



SightLine

APPLICATIONS

EAN-Troubleshooting Comms

PN: EAN-Troubleshooting-Comms

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Alerts

The following notifications are used throughout the document to help identify important safety and setup information to the user:

 **CAUTION:** Alerts to a potential hazard that may result in personal injury, or an unsafe practice that causes damage to the equipment if not avoided.

 **IMPORTANT:** Identifies crucial information that is important to setup and configuration procedures.

 *Used to emphasize points or reminds the user of something. Supplementary information that aids in the use or understanding of the equipment or subject that is not critical to system use.*



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1 Troubleshooting Comms Overview

This document is intended to address frequently asked network questions and common problems.

Problem	Possible Cause	Solution
Software, documentation or sample code	All software is available online.	Browse or search at the SightLine software-downloads page and the documentation support page.
Software installation	Conflict with previous revision	Uninstall previous revision and delete any artifact directories (e.g. C:\Program Files (x86)\SightLine Applications\SLA-1500 Upgrade Utility 2.24.16)
No connection	Connected to wrong connector	Check the product ICD to verify the connector is correct.
	Bad cables	Verify connectors and cables by hooking them up to other sources.
No video output / video is black, etc.	Incompatible display	Try a known working input source (camera or DVD player, monitor) to verify the display is working.
	No Video Source	Verify the camera (or other source) is functioning by connecting it directly into the display
	No power to SightLine hardware	Verify correct voltage (5V or 12V depending on unit) Look for status lights on the board (non-enclosure units)
	Wrong Input Source Selected	Use Panel Plus to set the camera order.
	Analog Video Out disabled	System was configured for network output only. Use Panel Plus to enable NTSC output.
Serial port is not working	Wrong serial port	Try selecting a different COM PORT from Panel Plus
	TX and RX are swapped	Try using a NULL MODEM in line with your cable to the SLA-hardware.
	Bad serial port	Try hooking your serial port up to another device like a PC and send commands.
	Wrong voltage level	Verify with the ICD for your product. Some SLA-HARDWARE assumes a 3.3V TTL serial communication.
	Incorrect or no ground	Verify your serial cable is using the same digital ground as the SLA-hardware.
	Incorrectly configured serial ports	Connect via Network and configure with: <i>Panel Plus >> Configure >> Serial Ports...</i>
Unit does not respond to command but is shown on the network	IP address / Network Mask mismatch	If a DHCP server is not available, the default IP address for SLA-hardware is 169.254.1.180 (SLA-1500) or 169.254.1.181 (SLA-3000) with a subnet mask of 255.255.0.0 Set PC to be on the same subnet, and then use Panel Plus to change the network settings of the SLA-hardware. Clear the ARP table from the command line (arp -d *).
	Windows Firewall	Disable windows firewall.
	Router/Switch issues	Try using a simple (unmanaged) network switch.
	Not Connected	Select the unit name from the pull-down list and click Connect. The IP address, temperature, and firmware version should be visible in the status bar.
	Wrong Network Adapter	Disable all Wireless and other network adapters except the wired (LAN).
Video appears blue (or some other color) Image is scrolling, etc.	Video synchronization	Unplug the video source and plugging it back in. Cycle power to the SLA-hardware after the video source is connected. Try a different video source. Verify video source by plugging it directly into a display.



2 Power

1. Verify that SLA-PWR-xxxx is functional using a voltmeter.
2. Verify that power and ground are supplied to the correct pins. See [Figure 1](#) example.
3. Verify that screw terminals on top of connector are tight.
4. Verify that power connector is seated firmly within the socket on the SLA-1500-ENC.

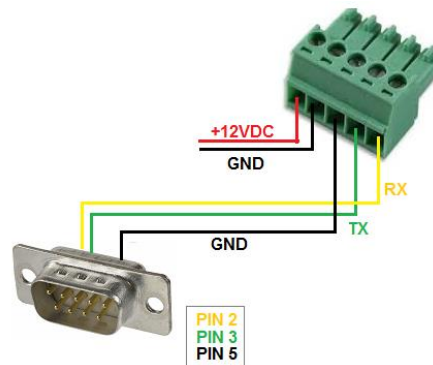


Figure 1: Example 3000-IO Power and Serial Connector

3 Ethernet

1. Make sure all cables are in good condition and firmly connected (swap cables if necessary).
2. Make sure power is supplied to all hardware, network switch, PC, SLA board, etc.
3. Verify that the link lights are active for the port on the network switch where the SLA board is plugged in.
4. Verify that the DHCP server can provide an IP Address.
5. If a DHCP server is not used, the SLA board will default to the following IP addresses:
 - 1500-OEM: 169.254.1.180 subnet mask 255.255.0.0
 - 3000-OEM: 169.254.1.181 subnet mask 255.255.0.0

Verify that the IP address and subnet mask are valid for your network.

6. Open a Command Prompt window and use the IPCONFIG command to see the network configuration. See the following Microsoft support [article](#).

```
IPv4 Address. . . . . : 192.168.1.106
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
```

7. Verify that the PC and SLA board are on the same subnet and using the same subnet mask.
8. Ping the SLA board from the PC.
9. Clear the ARP cache on the PC, type: `arp -d *`
10. Download and install a network packet analyzer to verify that the SLA board is generating packets.

References: [WireShark](#) / [Microsoft Network Monitor](#) / [Information about Network Monitor 3](#)

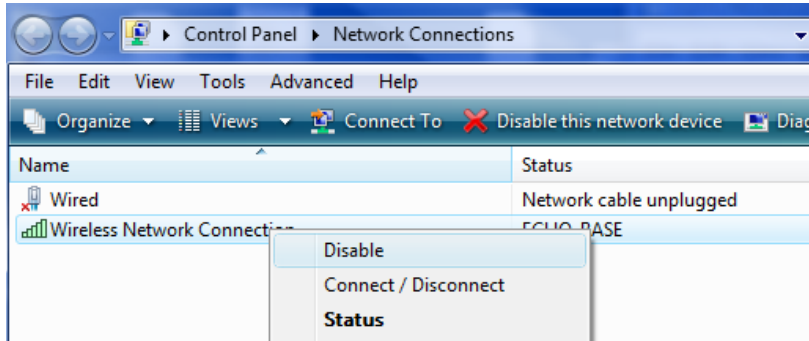
11. Disable Windows Defender or Microsoft Firewall protection. See the following Microsoft support [article](#).



12. Disable all wireless network adapters. See Microsoft Windows [support](#) for help.

Multiple network adapters on a PC can confuse Panel Plus or the upgrade server.

Leave the Wired network enabled.



13. Verify the wired network adapter is enabled and connected.

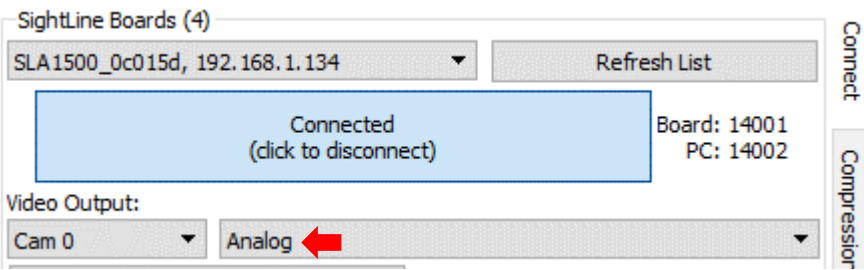
4 Analog Video on 1500-OEM

1. Verify power to the camera and analog monitor.
2. Connect the camera directly to the analog monitor.
3. From the *Multi Camera* tab in Panel Plus, verify the camera is connected to Vin0 on the 1500-AB board.
4. Verify the analog monitor is connected to Vout. Verify Cam0 is set as the input.





- From the *Connect* tab in Panel Plus, verify the system is configured for Analog (NTSC) output.

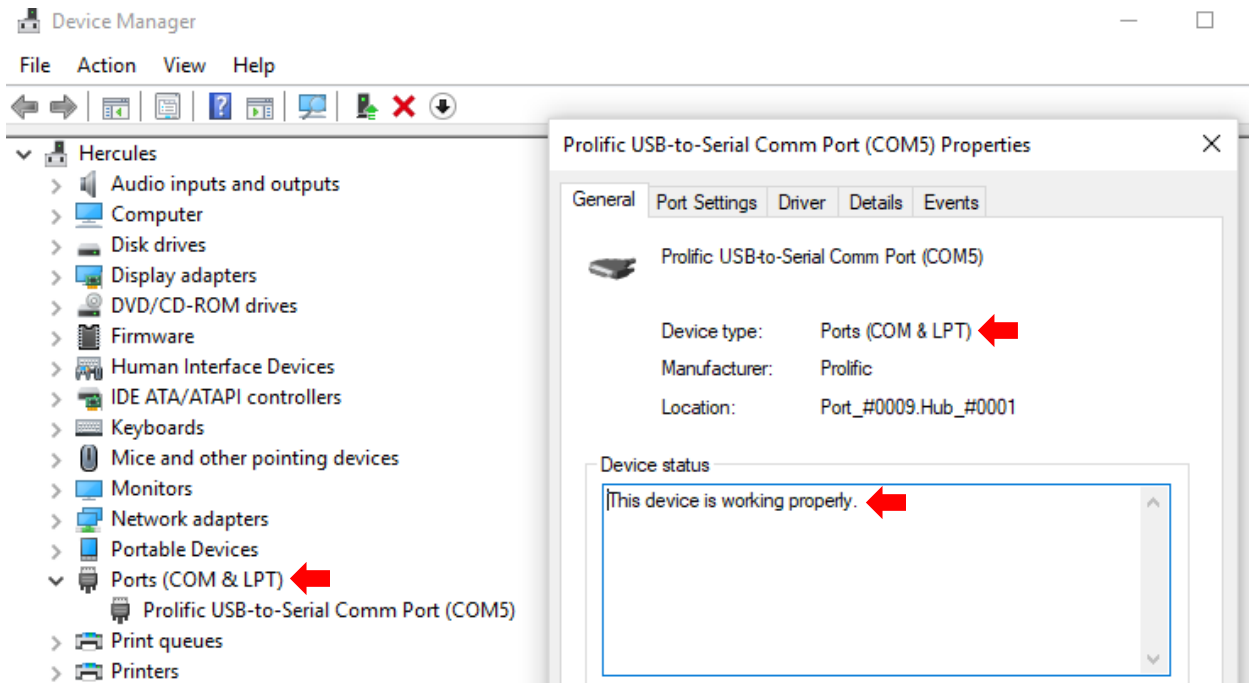


- In the *Acquisition Settings* dialog window of Panel Plus, verify *Camera Type* is configured as NTSC.



5 Serial

- Make sure to use the supplied Null Modem cable or adapter.
- Navigate to the *Control Panel » Device Manager (or use Windows KEY+R to open RUN and enter devmgmt.msc)*.
- Navigate to the *COM & LPT* ports and expand the menu. Right-click and select *Properties*.
- Verify the COM port number and status. The Port Settings (second tab) are preempted by Panel Plus and do not need to be set here.



- Alternatively, Use the Windows *Mode* command from the console to verify the PC serial port. See the following Microsoft support [article](#). Use the supplied null modem adapter.



6 PC to 1500-OEM

1. Configure host PC for Static IP Address (169.254.1.181).
2. Go to *Start » Control Panel » Network and Sharing Center*.
3. Change Adapter settings.
4. Right-click on *Local Area Connection » Disable*.
5. Right-click on *Local Area Connection » Properties*.
6. Select TCP/IPv4. Click *Properties*.
7. Select Use the following IP address:
 - 169.254.1.181
 - 255.255.0.0
8. Click *OK* and then click *Close*.
9. Right-click on *Local Area Connection » Enable*.

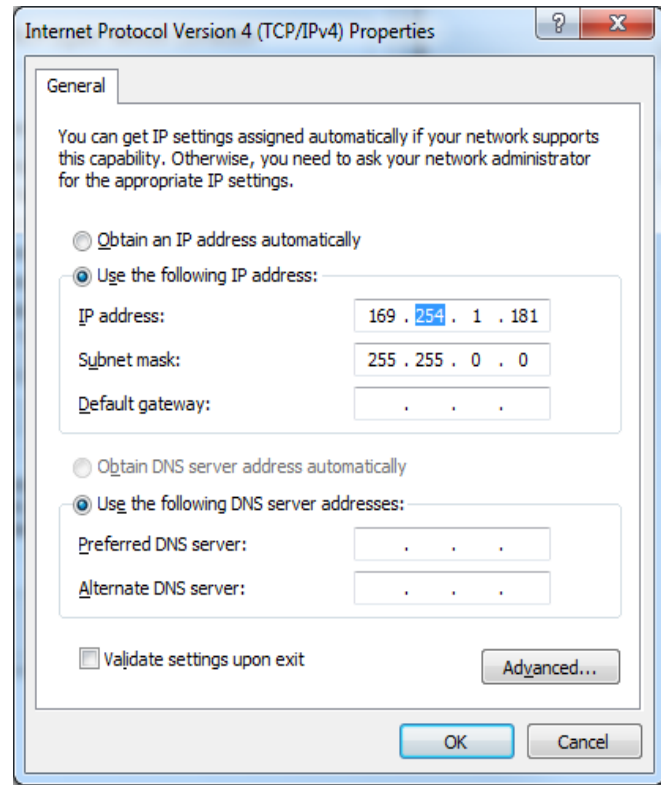


Figure 2: Configure Host PC for Static IP Address

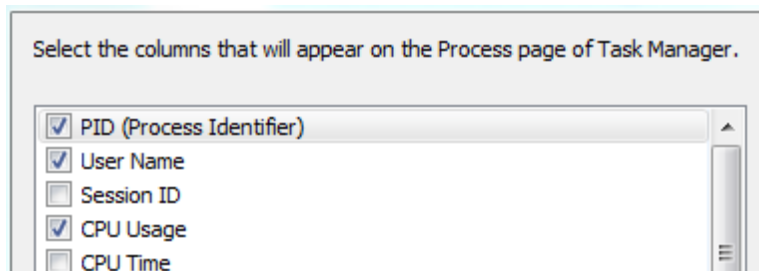
7 Video Not Displayed in Panel Plus

1. Open a Windows command prompt.
2. To find the process that has the 15004 port open type: `netstat -a -n -o`

```

UDP    0.0.0.0:4500          *:* * 412
UDP    0.0.0.0:5355          *:* * 1136
UDP    0.0.0.0:14002         *:* * 5812
UDP    0.0.0.0:15004         *:* * 5812
UDP    0.0.0.0:44784         *:* * 4104
UDP    0.0.0.0:53617         *:* * 1940
UDP    0.0.0.0:54925         *:* * 2052
    
```

3. *Ctrl+Alt+Delete » Start Task Manager*.
4. From the *Windows Task Manager*, click on the *Process* tab.



5. From the main menu » *View » Select Columns*.



6. Enable PID (Process Identifier).
7. Click *OK*.
8. Click the new PID column to sort by PID number.
9. Select the PID that has the port open.

Image Name	PID	User Name	CPU	Description
qtappwrapper.exe	4720	jeremy	00	QtAppWrapper
taskmgr.exe	4768	jeremy	00	Windows Task Manager
TraceCompMgr.exe *32	5000	jeremy	00	TraceCompMgr.exe
explorer.exe	5320	jeremy	00	Windows Explorer
CCSMonitor.exe *32	5404	jeremy	00	CCSMonitor
devenv.exe *32	5520	jeremy	00	Microsoft Visual Studio 2008
SLAPanel.exe *32	5812	jeremy	04	Application for Controlling SLA Hardware
soffice.exe *32	5852	jeremy	00	OpenOffice.org 3.3
putty.exe *32	5992	jeremy	00	SSH, Telnet and Rlogin client
svchost.exe	6084	SYSTEM	00	Host Process for Windows Services
splwow64.exe	6296	jeremy	00	Print driver host for 32bit applications

10. Click the *End Process* Button. Relaunch Panel Plus, connect to the device, and view network video.

8 Network and Video Diagnostic Checklists

8.1 Network

- ✓ Latest revision of the SLA-1500-AB board.
- ✓ Check all cable connections to make sure they are making a tight fit.
- ✓ Replace cables.
- ✓ Check indicator lights on network switch.
- ✓ Check indicator lights on 1500-OEM board.
- ✓ Try a different network port on the switch.
- ✓ Swap PC and 1500-OEM network ports.
- ✓ Preplace network switch.
- ✓ Use static IP address on PC and 1500-OEM board. Verify both on same subnet. Verify both have same network mask.
- ✓ Verify that there are no IP address conflicts.
- ✓ Ping the 1500-OEM board from the Command Prompt window.
- ✓ Disable Windows Firewall.
- ✓ Use a packet analyzer to examine packets on the network. See [WireShark](#) / [Microsoft Network Monitor](#).



8.2 Video

- ✓ Latest revision of the SLA-1500-AB board.
- ✓ Replace all video cables.
- ✓ Verify video input and output by connection video source (camera) to video display (analog monitor).
- ✓ Try a different video source.
- ✓ Try a different display. Is the video set to SC NTSC?
- ✓ Is the video progressive or interleaved?

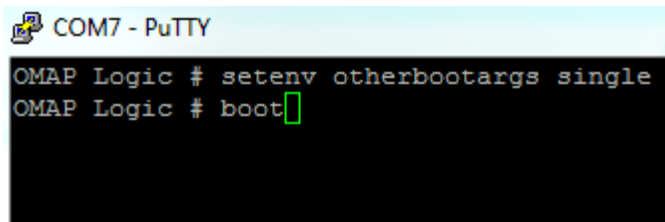
Appendix - 1500-OEM Does Not Boot

Problem: The 1500-OEM startup script was modified and now it does not boot.


Solution: Use single user mode.

 Use [Tera Term](#) or [PuTTY](#) for this process.

1. Connect PC to Serial Port 0.
2. Use Tera Term or PuTTY to establish an SSH session to the target.
3. Perform a SHIFT+S to get to U-boot.
4. Type: `setenv otherbootargs single`
5. Type: `boot`

A screenshot of a PuTTY terminal window titled "COM7 - PuTTY". The terminal shows two lines of text: "OMAP Logic # setenv otherbootargs single" and "OMAP Logic # boot" followed by a green cursor. The background is black and the text is white.

```
COM7 - PuTTY
OMAP Logic # setenv otherbootargs single
OMAP Logic # boot
```

 This executes a minimal Linux boot. At the command prompt you can now edit `rc.local`, delete parameter files, etc.