



**SightLine**  
APPLICATIONS

## **EAN-Managing the Parameter File**

PN: EAN-Managing-the-Parameter-File

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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 specific information that will assist with setup and configuration procedures and/or prevents damage to the hardware components.



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## 1 Overview

The parameter file on each board contains system and configuration startup settings. This guide outlines both dynamic and non-dynamic settings and how to manage these using the Panel Plus Software application.

### 1.1 Associated Documents

[EAN-Startup Guide 1500-OEM](#): Describes steps for connecting, configuring, and testing the 1500-OEM board on the 1500-AB accessory board.

[EAN-Startup Guide 3000-OEM](#): Describes the steps for connecting, configuring, and testing the 3000-OEM video processing board on the 3000-IO interface board.

[EAN-Firmware Upgrade Utility](#): Outlines the steps for installing and running the Firmware Upgrade Utility. Describes the steps for rebooting the video processor from a MicroSD card.

[Interface Command and Control \(IDD\)](#): Describes the native communications protocol used by the SightLine Applications product line. The IDD is also available as a local download on the [Software Download](#) page.

EAN-Panel Plus User Guide: (Located in the Panel Plus application in the *Help* menu) Provides descriptions of all the settings in the Panel Plus application.

### 1.2 Hardware Compatibility

Standard Ethernet network or serial connection to the SightLine hardware.

### 1.3 SightLine Software Requirements

The 3000-OEM (REV C) requires firmware 2.24.xx and higher.

**IMPORTANT:** The Panel Plus software version should match the firmware version running on the board.

### 1.4 Parameter File Description

The parameter file contains system configuration definitions for the board. The parameter file is loaded into active memory at system startup. Changes to system and configuration definitions are made via the Panel Plus software or directly with SightLine's communication protocol.

Some changes to configuration settings are made immediately in memory and are referred to as being *dynamic*. Other settings, to become active, must be first written to the parameter file and then loaded at system startup or reboot. These are referred to as being *non-dynamic*.

**Note:** Every purchased board is shipped without parameter file and is created after settings have been saved to the board. The parameter file name used is the same for all SLA boards (*param51ac9a4a.txt*).



**i IMPORTANT:** The parameter file format changed with firmware release 2.23.x.

The parameter file format can change with major releases. Some older releases of firmware may not be able to read new formats. Each version of firmware has settings which are unique to that version. It is recommended to use the same version of Panel Plus software and firmware to ensure compatibility.

**i IMPORTANT:** In troubleshooting situations, sending the parameter files to SightLine can help expedite the troubleshooting process. See the [EAN-Firmware Upgrade Utility](#) document for steps on how to download the file from the board. In some troubleshooting procedures, it may be advantageous to delete the parameter file, and then reload a copy of a known good file, or reset the board to factory defaults. Before removing the file or resetting the board, it is important to record the current network, pass-through, and camera configuration settings.

## 2 Dynamic and Non-Dynamic Configuration Settings

The Panel Plus application provides multiple ways to save settings to the parameter file. The process of saving configuration settings to the board involves taking what is currently actively loaded in memory and writing it to the parameter file. All *Save* buttons in the Panel Plus interface save settings to the parameter file, but the main menu is the primary path used to save settings to the board: *Parameters » Save to board*.

### When to save:

In most situations Panel Plus prompts the user to save or save and reboot when any settings changes are made. Much of the hardware settings changes require a save and system reboot for them to take effect, i.e., changing the lens type or swapping out a camera.

Non-hardware related setting changes used during operations in the field, i.e., changing tracking modes, overlays, and focus and zoom settings do not require a reboot. They take effect immediately and are persistent through restarts after they are saved.

It is important to understand the following guidelines when working with the parameter file and dynamic and non-dynamic configuration settings changes:

- All settings that need to be preserved through system restarts should be saved to the board.
- Most hardware and camera setup related settings are non-dynamic and require a save and system reboot before they take effect.
- Settings most often used during video processing are dynamic and take effect immediately.

Table 1 lists functions within the Panel Plus application that contain configuration settings that are dynamic and loaded into memory. They do not require a board restart.



**Table 1: Dynamic Parameter Settings (reboot not required)**

Panel Plus Dynamic Parameter Settings	Descriptions of Non-Dynamic Parameter Settings
Compression	Output options including frame size, bit rate, I-Frame interval, delivery format, streaming destination IP and Port
Video	Pan, enhancement, false color, image control, display, and stabilization
Tracking	Tracking modes, track-box size, index, and acquisition assist
Detection	Detection modes, frame step, sensitivity, background threshold, watch frames, temperature (radio metric) modes,
Recording	Start/stop video clips, snapshots, capture, display
Multi Camera	Display PiP, camera selection
Overlays	Text, lines, boxes, circles, cursor
User Palate	Allows a custom color palette for the radiometric display data
Lens	Focus and zoom
Acquisition Settings	Region of interest

Table 2 lists areas within the Panel Plus application that contain configuration setting that are non-dynamic and must be saved to the parameter file and the system restarted prior to taking effect.

**Table 2: Non-Dynamic Parameter Settings (save - reboot required)**

Non-Dynamic Parameter Settings	Descriptions of Non-Dynamic Parameter Settings
Acquisition Settings	Camera index, type, camera settings, and advanced selections and settings.
Network Settings	System level and telemetry IP addressing options
Communications	Pass-through settings and options
Lens	Lens type

**ⓘ IMPORTANT:** All settings that need to be preserved through system restarts should be saved to the board. Main menu: *Parameters* » *Save to board*.



### 3 System Level Functions

System level functions in Panel Plus are used to interact with the board. When managing a parameter file, it is important to understand if and how these functions relate to the Parameter File (Table 3 and 4). System level functions can be accessed under the Main Menu in the Panel Plus application. See also the Panel Plus User Guide (located in the Panel Plus application in the *Help* menu), which provides descriptions of all the settings.

**Note:** Specific board system level functions that relate to the parameter file can be found in the corresponding Panel Plus application.

**Table 3: Panel Plus System Level Functions that Affect the Parameter File**

Panel Plus System Level Functions	
<b>Parameters</b>	
Download	Download a copy of the Parameter File to the PC
Save to Board	Save parameters stored in memory to the Parameter File
<b>Reset</b>	
Board	Warm boot command to restart the board and therefore enable new Non-Dynamic Parameter File settings
Factory Defaults (params)	Deletes the active parameter file on the board and replaces it with default settings

**Table 4: Panel Plus System Level Functions that do not Affect the Parameter File**

Panel Plus System Level Functions	
<b>Parameters</b>	
Request All	Loads the Panel Plus settings from the saved Parameter File on the board
<b>Reset</b>	
Soft Reset	Resets most dynamic settings on the board.
<b>Configure</b>	
Time Stamp	Add time stamp to traces of commands and telemetry
Show Hidden	Toggle back on any checked/suppressed dialog boxes
Telemetry	View the telemetry monitor display
<b>View</b>	
Performance Graphs	View the performance graphs
User Warnings	Control what user warnings will be returned when conflicting options are select in Panel Plus
Telemetry	View the telemetry monitor display
<b>Help</b>	
About Board	Snapshot of the boards configuration and allows parameter and license file capturing
User Guide	On-Line users guide for the Panel Plus application



## 4 Renaming/Moving the Parameter File

The following instructions were written for the 1500-OEM, but also apply to the 3000-OEM. Additional steps for the 3000-OEM are specified.

When logging into the SLA-hardware the default username and password are *root*.

The same procedure can be done using SSH instead of the serial port. This assumes the SLA-hardware is on the network and the IP address of the unit is known. Test by using PING tools to query the SLA-hardware. If using SSH first, proceed to step 8 below.

Figure 1: Example Using SSH to Connect to SLA-Hardware

### Problem:

The 1500-OEM seems to have power, but the video does not display. Connection cannot be made over the network or the serial port.

### Analysis:

The boot cycle is not being completed. This is most likely due to a combination of settings. The solution is to interrupt the boot cycle using the serial port, rename or move the suspect parameter file to a temporary file, and then reboot the hardware.

### ❗ IMPORTANT: Before starting -

- The following procedure assumes that analog video in and out and network and serial communication were working. It also assumes that all the cables are connected properly. If these assumptions are not correct, do not proceed. Contact [Support](#) for further assistance.
- The following procedure assumes that a SLx-1500-OEM and a 1500-AB (or similar) is being used. If these assumptions are not correct, do not proceed. Contact [Support](#) further assistance.
- The 1500-AB board uses a DB-9 connector for RS-232C communication for use with a PC. Only 3 pins are used (2, 3, 5). If using a serial port that does not support the RS-232C voltage levels, do not proceed. Contact [Support](#) for further assistance.
- If you are unsure how to complete any of the steps below, do not proceed. Contact [Support](#) for further assistance.





1. Power off the 1500-OEM.
2. Connect the 1500-AB board serial port to the host PC.  
**Note:** A Null modem cable or adapter may be required.
3. On the PC, run a terminal emulator / console such as [PuTTY](#) or [TeraTerm](#) (or similar).  
**Note:** The proper baud rate for debugging is 115200.
4. Apply power to the 1500-OEM.
5. In the terminal window, on the keyboard hold the *SHIFT* key down and repeatedly press the *S* key (SHIFT+S). This should disrupt the boot process on the board.
6. In the terminal window, at the command prompt type: *boot*.

```
COM7 - PuTTY
OMAP Logic # boot
Booting from nand...

NAND read: device 0 offset 0x300000, size 0x2a0000
2752512 bytes read: OK
## Booting kernel from Legacy Image at 81000000 ...
Image Name:   Linux-3.0.0-BSP-dm37x-2.3-2SLA-s
Image Type:   ARM Linux Kernel Image (uncompressed)
Data Size:    2401260 Bytes = 2.3 MiB
Load Address: 80008000
Entry Point:  80008000
Verifying Checksum ... OK
Loading Kernel Image ... OK
OK
```

7. More text will slowly display (it varies based on error). Press the *ENTER* key to stop the VideoTrack1500.
8. The *SLA\_1500\_login:* prompt should display:
  - Login = root
  - Password = root

**Note:** Enter the login and password twice if needed.

```
route add -host 255.255.255.255 dev eth0
vidTsk_core: FPGA version = 0x0
Assuming eth0
Available Network Interfaces:
    lo
    eth0
IP = 169.254.1.180 NETMASK = 255.255.0.0
Hit ENTER to terminate the program...

SLA1500_login: █
```



## 9. Linux command prompt:

- a) Type: `ls`
- b) This will list all the files. Verify that the `param51ac9a4a.txt` is shown.
- c) For the 3000-OEM type: `mount -w -o remount /`
- d) Type: `mv param51ac9a4a.txt param51ac9a4a.backup`
- e) For the 3000-OEM type: `mount -r -o remount /`
- f) For the 3000-OEM type: `sync`
- g) Type: `reboot`

The 1500-OEM should begin the reboot cycle and start in factory default mode.

**ⓘ IMPORTANT:** When the system reboots, if there is no Analog Video In/Out or Network connectivity do not proceed further. Contact [Support](#) for further assistance.

### 4.1 Additional Tasks in U-Boot (1500-OEM only)

At the OMAP Logic # prompt (after SHIFT+S in step 5):

<code>setenv bootdelay 1</code>	# sets a delay in seconds before Linux kernel loads # setting to zero make SHIFT+S Impossible
<code>saveenv</code>	# saves u-boot args to NAND flash
<code>setenv silent 1</code>	# disable console window output
<code>setenv silent</code>	# re-enable console window output to serial
<code>setenv bootargs "run nfsboot"</code>	# boot from an NFS server rather than NAND # requires additional parameters to be set
<code>setenv bootargs "run nandboot"</code>	# boot from NAND rather than NFS Server
<code>boot</code>	# load and execute the Linux kernel
<code>printenv</code>	# shows all the u-boot args

```
COM7 - PuTTY
Hit any key to stop autoboot: 0
OMAP Logic # setenv bootdelay 1
OMAP Logic # saveenv
Saving Environment to NAND...
Erasing Nand...
Erasing at 0x260000 -- 100% complete.
Writing to Nand... done
OMAP Logic #
```

Figure 2: Changing Boot Delay in U-Boot

**⚠ CAUTION:** Use with care! In the event system becomes inoperable, the system can be recovered by creating a bootable MICROSD card. See the Support section of the SightLine web site for more information.



## 5 Questions and Additional Support

If you are still having issues and require additional support, please contact [Technical Support](#). Additional support, documentation and Engineering Application Notes (EANs) can be found on the Support pages of the SightLine Applications [website](#).