial Cable Run with Multiple Connections	CA101HD	HD-TVI Video Amplifier
Display Monitor (BNC, VGA or HDMI Input)	AD001TVI	HD-TVI to HDMI/VGA/Composite Video Converter