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# Centurion – Lite

(Pocket PC Software)

## *Users Guide*

V1.10

**Diamond Edge Technology**  
**545 High Street**  
**Eugene, OR 97401**

Phone : (541)-345-7852  
Fax : (541)-345-7853  
Web : [www.detllc.com](http://www.detllc.com)

***Diamond Traffic Products Customers:***

Email : [support@diamondtraffic.com](mailto:support@diamondtraffic.com)  
Web : [www.diamondtraffic.com](http://www.diamondtraffic.com)

***International Road Dynamics Customers:***

Email : [product.info@irdinc.com](mailto:product.info@irdinc.com)  
Web : [www.irdinc.com](http://www.irdinc.com)

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# **TABLE OF CONTENTS**

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<i>Section</i>	<i>Page</i>
I. Introduction & Installation .....	3
II. Connections and Cabling .....	5
III. Operation & Downloading Example .....	6
IV. Data Integrity Checking .....	10
V. Centurion-CC Link .....	11

# I. Introduction & Installation

Centurion-Lite (or CentLite) is a special version of the Centurion software designed to run on a PocketPC. It is very easy to use and for most tasks requires no user intervention to do the following:

- *Connect to a large variety of traffic counters from Diamond Traffic Products or International Road Dynamics.*
- *Automatically download data from the traffic counter (either previously unretrieved data or all data can be selected).*
- *After a successful download, an erase of the Flash, TAM, or MMC memory is also possible.*
- *Provide a seamless link to desktop Centurion-CC for report generation and database processing. (CC Version 1.11 or later, see section V for more information).*
- *Starting with CentLite V1.10, you can now automatically check downloaded data files to make sure they contain valid data. See section IV for more information.*

Later versions of CentLite will also include the ability to program, monitor, and otherwise setup most traffic counters and devices.

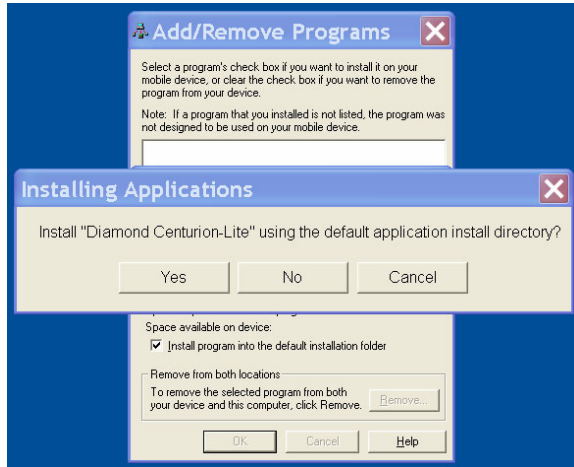
## Version Information:

<i>Version</i>	<i>Date</i>	<i>Explanation</i>
1.00	08/08/03 #0001	<input type="checkbox"/> First commercial release of software.
	08/15/03 #0002	<input type="checkbox"/> Added two new options: Require CTS to Link and Require DSR to link.
1.01	08/28/03 #0001	<input type="checkbox"/> Added ability to link to the TTC-442 Trail Counter.
		<input type="checkbox"/> Made changes necessary to operate on newer PocketPC 2003 systems (such as the Dell Axim X5).
1.10	05/06/04 #0001	<input type="checkbox"/> Added the "Data Integrity Check" option. This feature allows the user to check each downloaded data file to verify it contains valid data.

## Installation Information:

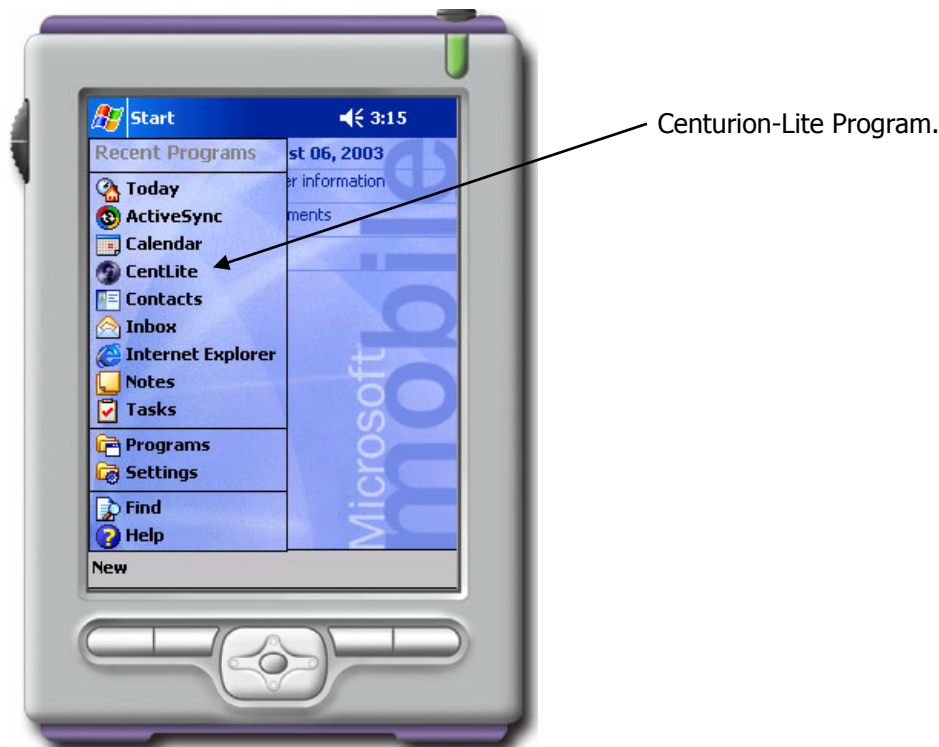
CentLite uses the standard Microsoft CE Application Manager to install on your PocketPC. To begin installation, follow these steps:

1. Connect your Pocket PC to your desktop computer (by putting it into the docking cradle).
2. Unzip the **CLite\_DTP.ZIP** (Diamond) or the **CLite\_IRD.ZIP** (IRD) file to a directory on your computer (such as C:\CentLite). *You must have the password to unzip these files!*
3. Using Windows Explorer, double click on the SETUP.EXE program.
4. The following window should appear:



5. Click Yes.

Centurion-Lite will be installed on your PocketPC and a shortcut will be placed on the Start Menu as shown below:



## II. Connections & Cabling

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A PocketPC is connected to a traffic counter utilizing two additional special cables (available from your PocketPC manufacturer or local electronics store).

1. Serial Cable (sometimes called a Serial Link Cable).
2. Null Modem Adapter (9 pin male-to-male).

The Serial Cable normally connects to the same connector that your PocketPC uses when it is dropped into its docking port. You can't use the Serial Cable and the docking port at the same time, so the Serial Cable is disconnected when you connect your PocketPC to your desktop computer.

Note that some PocketPC's don't have a docking port. These devices use either the same Serial Cable described above or a USB cable to connect to a desktop computer.

Because of the way the cables are wired, you cannot directly connect the Serial Cable to a traffic counter. Instead, you must place a Null Modem adapter onto the end of the Serial Cable. This can then be connected to a traffic counter.

### *Note about Datahog:*

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Centurion-Lite does support connection to the Datahog. However, because it has been designed to connect directly to a traffic counter, you would NOT use the Null Modem adapter when plugging the Datahog into your Pocket PC

### *Compatible Counters:*

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The following traffic counters and devices are compatible with Centurion-Lite.

TT-2001 & TCC-500	Version 3.00 and later.
Unicorn, Phoenix, Pegasus, & TCC-540	All versions (includes WIM, TAM & MMC)
TT-501 & TC-501	Version 2.00 and later.
Datahog	All versions.
Unicorn-Limited, Apollo, Argos	All versions.
Sprite	All versions.
TTC-442X (Trail Counter)	All versions.

### III. Operation & Downloading Example

The following screen shots walk you through all of the functions and features of Centurion-Lite. This includes everything from starting the program to downloading data and viewing current program version numbers.

From the basic PocketPC Screen, tap the Start Menu and then tap **CentLite**:



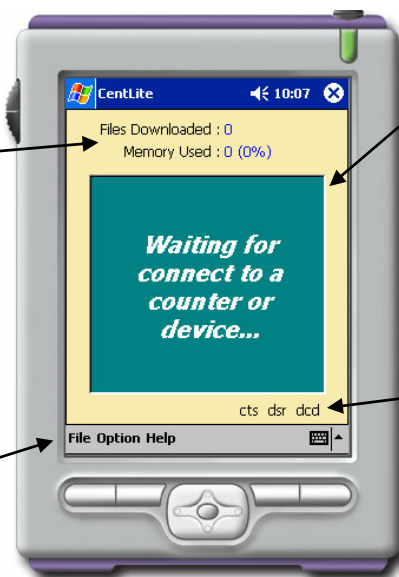
The program will start and immediately begin scanning for a Traffic Counter or other supported device.

Displays total number of data files and the amount of memory used by these files. The % shows how much of the available memory in PocketPC is being used.

This large box displays information about the activities of the program.

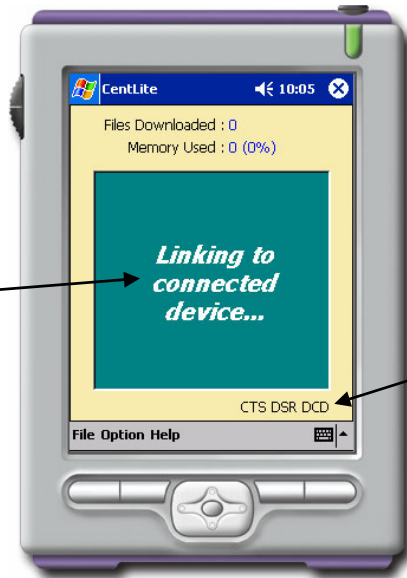
This is the program menu bar. You can view files, set program options, and view the About box by tapping one of these selections.

These three values indicate the state of the Serial Port CTS, DSR, and DCD status lines. Lower case indicates the signal is Off, upper case indicates On. When a device is connected, they will normally all change to the On state.



To immediately start a download, plug the Serial Cable into the PocketPC with a Null Modem adapter on the end. Then plug in the traffic counter serial cable. The screen should change to:

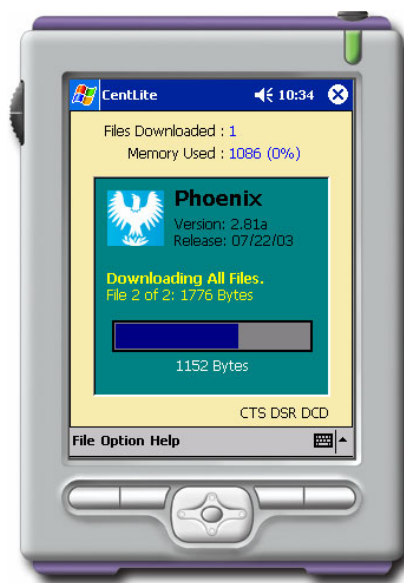
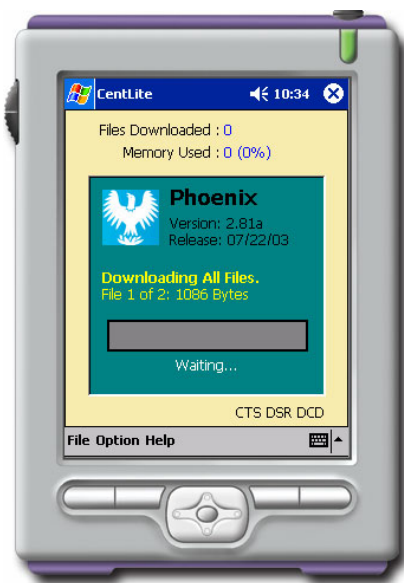
Main window immediately changes to show CentLite is attempting to communicate with traffic counter.



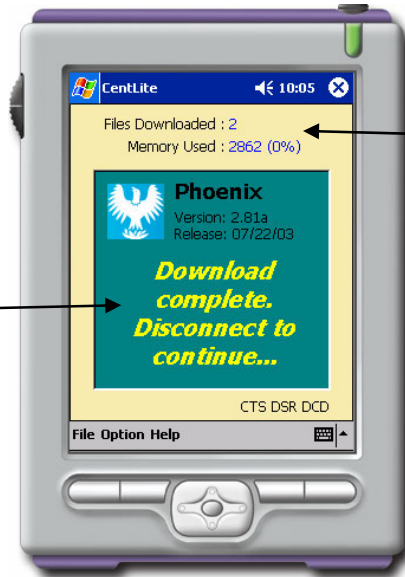
All three Serial Status indicators go to capitals to indicate correct cable connect.

When the device is identified it is immediately polled for status and file directory information. By default, CentLite first checks to see if a counter has any unretrieved data files. If it does, then just those files are downloaded. If it doesn't, then all the files in the counter are retrieved. You can change this behavior with the Option menu (see later descriptions).

The following two screen shots show a connection to a Phoenix with two files being downloaded.



When the download has finished, the program alerts you with a sound and displays this screen:

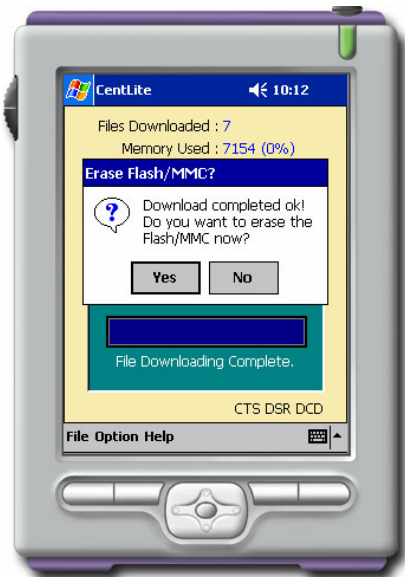


The number of files and amount used is always updated after each file is retrieved by the program.

CentLite waits until you disconnect the current device before starting to scan for the next device.

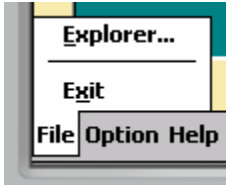
It is important to note that while any device is connected, CentLite disables the Automatic Shutdown feature of your PocketPC. This is so downloading and other communication functions will proceed uninterrupted. However, you should check the device whenever you hear a tone so that you can disconnect promptly when download complete (otherwise the battery in the PocketPC will be drained at a faster rate).

If the download is successful and the device has Flash, PCMCIA, or MMC memory, CentLite will ask you if you want to erase this memory. Tap **Yes** to erase the memory or **No** to not erase. These three screen shots show the typical erase procedure:





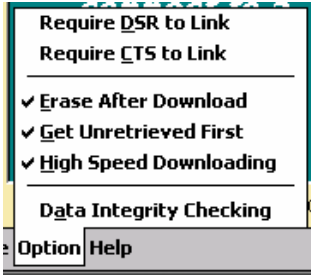
The three menu selections are described below:



**Explorer...** : Opens up the standard windows file explorer onto the download directory.

**Exit** : Terminates the program.

Tap the option to toggle the check mark On/Off.



**Erase After Download** : When enabled, the program will pause and ask if you want to erase the Flash, PCMCIA, or MMC memory (if any in device).

**Get Unretrieved First** : When enabled, the program will download only unretrieved files if the counter contains any (otherwise all files are retrieved). If disabled, all files are retrieved always.

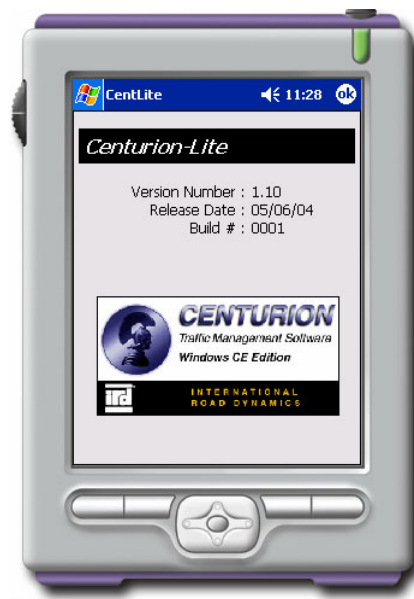
**Require DSR/CTS Link** : When checked, Centurion-Lite requires these control signals to be active before it will try and link to a device.

**Data Integrity Checking** : When checked, each downloaded file will be scanned for errors and displayed after the counter is disconnected. See section IV for complete information.



**About** : Displays the current program information and version (see next page).

The About boxes for Diamond and IRD versions of Centurion-Lite:



## IV. Data Integrity Checking

CentLite V1.10 contains the ability to check each downloaded file to insure that it contains valid data. This check occurs automatically if you enable the “Data Integrity Checking” feature on the Option menu.

When enabled, the counter will scan the downloaded file(s) only after all data from a device has been downloaded and the device is disconnected. When this happens, a window similar to this will appear:

This identifies the name of the file as it is stored in the PocketPC. Since file names are usually fairly long, only the first 32 characters or so are displayed.

This line tells the type of data (Raw, Binned, Count, or Sensor) and the number of lanes of data collected.

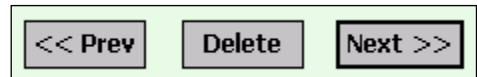
If the file is bad or if you decide you do not want to keep it, click the Delete button to eliminate it from the PocketPC memory.

At anytime, click Ok to stop the Data Integrity check function.

These first 3 lines indicate the Site ID, Start, and Stop times for the file.

This box displays the status of the data. If it passes all data integrity checks, a “File Ok” appears in green. If it fails, then a red message appears along with a list of what is wrong with it.

If more than one file is downloaded, CentLite will display additional buttons at the bottom of the screen to allow you to move to the Next or Previous file. If you do not see the Next button, then you know you have reached the last file and you can click Ok to close the Data Integrity check window.



When a Data Integrity violation occurs, the status box changes to Red and displays “FAILED” followed by what caused the failure. Only the first two data integrity violations are displayed. The following lists possible data integrity violation messages:

- x - Ly 0 hours @hh:00** - Indicates 3 or more consecutive hours containing nothing but zeros. The “x” is the number of hours, “y” is the lane number, and “hh” is the hour the zeros started at.

*Note: Additional Data Integrity checks will be added in future versions.*

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## V. Centurion-CC Link

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Starting with Centurion-CC V1.11, the ability to automatically identify, download, and process data from any PocketPC connected to your desktop computer is built into the program. Please refer to the Centurion-CC quick start guide for more information on setting up and using this feature.

For versions of Centurion-CC less than V1.11, and for TrafMan users, the data collected by Centurion-Lite can still be used but you must manually move it from the PocketPC following these steps:

1. Drop your PocketPC into the docking cradle.
2. When Microsoft ActiveSync finishes connecting, click the Explore menu button.
3. From the explorer window that appears, double click the Centurion Downloads folder.
4. Mark all the files (Cntrl+A) then select Edit - Move To Folder.
5. For Centurion-CC, select the Download directory (usually C:\Program Files\Diamond\Centurion CC\Downloads).  
For TrafMan, it is usually C:\TRAFMAN\DOWNLOAD.
6. When finished, close the explorer window and execute Centurion-CC or TrafMan.
7. In Centurion-CC, select the Manually Import files option and then select the files you just moved into the download directory.  
In TrafMan, select Files, tag each of the new files, and then press <F5> to import them.