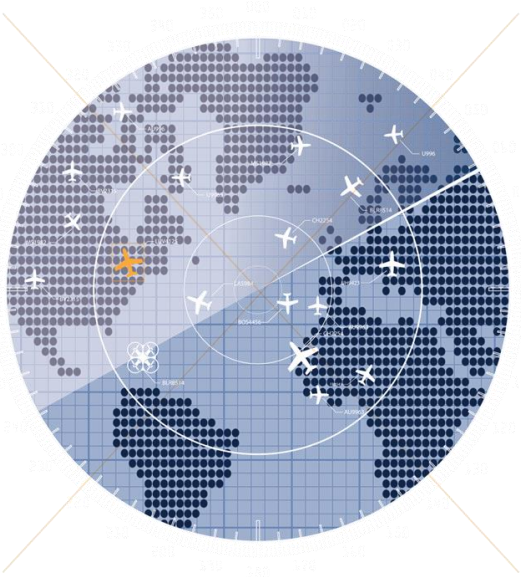
Sunhillo Technical Support Frequently Asked Questions



SUN9247, Revision 2.5 • August 8, 2023

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Contents

FAQ 1: Topic – Providing Product Information to Sunhillo Support

Question:

What product information is needed by Sunhillo's support team, and how do I get the information?

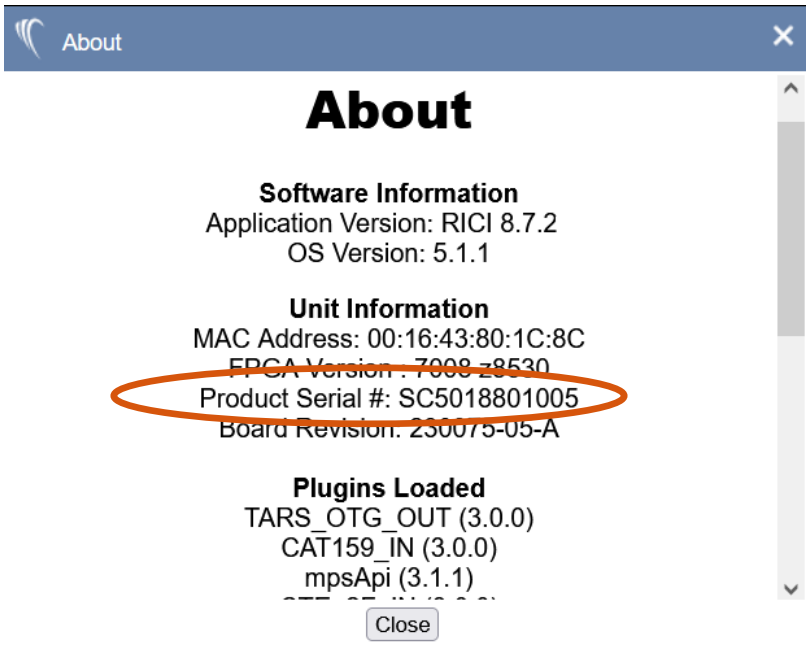
Answer:

At a minimum, the support team needs the product serial number and the system's logfile. These two items can be obtained either through the GUI or via the USB connection.

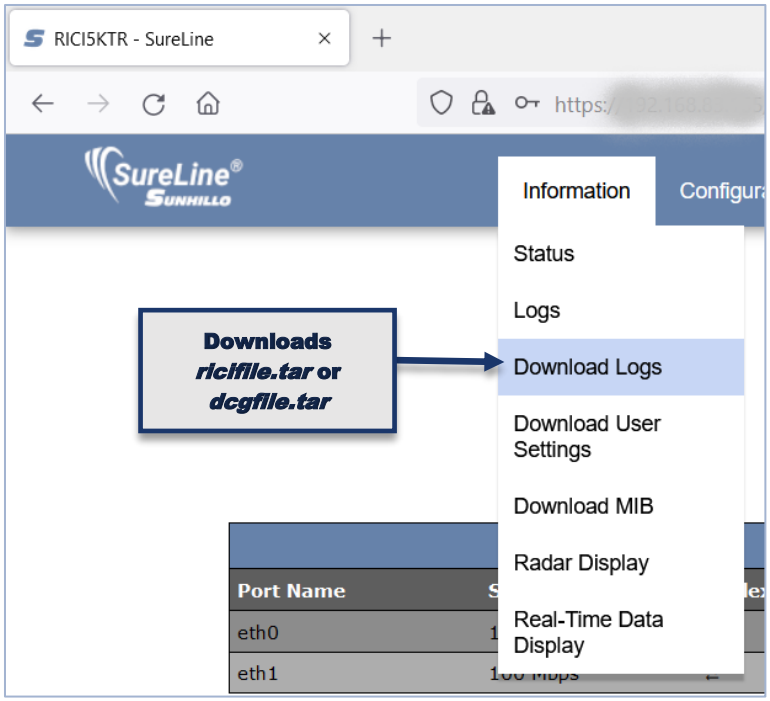
Note
The RICI 5000 and Margate II products do **not** provide USB support.

Using the GUI

The Product Serial number is located on the About page, under the **Unit Information** section. Below is an example from a RICI 5000 About page:



To obtain the log file(s), select *Information→Download Logs* from the SureLine GUI menu (as shown below). The logfile is downloaded as a tarball file to your system's Downloads directory. The filename is *ricifile.tar* for all platforms except the SGP, which is *dcgfile.tar*.



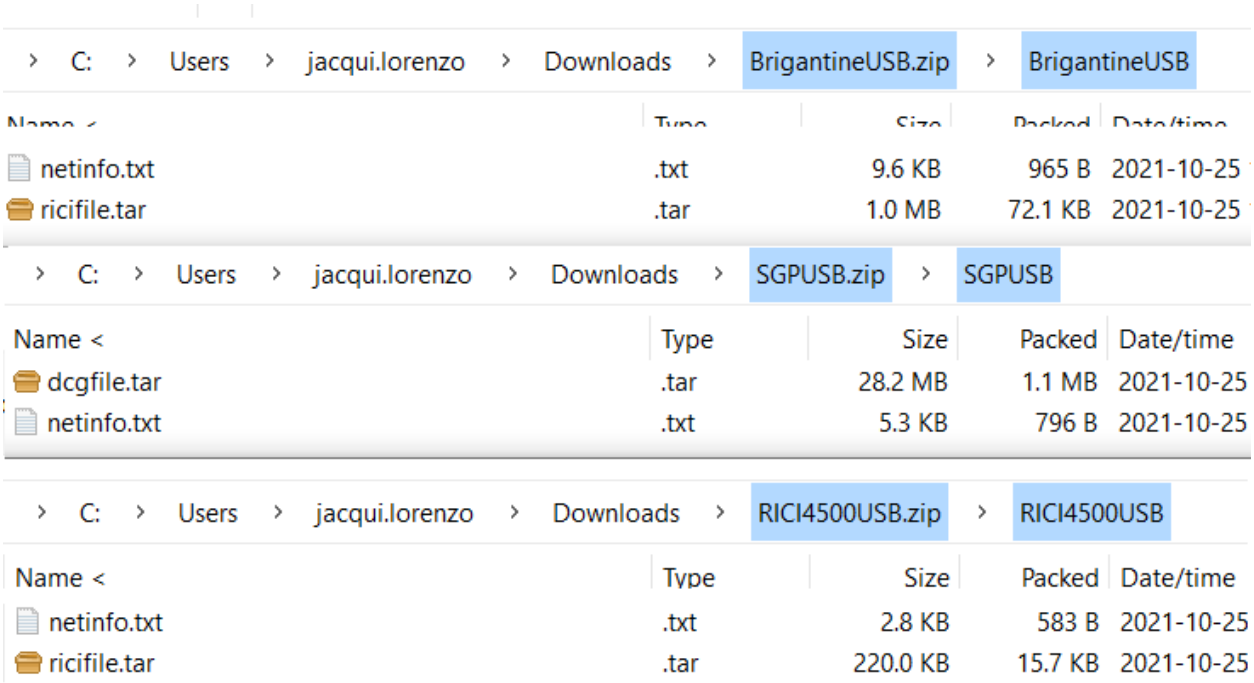
Note

The Product Serial number gets downloaded with the *.tar file. The information on how to find it using the GUI simply provides another means of obtaining this information for the Support team.

Using the USB Drive

If the *platform_#_#_#.sun* and/or **.xml* files are not present on the USB flash drive, then the USB flash drive is in “download” mode. In download mode, the log files will automatically be written to the USB flash drive once it is inserted into the USB port. The file download process takes approximately 10 seconds, at which time the USB flash drive should be removed from the USB port.

The following image depicts the USB drive files (after download) for a Brigantine, SGP, and RICI 4500 (in that order).



FAQ 2: Topic - Web GUI Signal 11

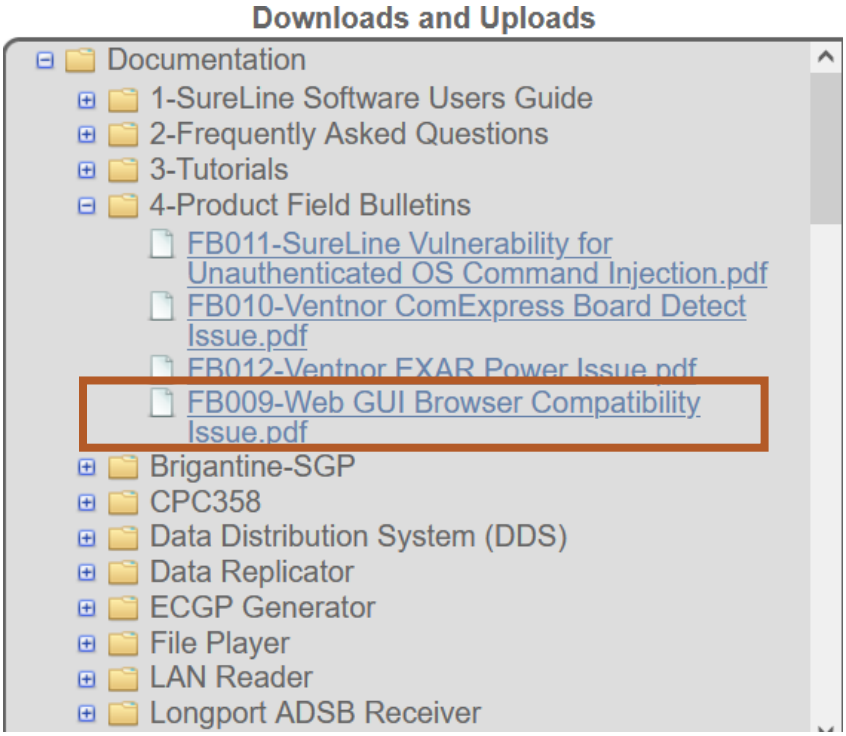
Question:

On my SureLine Web interface, when I create a dataflow, and click Save File or Save File As, I get this error on the “Web GUI: Signal 11 last debug line 0 aborting”. Why?

Answer:

Sunhillo’s SureLine software that runs on many of our products is compatible with Windows 7 through 10 and **Internet Explorer 11** and **Google Chrome version 97 or higher**. Earlier brower updates had caused an incompatibility with SureLine software’s web interface that causes many issues with our dataflow configuration functionality and with editing and saving the configuration file. Using any unsupported web browsers to create and save configurations could result in a corrupted configuration files that may be unrecoverable by normal methods without contacting Sunhillo technical support.

This issue was resolved in SureLine release v7.6.1. If you encounter this error when editing or saving your configuration on a Sunhillo product running the SureLine Web Interface or other products running a legacy Sunhillo Web Interface, please try using the following web browsers on Windows 7 or Windows 10 for best results: **Internet Explorer 11** or **Google Chrome version 97 or higher.** There is also a field bulletin for this web interface compatibility issue, *FB009-Web GUI Browser Compatibility Issue*, that is available on your support account under Downloads and Uploads → Documentation → Product Field Bulletins.



FAQ 3: Topic – Account Password not Received

Question:

I created an account, but I never received an email to setup my password. Why?

Answer:

Some email servers may block our Support Portal's automated password registration email from password@sunhillo.com, or it may end up as junk mail or spam. If you do not receive the email in a timely fashion, please contact support@sunhillo.com and we will manually resend the link to setup your account password as soon as possible.

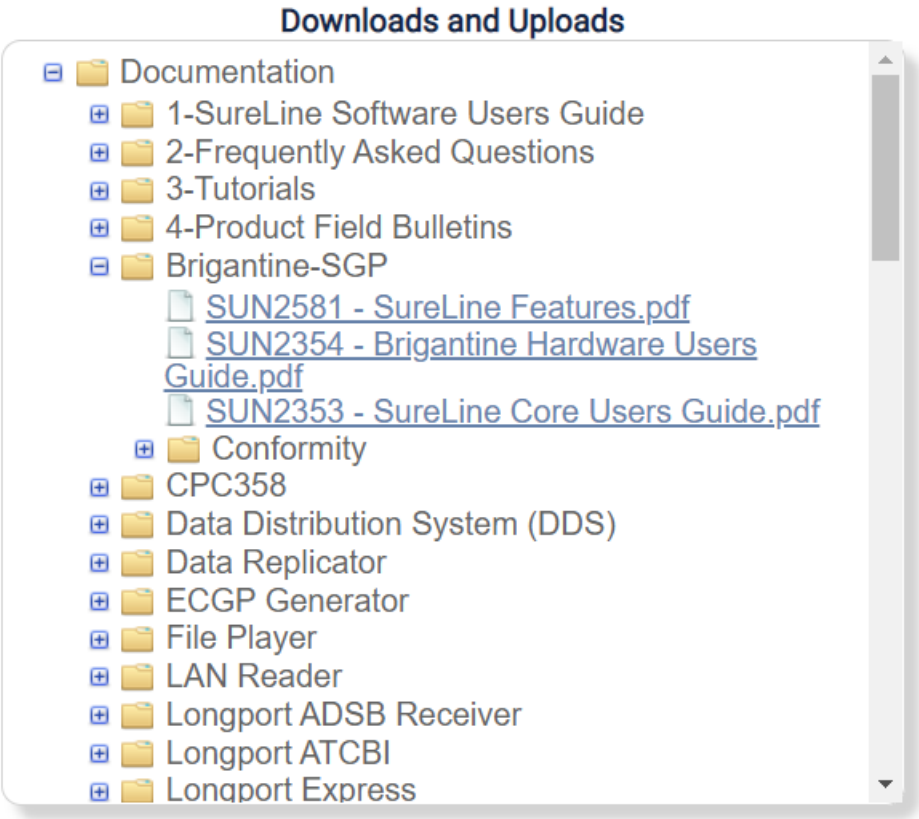
FAQ 4: Topic - Sunhillo Product Documentation

Question:

Where can I find the documentation for my Sunhillo product?

Answer:

1. Go to www.sunhillo.com/support
2. Create an account or login if you already have an account
3. Once logged in, under **Downloads and Uploads**, there is a Documentation folder and within it is a list of products. Inside each folder are links to all documentation corresponding to that product.
4. Click the appropriate link to download the documentation you need.



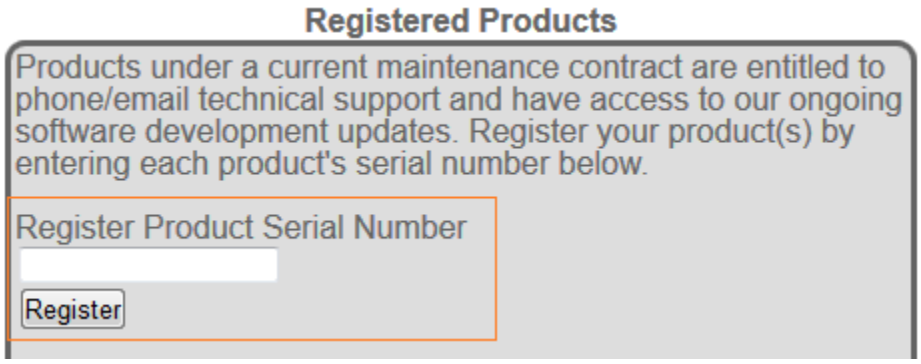
FAQ 5: Topic – Sunhillo Product Registration

Question:

How do I register my Sunhillo product on the Support Portal?

Answer:

1. Go to www.sunhillo.com/support
2. Create an account, or login if you already have an account
3. Register one of the following products by entering its serial number in this textbox:
   a. The product serial number can be found on the About page of the Web GUI for SureLine products
   b. Most, but not all, Sunhillo products can be registered through the Support Portal.



   c. The products that can be registered on the Support Portal by serial number entry are the following:

   - Brigantine-SGP
   - Longport Express
   - Longport Processor Card Module (ATCBI)
   - Longport Processor Card Module (COTS/SureLine)
   - Longport Processor Card Module (Mode 4 Interrogator)
   - Longport Processor Card Module (STARS)
   - Margate I
   - Margate II ADS-B Receiver
   - RICI
   - RICI (Mode 4 Interrogator)
   - Ventnor
   - Asbury

   d. For support for any other Sunhillo products not on this list, email support@sunhillo.com and someone will assist you with whatever you need.

FAQ 6: Topic – Registered Product is Out of Warranty

Question:

I registered my Sunhillo Product, but Its Warranty status says “Out of Warranty” and I cannot access any downloadable content such as the latest software, plugins or operating system releases. Why Not?

Answer:

You must have an active warranty or maintenance contract on all your products in order to access downloadable content such as software updates and operating system updates. You can see your warranty/maintenance status under the Registered Products area in the Warranty Status column. For extended maintenance on all your Sunhillo products, please contact sales@sunhillo.com

Registered Products

Products under a current maintenance contract are entitled to phone/email technical support and have access to our ongoing software development updates. Register your product(s) by entering each product's serial number below.

Register Product Serial Number

Register

Product Name	Serial Number	Warranty Status
Longport SureLine	ST4414041450	In Warranty until 03/13/2027
RICI	ST2112011066	In Warranty until 03/13/2027
RICI	SC0416801001	In Warranty until 03/13/2027
Ventnor	SC0517871009	In Warranty until 03/13/2027
Longport Express	ST3913081012	In Warranty until 03/13/2027
SGP	AB1831267	In Warranty until 03/28/2027
Margate II ADS-B	SC2817851001	In Warranty until 12/11/2022

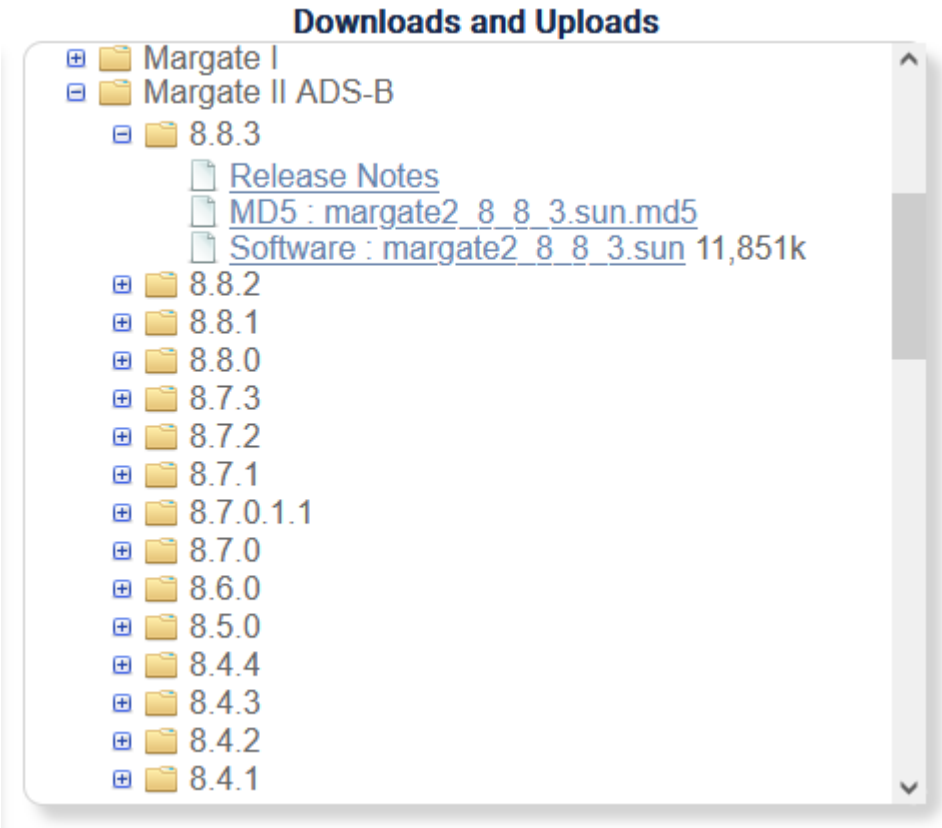
FAQ 7: Topic – Software, Plug-ins, OS Downloadable Updates

Question:

Where can I find the software, plugins, or operating system download links for updates to my in-warranty/maintenance Sunhillo product?

Answer:

1. Go to https://support.sunhillo.com
2. Create an account or login if you already have an account
3. Once logged in, under **Downloads and Uploads**, there is a list of Sunhillo products as folders. Inside each folder is the applicable download link(s) for each product.
4. Click the appropriate link to download the software you need.
5. MD5 checksum files are available for all software and operating systems for further download verification post-download from our support portal.



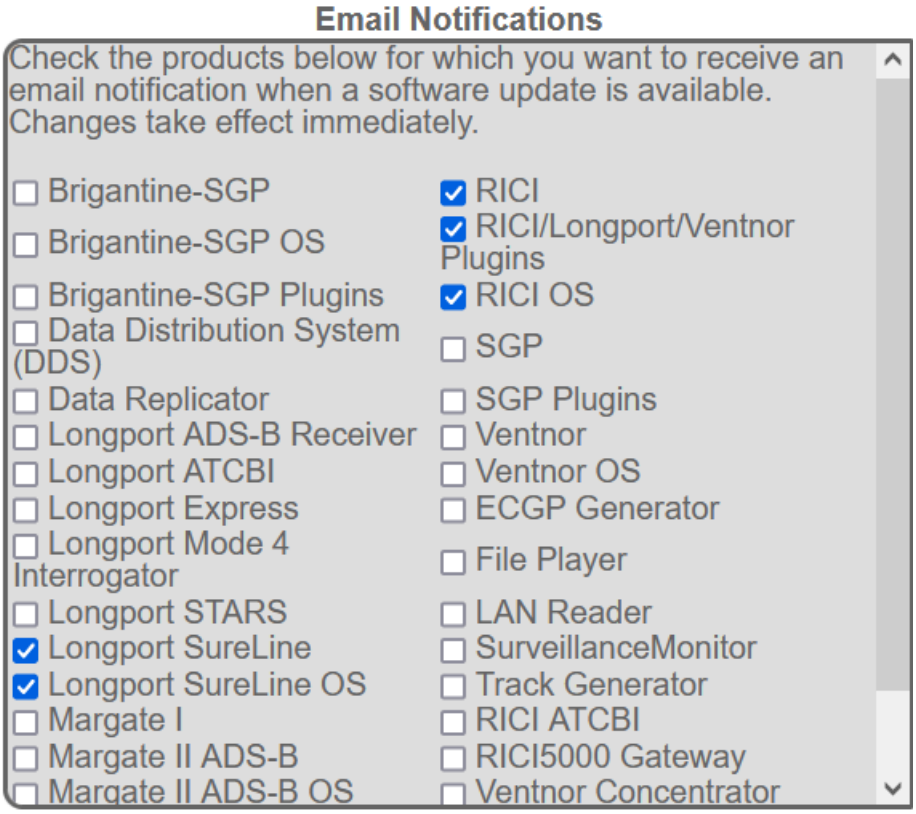
FAQ 8: Topic – New Software Release Notification

Question:

How would I know when a new release is available on the Sunhillo Support Portal for download for my Sunhillo product?

Answer:

1. Go to https://support.sunhillo.com
2. Create an account or login if you already have an account
3. Once logged in, under Email Notifications, there is a list of products with checkboxes. Select those products you wish to receive email notifications about.



4. Look for emails from webmaster@sunhillo.com about new releases available on the Sunhillo Support Portal for download.
5. If you have a product not listed and would like information about it, please contact support@sunhillo.com

FAQ 9: Topic – Uploading Customer Files to Sunhillo Support Portal

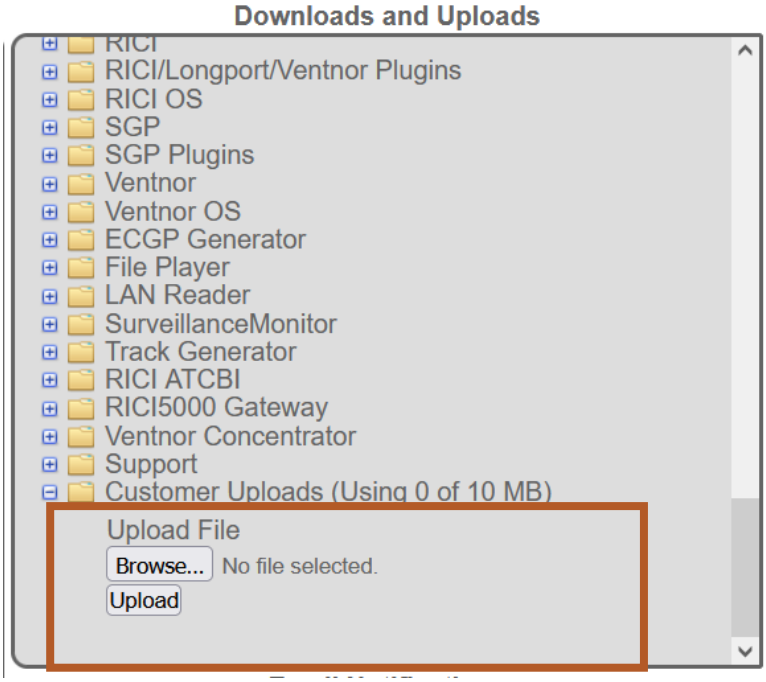
Question:

I need to upload files to Sunhillo. Is there a place on my Support Portal account where I can do that?

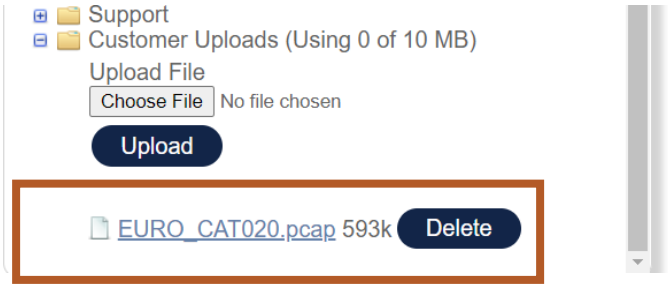
Answer:

Yes, there is. Under Downloads and Uploads, there is a folder titled “Customer Uploads” where you can upload files up to 10 MB by default. If you need more space, please contact support@sunhillo.com and we can increase your account’s upload area quota as needed.

For security reasons, the upload data is encrypted.



Once the file has been successfully uploaded, the Web page will refresh and your file(s) will be listed under the Customer Uploads folder.



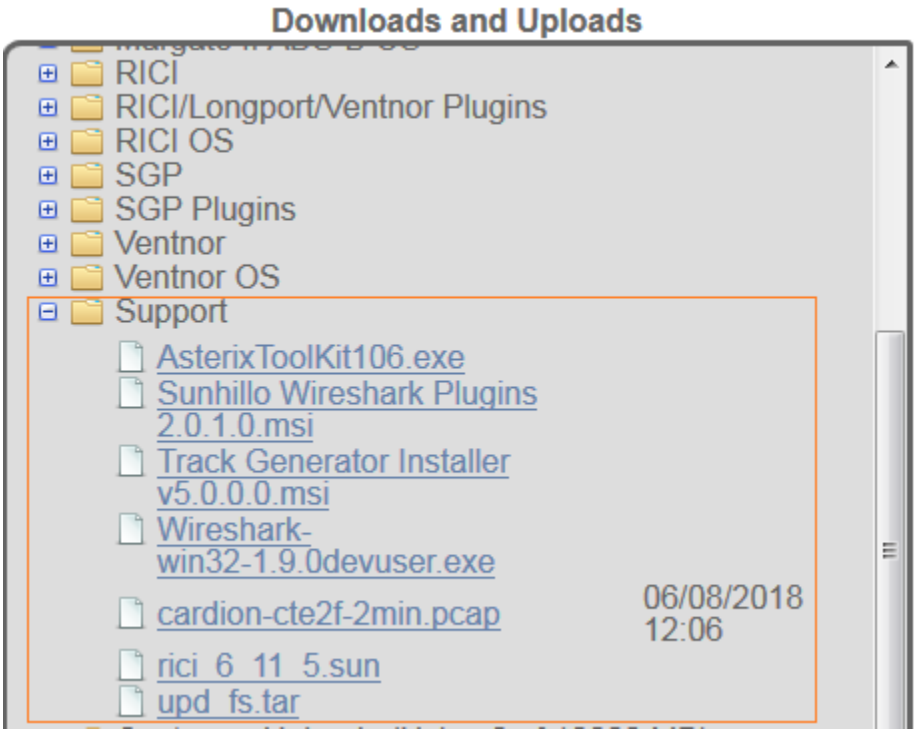
FAQ 10: Topic – How to Download Files from Sunhillo Support Portal

Question:

I need to download files from Sunhillo on my Support Portal. Is there a place on my Support Portal account where I can do that?

Answer:

Yes, there is. Under Downloads and Uploads, there is a folder titled “Support” where you can download files, we have placed there for you. You should receive email notifications when Sunhillo’s support staff has provided you files in your Support folder.



FAQ 11: Topic - Serial Port Pinouts

Question:

Where can I find the pinout diagram for my Sunhillo Product's serial ports?

Answer:

Each product's specific pinout diagram is in the product's hardware user's guide which is available for download on the Support Portal. Create an account, login, and download the hardware user's guide to find the pinout diagram for your Sunhillo product.

FAQ 12: Topic – SureLine Serial Protocols and Radar Conversions

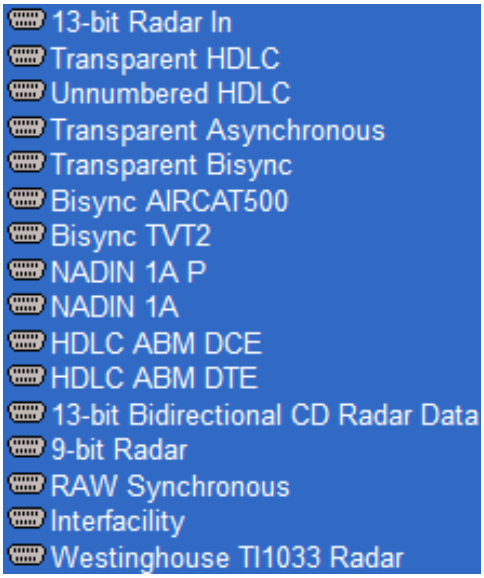
Question:

What Serial protocols and radar conversions are supported on Sunhillo SureLine products?

Answer:

The specific serial protocols supported on RICI/Longport/Ventnor are shown below. For more information on how these work with Sunhillo products, please reference *SUN2353 - SureLine User's Guide* or contact support@sunhillo.com

SureLine Serial Protocols



The SureLine product datasheet contains a conversion chart found on Sunhillo's website that summarizes the radar conversions supported on SureLine products. Sunhillo is continually adding conversion support and offers custom conversions as an offering. For more information on custom conversions, please contact support@sunhillo.com

Here is a link to the SureLine Software Product Datasheet on Sunhillo's website: SureLine Datasheet.

FAQ 13: Topic – COTS vs. STARS Ethernet Switch Module

Question:

What Is the difference between a Longport STARS Ethernet Switch Module (ESM) and a Longport COTS ESM?

Answer:

A Longport STARS ESM has a single VLAN across all 4 Ethernet ports that map to eth0 only. This switch is meant to be used with Longport STARS processor card modules only; a Longport COTS ESM has 2 VLANS where the top 2 physical ports map to the eth0 LAN and the bottom 2 physical ports map to the eth1 LAN. This switch configuration is meant to be used with Longport ATCBI/COTS/SureLine processor card modules only. It should also be noted that the switch configuration can only be changed at Sunhillo's facility, and not in the field.

FAQ 14: Topic – Purpose of Maintenance Port on Longport ESM

Question:

Should I log into the Eth5 Maintenance Port on the front of The Longport Ethernet Switch Module for configuration or connect it to live data connections?

Answer:

No, you should not use it to configure or for live data connections. It is a spanning port and its only reliable purpose is for network monitoring of the Longport switch via Wireshark. It should not be relied on for individual PCM Web GUI access, or for live data connections. Do not connect this Eth5 maintenance port to your routers/switches/hubs for permanent field use cases!

FAQ 15: Topic – ADS-B Receiver Antenna Cable

Question:

What type of antenna cable is best to use with Sunhillo's ADS-B Receiver products (Margate II / Longport ADS-B Receiver) ?

Answer:

We have tested with numerous types of cables and found that LMR600 in lengths up to 200 ft. work best with our products. We offer this cable with length options from 50 ft. to 200 ft. and an antenna kit as an additional option to our Longport and Margate II ADS-B Receiver products.

FAQ 16: Topic – How to Login to Sunhillo Product when Unable to Access Web GUI

Question:

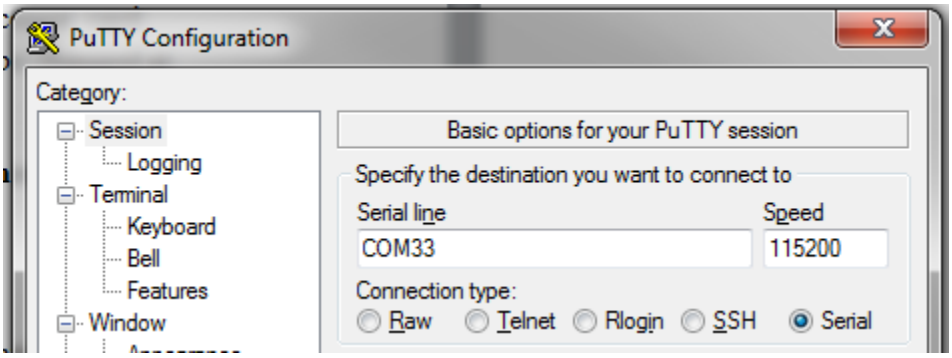
I cannot access the Web GUI of my SureLine product and don't know its network settings or IP address. How do I perform a factory reset to log in?

Answer:

The factory reset button feature commonly found for SureLine products ended with the introduction of the RICI4500. The RICI4500 and Longport PCM do still have a **Reset** button, but it only performs a reboot when depressed with an engineering paperclip, and no longer resets the unit to factory default network settings as previous products such as the RICI 4300 used to support. The removal of a factory reset button feature is due to ongoing security initiatives for all Sunhillo product lines.

A different feature is now supported to enable you to access your SureLine device using STUI (Sunhillo's Terminal User Interface). STUI is accessible via a USB to mini-USB cable. The PC can communicate with the unit through this cable using an application like **puTTY** where Serial Line (COM33 in this case) is dependent on your PC's COM port settings in the Control Panel and the Speed is always 115200 for this interface:

Putty Setup Example for STUI access



Once logged into STUI using the default user credentials of **username:Admin password:Sunhillo**, there will be a text-based user interface where a limited set of configuration options similar to what can be found on the Web GUI can be configured and saved here, including the network settings. The SGP product does not support STUI but can be accessed via SSH or local terminal on the SGP GUI and the default login is:
Username: root
Password: sunhillo.

For more information on STUI, please refer to *SUN2353 – SureLine User's Guide*, which can be found on the Sunhillo Support Portal in the ***Documentation*** folder.

FAQ 17: Topic – FTDI Driver Downloads

Question:

Where do I get the FTDI drivers for the console cable for connecting to Sunhillo Products such as RICI 4500, RICI 5000, Longport PCM, Ventnor, Brigantine, Margate I M4I, And the Margate II ADS-B Receiver?

Answer:

The latest FTDI drivers will normally install when you connect the cable either from the OS natively or from the internet but in the case this does not occur, here is the link to FTDI's website for their driver support: https://ftdichip.com/drivers/d2xx-drivers.

FAQ 18: Topic – Operating System Upgrades and Application Software Pairing

Question:

How do I know what Operating System and what software releases go together and how do I upgrade to the next SureLine Operating System to use the latest software?

Answer:

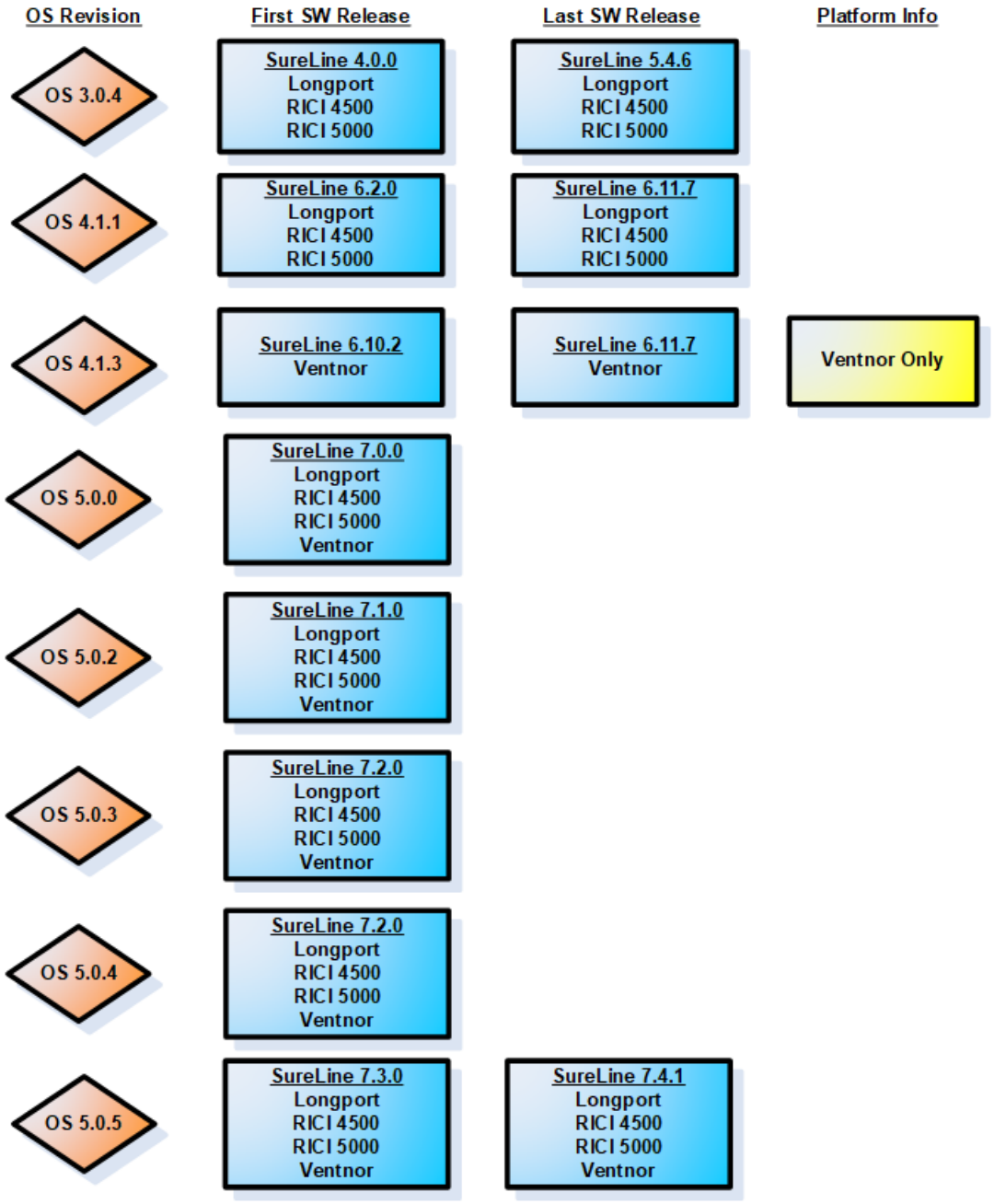
Every SureLine operating system has release notes in the download area that includes a SureLine operating system upgrade path for the applicable SureLine software release. Each SureLine operating system series has a debut software release and a SureLine operating system upgrade path release often required to migrate up to the next SureLine operating system and software revision as we add features and release new products. SureLine operating systems come with a SureLine software release embedded within it and subsequent SureLine software releases can be installed as they become available in that SureLine operating system series until the next SureLine operating system becomes available and a new series begins. At that time, a new SureLine operating system upgrade path release will become available for download.

Each SureLine OS release applies to a set of board revisions and is listed within the name of the .sop SureLine OS filename which is downloaded from the Support Portal. Board revisions are listed on the About page of SureLine products. Make sure the SureLine OS you install on your SureLine product matches the supported board revision(s) of that SureLine OS package. The SureLine OS release notes include the prerequisite SureLine OS and SureLine software that must be installed prior to upgrading the SureLine OS via the Web GUI Flash OS feature.

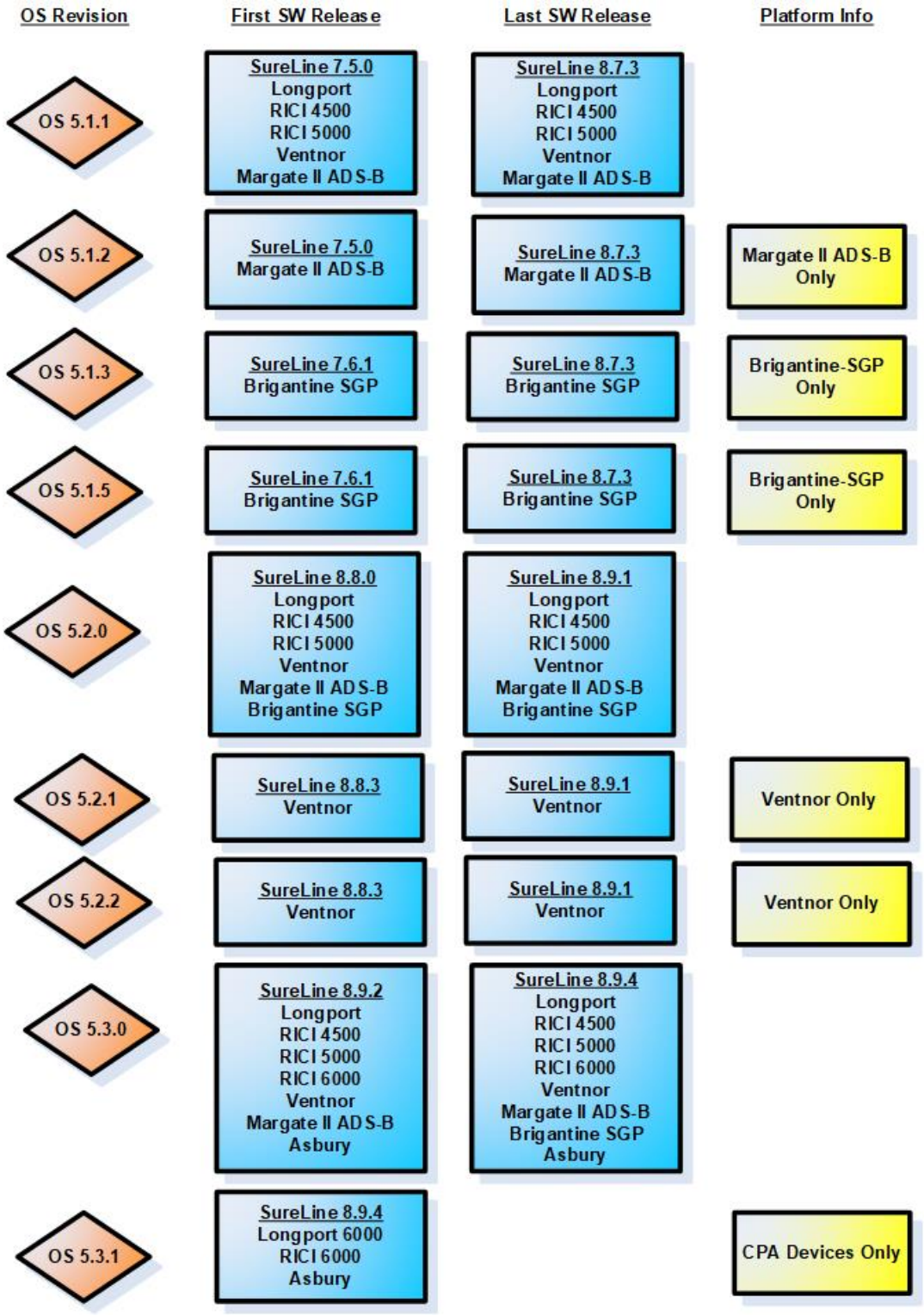
Running newer software on an older OS may cause software compatibility issues and is not recommended because the SureLine software may be expecting features within the latest SureLine OS to function properly that aren't present in the older SureLine OS. It is always recommended to install the latest SureLine OS and SureLine software pair and then upgrade the software once on the latest operating system is installed on your SureLine product.

The following graphics depict the SureLine software series from the first software release to the latest software release for each SureLine OS revision before an OS update is required. The OS upgrade path prerequisites are in the OS release notes and it is not always necessary to upgrade incrementally. For example, one can upgrade from OS 4.1.1/SW 6.11.7 directly to OS 5.1.X and skip over the OS 5.0.X revisions.

Detailed instructions for updating to the latest OS can be found on page 23 (immediately after the OS upgrade graphics).



OS Upgrade Path (pre-OS 5.1.1 versions)



OS Upgrade Path (OS 5.1.1+ versions)

The following instructions are for upgrading to the latest SureLine devices using its Web GUI:

1) Update to SureLine version 5.4.6 via Upload Data on the Web GUI and reboot
2) For RICI and Longport, flash OS 4.1.1- SW 6.11.8 via Flash OS on the Web GUI. For Ventnor, flash OS 4.1.3-SW 6.10.2 via Flash OS on the Web GUI.

Note

You can go from Step 2 to Step 5 (skipping steps 3 & 4) if desired.

3) Flash OS to OS 5.1.1 - SW 8.1.0 via Flash OS menu (optional step)
4) Update to SureLine v8.7.1 via Upload Data on the Web GUI and reboot (optional step)
5) Flash OS to OS 5.2.0 - SW 8.8.0 via Flash OS on the Web GUI
6) Update to SureLine v8.8.X via Upload Data on the Web GUI and reboot

Web Browser Note

Use Internet Explorer 11 or Google Chrome v97 or higher. Clear cache and cookies, and close/reopen the browser after each step for best results.

Compatible plugin versions per OS/SW revision are:

- Plugin v1.X.X - OS 3.0.4/SW 5.4.6 up to OS 4.X.X/SW 6.2.1
- Plugin v 2.X.X - OS 4.X.X/SW 6.3.0 up to OS 4.X.X/SW 6.11.8
- Plugin v 3.X.X - OS 5.X.X/SW 7.0.0 up to current OS/SW

FAQ 19: Topic – Sunhillo Single Sensor Tracker and Multi-Track Fuser Operation

Question:

How does Sunhillo's SureLine Single Sensor Tracker (SST) and Multi-Track Fuser (MTF) package work?

Answer:

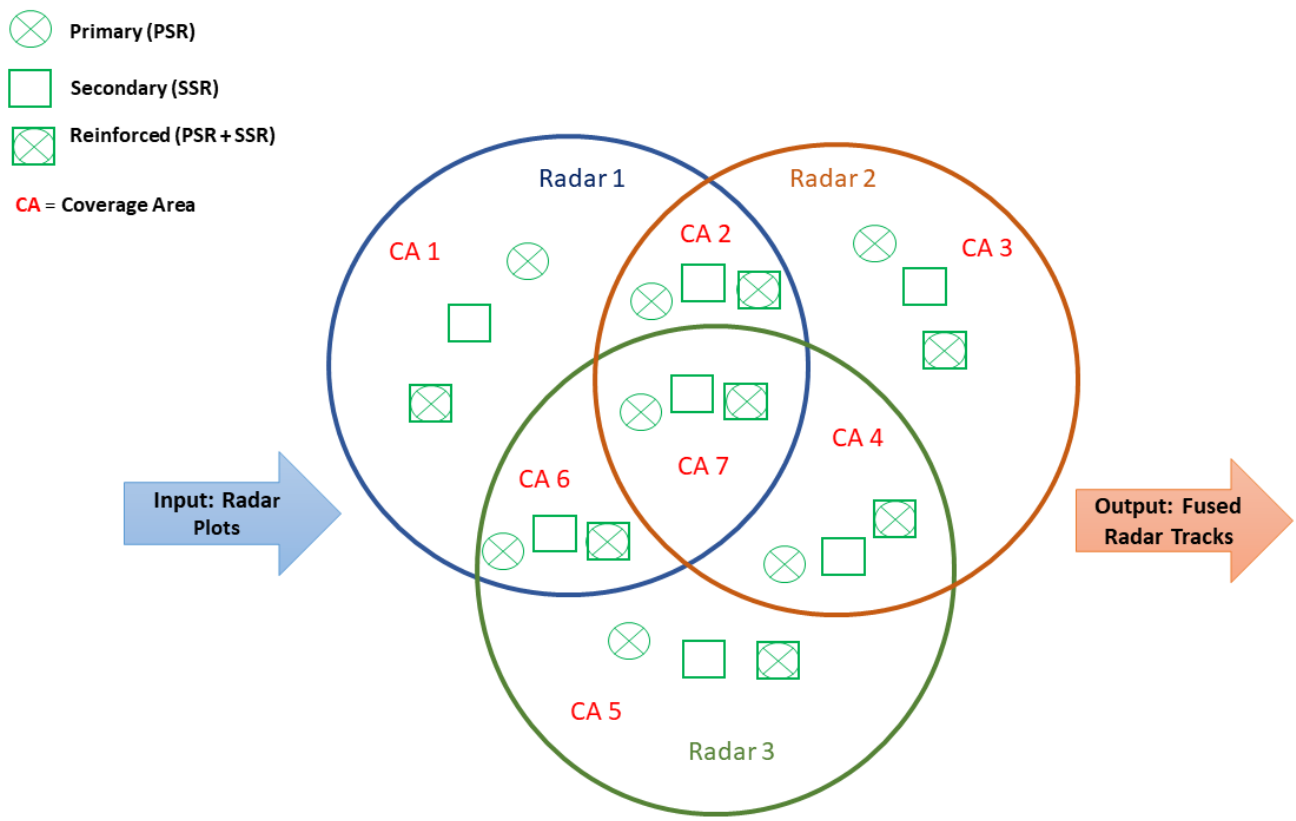
SureLine supports many radar Plot PSR, SSR, and PSR+SSR input formats ***to*** the SST and MTF including:

- AIRCAT 500
- ASTERIX CAT001/048/159
- ASR-9
- CD-1
- MAR-1
- ARSR-4
- Selenia
- TPS-70 13-bit
- TPS-75
- TSR-07C

Converserly, it supports numerous Track radar outputs ***from*** the SST and MTF, such as:

- XML SDO
- ASTERIX CAT021/033/062
- Comma-separated Values (CSV)

For a graphical depiction of the interoperation between SST and MTF, see the diagram on the next page.



Coverage Areas 1, 3 and 5 on Radars 1, 2 and 3 see only these three targets. SST converts three plots to three tracks: PSR track, SSR track and SSR+PSR (reinforced) track. MTF does **not** fuse these three because only one radar sees these targets and there are no duplicate radar reports.

Coverage Area 2 = Radar 1 and Radar 2; both see these three targets. SST converts all three plots to three tracks for Radar 1 and Radar 2 for a total of six targets. MTF receives these ***six*** targets, checks which Radar location (preconfigured latitude/longitude location of radar) is closest to these six targets and outputs only three tracks rather than six tracks. Thus, multi-track fusing its input to the clear output feed for situational awareness displays or systems.

Area 7 = Radars 1, 2 and 3; all three radars see these three targets. SST converts all three plots to three tracks for all three radars for a total of nine targets. MTF receives these ***nine*** targets, checks which Radar location (preconfigured latitude/longitude location of radar) is closest to these nine targets and outputs only three tracks rather than nine tracks. Thus, multi-track fusing its input to the clear output feed for situational awareness displays or systems.

FAQ 20: Topic – Dataflow Configuration Parameter Descriptions

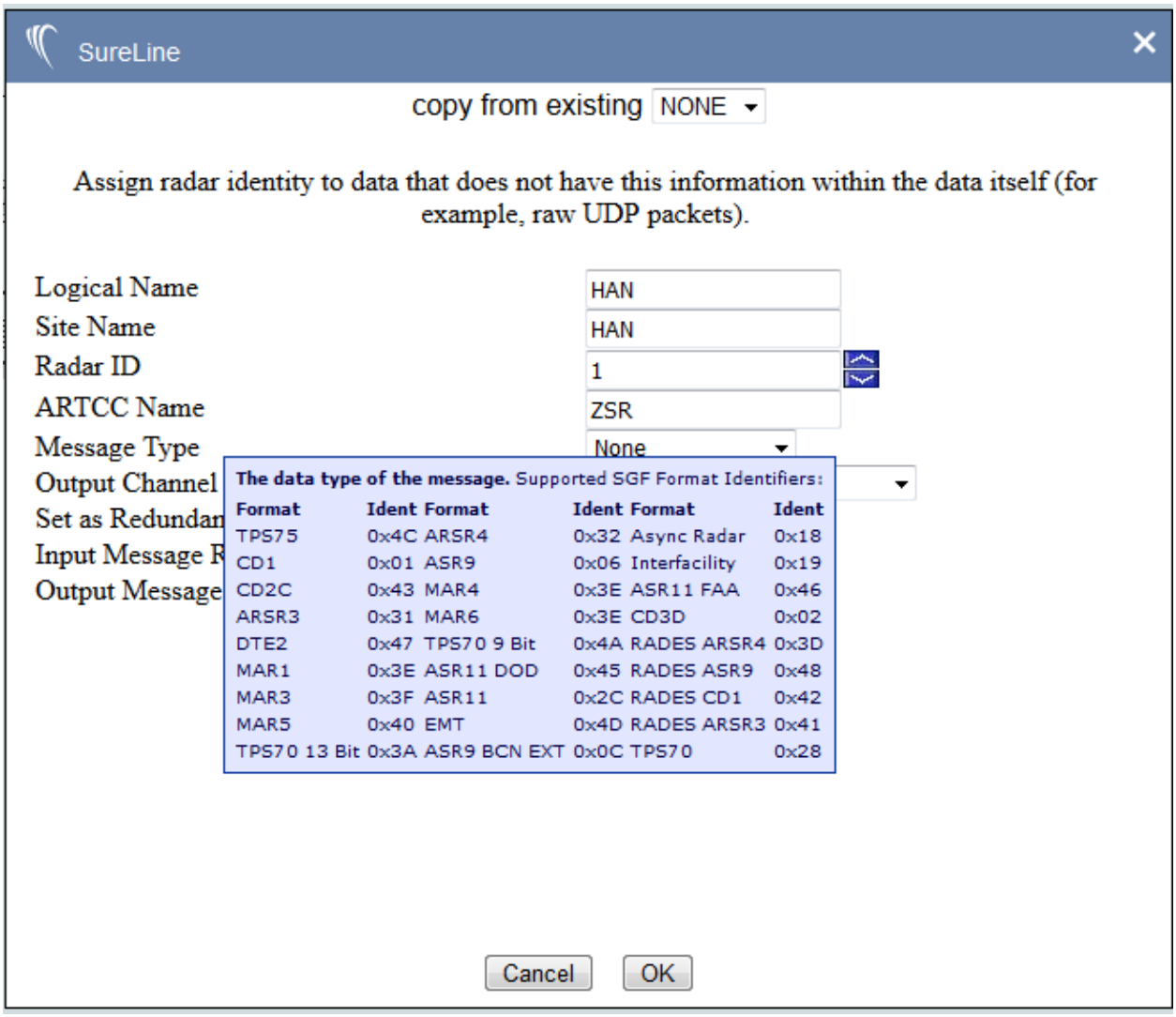
Question:

How do I know what all the SureLine dataflow configuration parameters do since they are not all in *SUN2353 - SureLine User's Guide*?

Answer:

When you open a node in the dataflow to set its configuration parameters, you can hover over each parameter and a tooltip appears that gives more information on the purpose or definition of the configuration parameter. If this is still not enough information, please contact support@sunhillo.com with your specific node and configuration parameter in question and we will be happy to help explain how configuration parameter works for your dataflow.

Tooltip Example



FAQ 21: Topic – Margate II ADS-B Receiver Time Sync

Question:

How does the Margate II ADS-B Receiver synchronize time?

Answer:

It is best to use Global Positioning System (GPS) for timestamping accuracy with the Margate II ADS-B Receiver. Without a GPS present and functioning, setting up the product with a valid Network Time Protocol (NTP) server is strongly recommended for good accuracy results (though not as good as GPS).

Without a GPS, NTP can be up to 150 milliseconds off plus any latency through the Sunhillo product, which is minimal (approximately 2 milliseconds). Without both GPS or NTP, the latency can be off by quite a bit because the only timestamping source is the system time set by the user through the Web GUI, which may or may not be accurate.

FAQ 22: Topic – UDP Unicast, Multicast and Broadcast Send/Receive in SureLine

Question:

How do I send/receive unicast, multicast, or broadcast UDP data in SureLine?

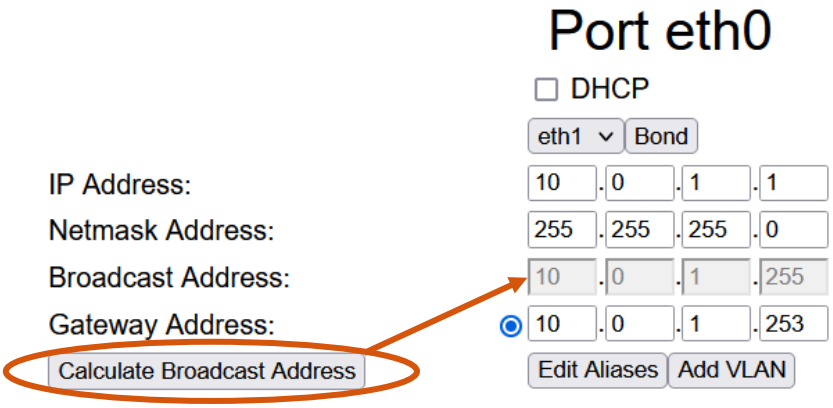
Answer:

The Ethernet UDP/Multicast node has evolved over time and, while it is titled "UDP/*Multicast*", this same node is used for transmitting/receiving multicast, unicast, **and** broadcast data.

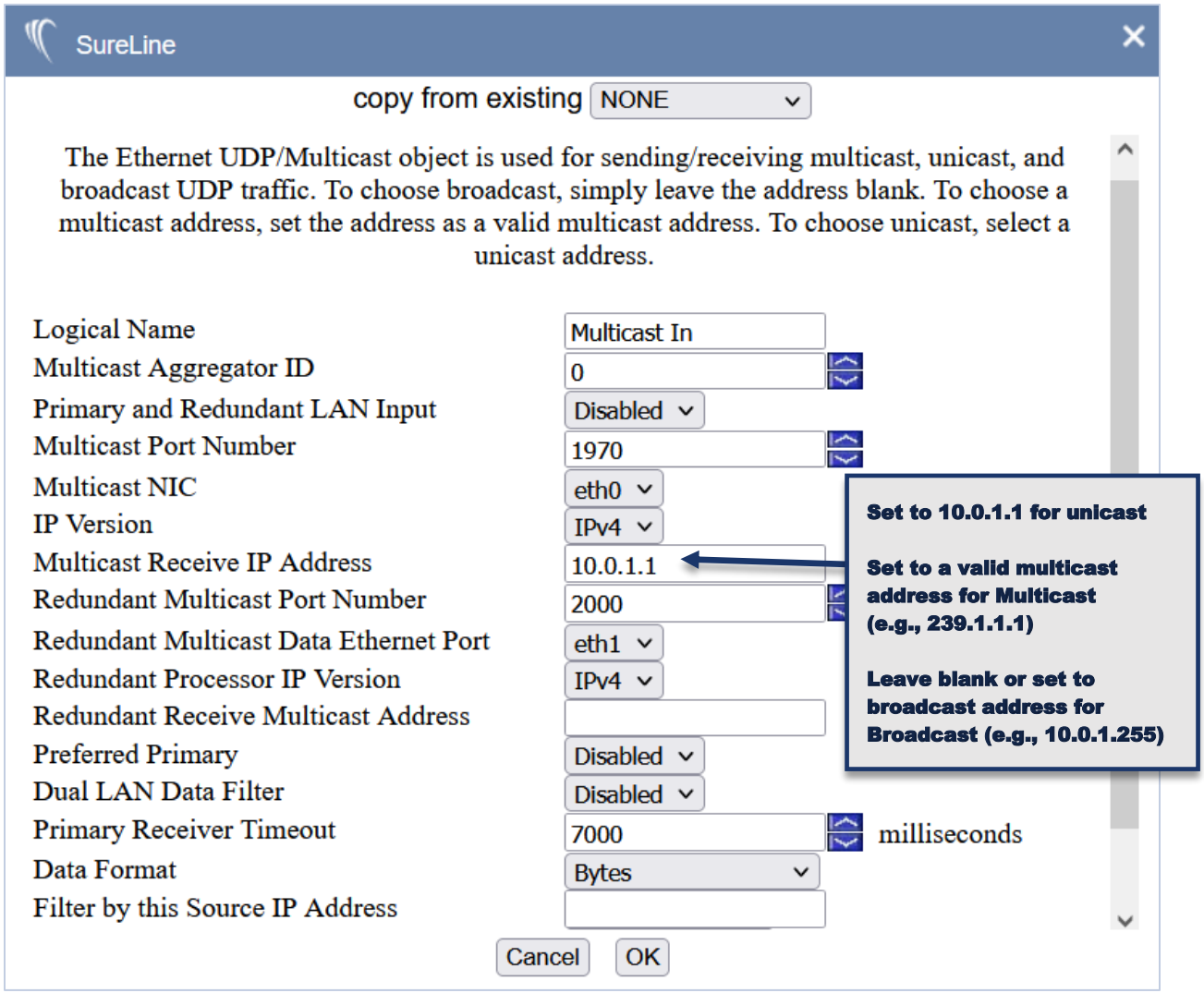
The type of UDP transmission or receipt is set by simply configuring this node's ***Multicast IP*** (transmitting) or ***Multicast Receive IP*** (receiving) parameter to a valid multicast, unicast, or broadcast IP address. Note that for broadcast UDP, you can also leave this parameter's entry blank.

As an example (for unicast), if your Eth0 IP address is 10.0.1.1, then the **Multicast Receive IP Address** parameter in the *Ethernet UDP/Multicast* node must be set to 10.0.1.1. If multiple unicast streams are required, then any additional Ethernet UDP/Multicast nodes must also have their **Multicast Receive IP Address** parameter set to 10.0.1.1; however, each **Multicast Port Number** parameter ***must be unique***.

For Broadcast or Multicast, set the **Multicast Receive IP Address** parameter in the *Ethernet UDP/Multicast* node to a valid broadcast/multicast address. Consult with your Network Administrator to obtain the valid addresses. Your unit's Broadcast address can also be found by the clicking the **Calculate Broadcast Address** button of the associated Ethernet port on the GUI's *Network Configuration* page.



An example of the configuration settings for an Ethernet UDP/Multicast node is shown on the following page.



Note

For ***transmitting*** unicast data using the Eth0 IP address of 10.0.1.1 example, set the **Multicast IP** parameter to 10.0.1.1 in the ***output*** *Ethernet UDP/Multicast* node. The **Multicast Port Number** parameter is used for both transmitting and receiving data and must also be unique for data transmission.

For Broadcast or Multicast transmission, set the **Multicast IP** parameter to a valid multicast/broadcast address (or you can also leave this blank for broadcast).

FAQ 23: Topic – Brigantine SFP+ Modules Supported

Question:

What type of SFP+ modules are supported in the Brigantine product?

Answer:

In general, any basic 10GB SFP+ module should work in Brigantine. Customers should be aware that most 10GB SFP+ modules are compatible, while most 1GB modules are not. It is recommended that a 10G interface type be used. The end user will have to choose the external media type (fiber or copper).

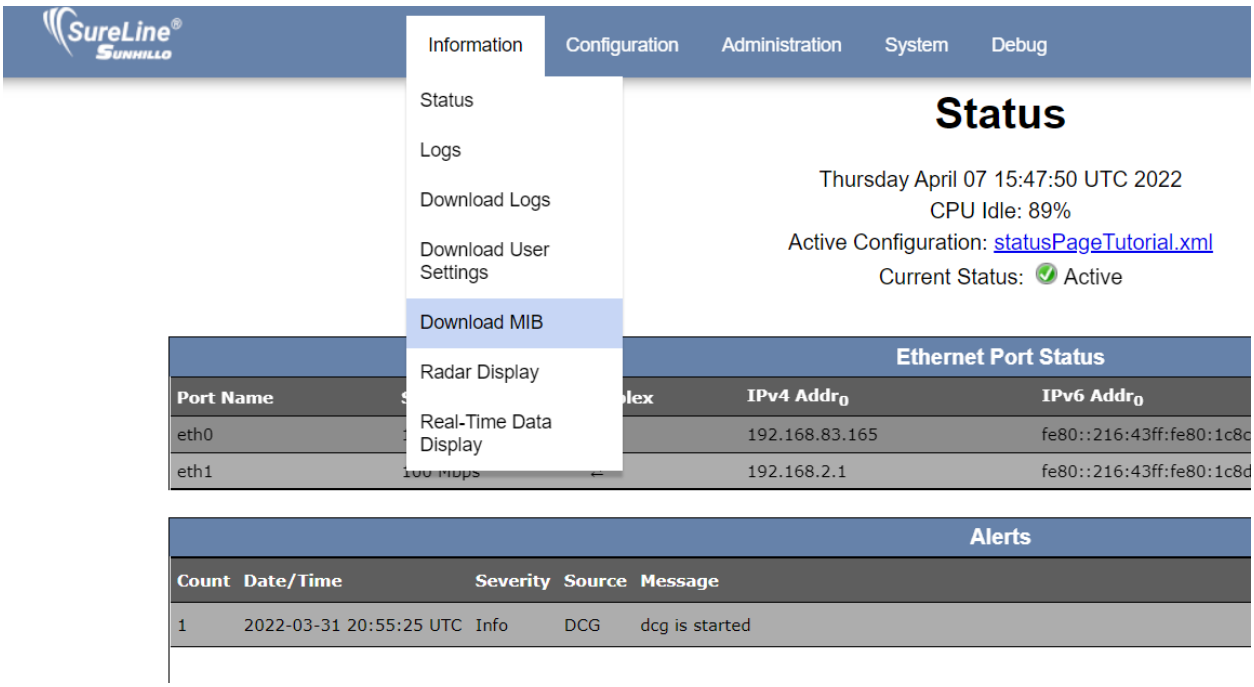
FAQ 24: Topic – Accessing the SNMP MIB with iReasoning

Question:

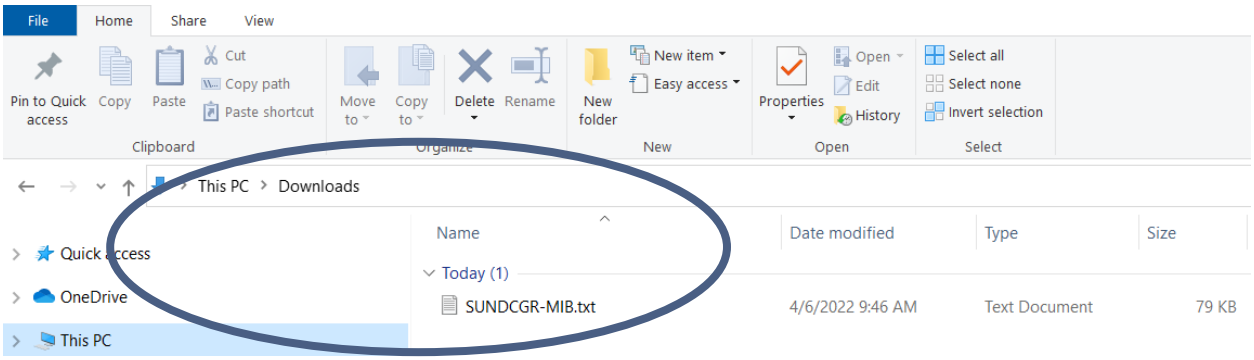
How do I access SureLine's SNMP MIB using the iReasoning MIB browser software tool?

Answer:

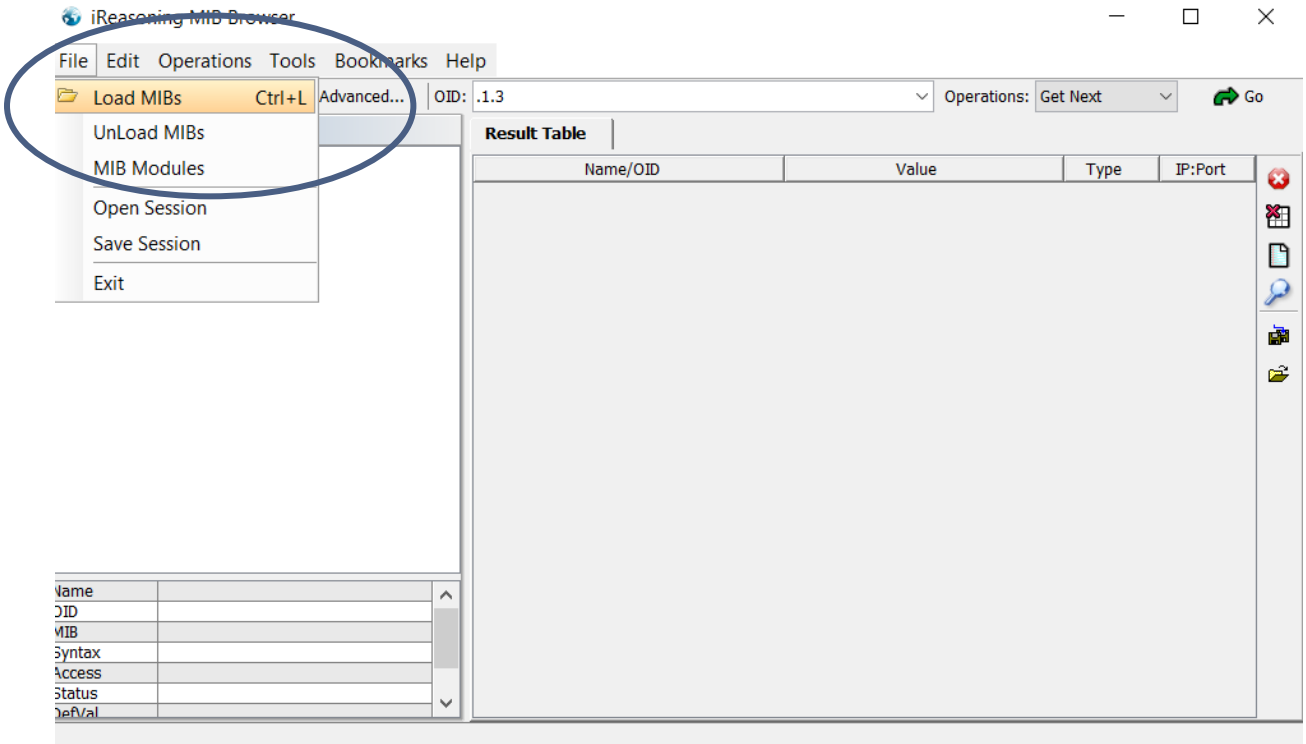
The SureLine SNMP MIB needs to first be downloaded from your Sunhillo product to your local PC. This is done using the WebGUI interface by selecting "Download MIB" from the **Information** menu.



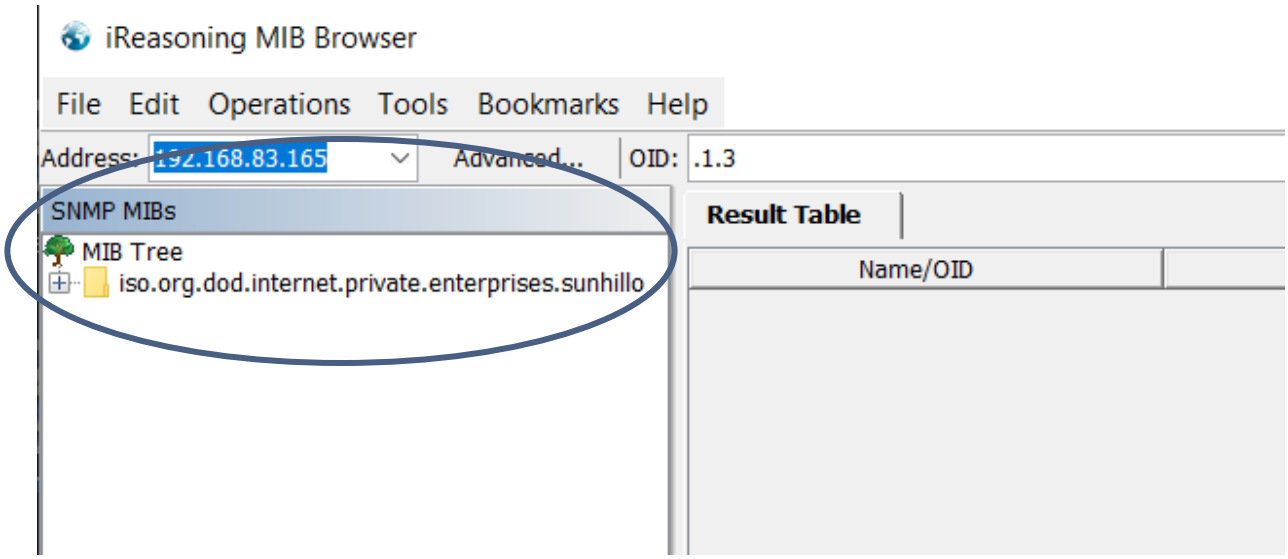
The MIB file, *SUNDCGR-MIB.txt*, is downloaded to your computer's **Downloads** directory.



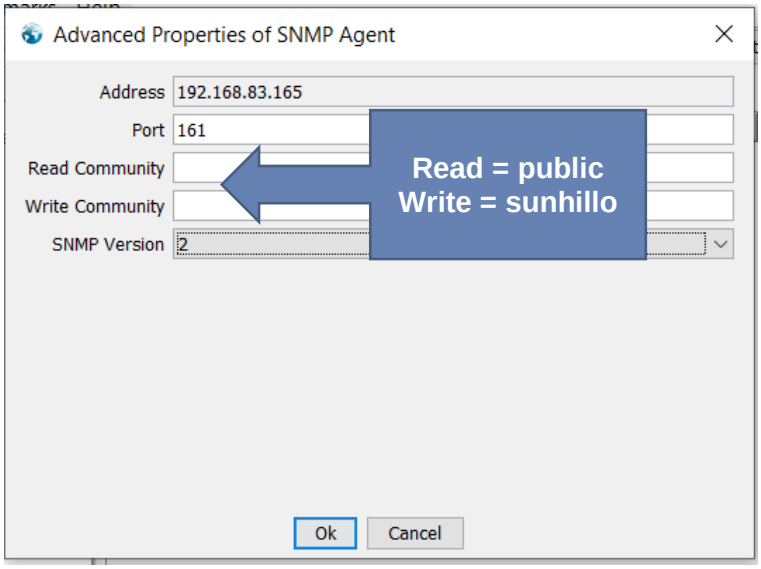
In the iReasoning MIB browser software tool, select “Load MIBs” from the File menu dropdown and load the *SUNDCGR-MIB.txt* file.



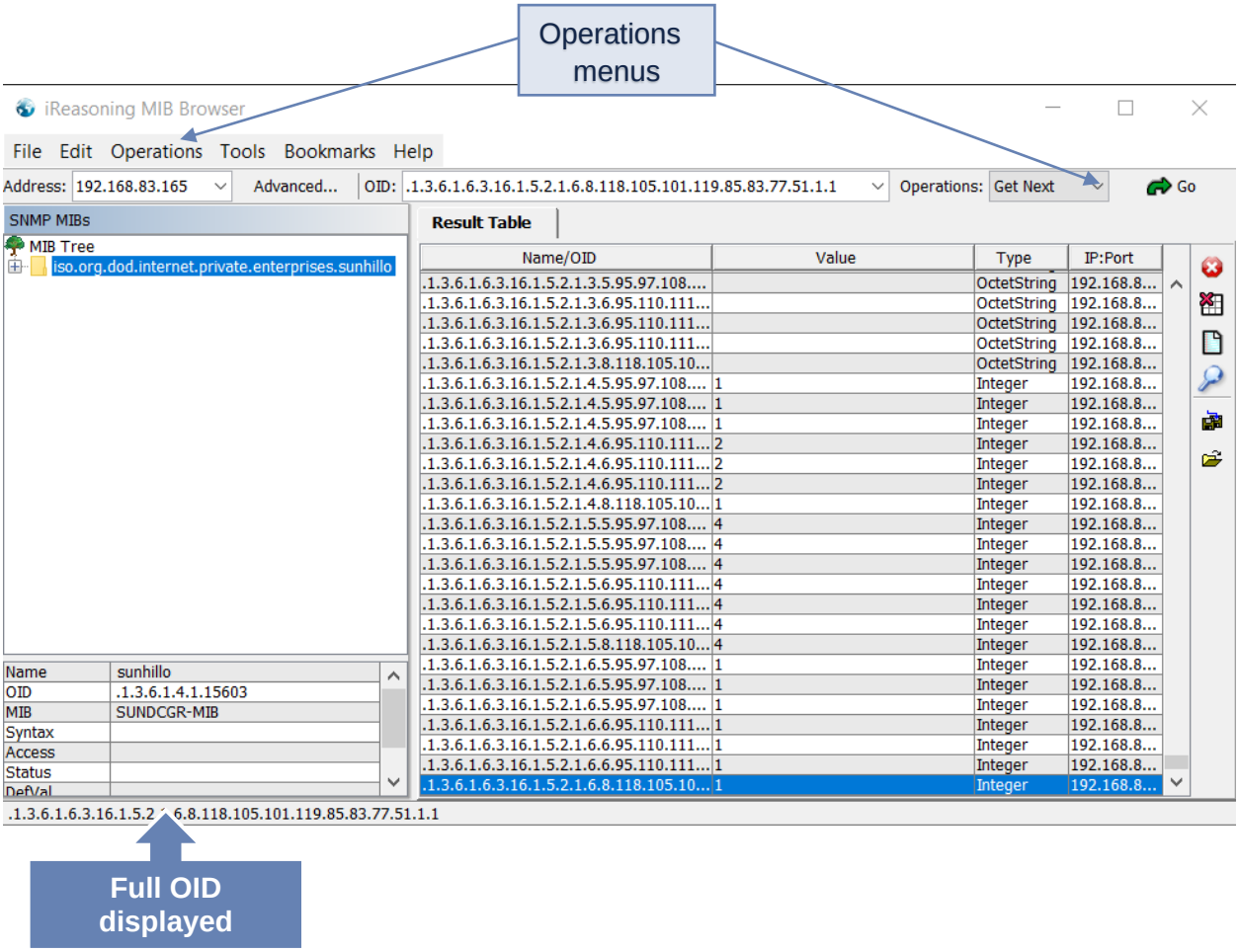
The SureLine MIB now appears in the **SNMP MIBs** window.



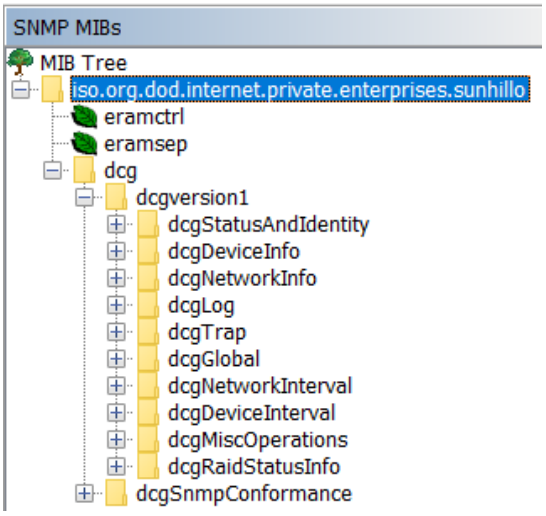
Click on the **Advanced** tab and enter the following *Read/Write Community* strings:



To verify that the MIB is properly loaded, walk the MIB by selecting “Walk” from either of the **Operations** dropdown menus. Once complete, the full OID will appear in the bottom left of the iReasoning window.



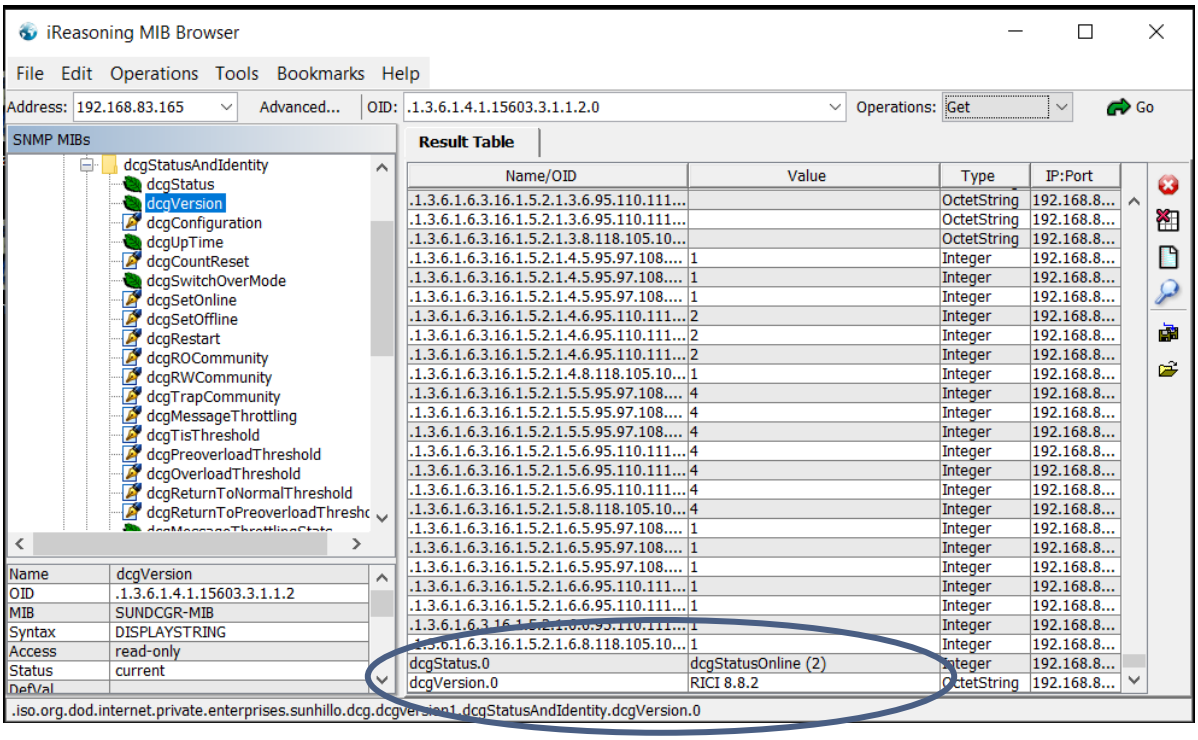
To perform operations on the MIB, expand the MIB tree by clicking on the plus sign to the left of the tree name.



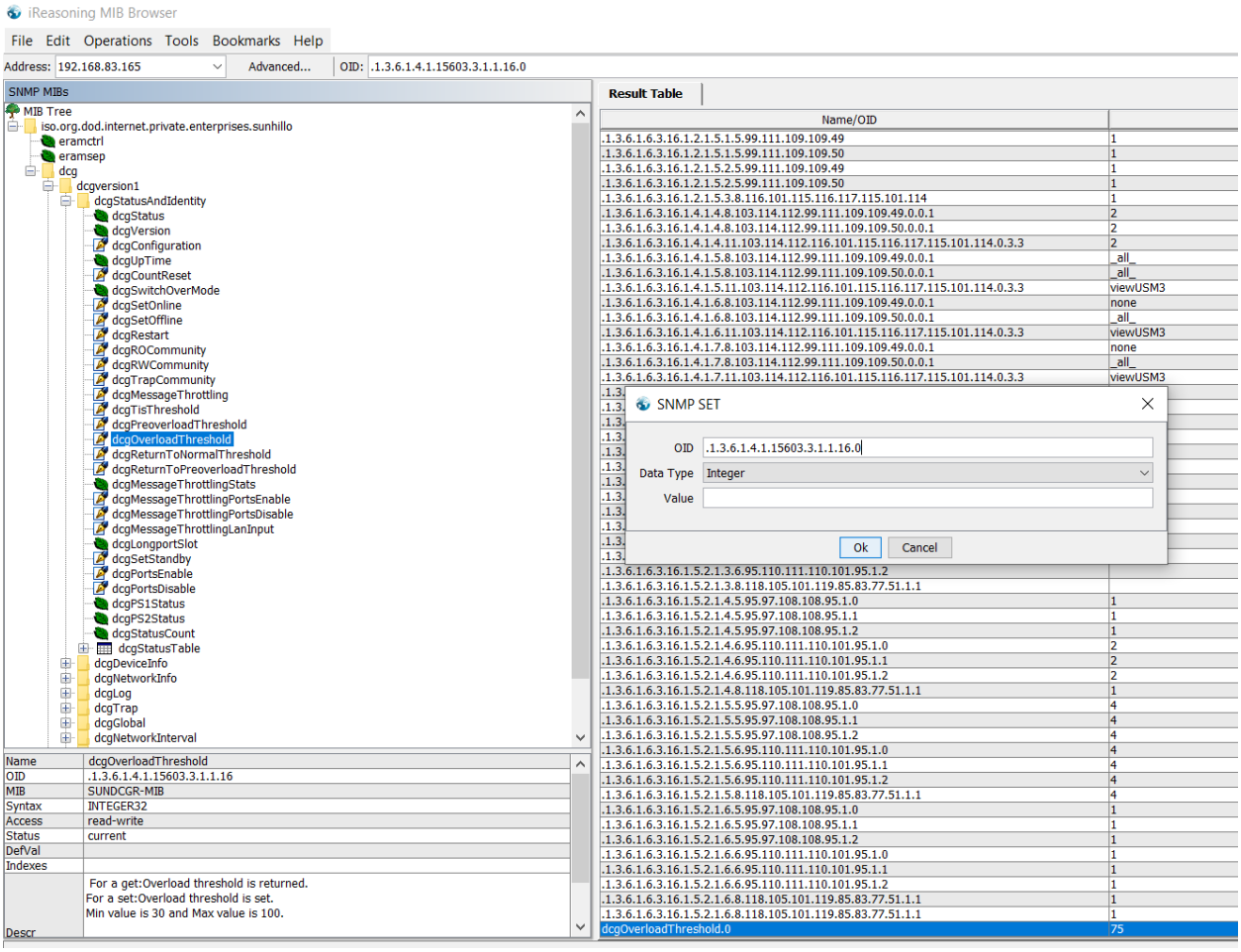
Note

The SNMP objects listed under dcg, dcgversion1 are described in detail in *SUN2353 – SureLine Users Guide*.

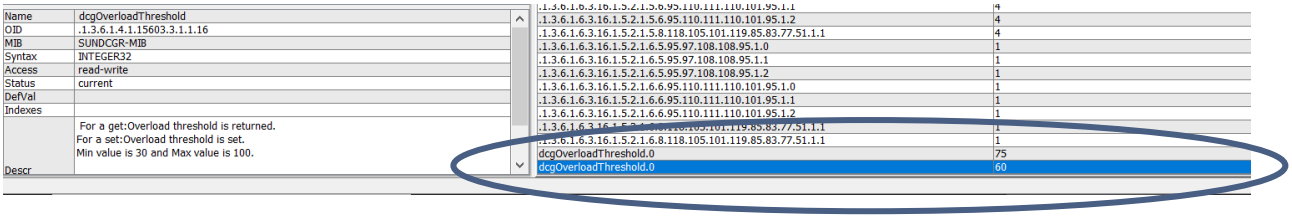
You can now perform whatever allowable operations you wish on the SNMP objects in the SureLine MIB. Below is an example of a GET on both the *dcgStatus* and *dcgVersion* elements of the **dcgStatusAndIdentity** object.



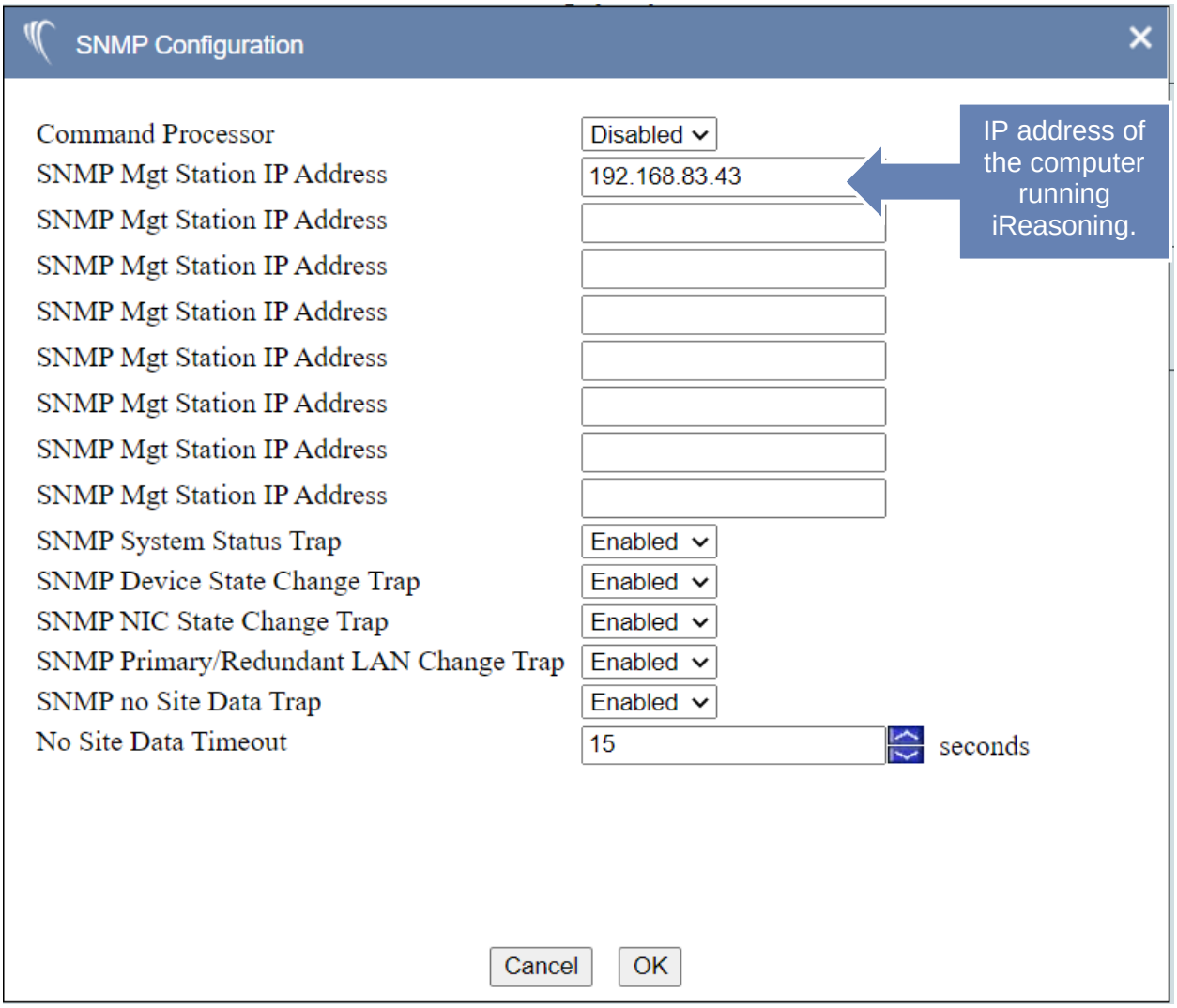
The following example is for a SET command using the MIB object **dcgOverloadThreshold**. Double-click on the object to see its current value, which is highlighted in blue at the bottom of the *Name/OID* window. Once you've clicked the SET operation, an SNMP SET window appears. Type the new value into the *Value* field.



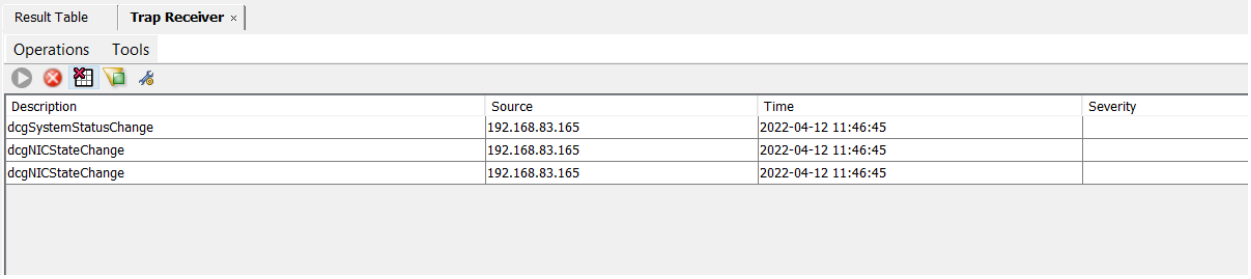
To see the updated value, double-click on the **dcgOverloadThreshold** object again. In this example, the new value of 60 is displayed.



In order to receive SNMP traps via iReasoning, you must first configure your SureLine device to recognize the computer that is running iReasoning as a trap management station. Do this by editing your configuration file and clicking on the **SNMP** button above the displayed data flow. In the *SNMP Configuration* window, modify any of the *SNMP Mgt Station IP Address* entries to match your computer's IP address.



On iReasoning, start the Trap Receiver. Any SNMP traps sent by the SureLine device are now displayed in iReasoning's *Trap Receiver* window.



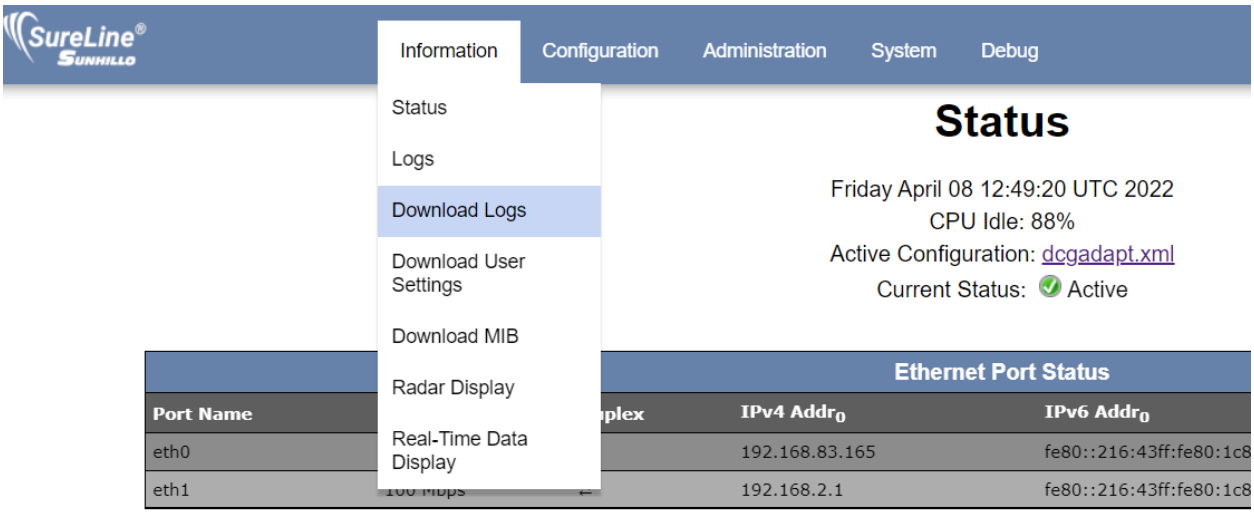
FAQ 25: Topic – What Information is Available in the Log Files

Question:

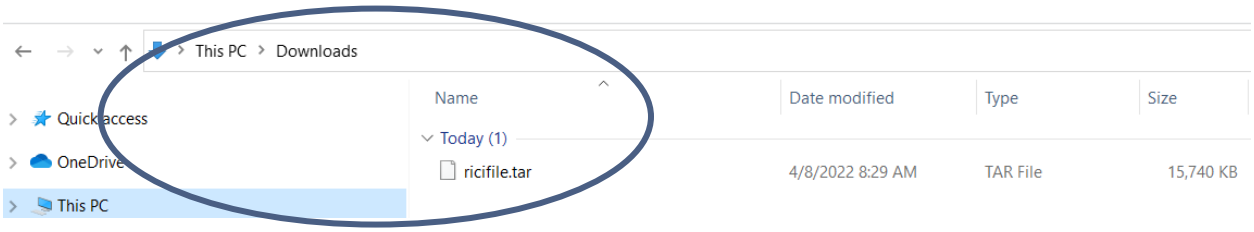
How do I download the system log files and what information is in the logs?

Answer:

To download the logs from the SureLine WebGUI, select “Download Logs” from the **Information** menu.



The archive (.tar) file containing the logs, *ricifile.tar*, is downloaded to your computer’s **Downloads** directory.



Note
On the first generation SGP, this file is named *dcgfile.tar*.

The archive file's contents can be viewed/extracted with any compatible archive extraction software – WinZip, 7-ZIp, PeaZip, etc. Click on the archive file to view its contents.

Name <	Type	Size	Packed	Date/ti...	Attr...	Checksum...
etc	[folder]	0 B	0 B		D	
home	[folder]	0 B	0 B		D	
proc	[folder]	0 B	0 B		D	
tmp	[folder]	0 B	0 B		D	
var	[folder]	0 B	0 B		D	

These directories contain useful information about SureLine and the platform on which it is running. The top-level folders contain the following files:

/etc – system files that assist Sunhillo personnel with troubleshooting

/home/dcg
radar.ini – created by Sunhillo for use with Tracker plug-ins
_.xml* (templates), dcgdefin.xml, dcgdeflt.xml – default SureLine configurations files
version – SureLine application version number
activeFile – contains the Active configuration running on the SureLine unit
sys.ver – lists details regarding active OS running on the unit, including build date
chksum.log – checksum error log information

/home/dcg/SystemConfig
SystemConfig.xml – SureLine network and security configuration parameters; can be edited and uploaded to unit. See *SUN2353 - SureLine User's Guide* for details.

/home/dcg/userdata
**.xml* – user-defined configurations
**.pol & *.dat* – geographic filter polygon files (*.pol*) and data recording files (*.dat*)

/proc/mpsprotem - MPS application/debug files

/tmp
sn.txt – contains Board serial number and revision
netinfo.txt – output from **ifconfig –a**

/var/log
messages – SureLine's event log contents

/var/tmp
license.log – contains list of licensed features on the unit
switch.txt – dump of */home/dcg/switchMonitor* (if present)
**.psar, *.pcap* – data recording files
POST_LOG.log – results from power-on self test (POST)

Note

The directories and folders vary slightly based on the SureLine platform.

FAQ 26: Topic – How Can I Filter Specific Fields from my Surveillance Data?

Question:

Is there a way I can filter out specific fields from my input surveillance data?

Answer:

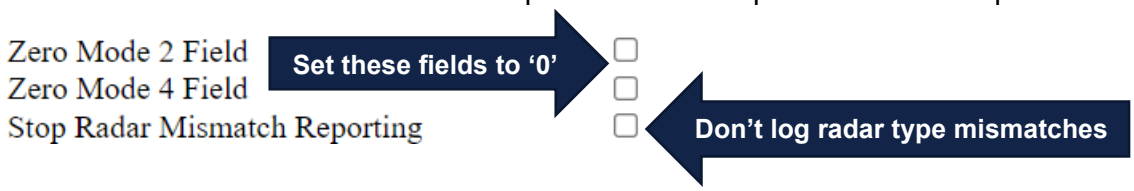
SureLine provides the following message filters, which are available from the configuration data flow editor:

- **ASR9 Filter** – Filter ASR-9 radar data fields
- **ASTERIX Filter** – Filter out ASTERIX categories
- **ASTERIX FRN Filter** – Filter specific FRNs from ASTERIX categories
- **CAT034 Status Filter** – Filters Status data items from CAT034 Sector messages
- **CD2 Filter** – Filter CD-2 radar data fields
- **Duplicate Message Filter** – Drop duplicate messages
- **Generic Filter** – Filter out a variety of message fields
- **Geo Filter** – Filter data based on geographic coordinates
- **Identity Filter** – Filter data by Mode 3A codes, Mode S codes, and/or Target IDs
- **Mode 3A Filter** – Filter specific Mode 3A codes
- **Mode 3A Range/Azimuth Filter** – Assign range/azimuth gate (RAG) filters to ASR/CD Beacon/BRTQC messages
- **Site Name/ID Filter** – Assigns site and channel filters for ECGP-encapsulated data
- **TI1033 Filter** – Filter TI1033 radar data fields

If you're unsure of what filter to use, the **Generic Filter** provides a comprehensive set of filters that can be applied to your data. The top portion of this filter's configuration window lists radar message fields that can be discarded by checking the checkbox next to the desired filter:

Discard All Beacon Messages	☐
Discard Non-Reinforced Beacon Messages	☐
Discard Reinforced Beacon Messages	☐
Discard BRTQC Messages	☐
Discard Beacon Sector Mark Messages	☐
Discard Fixed Beacon Messages	☐
Discard Search Messages	☐
Discard Search Correlated Messages	☐
Discard Search Uncorrelated Messages	☐
Discard Search Correlated RTQC Messages	☐
Discard SRTQC Messages	☐
Discard Search Sector Mark Messages	☐
Discard Weather Messages	☐
Discard Status Messages	☐
Discard Site ID Messages	☐
Discard CPC Messages	☐
Discard Plot Messages	☐
Discard Track Messages	☐
Discard Unknown Message Types	☐
Discard Messages with Invalid Mode C	☐
Discard Messages with Valid Mode 2	☐

The next set of checkboxes informs SureLine to perform various operations on the input data:



The next three entries are for SIC/SAC filtering. To do this, click the **SIC/SAC Filter** dropdown arrow and select "Filter by SIC/SAC", and then enter the **SIC** and/or **SAC** values that are being filtered. If neither the (input) SIC nor SAC match the filter values, the message will be dropped.

The next set of filters are for Altitude filtering. Checking the **Zero Negative Altitudes** checkbox will set any non-negative altitude values to zero, and it will **not** drop these messages. To only pass through messages within a given altitude range, select "Disabled" from the **Filter by Altitude** dropdown and then set the **Minimum Altitude** and **Maximum Altitude** parameters.

Similarly, you can also filter by the Range value. To do so, select "Disabled" from the **Filter by Range** dropdown and then set the **Minimum Range** and **Maximum Range** parameters.

The next two filters are for the Hit Count and Run Length fields. Set the **minimum** acceptable value for these fields. Any input message with a value that is below the set minimum(s) will be dropped.

The last three entries potentially manipulate the output data.

If the **Azimuth Adjustment** is set to any value other than ‘0’, this value is added to the Azimuth in the outbound message. The dropdown values for the **FAA Bit Settings** and the **AF Bit Settings** are:

- **Don’t’ Override** – FAA/AF bit will not be modified (default)
- **Force Disabled** – sets the bit to ‘0’
- **Force Enabled** – sets the bit to ‘1’

FAQ 27: Topic – How Do I Download Files using Zmodem?

Question:

How can I use a Zmodem connection to download log files from a SureLine product?

Answer:

SureLine utilizes its STUI (Sunhillo Terminal User Interface) feature to support a Zmodem connection. This connection is accessible using a USB to mini-USB cable through the **Maint** port.

Zmodem Note
Neither PuTTY nor extraPuTTY support a Zmodem connection, which is why Tera Term is chosen for this example. Should you use a different utility that supports Zmodem, the concept for downloading files once you've made the connection to STUI should be similar.

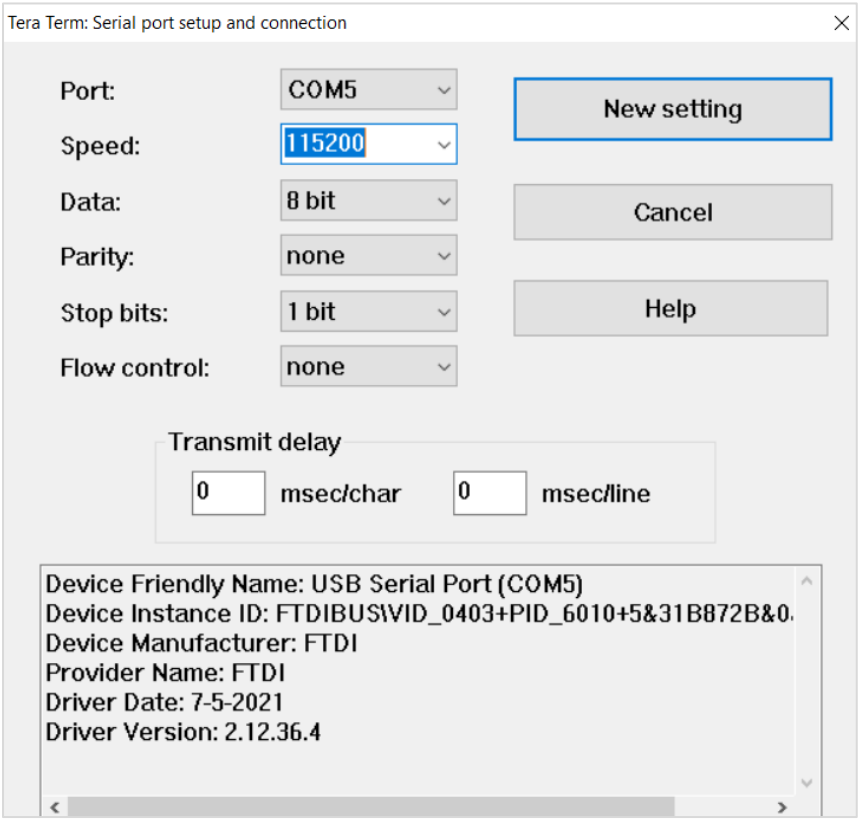
The steps required for downloading SureLine logs via Zmodem are:

1. Connect a USB to mini-USB cable from your PC/laptop to the Maint port on the SureLine device.
2. Bring up the Tera Term application on your PC/laptop.

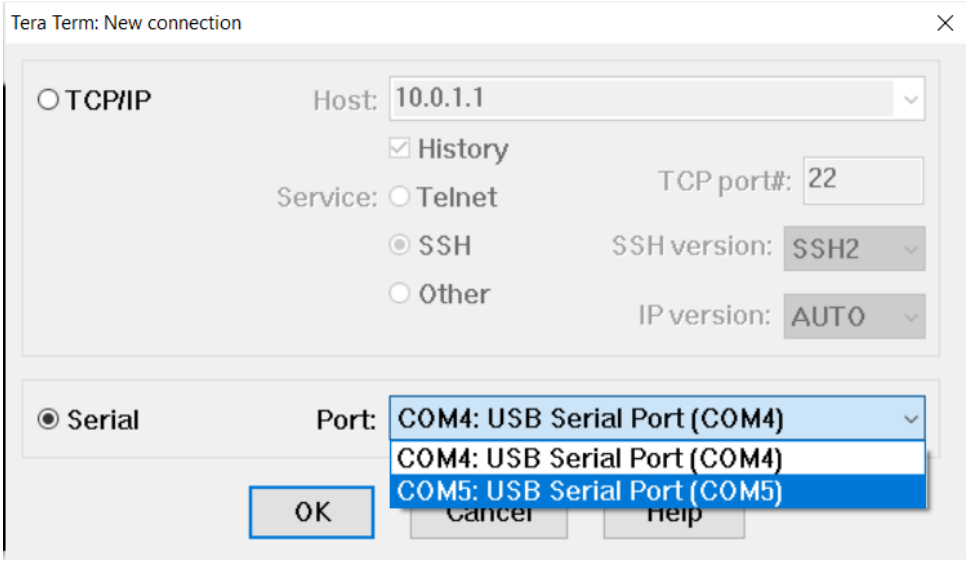
Tera Term Note
You must run Tera Term as Administrator for the connection to the SureLine device to work properly.

3. Tera Term's *New Connection* window displays by default. Click the **Cancel** button to dismiss this window.
4. From Tera Term's ***Setup*** dropdown menu, select "Serial port".

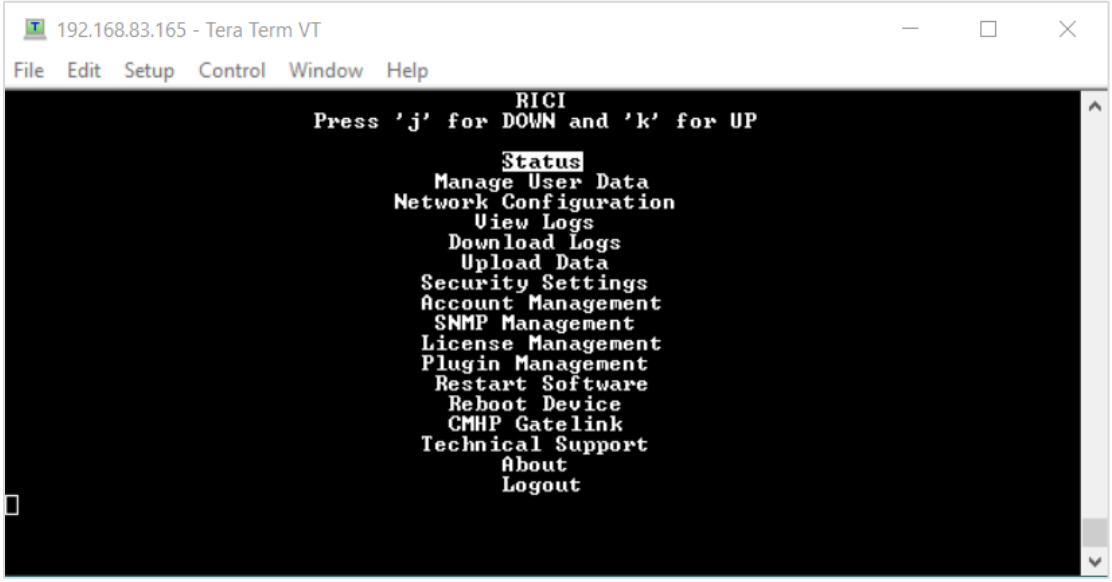
5. In the *Serial port setup and connection window*, select the USB port you will be using and set the Speed to 115200.



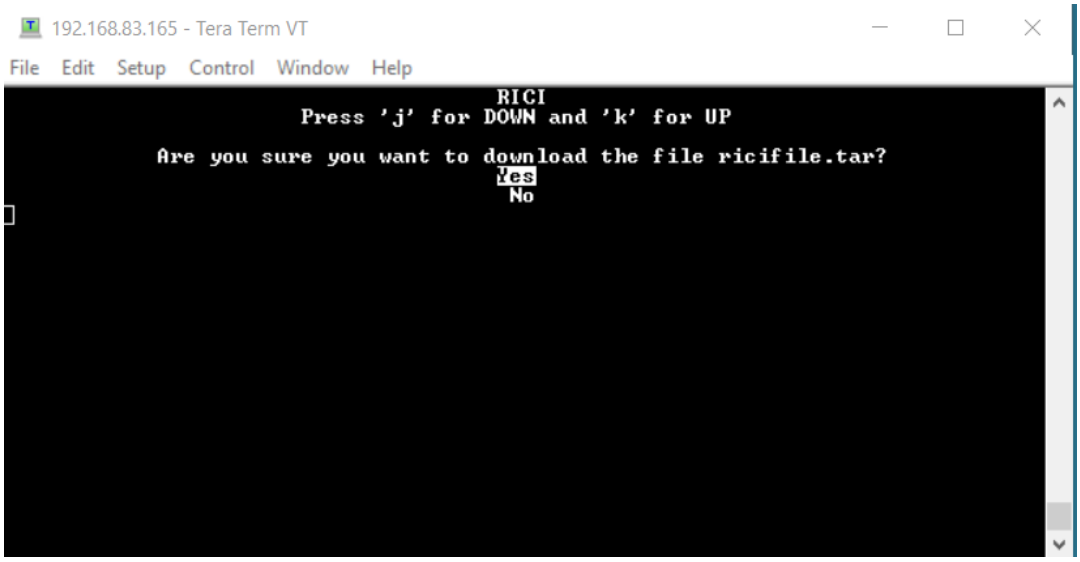
6. Click the **New Setting** button to save the settings.
7. From the Tera Term ***File*** dropdown menu, select “New connection”.
8. Click the **Serial** radio button and select the COM port from its dropdown menu. Once selected, click the **OK** button.



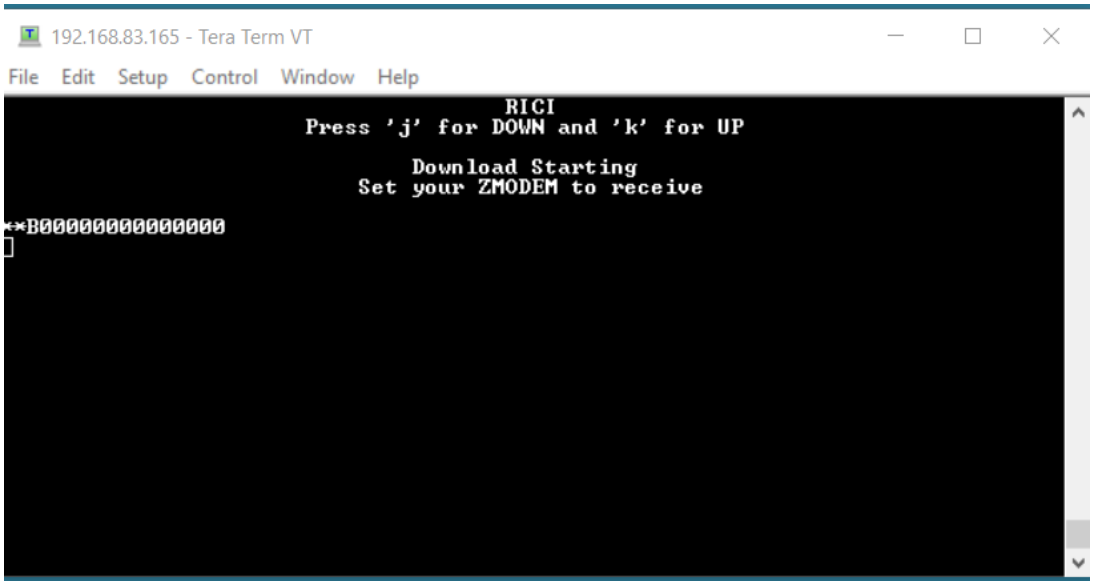
9. The STUI menu for the SureLine device displays with the “Status” option highlighted.



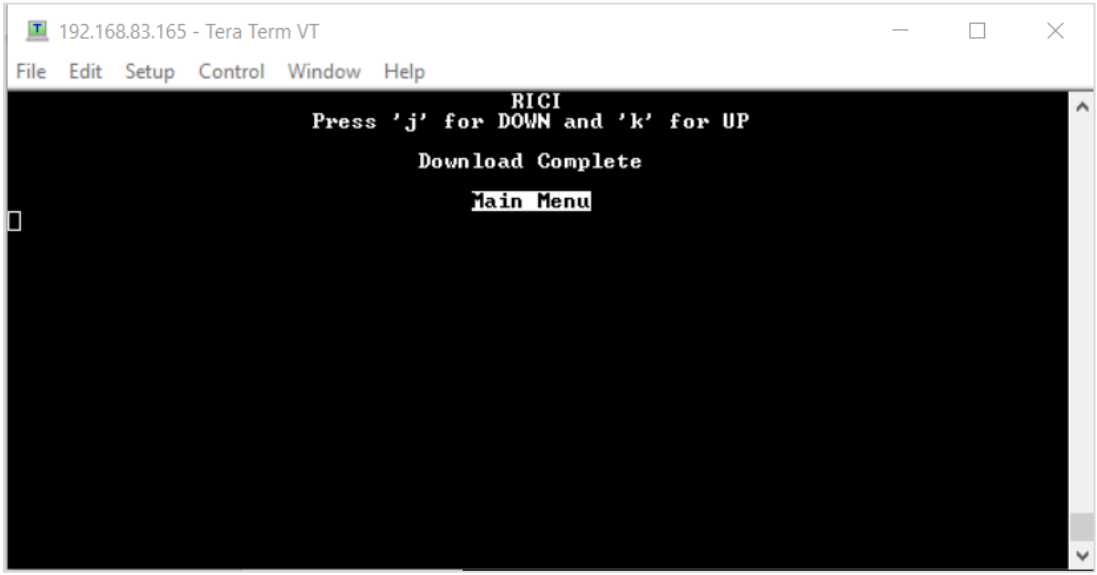
10. Press the Down arrow to the “Download Logs” option and hit Enter.
11. You will be queried as to whether or not you want to perform the download operation; select Yes (default) and hit Enter.



12. You will be instructed to set your Zmodem to Receive. This is done from the Tera Term ***File*** dropdown, by selecting “Transfer → ZMODEM → Receive”.



13. The file transfer begins automatically. Upon completion, STUI will display the “Download Complete” message and prompt you to return to the Main Menu.



14. The downloaded log file (*ricifile.tar*), is located in C:\ProgramFiles(x86)\teraterm.

Tera Term Defaults Note

The location cited in **step #14** is based on the assumption that Tera Term’s default settings for installation and file downloads were used.

FAQ 28: Topic – How Do I Factory Reset my SureLine product?

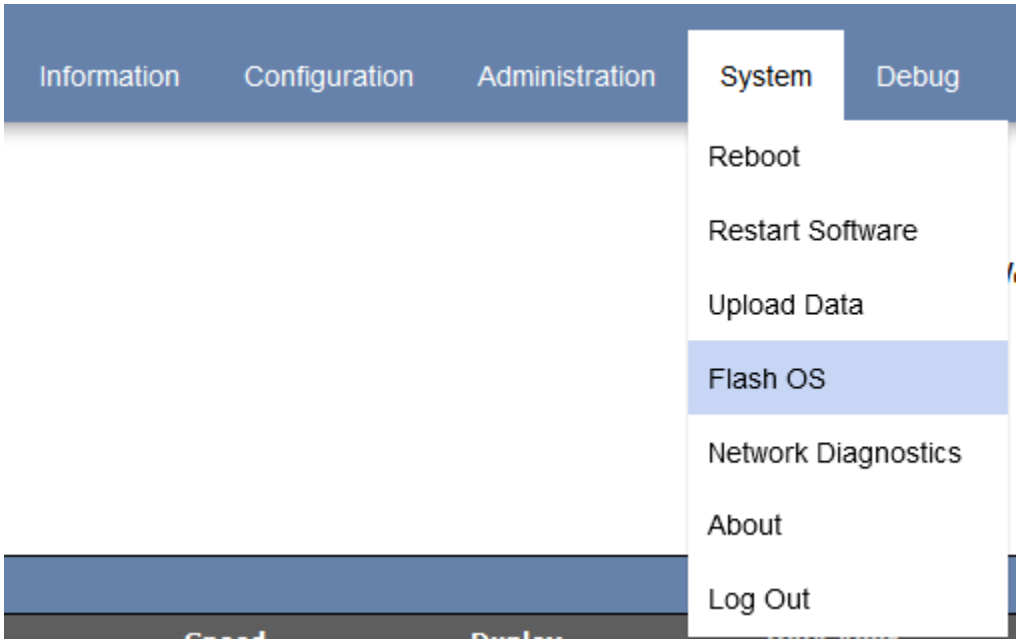
Question:

How do I factory reset my SureLine product?

Answer:

SureLine products can be factory reset using the Flash OS feature. When logging in and navigating to the System → Flash OS menu, you are presented with a dialog box, a file upload option, and a checkbox with an option to **Backup and restore all user data**. This option is selected by default as most users want to retain their IP addressing and configuration files when performing a Flash OS operation. However, unselecting this option and flashing the appropriate operating system file (.sop) will effectively factory reset the unit once the Flash OS process has completed. The IP addresses will return to default settings and all configuration files will be erased, along with any other personal identifiable information you may have had on the unit. The operating system .sop downloadable content can be obtained from Sunhillo's Support Portal at https://support.sunhillo.com/Login.php for registered products currently in an active maintenance contract.

Below is the location of the Flash OS option on the SureLine Web GUI System menu of a RICI 6000 running SureLine:



Below is the location of the Flash OS option using the same RICI 6000: