

How to Connect an Analog Camera to a Magelis® XBTGT Operator Terminal

Retain for future use.

Introduction

This instruction bulletin describes how to connect an analog camera to a Magelis® XBTGT operator terminal. It describes:

- How to make the physical connections, and the components that are required
- How to set up the software
- How to create a video pane on the Magelis XBTGT operator terminal
- How to take still snapshots and video clips from the video pane
- How to transfer the snapshots and video clips to a Microsoft® Windows® Internet Explorer compatible computer and view them

Hardware Requirements

You will need the following hardware for this application:

1. The XBTGT operator terminal appropriate for your application.
2. An RCA-style 75 Ω connector cable for your camera. A connector is provided on the Magelis XBTGT operator terminal.
3. A serial download cable appropriate for the Magelis XBTGT operator terminal or an Ethernet cable.

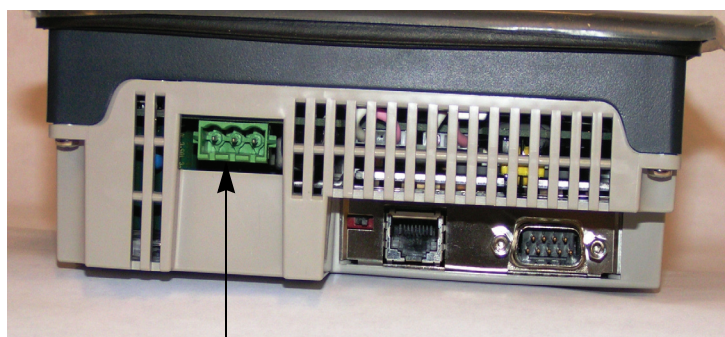
Software Requirements

You will need Vijeo Designer version 4.3.0 or higher to program the Magelis operator terminal for this application.

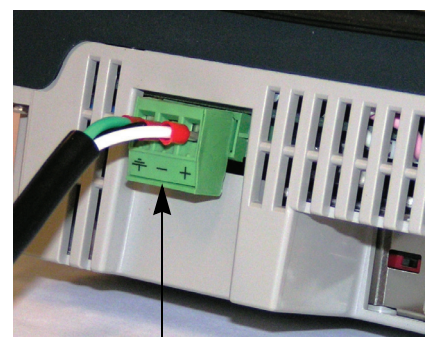
Connections

1. All Magelis XBTGT operator terminals have 24 Vdc receptacles for a power supply. The polarity is marked on the bottom of the operator terminal and on the connector supplied with the terminal. See Figure 1. For high quality power, use an ABL series power supply. To prevent wire fatigue and possible shorting of the terminals, use DZ5 or AZ5 cable ends and ferrules.

Figure 1: Power Supply Connections on Magelis XBTGT Operator Terminals



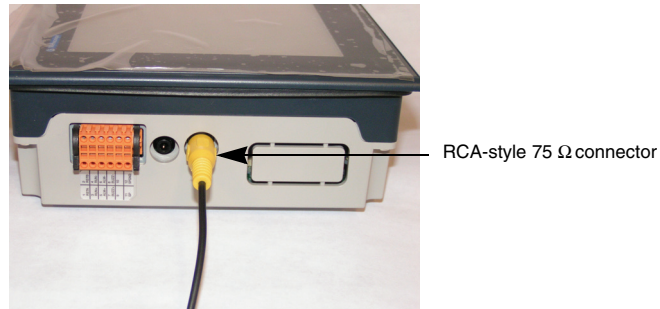
24 Vdc receptacle



Supplied connector plugged into the 24 Vdc receptacle

2. The Magelis XBTGT operator terminal provides an RCA-style 75 Ω connector for your camera as shown in Figure 2. This connector is on the left side of the operator terminal when facing the front of the operator terminal. Make sure the camera has power before connecting it to the operator terminal.

Figure 2: RCA-style 75 Ohm Connector



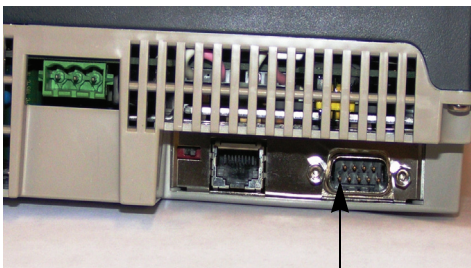
Connect the XBTGT Operator Terminal to a PC

There are two ways to connect to the Magelis XBTGT operator terminal to a PC. Refer to Figure 3.

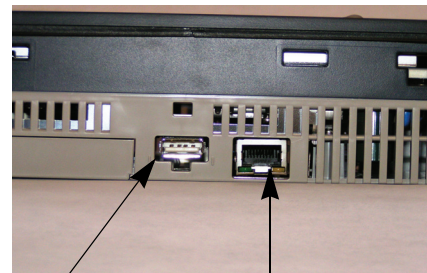
1. Connect a serial download cable as follows:
 - a. XBTZG915: D-sub 9 to MiniDin
 - b. XBTZG925: USB to MiniDin
 - c. XBTZG935: USB to USB
2. Connect an Ethernet cable as follows:
 - a. Connect a crossover cable directly from the PC to the Magelis XBTGT operator terminal, or
 - b. Connect an Ethernet cable with an RJ45 connector through a switch, such as a TCSESM series Ethernet switch or a SDM5DE100 switch from Schneider Electric.

If connecting by Ethernet, ensure that the IP address is correct, that the subnet mask is 255.255.255.0, and that the default gateway is correct. A user name and password are required, so make sure that you write them down.

Figure 3: Connecting the Magelis XBTGT Operator Terminal to a PC



XBTZG915: D-sub 9 to MiniDin
XBTZG925: USB to MiniDin



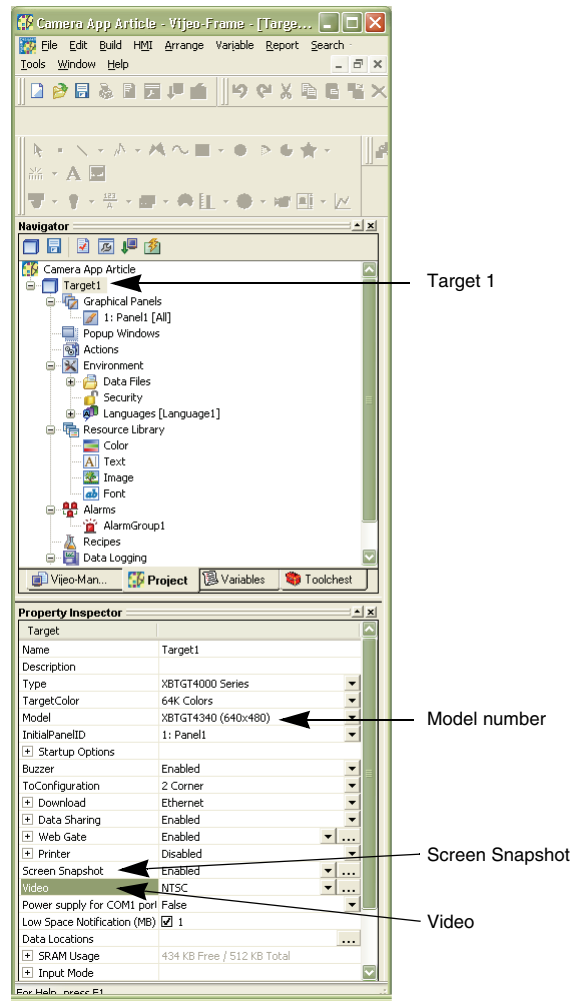
XBTZG935: USB to USB Crossover cable or Ethernet cable

Program the Operator Terminal in Vijeo Designer

After connecting the operator terminal to your PC, start the Vijeo Designer software.

1. Set up the operator terminal as the Target as shown in Figure 4. Any Magelis XBTGT operator terminal ending in a 40 designation, such as the XBTGT4340 shown in this example, is compatible with an analog camera.
2. For full video capability, enable all of the video features. See Figure 4. Video cameras support two major standards—the NTSC and the PAL protocols. In the United States, the most commonly available protocol is the NTSC.

Figure 4: Set Up Vijeo Designer



Enable Screen Snapshot

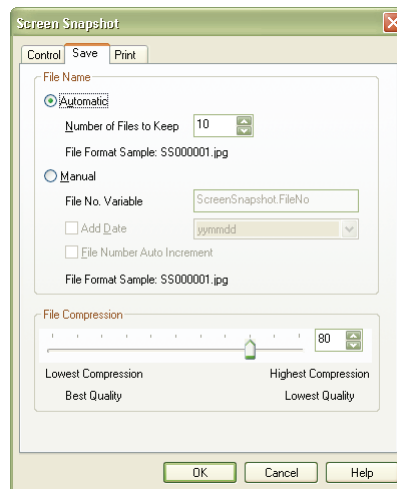
Double click the Screen Snapshot line in the Property Inspector window illustrated in Figure 4 (page 3). The Screen Snapshot window, illustrated in Figure 5, appears.

The default settings on the Control tab are suitable for simple setup.

The Save tab allows you to specify how many photos you want to store. Depending on the method of storing the images and the type of compression used, you can specify up to 200 snapshots.

Snapshots can be taken manually from the toolbar on the operator terminal, or programmed using event or timers to trigger the shots. This document describes how to take manual snapshots from the operator terminal.

Figure 5: Screen Snapshot Save Tab



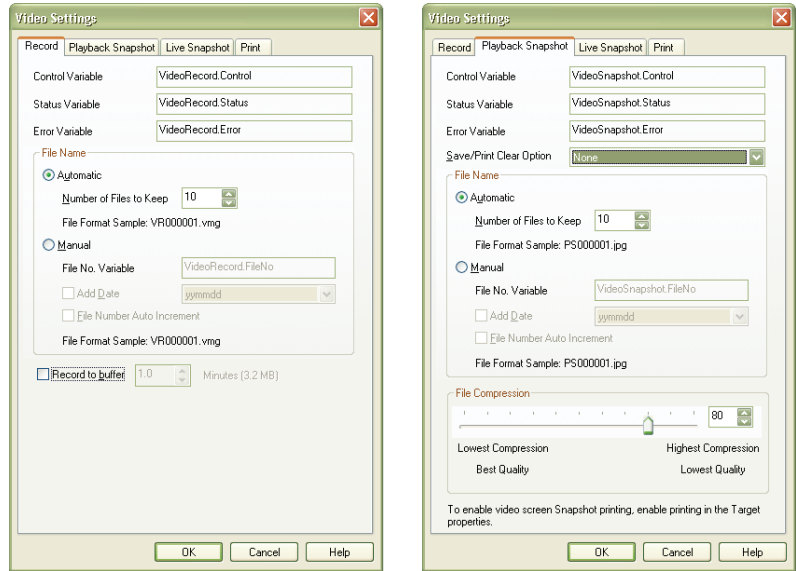
Enable Video

Double click on the Video line in the Property Inspector window illustrated in Figure 4 (page 3). The Video Settings window, illustrated in Figure 6 (page 5) appears.

Use the default settings on the Record tab.

On the Playback Snapshot tab, specify how many video clips you want to keep. The video record buffer can only handle clips from 0.5 to 10 minutes long. There may be additional memory constraints based on the main or secondary memory (CF card).

Figure 6: Video Settings Record Tab and Playback Snapshot



Create a Video Pane


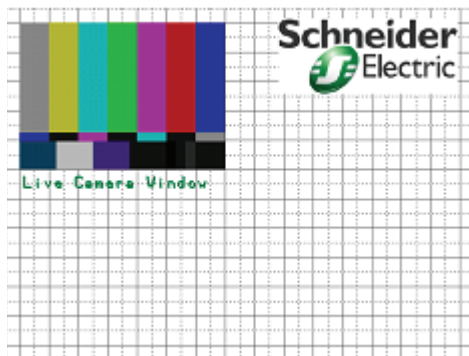
To create a video pane, click on the camera icon  in the Vijeo Designer toolbar. On the palette provided in Vijeo Designer, drag a frame for the video window to the desired size. See Figure 7. The built in toolbar on the operator terminal allows for toggling back and forth between the Video Pane and full screen.

Figure 7: Live Camera Window



Keep in mind the following points about Vijeo Designer:




- Vijeo Designer Runtime does not allow more than two video displays to show video on a single panel at the same time. If more than two video displays exist on a panel, one video display will show only blue screens.
- Vijeo Designer cannot record live video in one video display and play a recorded video file in another video display at the same time.
- Video displays are not supported on pop-up windows.
- Snapshot files cannot be viewed on the Magelis XBTGT operator terminal screen after they have been saved.

Take a Still Snapshot

To take a still snapshot from a video:

1. Touch the video pane. The following toolbar should appear:



2. Touch the camera icon.  This will capture a frame from the live video that is showing on the screen at the moment the icon is pressed.
3. Touch the file icon.  This places the still snapshot into the snapshot file.
4. To save the snapshot, touch the OK icon.  The snapshot is given an incremental name in the automatic mode. The name appears as LSXXXXXX.jpg, SSXXXXXX.jpg or PSXXXXXX.jpg on the screen.







NOTE: In the current release of Vijeo Designer, you cannot view snapshots on the Magelis XBTGT operator terminal screen. However, you can transfer them to your PC desktop and view them there. See "Transfer Snapshots and Video Clips to a PC Via FTP" on page 7.

Record a Video Clip




To record a video clip:

1. Touch the video pane. The following toolbar should appear:



2. Touch the record icon.  The video will record for the amount of time allowed by the Video Settings. See "Enable Video" on page 4.
3. Unlike the snapshot, the video clip can be replayed on the operator terminal screen. Touch the video pane to enable the toolbar.
4. Touch the File icon. 
5. Then touch the Go to Play icon  and select the desired file using the Up  or Down  icons.
6. Finally, touch the OK icon.  This will automatically launch and play the video clip. To replay the clip, touch the Play icon.



7. To return to Live Video, touch the File icon. 
8. To close the toolbar, touch the Go to Live icon , then touch the Close icon. 

Transfer Snapshots and Video Clips to a PC Via FTP

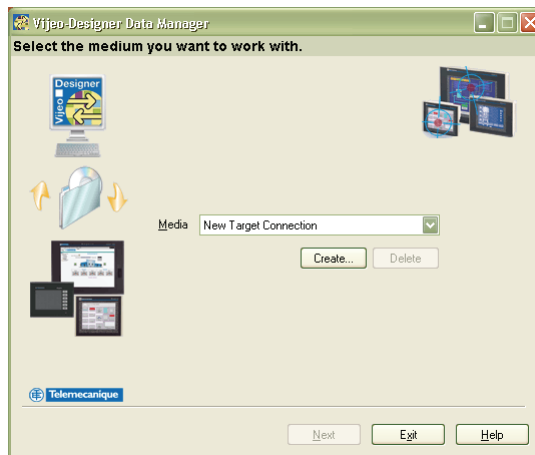
The acronym FTP stands for file transfer protocol, a data transmission method that allows the transfer of files over the internet.

To transfer files from the operator terminal to a PC via FTP, Webgate must have been configured during the initial setup of the Magelis XBTGT operator terminal, and the operator terminal must be installed and operational so that a remote computer can log into its IP address.

To transfer files:

1. From the Vijeo Designer menu, select Tools, then Data Manager, then Vijeo-Designer Data Manager. The Vijeo Designer Data Manager screen illustrated in Figure 8 appears.
2. Click on Create.

Figure 8: Vijeo Designer Data Manager

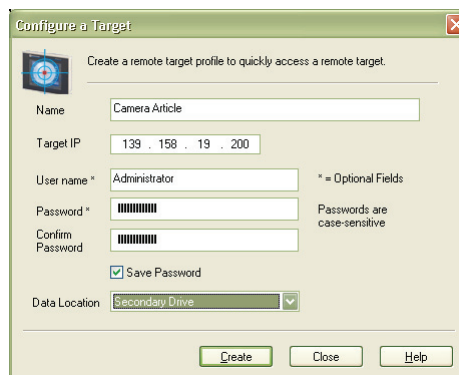


3. Fill in the information requested on the Configure a Target window as shown in Figure 9, including the IP address that you assigned to the Magelis XBTGT operator terminal.

It is recommended that you select Secondary Drive in the Data Location field. If a field change or upgrade is needed, it can be put on the CF card and installed by a non-technical worker.

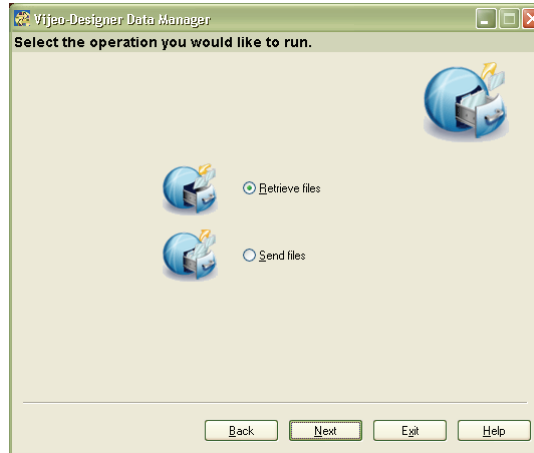
4. Click on Create.

Figure 9: Configure a Target



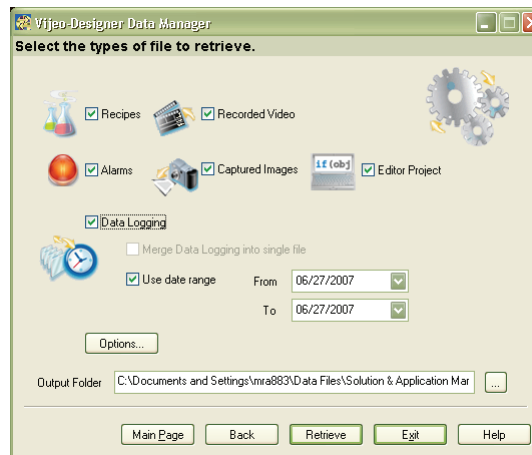
5. Select Retrieve Files as shown in Figure 10 and click on Next.

Figure 10: Retrieve Files



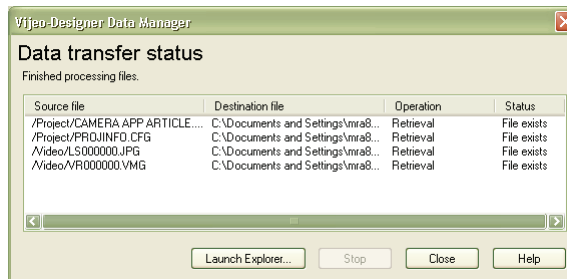
6. On the screen illustrated in Figure 11, choose the types of files you want to retrieve. In this case, check the boxes labeled Recorded Video and Captured Images. In the Output Folder field, define the folder where you want to store the files, then click on the Retrieve button.

Figure 11: Select Types of Files



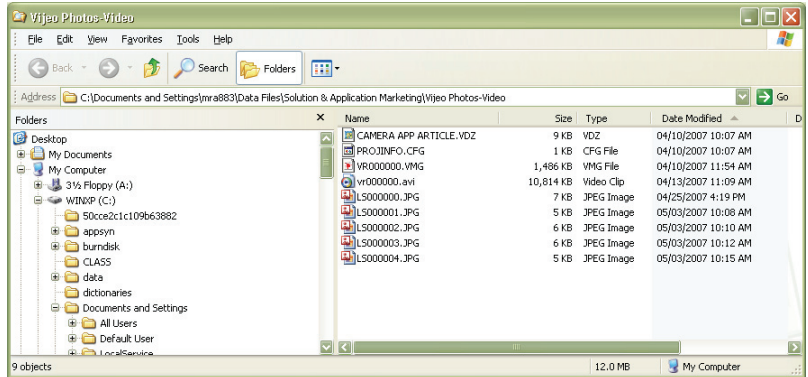
7. The files in the Magelis XBTGT operator terminal will be listed in the Data Manager window as illustrated in Figure 12. Click on Launch Explorer. The output folder defined in Step 6 now shows the retrieved files. See Figure 12.

Figure 12: List of Files Transferred



- The snapshot files can now be viewed through your photo or multi-media viewer as shown in Figure 13.

Figure 13: View Snapshot Files

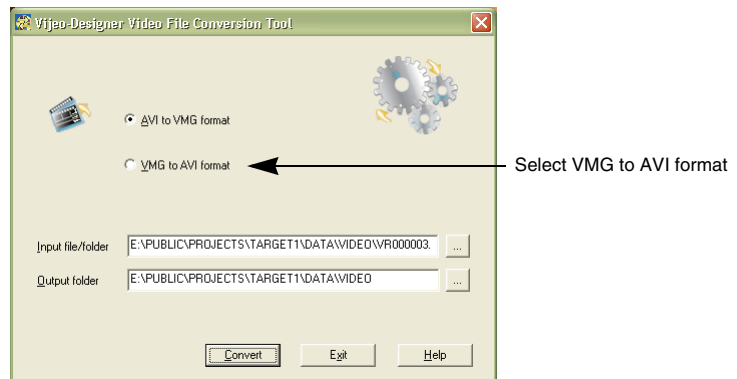


Convert Video Files for Viewing

To view the video files, the files must be converted from .vmg format to .avi format.

- In the Vijeo Designer menu, click Start, Schneider Electric, Vijeo Designer, Tools, AVI2VMG. The screen illustrated in Figure 14 appears.

Figure 14: File Conversion Tool



- Select VMG to AVI Format, designate the folder where the .vmg files are located as the Input file/folder, and designate the folder where you want to save the .avi files as the Output folder.
- Click on Convert. This utility only converts one file at a time. The conversion process time varies depending on the .vmg file size.
- The video clip recorded on the Magelis XBTGT operator terminal can now be viewed with Windows Media Player.

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