

# **Iridium Direct Internet**

**Powered by Riverbed<sup>®</sup> SteelHead<sup>™</sup> Mobile**

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**User Manual for Windows<sup>®</sup> Operating Systems**

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## 1. Overview

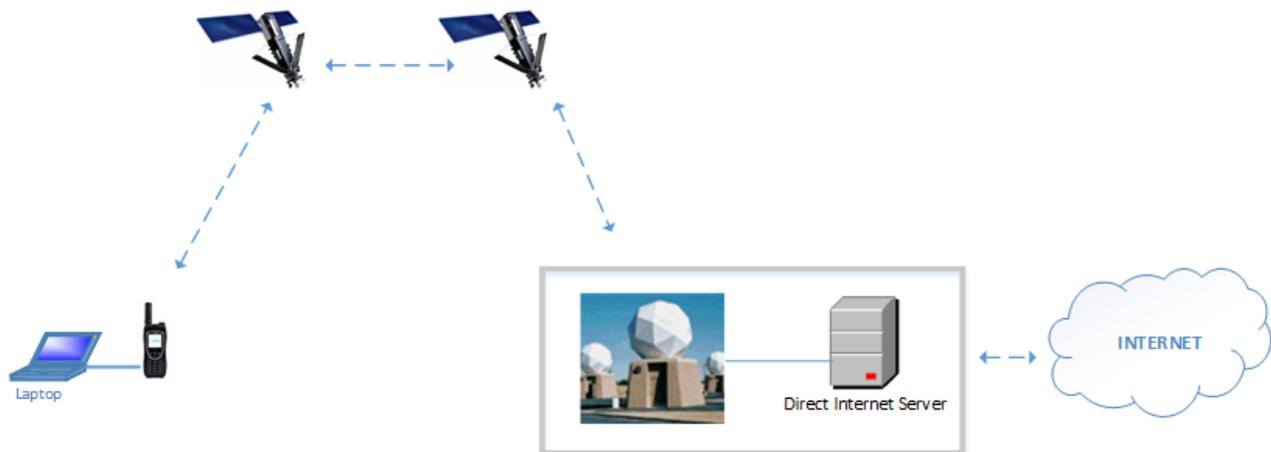
Iridium's Direct Internet Service allows customers to connect directly to the Internet via the Iridium gateway. While users are not required to load any special software onto their computer to connect, they will find additional compression and speed benefits from installing the Riverbed SteelHead Mobile ("Riverbed"). The service utilizes standard dial-up networking and has been shown to work with a variety of operating systems. This documentation provides complete instructions on use.

The Iridium Direct Internet service is provided by the Riverbed software application and runs through a Riverbed® Controller at the Iridium gateway. The application provides data reduction/acceleration for faster browsing and file transfer using your Iridium phone as an Internet modem.

This application operates on Windows 7 and 8 and is not certified for Windows XP. Windows 10 support for Iridium phones is expected soon and once that is provided by Microsoft, Iridium will open Windows 10 for use with Direct Internet.

NOTE: Microsoft provides a TCP/IP optimization utility that greatly improves the performance of Direct Internet. The utility may be found at [www.Microsoft.com](http://www.Microsoft.com). Please contact Microsoft with any questions.

## 2. How It Works



By initiating a connection through the pre-configured dial-up connection, your Iridium phone will dial and initiate a connection with the Iridium gateway through the Iridium satellite constellation. The Iridium gateway switch will then route the call to the Riverbed server. Once connected to the Riverbed server and a session has been established, the Riverbed accelerator (if installed on your



computer) will automatically detect the connection and enhance your Internet connectivity experience. NOTE: The Riverbed application may take up to 30 seconds to establish its connection with the server.

## 3. The Dial-Up Connection

### 3.1. Connect

This process will allow you to connect to the Internet via a data call from your Iridium phone.

1. Connect the computer and Iridium satellite phone or transceiver. The Iridium Extreme®, Iridium Extreme PTT, and the Iridium 9555 satellite phones require a USB to mini USB cable (Iridium Part Number: USBC0801). The Iridium 9505A satellite phone requires a standard RS-232 cable and RS-232 Data Adapter (Iridium Part Number: RDA0401). The Iridium 9522B satellite transceiver requires the cable assembly and the RS-232 connector included in the box..
2. Position the Iridium phone or transceiver antenna with a clear view of the sky.
3. Make sure the computer is powered and completely booted up.
4. Turn on the Iridium phone or transceiver and wait for it to register with the satellite network.
5. Click on the **Riverbed SteelHead Mobile** desktop shortcut.

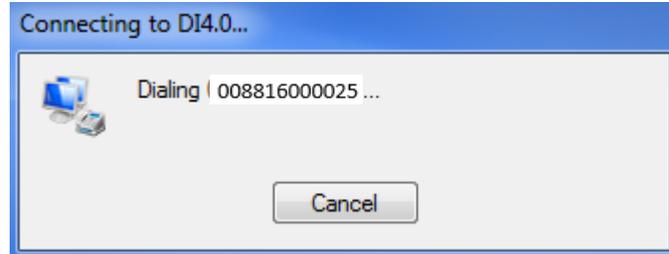


6. Click **Dial** from the Windows dial-up connection window.





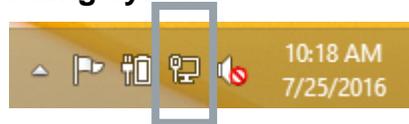
7. As the Iridium phone is dialing...
  - The *phone* will display **USB Data Call in Progress** or **Data Call in Progress**.
  - The *computer* will display a Dial-Up Connection pop-up window showing the current status of the connection from **Dialing...** to **Verifying...** to **Registering...**



8. Once connected, the dial-up networking icon will appear in the systems tray.
  - **Windows® 7 operating system:**



- **Windows® 8.1 operating system:**



9. You may now launch your Internet application.

### 3.2. Disconnect

This process will disconnect your Iridium phone's data call and end your Internet access.

1. Click on the dial-up networking icon in the system tray.

- **Windows® 7 operating system:**

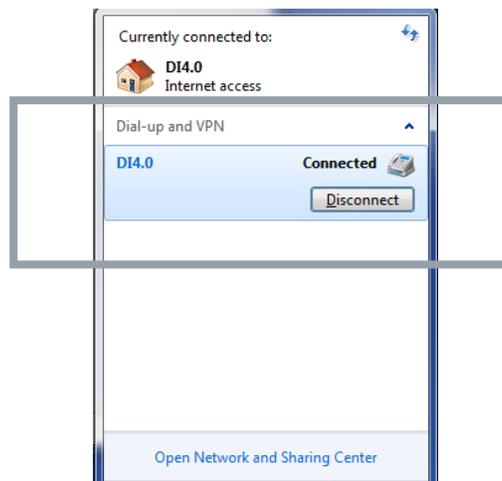


- **Windows® 8.1 operating system:**

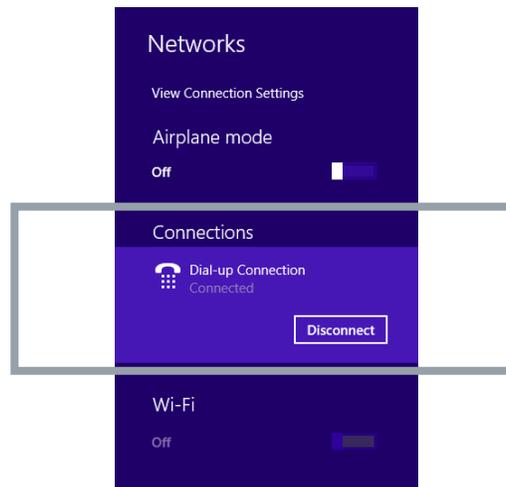


2. From the pop-up menu, click the connection, then click **Disconnect**.

- **Windows 7® operating system:**



- **Windows 8.1® operating system:**



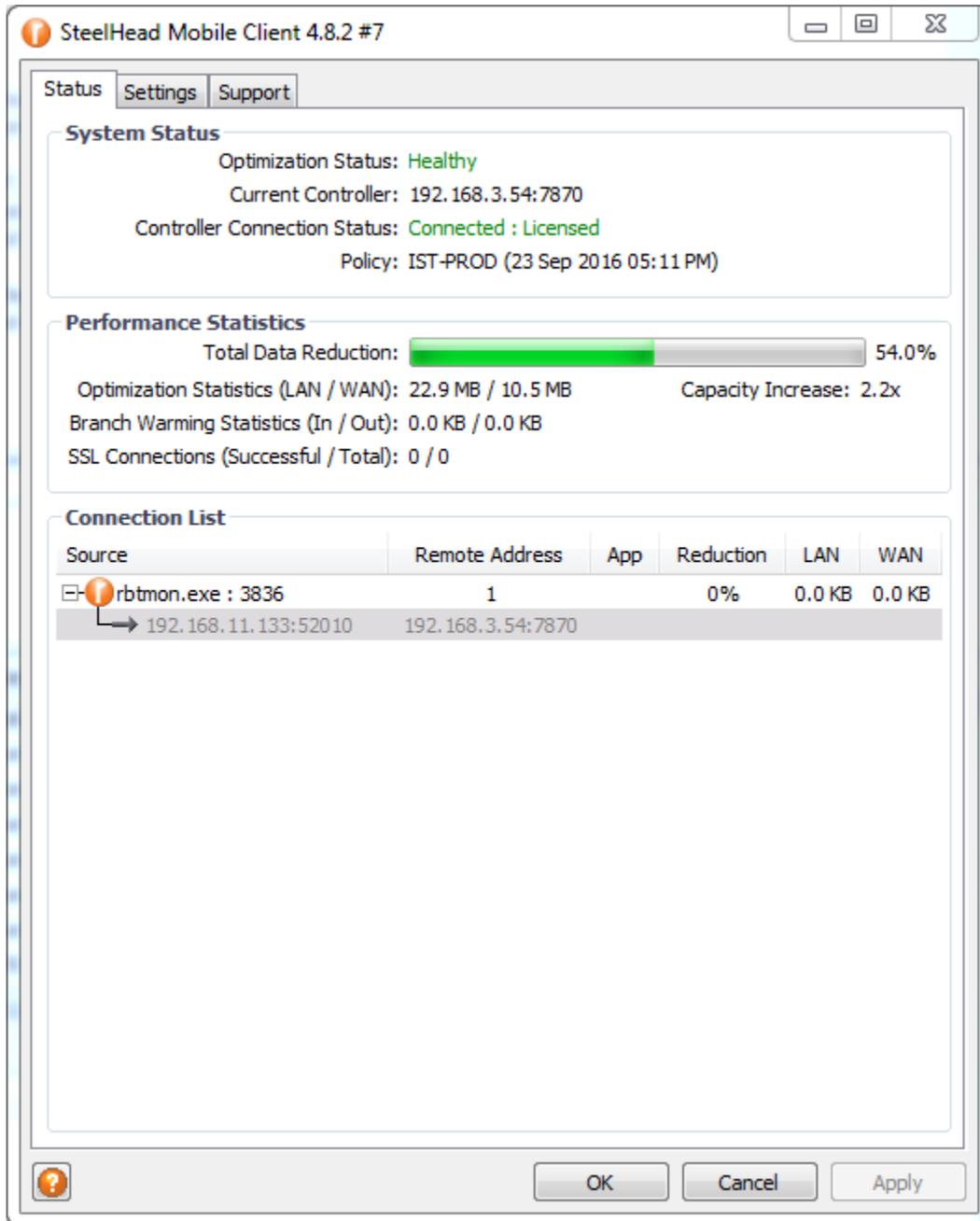
## 4. SteelHead Mobile Client

Source: Riverbed. "Windows SteelHead Mobile Client Properties." *SteelCentral™ Controller for SteelHead™ Mobile User's Guide*. Version 4.8.

**Note:** Any changes to the default settings on the Riverbed SteelHead Mobile client is not necessary and is discouraged as it may impact the client working properly.

### 4.1. Status Tab

The Status tab displays the SteelHead Mobile system status, performance statistics, and connection list.



The following table describes the controls under the Status tab of the Windows® SteelHead Mobile.

Function	Control	Description
<b>System Status</b>	Optimization Status	Displays the current state of the SteelHead Mobile. The SteelHead Mobile can be in one of the following states: <b>Initializing</b> - Indicates that the optimization service is starting.

**Healthy** - Indicates that all systems are functioning properly.

**Critical** - Indicates that the optimization service is not running. Contact your system administrator.

**Disabled** - Indicates that the optimization service is turned off.

**Warning** - Indicates that the optimization status is running, but there are some issues. Contact your system administrator.

Current Controller	Displays the Mobile Controller hostname or IP address and the port to which the client connects.	
Controller Connection Status	Displays the Mobile Controller's connection status. Possible values are <b>Connected</b> , <b>Connected: Licensed</b> , <b>Connected: Not Licensed</b> , or <b>Not Connected</b> .	
Policy	Displays the policy currently running on the client.	
<b>Performance Statistics</b>	Total Data Reduction	Displays the percent data reduction on the SteelHead Mobile since the optimization service has been running.
	Optimization Statistics (LAN/WAN)	Displays the total amount of optimized data exchanged with peer SteelHead (for LAN/WAN).
	Branch Warming Statistics (In/Out)	Displays the branch warming statistics. This is a feature that is not utilized with the solution Iridium is providing.
	SSL Connections (Successful/Total)	Displays the number of successful SSL connections.
<b>Connection List</b>	Displays the different connections. Right-click a connection and select <b>Detect SteelHeads</b> to find and display SteelHeads along the network path to a specified destination server.	

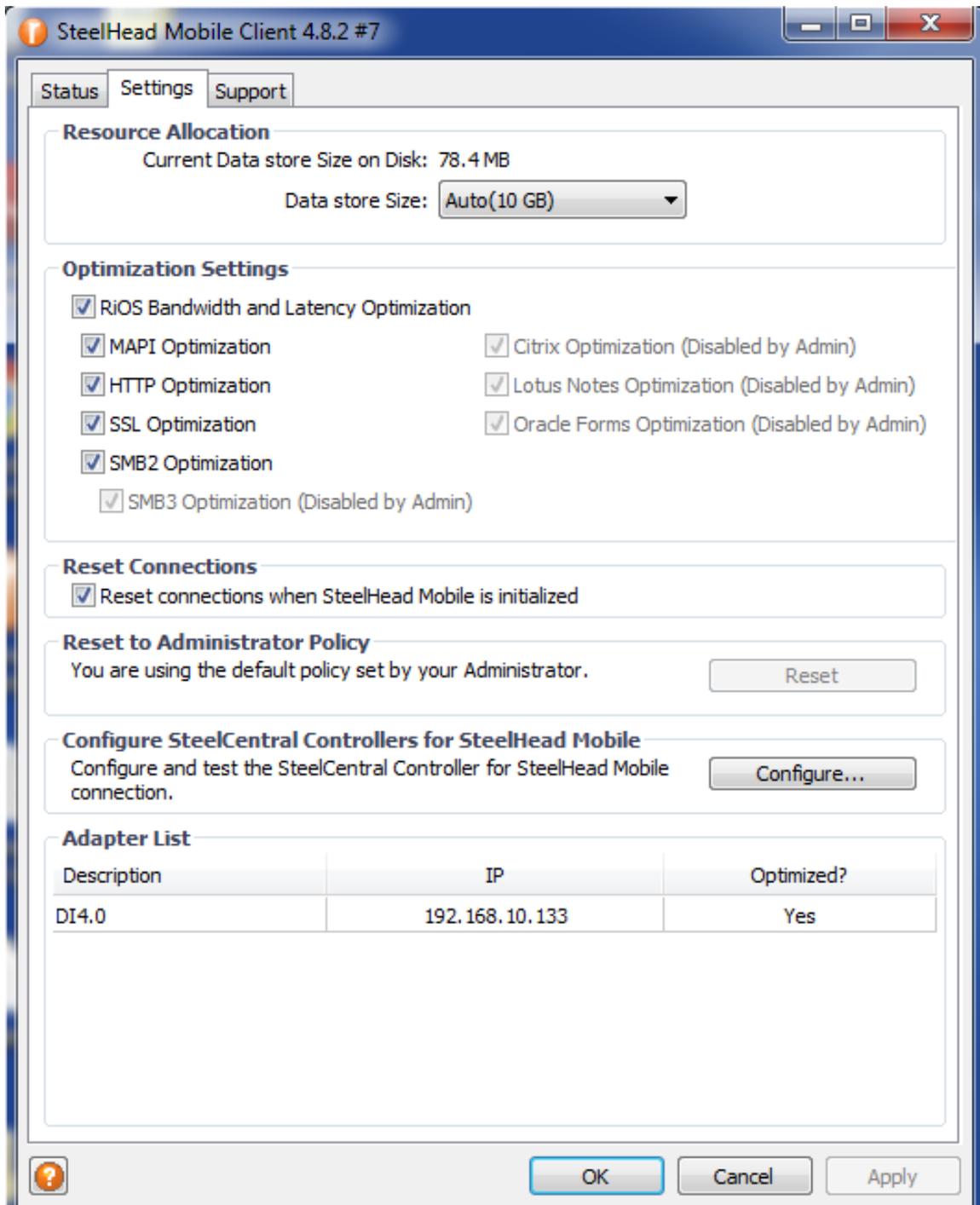
## Connection Icons

The following icons are displayed in the Connection List of the Status tab to indicate the state of the connection:

Yellow arrows		Displays Established (Optimized) connection.
Green arrow		Displays Established (Branch Mode) connection.
Blue arrow		Displays Established (Branch Warming) connection.
Gray arrow		Displays Established (Pass-through) connection.
Red arrow		Displays Established (Optimized) connection with optimization error.
Lock icon		Indicates secure inner channel connection

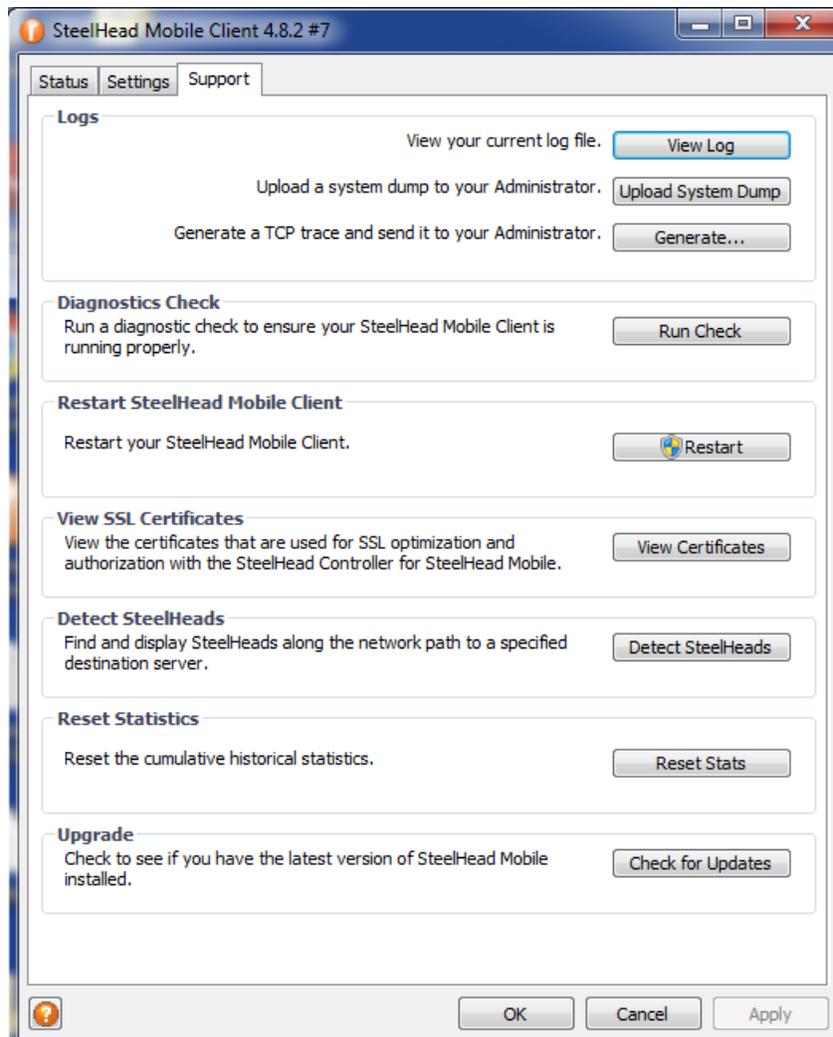
## 4.2. Settings Tab

The Settings tab displays current SteelHead Mobile settings such as data store size, optimization settings, reset connections, and adapter list. Most users will never need to change these settings.



### 4.3. Support Tab

The Support tab displays tools for assisting you in diagnosing problems with your system. Listed below are the controls for the user to be utilized during troubleshooting with a system administrator or Iridium support.

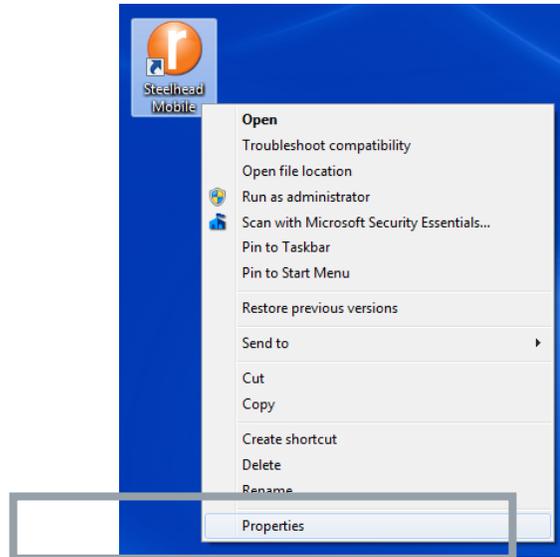


1. **Log/View Log:** View the log files for the SteelHead Mobile Client
2. **Log/Upload System Dump:** Upload system dump files to your Administrator for troubleshooting
3. **Logs/Generate TCP Trace:** Generate a TCP dump sent to your Administrator for troubleshooting
4. **Diagnostics Check/Run Check:** Check the diagnostics of the SteelHead Mobile. Any reading other than **Healthy** could indicate a problem with the system.
5. **Restart:** Restart the SteelHead Mobile. This is the first step to troubleshooting the client.
6. **View SSL Certificates:** View the SSL optimization certificates for authorization between the Client and Controller
7. **Detect SteelHeads:** Displays SteelHeads along the network path to a specified destination server
8. **Reset Statistics:** Resets the cumulative historical statistics

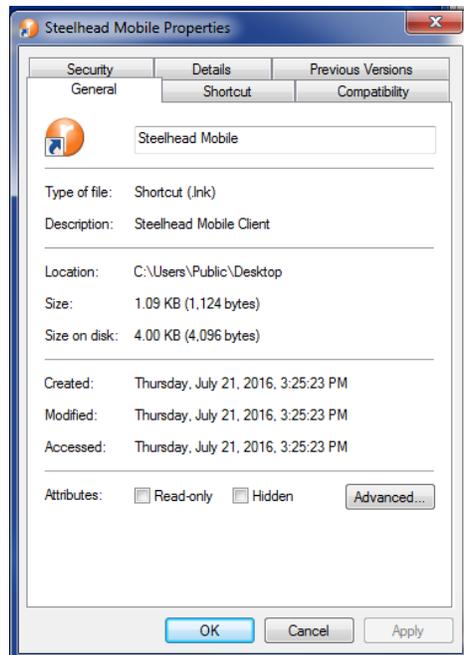
## 5. SteelHead Mobile Client Interactions

### 5.1. Properties

1. The Riverbed General product information is available through the **Properties** sub-menu option of the User Interface menu.



2. A dialog box will appear with the information and various tabs to see Security, other Details, and Version information.



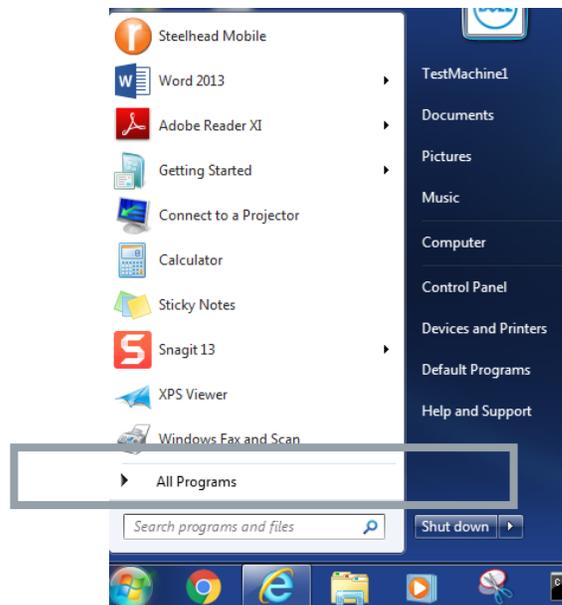
## 5.2. Close Program

1. To close the Riverbed SteelHead Mobile, select the **Close Window** by right-clicking on the Taskbar icon.
  - *It is important to note that closing the Riverbed Client will NOT disconnect the call. To **Disconnect** the call, refer to **3.2 Disconnect**.*



## 5.3. Uninstall Program

1. To Uninstall the Riverbed SteelHead Mobile application from your computer click the **Start** button (or navigate to the **Start** screen) and click **All Programs**.



2. Click on the **SteelHead Mobile** application, then click **Uninstall SteelHead Mobile**.



## 6. Web Browsing Tips

### 6.1. Mobile Websites

Whenever possible, use the mobile version of a website. Mobile websites are optimized for viewing on mobile devices. Viewing mobile websites while connected to Riverbed SteelHead Mobile will significantly reduce web loading time as compared to the original website. For a list of popular mobile websites, visit the Iridium Mobile Websites page at: <http://www.iridium.com/mobile>



### 6.2. Disconnect After Loading Web Page

To minimize airtime charges, disconnect your Riverbed SteelHead Mobile dial-up connection after loading the desired web page. Re-connect your Riverbed SteelHead Mobile Dial-Up connection when you are ready to view a new web page.

## 7. Emailing Tips

### 7.1. Client-Based Email

Avoid using web-based email software to send or receive email. In web-based email, Internet connection time is spent on:

- Loading the log in web page
- Once logged in, waiting for all your past messages and the web email interface to load on to the web page.
- Waiting for the new messages to be loaded or sent.

Client-based email software, however, will only use the Internet connection to send or receive new emails. All of your past messages as well as the email interface are already available locally from your computer.

Below are a few examples of client-based email software to use and web-based email software to avoid.

Use	Avoid
Mozilla Thunderbird®	Windows Live™ Hotmail
Eudora®	Gmail™
Windows Live™ Mail	AOL Mail.
Outlook Express®	Yahoo!® Mail
Outlook®	Other Internet Service Provider Webmail Service
Entourage®	
Any other client-based email software	

### 7.2. Disconnect After Sending or Receiving New Email

To minimize airtime charges, disconnect your Riverbed SteelHead Mobile dial-up connection after sending or receiving new email. Re-connect your Internet connection when you are ready to send or receive new email.

## 8. Troubleshooting

### 8.1. Direct Internet Dial-Up Connection

#### 1. ERROR MESSAGE: THE REMOTE COMPUTER DID NOT RESPOND

##### Symptom

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When I try to connect to Riverbed SteelHead Mobile, I get an error message similar to the one shown below.



##### Cause

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This error message appears whenever a dial-up connection could not be established. Typically, this message appears when the Iridium satellite phone or transceiver is not registered with the Iridium network. Alternatively, it may be that you are using the wrong Dial-Up number. Finally, it may be an indication that your connection is tied to the wrong COM port on the PC (not the one to which the phone is attached).

## Action

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First, make sure that the Iridium satellite phone or transceiver antenna is properly oriented towards a clear sky. Wait until the Iridium satellite phone or transceiver has registered to the Iridium network before attempting to re-dial.

Second, verify that the Dial-Up number is **008816000025**.



Also, make sure that all other network connections (LAN and wireless) have been disconnected.

You may power cycle the phone by removing both the data cable and battery or power cycle the computer to clear any resource-locked COM ports.

Finally, verify that the phone and the COM port mapping are the same for this dial-up activity.

## 9. Frequently Asked Questions

### 9.1. Windows® 10 Compatibility

Currently Windows 10 does not support the drivers for Iridium satellite phones and as such they cannot be used as modems to connect to the internet and set up a dial-up connection. Windows is currently working to resolve the issue as quickly as possible.

### 9.2. Computer Applications

Newer computer applications (i.e. Google Chrome, Apple Safari, Adobe products, etc.) will run updates in the background of the application attempting to connect to the internet. This will make your data connection slower and we recommend turning off Auto-Updates for all applications that connect to the internet to improve your data speeds.

The IP address of the offending applications are shown on the Riverbed client window when a call is in progress. The Connections section on the Status page will list every process and IP address the client is trying to reach. As a potential fix, users can then take the target IP address and block it via the Windows firewall (found via the Control Panel) by adding it to a list on the client computer. If all is well, you should only see your own IP address contacting the license server or your destination Web site, etc.

### 9.3. How to create a dial-up connection

For additional information on creating a Dial-Up connection with your Iridium phone, please see the Iridium RUDICS Description manual posted on ([www.iridium.com](http://www.iridium.com)).