



# Eagle

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Beam Communications

*User guide*

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## Introduction

The Eagle is an application tool designed specifically for Beam Units and is compatible with the following models:

- **DriveDOCK Extreme**
- **PotsDOCK Extreme**

## Features

The Eagle supports the following features:

- View the status of the unit
- Configure tracking settings
- Configure POTS/RJ11 settings
- Configure Bluetooth settings
- Configure general settings
- Store/Edit/Retrieve docking station settings
- Resetting docking station to the factory defaults.
- Modifying supervisor PIN of the unit
- Beam Terminal Firmware Upgrade

As not all features are available across the range of docking stations, the Docking Station Management Software will enable or disable the feature set as follows:

Feature	DriveDOCK Extreme	PotsDOCK Extreme
View the status of the unit	✓	✓
Configure tracking settings	✓	✓
Configure POTS/RJ11 settings		✓
Configure Bluetooth settings	✓	✓
Configure general settings	✓	✓
Resetting factory defaults	✓	✓
Store/Edit/Retrieve settings	✓	✓
Modifying Supervisor PIN	✓	✓
Beam Terminal Firmware Upgrade	✓	✓

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## Requirements

The Eagle requires the following:

- A computer with Microsoft Windows XP/VISTA/7 operating system
- Microsoft.NET 3.5 Framework  
Microsoft.NET 3.5 Framework can be downloaded from the Microsoft website at:
  - <http://www.microsoft.com/downloads>
- 1x USB cable
- An available USB port on the computer

## Installing

- Download the Eagle software from our website at [www.beamcommunications.com/Eagle](http://www.beamcommunications.com/Eagle)
- Run (double click) setup.exe
- Follow the steps during the setup wizard
- Once installed the program can be run by clicking on the Start button -> **Programs** -> **Beam Communications** -> **Eagle**

### Missing components

If the computer does not have the Microsoft .NET 3.5 Framework, an option will be presented to install this component provided that an active internet connection is available. This download is approximately 35MB and may take over an hour to download on internet connections utilizing a 56k Modem.

Microsoft.NET 3.5 Framework can be downloaded from the Microsoft website at <http://www.microsoft.com/downloads>.



If you are using Windows Vista or 7, the application will request administrator privileges.

## Installing Beam Universal USB Drivers

USB drivers are installed as part of the Eagle installation. However, if you have already installed drivers previously, you are not required to install them again.

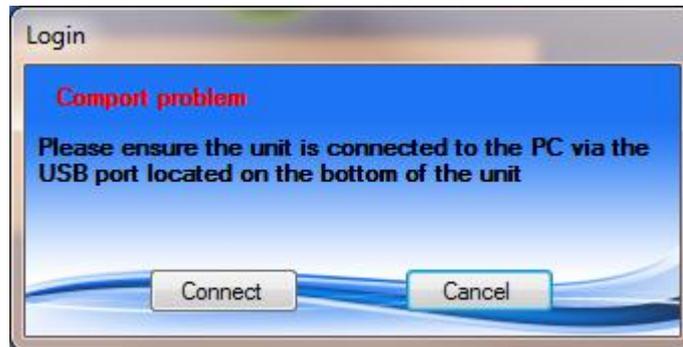
## Connecting

To connect the unit with the Eagle, you will need to do the following:

- Connect power to the device.
- Connect PC to application port of the unit via USB cable.
- Open Eagle and click the connect button to initiate a connection with the unit.



If the unit is not connected Eagle will display comport error.



Ensure the unit is physically connected to the computer via the USB cable and that the cable is connected to the docking station and click the connect button again.

Eagle may also ask to provide the supervisor PIN number. The default supervisor PIN is 3170.



Once connected, configuration options will be available.



You will need to keep the unit attached to use Eagle. If Eagle does not find the unit connected, the configuration will become unavailable and any settings that have not been applied will be lost.

## Disconnecting

When you hit the disconnect button, Eagle will terminate a connection with the unit. Any unsaved settings will be lost. The unit status will also be cleared.

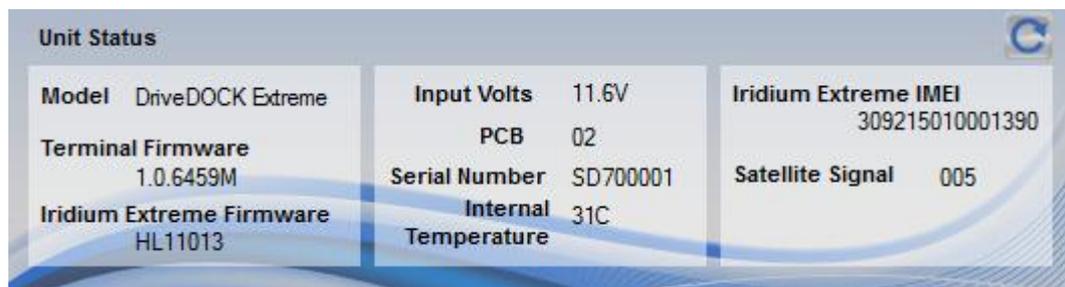
If the unit is disconnected from the USB without pressing the disconnect button, Eagle will clear all status information and unsaved settings will be lost.

## Main Window



Information will not be displayed until a connection is made with the unit

## Unit Status Information



Unit Status		
<b>Model</b> DriveDOCK Extreme	<b>Input Volts</b> 11.6V	<b>Iridium Extreme IMEI</b> 309215010001390
<b>Terminal Firmware</b> 1.0.6459M	<b>PCB</b> 02	<b>Satellite Signal</b> 005
<b>Iridium Extreme Firmware</b> HL11013	<b>Serial Number</b> SD700001	
	<b>Internal Temperature</b> 31C	

Once the management system has synchronized with the docking station, the following status information will be fetched and displayed:

- Model
- Terminal Firmware
- Iridium Extreme Firmware
- Input voltage
- PCB
- Serial number
- Internal Temperature
- Iridium Extreme IMEI
- Satellite signal

## Help



For additional help for Eagle. Please click on the help button to open the help document.

## Tracking

This allows to use the tracking functionality available in the Iridium Extreme Handset via the dock.



**NOTE: Tracking must be enabled in Iridium Extreme Handset for the following to function.**



- Send a quick GPS message when Track button is pressed  
This will allow the handset to send a quick GPS message once when **Track Button** on the dock is momentarily pressed.



**NOTE:** A Quick GPS list must be completed in the handset for message to be sent.  
Please refer to Iridium Extreme user manual page 174 for more information.

- Turn on emergency when alert loop is broken  
Selecting this will activate the emergency mode in the iridium Extreme handset when alert loop is broken.
- Make audible notification when track button is pressed or alarm loop is broken  
Selecting this will emit three long beeps when alert loop is broken and one beep when track button is pressed.

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## POTS

### Overview

The POTS/RJ11 circuitry enables the use of standard telephone equipment to be used with the docking station. The Eagle allows the viewing and changing of the POTS/RJ11 settings.

POTS/RJ11 option will only be available to PotsDOCK Extreme.

The POTS settings are divided into four sections:

1. Tones settings
2. Call Processing
3. Timeouts settings
4. Gains and Impedance

### Tones

The unit allows the use of standard telephone equipment; tone setting allows modifying how different tones like ringer, dial tone, unavailable or busy tone will be heard on the standard telephone equipment

#### *Ringer*

Ringer allows modifying how the ring will sound during the incoming call on the standard telephone equipment.

There are two ON and OFF times (in milliseconds) to allow for a European style ring tone. For US style cadence, set 2nd ON and OFF the same as 1st ON and OFF.

Parameters:

- 1st ON  
Input type: Numeric, 200-4000 ms  
Default: 1500 ms
- 2nd ON  
Input type: Numeric, 200-4000 ms  
Default: 1500 ms
- 1st OFF  
Input type: Numeric, 200-4000 ms  
Default: 800 ms
- 2nd OFF  
Input type: Numeric, 200-4000 ms  
Default: 2000 ms

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All parameters are in milliseconds and change the sound of the ring sound.

### *Dial tone*

Dial tone allows modifying how the dial tone will sound when lifting the handset of the standard telephone equipment.

Using these parameters, the dial tone can be set to sound like a "Prrrrr" or a "Beeep". For a Beep set the OFF time to 0 and ON to 200ms.

A stuttered dial tone can be optionally generated if there is a Voicemail or SMS waiting so the users detect this immediately when they pick up the phone. This parameter specifies the interrupt rate to generate the stutter in milliseconds.

### *Unavailable*

Dial tone allows configuring how the network unavailable tone will sound on the standard telephone equipment.

### *Busy*

Dial tone allows configuring how the network busy tone will sound on the standard telephone equipment.

## **Call Processing**

Call processing is the ability for the docking station to automatically prefix a user dialed number with the correct area or country code. This is intended to allow for a simpler dialing process for users who have not been trained to place a call from a satellite phone.

Eagle allows a user to enable or disable this feature. By default this feature will be disabled.

When this feature is disabled there will be no alteration to dialed numbers by the docking stations.



**WARNING:** Phone number processing only applies to RJ11/POTS handsets. It does not apply when dialing directly from the Iridium Extreme.

When enabled the users will have the following customizable parameters:

### **Minimum Digits**

Input type: Numeric, 3-10

Default: 8

The minimum number of digits a user must enter for the docking station to accept the dialed number as a valid phone number and apply call processing. Call processing will not be applied to any user entered number that has less than the minimum digits entered here.

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### **Country Code**

Input type: Up to 4 numeric digits

Default: 61

This is the country code that the docking station will automatically prefix users dialed numbers with. For example if a user was operating the docking station within Australia, a user would enter in "61" which is Australia's country code.

### **Area Code**

Input type: Up to 4 numeric digits

Default: 3

The local area code of the users location. It will be recommended via written text for users not to enter in the STD digit component of their local area code. For example, the state of Victoria (In Australia) has an area code of '03', in this instance a user would enter in '3'.

### **Leading Digit for Information numbers**

Input type: Numeric, 0-9

Default: 1

This allows setting the first digit of local information service numbers (eg. Time, Weather). If the 1st digit of the phone number is the defined local information service numbers, the docking station ignores the 'Minimum Digits' and "Area codes" setting to dial information service number.

### **Leading Digit for Long Distance (STD)**

Input type: Numeric, 0-9

Default: 0

If the 1st digit of the phone number is this number, it is assumed to be a national call rather than a local call. The phone number will therefore include the area code to be dialed.

**Dialing Emergency number**

<b>Local shortcut for emergency services</b>	<b>Iridium Translation of Emergency Number</b>
Input type: 000-999 Commonly set to '000', '911' or '100' Default: 911	This number is sent to the network when the emergency number is dialed. It must be a full format Iridium number (include 00 or +). Default: 112

**Dialing Voicemail number**

<b>Shortcut to retrieve voicemail messages</b>	<b>Iridium Translation of voicemail number</b>
Input type: 000-999 Default: 101	This number is sent to the network when the voicemail shortcut above is dialed. It must be a full format Iridium number (include 00 or +). Default: +881662990005

**QUICK DIAL**

Input type: Full format number (include 00 or +).

Up to 10 configurable quick dial numbers can be stored. Quick dial numbers can be dialed by pressing "\*" followed by the allocated quick dial position number. Quick Dial functionality will not be available when Auto Dial is enabled.

**ENABLE AUTO DIAL**

The Auto Dialing capability when enabled, will establish a call with the number defined in position 0 (zero) of the quick dial section once the handset is lifted.



**NOTE:** Call Processing does not apply to any of the numbers in the Quick Dial positions. You must enter phone numbers here, exactly as they would be dialed from the handset, including international and local prefixes.

## Timeouts

### **DTMF 1st digit timeout**

Input type: Numeric, 1000- 25000 ms

Default: 15000 ms

DTMF 1st digit determines how long to generate a dial tone in milliseconds before the 1st digit of the phone number is pressed on the phone. If this time expires, it is likely the phone has been left off the hook accidentally and a special rising tone at maximum volume is made to alert the user to hang up (put on hook).

### **Autodial timeout**

Input type: Numeric, 1000- 25000 ms

Default: 3000 ms

When Autodial is enabled from call processing, autodial timeout determines how long to wait before dialing the predefined autodial number.

### **Entry timeout**

Input type: Numeric, 1000- 25000 ms

Default: 5000 ms

DTMF Digit determines how long to wait for another phone digit before we assume the number has been fully entered. This is a tradeoff between being too quick for a slow dialer or extending the time taken to place a call.

### **Hang-up timeout for incoming call**

Input type: Numeric, 0- 25000 ms

Default: 0 ms

Hang-up timeout determines how long to wait before terminating incoming call when pots phone is returned to on hook. In the situation when multiple pots phone are attached, this feature allows users to switch between the pots phone without disconnecting the call.

## Gains and Impedance

### Gains

This allows configuring independent setting of the gain for Dial tone, signaling tone (Unavailable, SIM Locked/Puk), downlink and uplink voice.

The gains can be set during a call as the effect is immediate. The major reason to modify a gain setting would be to reduce the downlink voice gain to reduce the echo feed back to the far end user.

### Impedance

Impedance settings relate to the load the standard telephone equipment (RJ11) presents to the docking station. As the standard telephone equipment line interface is a 2-wire standard, it relies on careful balancing between the impedance expected and experienced by the Docking station to stop signals in each direction being improperly reflected. In normal telephone installations, this is not that critical because a reflection at the far end is just experienced by the near end user as an increase in side tone (or how much you hear your own voice). In a satellite application, however, the echo reflected back to the far end user is delayed twice by the satellite and landline delays. By the time the user ringing the satellite phone gets to hear his voice back again, it has been delayed up to a second.

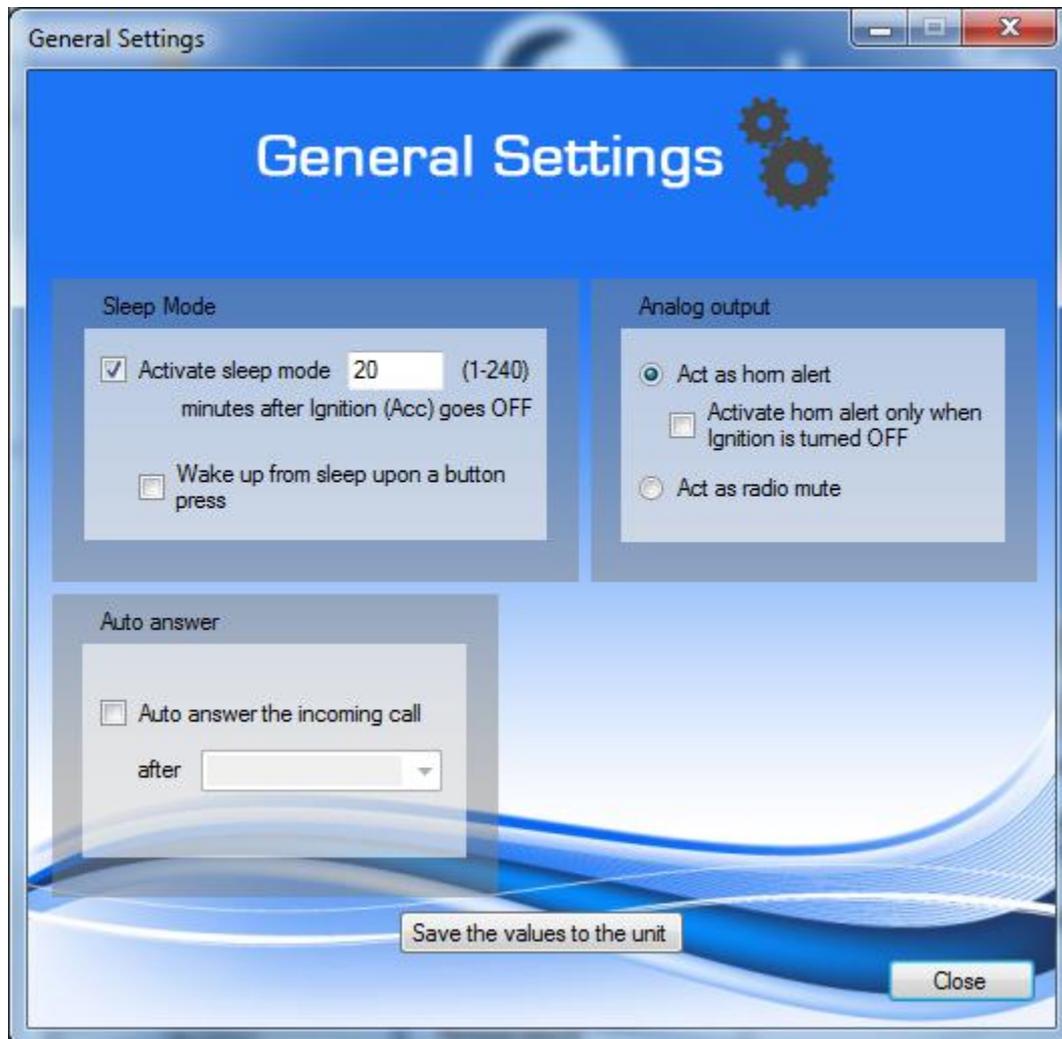
## Bluetooth

This allows to set the custom Bluetooth PIN and clear currently paired devices.



- Enable/Disable PIN  
This allows to set custom connection PIN (up to 6 digits) to be paired with the Bluetooth devices.

## General settings



### Sleep Time

Time in minutes after the unit should go to low power mode, once the Ignition/Accessories goes OFF. Default is set to 20 minutes.

### Analog output

This allows user to switch the blue analog output line to act as horn alert or radio mute.

### Auto answer

This allows user to auto answer the incoming call after defined seconds.

## **Backup and Restore**

### **Backup device to file**

This will read all settings from the device and store them to a file.

The process will create a .econfig file. This file can be used to upload settings to multiple units or to restore settings on the same unit.

### **Restore device from file**

This will read settings from a .econfig file and restore to the connected device.

The process will ask to select a .econfig file. The settings from selected file will be uploaded. At the end of upload you will be asked if you would like to turn on the tracking.

### **Load settings to application from file**

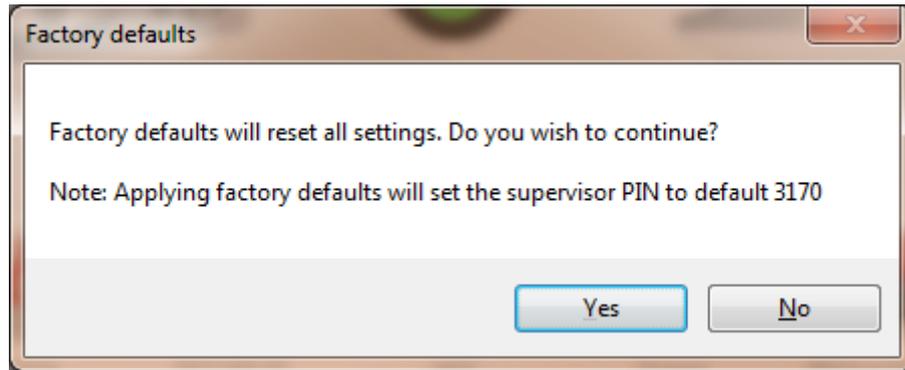
This will read all the settings from the .econfig file and load them in to the application. This allows you to view and edit the settings without uploading to the unit.

## Advance Options



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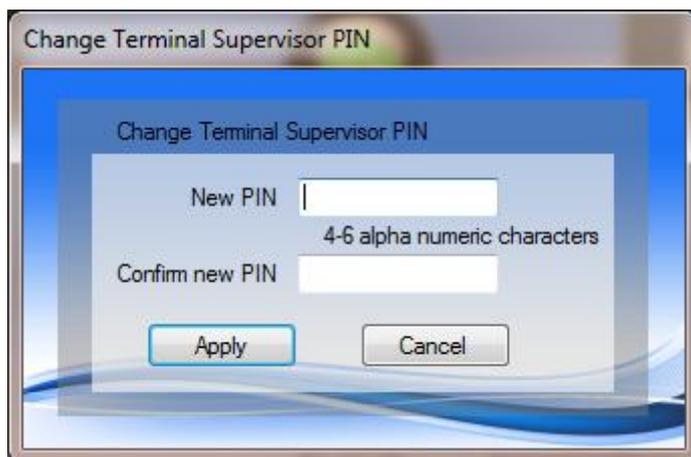
## Factory Defaults



Factory default resets the device back to original settings, including the supervisor PIN (pass code) 3170. It will clear existing tracking, pots and the power settings.

## Security Settings

### Change Supervisor PIN



Input type: Alphanumeric, 4-6 characters long

Default: 3170

This allows the supervisor pin (pass code) to be changed.

## Log History

Index #	Date	Time	Event Type	Call Handler State	SMS Handler State	Message	Loop connected	Ignition ON	Network Registered	Signal strength	Temperature
1	23/11/2011	23:26:06	Status	Idle	SMS Idle	Log Cleared	False	True	True	4	27
2	01/01/1970	00:00:00	Status	Phone Starting	SMS Idle	Phone On	False	True	False	0	28
3	01/01/1970	00:00:00	Voice call: Remote Initiated	Idle	SMS Idle		False	True	True	5	29
4	23/11/2011	23:34:31	Voice call: Remote Initiated	Ringing	SMS Idle		False	True	True	4	29
5	01/01/1970	00:00:00	Status	Phone Starting	SMS Idle	Phone On	False	True	False	0	29
6	23/11/2011	23:39:35	Voice call: Remote Initiated	Idle	SMS Idle		False	True	True	5	30
7	23/11/2011	23:40:42	Voice call: Remote Initiated	Idle	SMS Idle		False	True	True	5	29
8	23/11/2011	23:41:05	System error	Phone Disconnected	SMS Idle	No Clk R1	False	True	True	5	30
9	23/11/2011	23:41:15	Status	Phone Disconnected	SMS Idle	Phone On	False	True	False	5	31
10	01/01/1970	00:00:00	Status	Phone Starting	SMS Idle	Phone On	False	True	False	0	30
11	01/01/1970	00:00:00	System error	Phone Disconnected	SMS Idle	No DPL R1	False	True	False	0	30
12	01/01/1970	00:00:00	Status	Phone Disconnected	SMS Idle	Phone On	False	True	False	0	30
13	23/11/2011	23:43:13	Voice call: Remote Initiated	Idle	SMS Idle		False	True	True	4	29
14	01/01/1970	00:00:00	Status	Phone Starting	SMS Idle	Phone On	False	True	False	0	32
15	01/01/1970	00:00:00	System error	Phone Disconnected	SMS Idle	No DPL R1	False	True	False	0	30

Total Log Entries: 136

Retrieve more log entries: Retrieve all log entries [Retrieve]

[Clear] [Export] [Close]

This provides a listing of all entries stored in the unit's log. The log can store alarm events, errors and other information regarding the activities of the unit.

**Retrieve:** Retrieves the log from the attached unit.

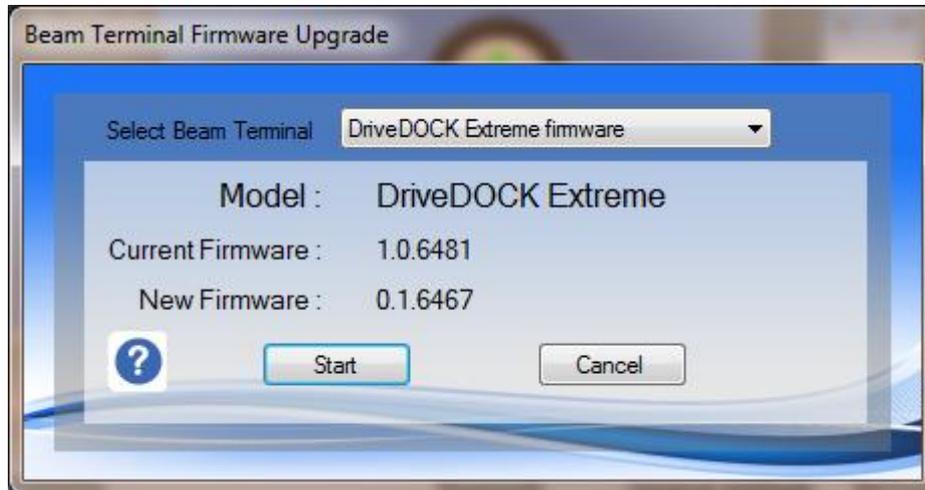
**Clear:** Clears the log from the attached unit.

**Export:** Exports the log in comma separated file system.

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## Upgrade Firmware

### Beam Terminal Firmware Upgrade



This provides the ability to upgrade the unit with new firmware. Firmware for the unit has a ".HEX" extension.

When upgrading the firmware of the unit it is vital that power is not removed to the unit, and the cable is not disconnected from the device at any stage until the process is complete.

## Troubleshooting

1. Cannot communicate with the unit.
  - a. Ensure the unit is physically connected to the computer via the USB cable and that the cable is connected to the docking station.
  - b. Ensure that no other application or utility is connected to the Beam Application comport
  - c. Ensure that power is switched ON to the unit
  - d. Remove the USB cable and then reconnect it to the unit.