



**OPN2002_DL
UTILITY SOFTWARE**

INSTALLATION AND USER GUIDE - v1.00

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1.0 INTRODUCTION

OPN2002_DL allows stored timing data to be collected from Opticon OPN2002 data collectors running the ERS 'ScanStore' Application software.

Collected data will be written to a simple comma delimited text file on disk.

2.0 INSTALLING OPN2002_DL AND DRIVERS

Installing OPN2002_DL is a 2 step process as follows:

Step1 - Install the OPN2002 Application software

Step 2 - Install the relevant hardware drivers

These steps are described in further detail below

2.1 INSTALLING THE OPN2002_DL APPLICATION

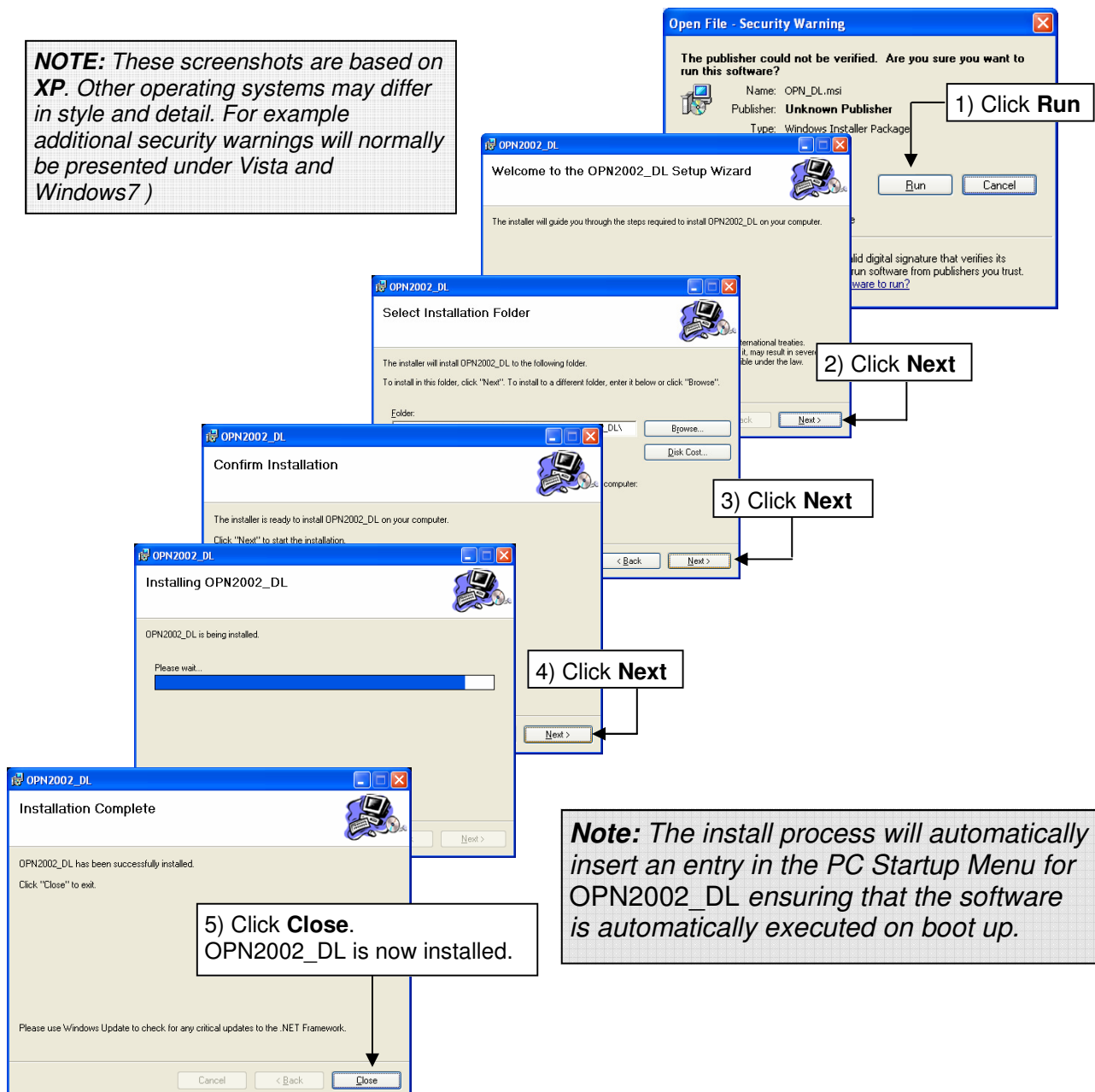
NOTE: The .NET 2.0 Framework is a prerequisite of the OPN2002_DL application.

The .NET 2.0 Framework may be downloaded from the [ERS website](#) or direct from [Microsoft](#).
(Approximately 22MB download)

To install the OPN2002_DL utility execute the Microsoft Installer **OPN2002_DL.msi** and proceed as show below:

Note: The software must be installed from a logon with full **Administrative rights**

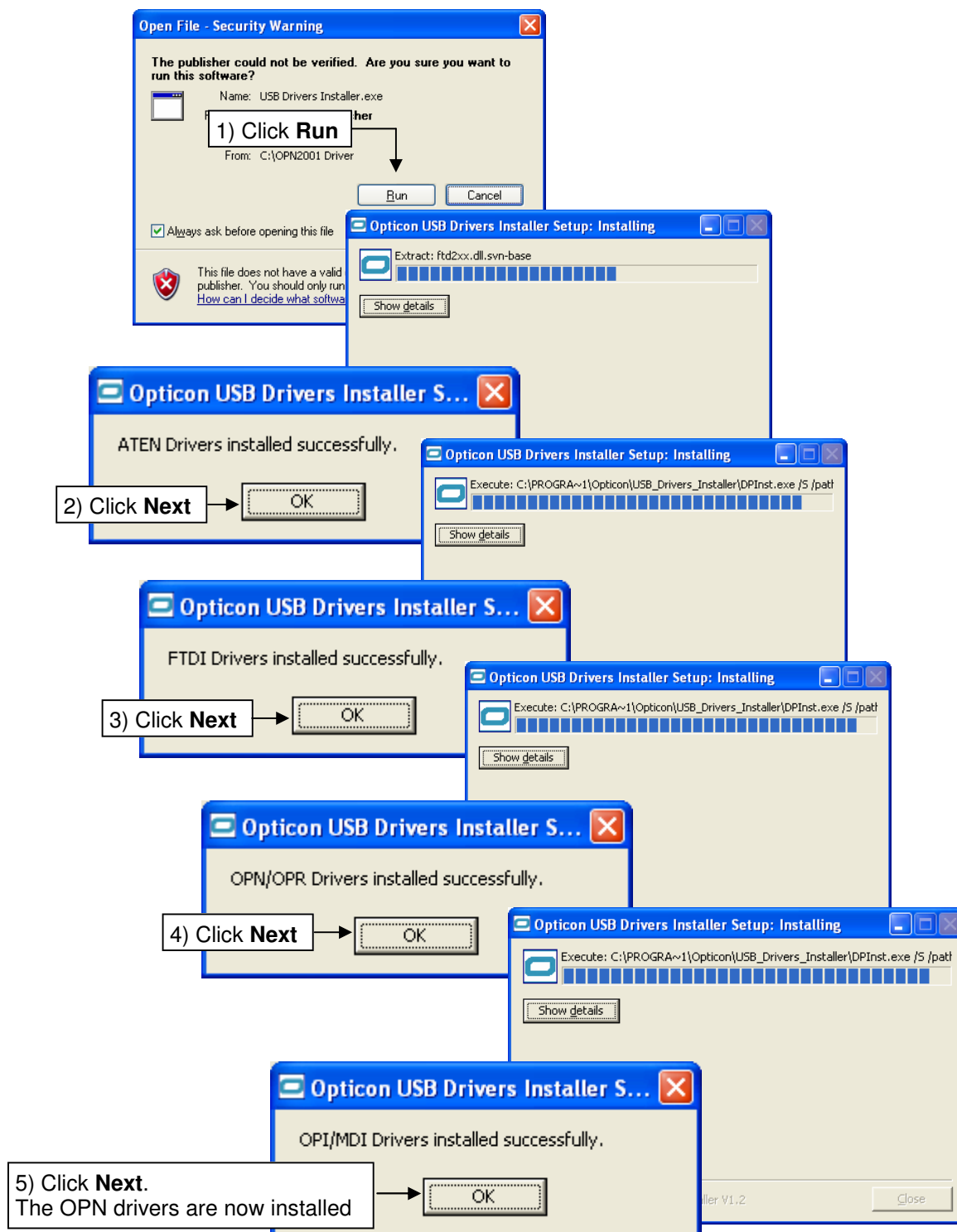
NOTE: These screenshots are based on **XP**. Other operating systems may differ in style and detail. For example additional security warnings will normally be presented under Vista and Windows7)



2.2 INSTALLING OP2002 DRIVERS

To install the drivers for the OPN2002 or multi-way Cradle run the OPN2002 Driver Installer 'USB Drivers Installer.exe' and proceed as follows:

NOTE: Do not plug the OPN2002 or cradle onto the PC until after step 5 below



OPN Hardware Drivers:

Note 1: The drivers automatically allocate a 'virtual' COM port for the OPN2002 allowing it to operate just as if it were plugged into one of the PC COM ports.

The OPN2002_DL utility will automatically detect the COM port allocated to the OPN2002, avoiding the requirement for manual configuring of the software.

Note 2: If the OPN2002 is subsequently connected to a different USB port on the PC it will be seen as a new device. The Found New Hardware wizard will then automatically run to allow the OPN2002 to be installed to this USB Port. In this case a new virtual COM port will be assigned for the device when used via this USB port.

Note 3: OPN2002_DL expects that only 1 OPN2002 will be connected to the PC. In the event that multiple devices are simultaneously connected, OPN2002_DL will communicate only with the 1st OPN2002 found when searching for devices. If that device is disconnected OPN2002_DL will re-enter 'search' mode finding the 'next' connected device.

2.2.1 CHECKING THE DRIVER INSTALLATION

To check the driver has installed correctly proceed as follows:

Connect the OPN2002 or Cradle onto the PC via a convenient USB port and from the Windows Device Hardware Manager expand the Ports option.

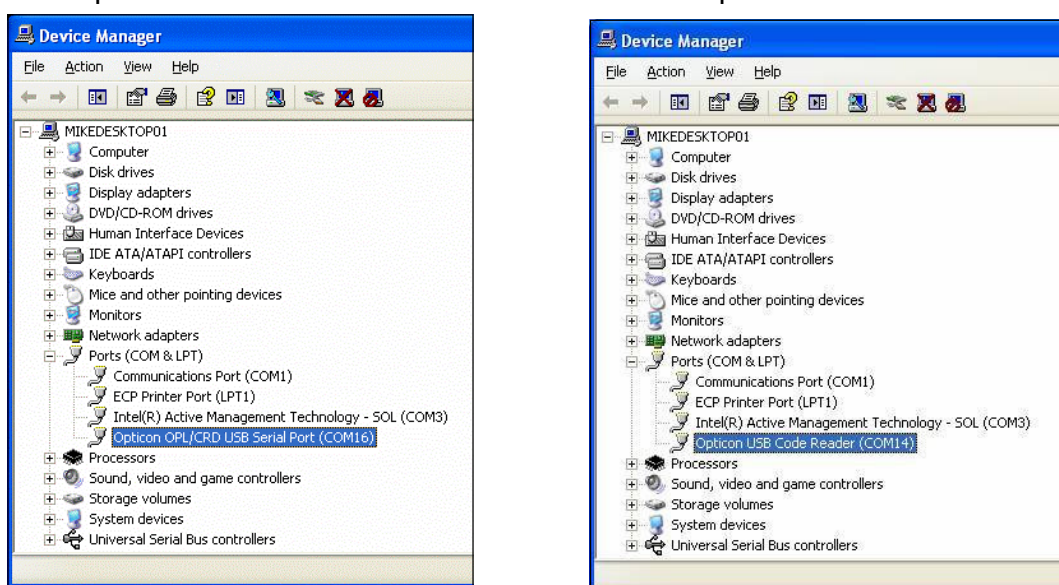
The OPN2002 should appear in the list of available ports as

Opticon USB Code Reader (COMxx)

The multi-way Cradle should appear as:

Opticon OPL/CRD USB Serial Port (COMxx)

The COM port allocated to the device will be shown in parentheses:



Updating the Driver:

In the event that the device does not appear correctly in the list expand the Universal Serial Bus Controllers option in the Device Manager and look for

Opticon OPL/CRD USB Serial Converter

Right-click and select **Update Driver...**

Click **Yes, this time only** to allow Windows to connect to Windows Update to search for the driver and click **Next**:



The driver should automatically update and the relevant port as noted above should then be listed under Ports in the Device Manager.

3.0 USING OPN2002_DL

The installation procedure above will create a desktop icon for OPN2002_DL and will automatically insert an entry in the PC Startup Menu ensuring that the software will automatically be executed when the PC is booted. Alternatively OPN2002_DL can be run from the Windows program list in the usual way.




3.2 CONFIGURING THE OPERATIONAL MODE FOR OPN2002_DL

The operating mode for OPN2002_DL may be configured from the main program screen as follows:

OPN2002_DL running in default 'Single Unit Mode'

Waiting for OPN-2002...




Click to enable/ disable writing of the date/time of each record to the output text file. (Default setting is ON - ie: Date/ time included on every data record)

Click to enable/ disable automatic clearing of data from the OPN2002 after successful download (Default setting of OFF - ie: no automatic clearing of data)

Click to switch between single unit communications mode and multi-way cradle communications mode (Default setting is Single Unit Mode - ie: single OPN2002 connected via USB)

OPN2002_DL running in multi-way Cradle Mode

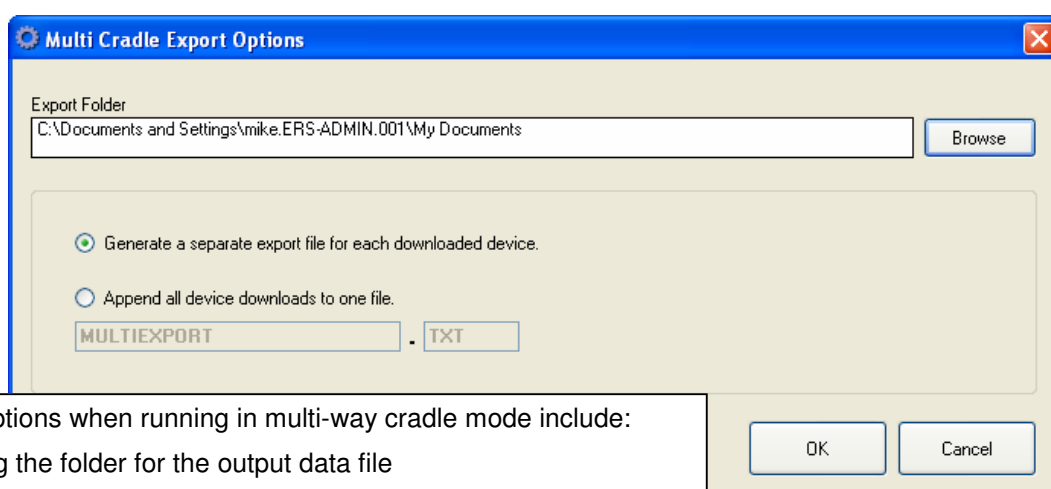
Waiting for OPN-2002...



Note additional configuration option when running in multi-way cradle mode (See below)

NOTE: The settings selected above will be stored and will remain as the default settings until subsequently changed by the operator if required.

3.2.1 ADDITIONAL CONFIGURATION OPTION IN MULTI-WAY CRADLE MODE



Configuration options when running in multi-way cradle mode include:

- Specifying the folder for the output data file
- Selecting either
 - Automatic generation of a separate output file for each downloaded device (See File Naming Convention below)
 - or
 - Appending all downloaded data to a single specified filename

3.2.2 FILE NAMING CONVENTION

When using automatic file generation in multi-way cradle mode OPN2002_DL will use the following naming convention when generating the output files:

OPN2002_[Serial No.].[Date/Time].txt

Eg:

OPN2002_003256_13052010171019.txt

3.3 DOWNLOADING STORED TIMING DATA FROM THE OPN2002

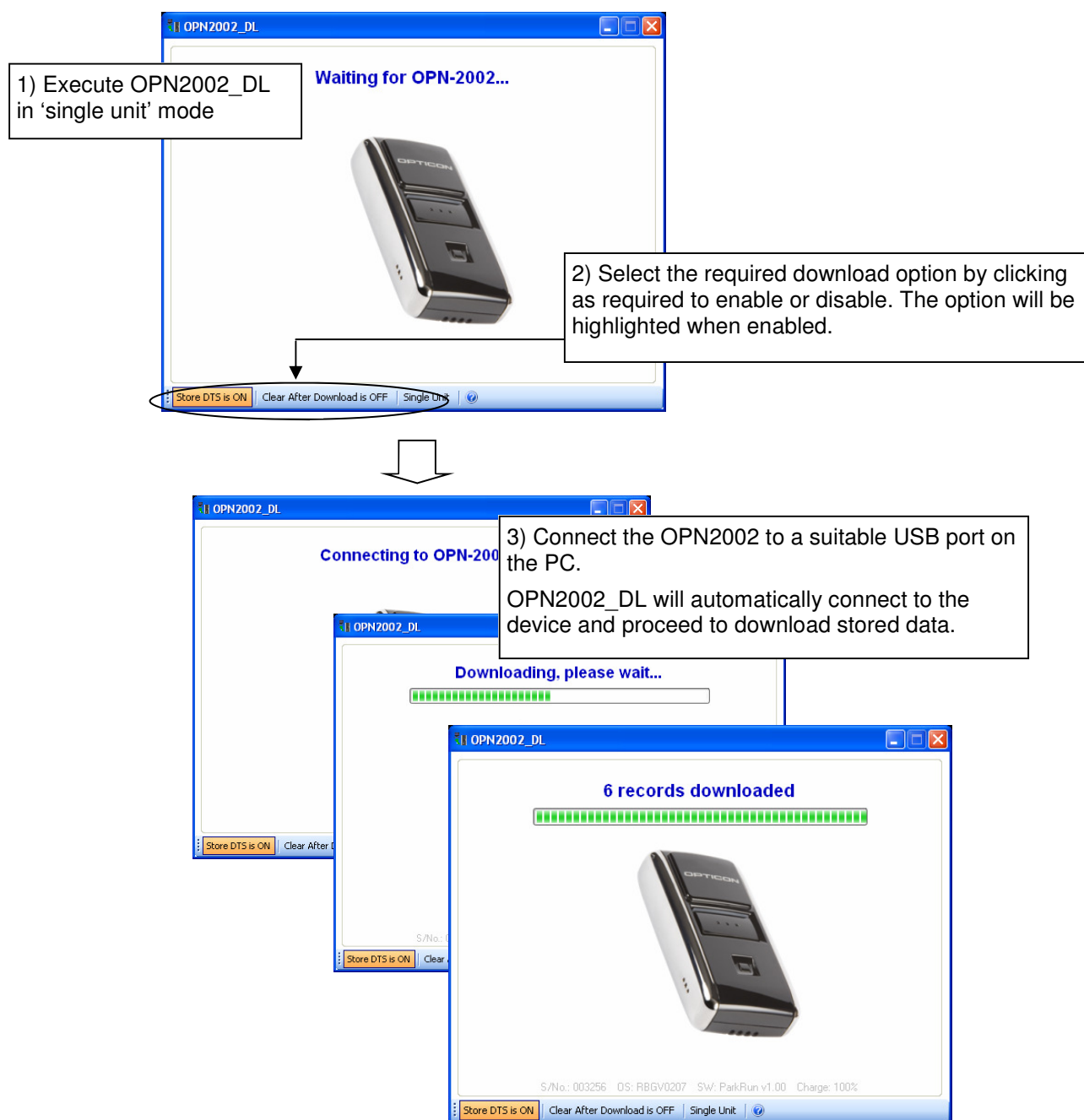
To download stored data from the OPN2002 simply connect the OPN2002 to the PC USB port using the cable provided, or place the OPN2002 into an empty slot in the multi-way cradle.

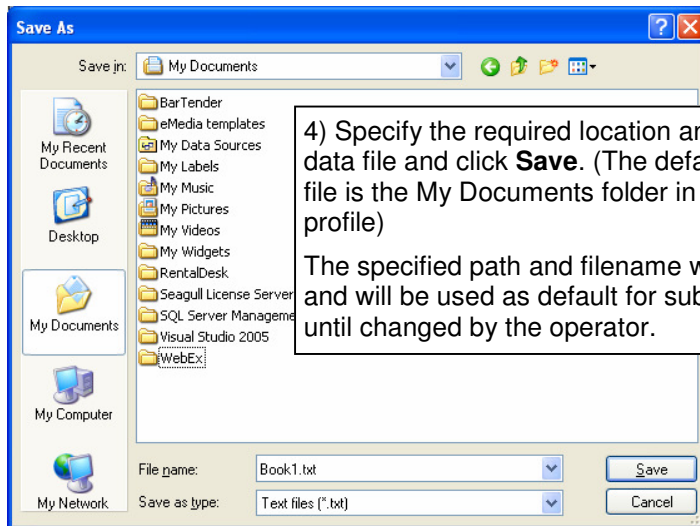
Within a few seconds OPN2002_DL will detect the connected device and proceed to download stored data.

Note: OPN2002_DL will automatically synchronise the real-time clock in the OPN2002 to the PC clock every time a device is attached or placed into the cradle.

3.3.1 DOWNLOADING VIA DIRECT USB CONNECTION

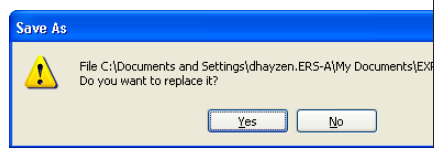
To download via a single OPN2002 direct USB connection proceed as follows:





4) Specify the required location and name for the output data file and click **Save**. (The default path for the output file is the My Documents folder in the current user profile)

The specified path and filename will be remembered and will be used as default for subsequent downloads until changed by the operator.

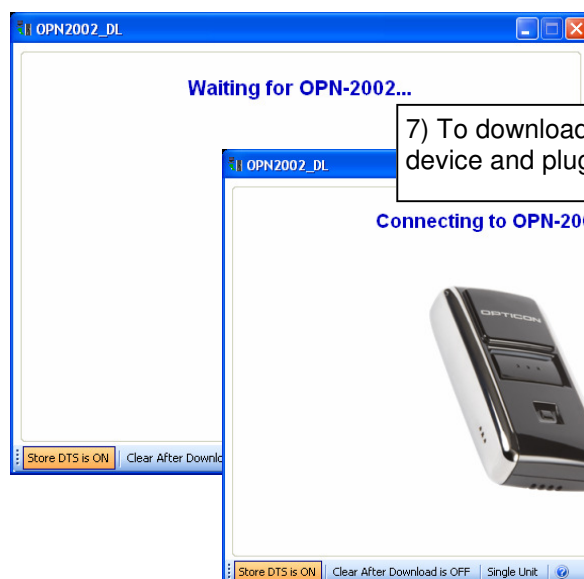


5) OPN2002_DL will overwrite the data file if it already exists.

Click **Yes** to confirm overwrite, **NO** to return to the **Save as** screen above for selection of a new output file.



6) OPN2002_DL confirms that the data records have been written to the output data file.



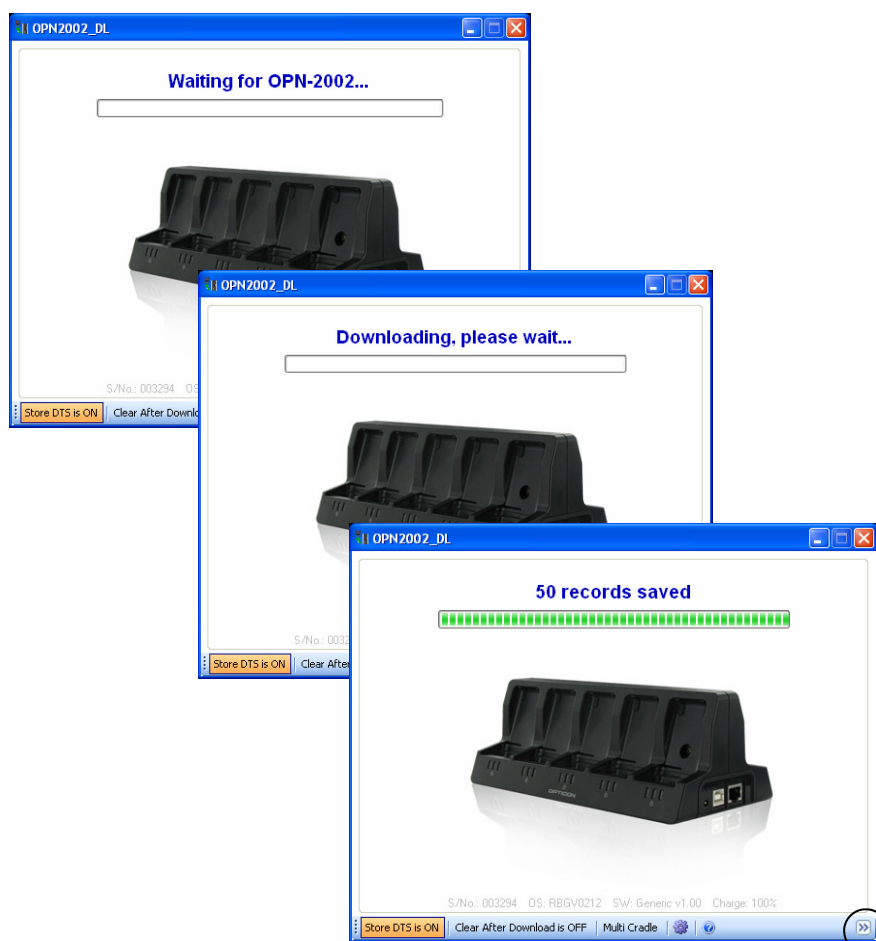
7) To download another OPN2002 simply unplug the device and plug-in another.

3.3.2 DOWNLOADING VIA MULTI_WAY CRADLE

To download stored data via the cradle simply place the OPN2002 data collectors into a spare slot in the cradle.


OPN2002_DL will detect the data collectors and automatically proceed to download the units in turn.

The downloaded data will automatically be written to one or more text files as configured in section 3.2.1 above.



Note the additional 'Communications Monitor' feature when running in Multi-way cradle mode. Click here to display the monitor

3.3.3 COMMUNICATIONS MONITOR (MULTI_WAY CRADLE MODE ONLY)

The Communications Monitor may be enabled/ disabled by clicking the  button at the bottom right of the main program screen.



Click here to toggle the Communications Monitor screen ON/ OFF

Click here to Pause/ Restart Communications Monitor.

Note: The communications trace is not buffered when the Communications Monitor is paused. On restart the display continues immediately with live communications

Click here to clear the Communications Monitor display

NOTE: The Communications Monitor display may be moved around the PC screen independently if required, however if the OPN2002_DL screen is subsequently moved the Communications Monitor will immediately revert to the default display position (i.e. attached to the right hand side of the OPN2002_DL program screen as shown above).

3.4 FORMAT OF THE OUTPUT DATA FILES

The output data files will be written as simple text files using comma delimited records in the following format:

```
Barcode, ScanDate
[Barcode Data 1],[Date/ Time]
[Barcode Data 2],[Date/ Time]
[Barcode Data 3],[Date/ Time]
:
:
[Barcode Data N],[Date/ Time]
```

where

Barcode, Scandate

is a fixed header record

[Barcode Data 1]... [Barcode Data N]

are the individual records comprising scanned barcode plus scan data/ time

For example:

```
Barcode, ScanDate
157260,12/05/2010 16:44:34
1DA57311,12/05/2010 16:44:36
179250,12/05/2010 16:44:36
11160,12/05/2010 16:44:37
F-78960,12/05/2010 16:44:38
:
:
```

Note that the date/time stamp will only be present if the **Store DTS** option from the OPN2002_DL main screen is set to **ON** when the device is downloaded.

3.5 BACKUP DATA FILES

In addition to the output data file produced above OPN2002_DL also writes a file to a history folder located in the Application Data folder for All Users.

For example: Back up data files on Windows XP will be stored at:

```
C:\Documents and Settings\All Users\Application Data\Electronic Reading
Systems Ltd\OPN2002_DL\HISTORY
```

These history files are written in the same format as the normal output files and using the same filename convention as the individual file output.

4.0 SHUTTING DOWN OPN2002_DL

To close OPN2002_DL simply click 'X' from the top right of the program screen

