



DVT Ethernet to Serial Converter Guide

DVT Corporation
Applied Engineering Department



The SmartImage Sensor Specialists

DVT Ethernet to Serial Converter (PN: CON-ETS)

The DVT Ethernet to Serial Converter (PN: CON-ETS) is a new, easy to configure device that allows Legend Series SmartImage Sensors to communicate serially with any device using the RS232, 422, or 485 protocols. SmartImage Sensors establish communications with this device on port 2101 and any device that uses serial communications connects to the other end of it to interchange data with the SmartImage Sensor. This device comes with a DIN rail mountable bracket as part of the package to simplify its installation in an industrial environment. This document explains some important points regarding the converter and serves as a guide to correctly configure the communications from the SmartImage Sensor.



The SmartImage Sensor Specialists

Device Configuration

The DVT Ethernet to Serial Converter is designed to be easily configured with the assistance of the DVT configuration Wizard. This software comes with the Serial Converter and is available for download from the DVT website. It walks users through the process of setting up the device. This wizard should be used to configure the IP Address of the device, the Net Mask, and the Serial port settings (Baud Rate, etc.).

Once power is connected to the device, the lights will blink while the system boots up and the red power light will blink until the IP address is assigned. At this point run the wizard to configure it. Once the device is configured it will be listening for Ethernet connections on port 2101.

Resetting Device to Factory Settings

The procedure explained below resets the DVT Ethernet to Serial converter to its original factory configuration. When this procedure is followed all the previously configured settings are permanently lost. After the system is reset to factory defaults the Setup Wizard needs to be run again to reconfigure the device. The steps to follow are:

- 1) Power off the converter by unplugging the power.
- 2) Use a pen or the point of a paper clip (NOT SHARP or the button could be damaged) to press and hold down the reset button. The following figure shows where to find the reset button:



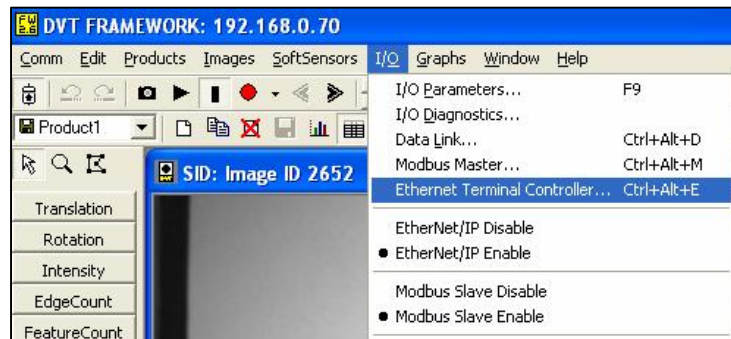
- 3) While holding the reset button, power up the unit.
- 4) Hold the button for 20 seconds and then release it.

The default configuration should be now restored. The device can be reconfigured once it completes its boot sequence.

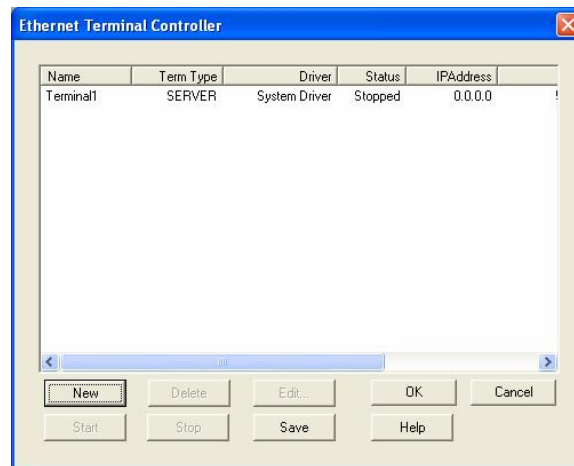
DVT SmartImage Sensor Configuration

The Configuration of the DVT SmartImage Sensor is the same as for communicating with any other serial converters. A client Ethernet Terminal Controller has to be created and directed towards port 2101 of the Serial Converter. The procedure is explained next.

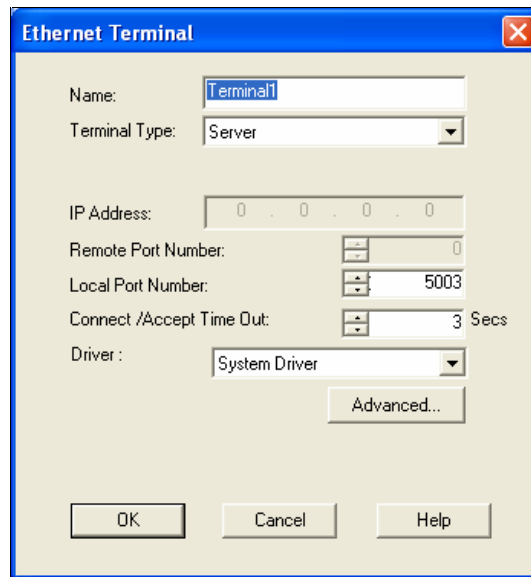
- 1) From the I/O menu of FrameWork select the Ethernet Terminal Controller option as shown below:



- 2) In the dialog box that pops up click the “New” button to create a new controller. This controller will redirect any information towards the converter to communicate with external devices. After clicking the button a new controller will be added to the list as shown next:



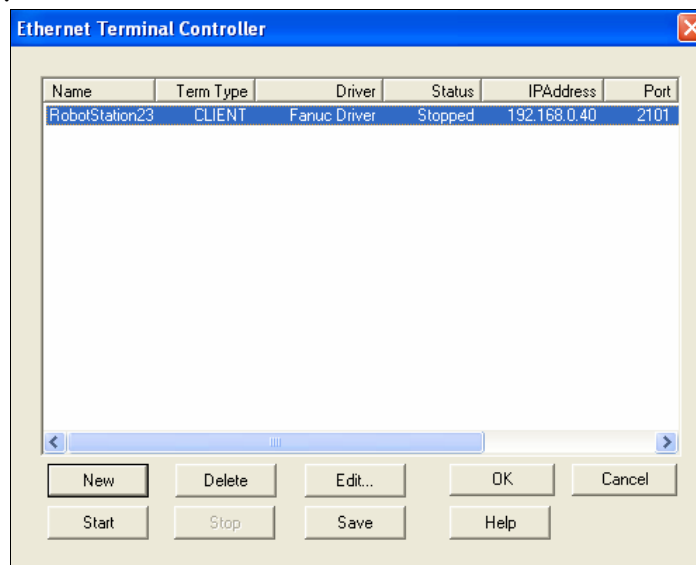
- 3) Select the recently created Ethernet Terminal Controller and click on the “Edit” button to further configure it. The dialog shown below should appear:



4) Use this dialog to configure the settings as follows:

- Name: custom name that describes the transfer, only used for reference
- Terminal Type: Client
- IP Address: the IP Address for the Ethernet to Serial Converter
- Remote Port Number: 2101
- Driver: Select the driver to use over this connection, this determines the data that is sent to the device that communicates serially with the DVT Ethernet to Serial Converter

When the settings are properly configured, click OK. This will take you back to the main Ethernet Terminal Controller window. This window will now show the custom settings that were configured for this Ethernet Terminal Controller as shown below:





The SmartImage Sensor Specialists

5) With the Ethernet Terminal Controller selected click the start button, this will change the status as listed in the image above from “Stopped” to “Running” and will initiate the communications with the previously configured Ethernet to Serial Converter.

The SmartImage Sensor should be now communicating with the device that accepts only serial communications.



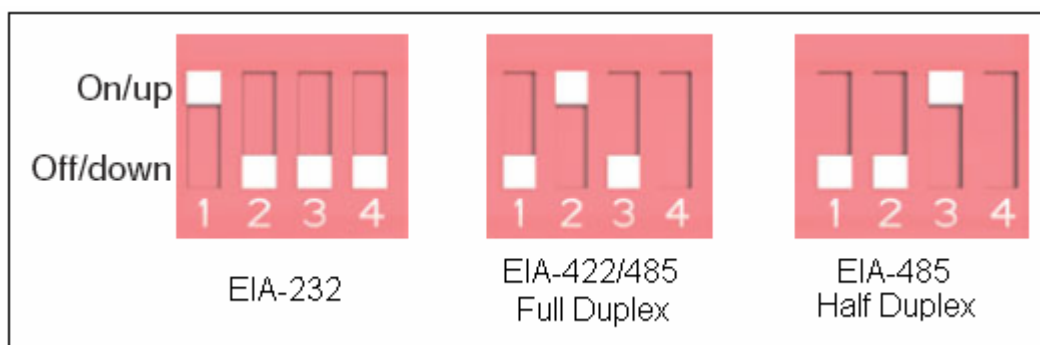
The SmartImage Sensor Specialists

Appendix A: DVT Serial Converter Specifications

General Specifications:

Attribute	Value
Main Power Connector	9-30 VDC barrel connector
Ambient Temperature	10 to 45°C
Relative humidity	5 to 90% non-condensing
Length	3.7 in. (9.4 cm)
Width	1.72 in. (4.3 cm)
Depth	0.93 in. (2.3 cm)

Positions for the EIA 232/422/484 switches:



LED indicators:

LED	Color	State	Indicates
Power	Red (labeled PWR)	On	Power detected
		Steady blinking	Waiting for an IP address
		Blinking 1-1-1	Starting the EOS
		Blinking 1-3-1	Starting the TFTP process
		Blinking 1-5-1	Configuration returned to factory defaults
		Off	No power detected
Link	Green	On	Physical network detected
		Off	No physical network detected
ACT	Yellow	On	Bad initialization
		Off	Ready
		Blinking	Network activity