



**RST INSTRUMENTS** LTD.

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FieldBook5  
Data File Editor  
Instruction Manual

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# FieldBook5 Data File Editor Instruction Manual

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Although all efforts have been made to ensure the accuracy and completeness of the information contained in this document, RST Instruments reserves the right to change the information at any time and assumes no liability for its accuracy.

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## 1 INTRODUCTION

The FieldBook5 Data File Editor software permits operators to enter new records into existing data files. The software is preinstalled on an Ultra-Rugged Field PC<sup>2</sup> that can withstand the often demanding field conditions. Files are stored in a common CSV format for easy import into data display programs such as Microsoft Excel™ or RST Instruments Geoviewer. Data file templates can be set up on a PC and transferred to the Field PC<sup>2</sup> via ActiveSync™ connection. After collecting data in field, data files can be transferred from Field PC to office desktop PC for quick analysis.

## 2 READOUT UNIT

The Ultra-Rugged Field PC<sup>2</sup>™ comes with a Rugged Case to protect the device in often demanding field conditions. All connections are conveniently located on the front of the case, after taking readings the cover should be always put back in place to protect connectors.



Figure 1 – Ultra-Rugged Field PC<sup>2</sup>™ Case

## 2.1 USING THE ULTRA-RUGGED FIELD PC<sup>2</sup><sup>TM</sup>

Once the Ultra-Rugged Field PC<sup>2</sup><sup>TM</sup> is connected to the RS485 Digital Sensor Interface, turn on the power to the Ultra-Rugged Field PC<sup>2</sup> by pressing the power button (Figure 3).



**Figure 2 – Overview of the Ultra-Rugged Field PC<sup>2</sup><sup>TM</sup>**

Front Image		Back Image
1. Elastomer overmold	9. Microphone	17. Speaker
2. Touchscreen	10. Keypad buttons	18. Battery Door
3. Buttons Control	11. LED Indicator	19. Hand Strap
4. Hold-to-Zoom	12. Power button	20. Stylus
5. Pictures and Videos	13. Enter button	21. Stylus Tether
6. Tab button	14. Backspace	
7. Home Screen	15. Context Menu Button	
8. Shift Function	16. Right Soft Key	

**Bottom Image**

22. USB client (micro USB)
23. Microphone/Headphones jack
24. 12V DC jack
25. USB host (full size USB)
26. 9-pin serial port

**Note**

DC charging is done through the 12V DC jack (barrel connector, bottom left of the unit).

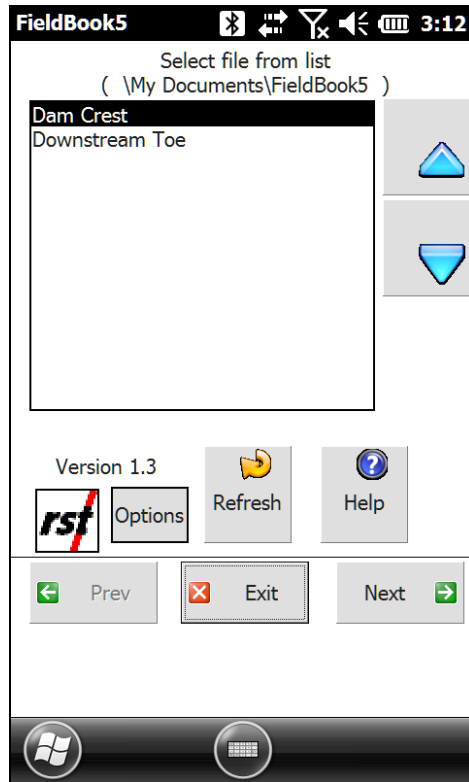
### 3 QUICK START INSTRUCTIONS

The following instructions outline the basic steps needed to record another data set from all instruments connected to the site.

1. The software is preinstalled on Field PC<sup>2</sup>.
2. If logger data is stored on Field PC<sup>2</sup>, copy data file to **My Documents\FieldBook5** folder. Go to step 4
3. Copy data files using ActiveSync and provided USB cable to folder **My Documents\FieldBook5**. Ensure that ActiveSync is installed on desktop or laptop PC before connecting, refer to section xx for ActiveSync installation instructions.
4. From the *Start* menu, choose FieldBook5 to launch the program.
5. Select the data file and press *Next*.
6. All site instruments are displayed, select the instrument and press *Next* to see all recorded data. Press *Add* to add a data entry.
7. Press *Next*, select another instrument and add new data entry the same way.
8. Press *Save* to save entire data file. NOTE: Saving before all instruments data is collected will cause "NAN" entries recorded.

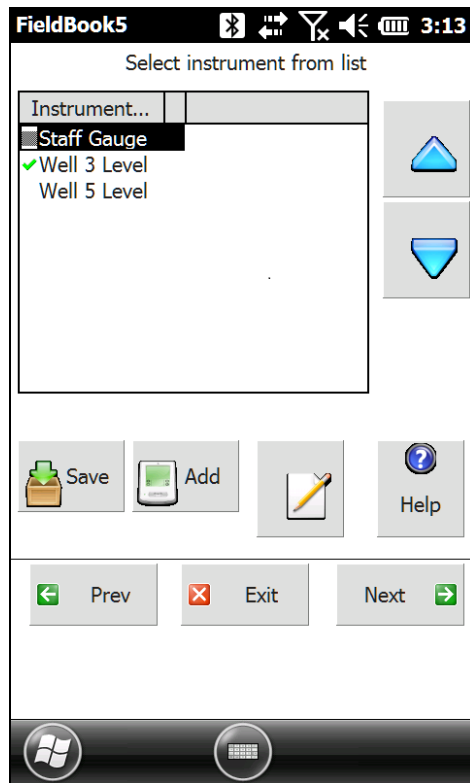
## 4 SOFTWARE OVERVIEW

To help the understanding of data file edit procedure, the sample file "Sample\_Data.dat" was included in data folder **\My Documents\FieldBook5**. The following screenshots show the procedure in more detail. At any time, the quick start instructions can be displayed by pressing the *Help* button located on the initial screen.



**Figure 3 – File Select**

Choose desired file using up ▲ and down ▼ buttons. Press *Next* to see all instruments in selected site.

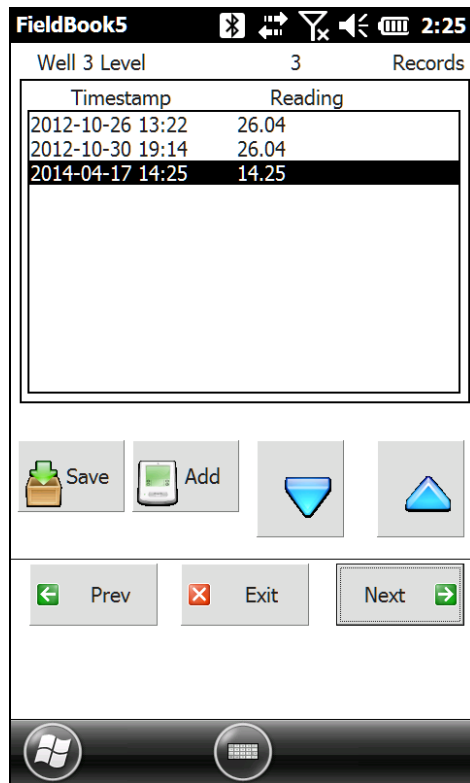


**Figure 4 – Instrument Select**

Press *Next* to see all data for selected instrument. Press *Add* to enter another data entry. Green check mark indicates instruments with added data in current session. Letter “C” indicates text comment has been appended to corresponding instrument data. To see or edit comments, select instrument label and press writing pad button. Refer to chapter 5.1 for more information.

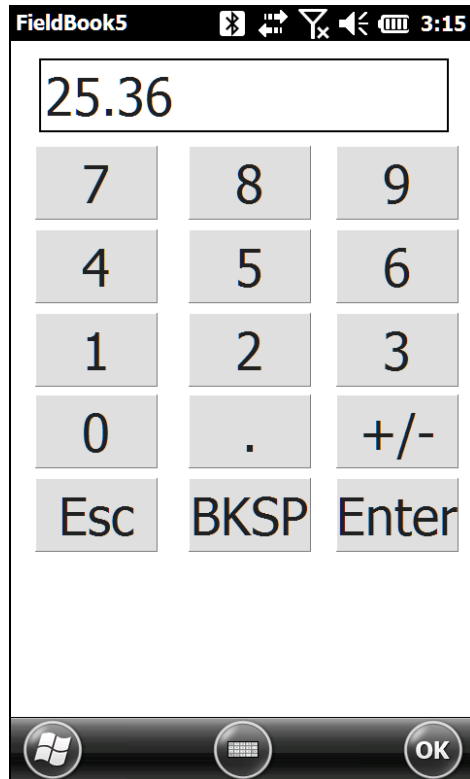
Recent edits can be saved to the data file by pressing *Save* button.





**Figure 5 – Data Preview**

Press *Add* to enter data for current instrument or press *Next* to move down to next instrument.



**Figure 6 – Data entry**

When data editing is done, press *Save* to write modifications to the data file.

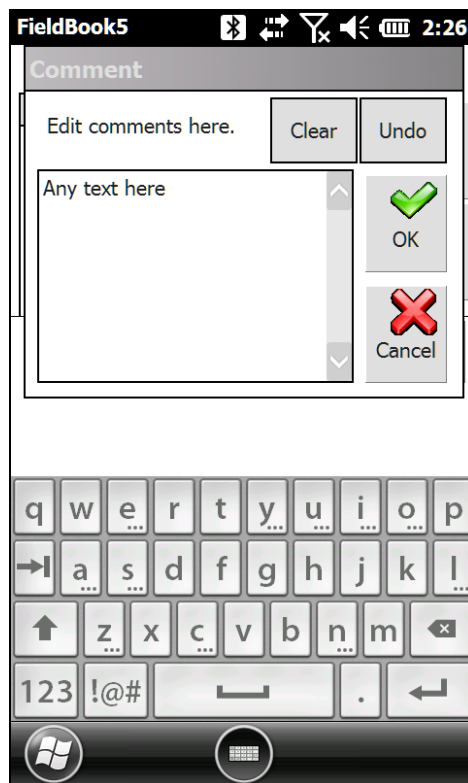
**Note**

If the data file is saved before all instrument data is collected, "NAN" entries will be recorded in place of missing data.

## 5 SOFTWARE FEATURES

### 5.1 INSTRUMENT COMMENTS

Brief commentary can be inserted for each instrument. Navigate to Instrument Selection window and click on drawing pad button to open comments dialog box.



**Figure 7 – Comments window**

Add new text or edit existing using on-screen keyboard. Any characters can be used except comma and bar (,|).

## 5.2 OPTIONS

Each data file contains several header lines with instrument information. These lines are normally detected automatically. In certain situations, it might be necessary to manually override automatic detection.

### Note

Use caution when changing these settings. Incorrect values might cause the program to malfunction, produce unexpected results or unreadable data files.

*First Data Line* and *Comments Line* can be detected and should be set to automatic detection (default). *Instrument Labels Line* is set to line 2 by default. Refer to Figure 8 for sample screen.

To change values, turn off automatic detection by pressing *Auto* button.

Press on desired setting to highlight (red) and tap on up ▲ or down ▼ buttons. Press OK to save.

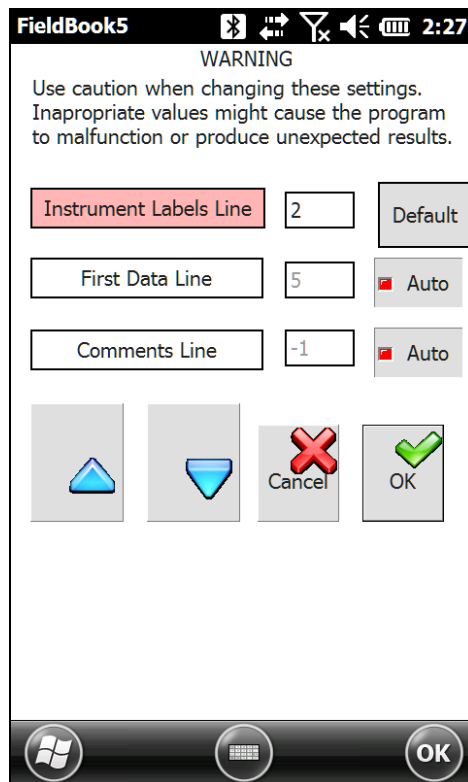


Figure 8 – Options window

## 6 INSTALLATION OF THE FIELDBOOK5 SOFTWARE.

Use the following steps to reinstall the RST Fieldbook5 Program:

1. Establish a connection to the Ultra-Rugged Field PC<sup>2</sup> using Microsoft ActiveSync.
2. Using Windows Explorer, copy the file "RST\_FieldBook5\_X.XX.CAB" to the folder on the Ultra-Rugged Field PC<sup>2</sup> (My Documents for example). The "X.XX" will mean the software version.
3. On Ultra-Rugged Field PC<sup>2</sup>, select *Start* and then *File Explorer* from pull down menu.
4. Navigate to the folder where the file "RST\_FieldBook5\_X.XX.CAB" was copied to.
5. Click on the "RST\_FieldBook5\_X.XX.CAB" file to begin installation.
6. Run the program by choosing FieldBook5 from *Start* menu.
7. Take a note of *Machine Code* and contact RST Instruments to obtain *Customer Code* necessary for program activation.
8. Enter *Customer Code* and press *Activate*.

## 7 DOWNLOADING DATA TO A DESKTOP PC

The software used to transfer data will depend on the version of Microsoft Windows installed on a desktop PC.

For Windows XP versions, ActiveSync™ is required. Windows Vista, Windows 7 and Windows 8 have a build-in Mobile Device Center. It is highly recommended to download and install the newest updates from Microsoft website.

### 7.1 INSTALLING MICROSOFT ACTIVESYNC™ ON WINDOWS XP

In order to communicate between the Ultra-Rugged Field PC<sup>2</sup> and a desktop PC or laptop, Microsoft's ActiveSync™ software is required and is included with the ThermArray System. Communication between the two devices is achieved through an USB connection.

#### Note

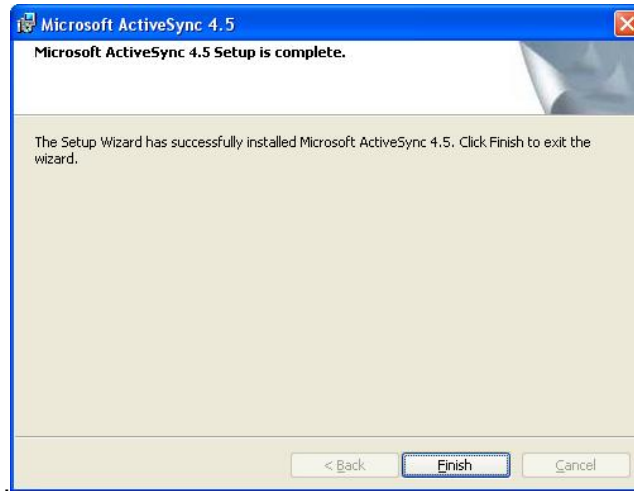
Microsoft's ActiveSync™ software can be freely downloaded from Microsoft's website.

#### Important

Don't connect the USB cable before installing ActiveSync™ software. Doing so will result in installation of generic Windows USB drivers which will not work with Ultra-Rugged Field PC<sup>2</sup>.

*To install Microsoft ActiveSync™:*

1. Insert the Ultra-Rugged Field PC<sup>2</sup> Companion CD into the CD-ROM drive. On most systems, Windows will automatically launch the setup program. Minimum system requirements are outlined in the jacket of the CD-ROM. Once the CD is up and running, a graphical window will open. Press the *play* icon on this window.
2. Click the link marked *Start Here*.
3. Click *Install ActiveSync*. Note: When prompted to download the file, select *Run this program from its current location*. Installing Microsoft Outlook is **not** necessary, for the ThermArray System to function. If you wish to use the Ultra-Rugged Field PC<sup>2</sup> for e-mail, install Outlook.
4. Follow the on-screen instructions until you reach the screen shown below, and then continue with Step 5.



**Figure 9 – ActiveSync Connection Screen**

5. Click Finish button.
6. Insert the AC Adapter plug into an electrical outlet. Connect the AC connector barrel connection on the base of the Ultra-Rugged Field PC<sup>2</sup> (item 24, Figure 2).
7. If you have not already done so, connect the mini USB connector to the connector on the base of the rugged case and the USB connector to the USB port on either the front or back of your personal computer.

**Note**

ActiveSync will automatically detect the Ultra-Rugged Field PC<sup>2</sup> connection.

8. Continue to follow the ActiveSync instructions to establish a partnership. Eventually you will come to a screen like the one below:

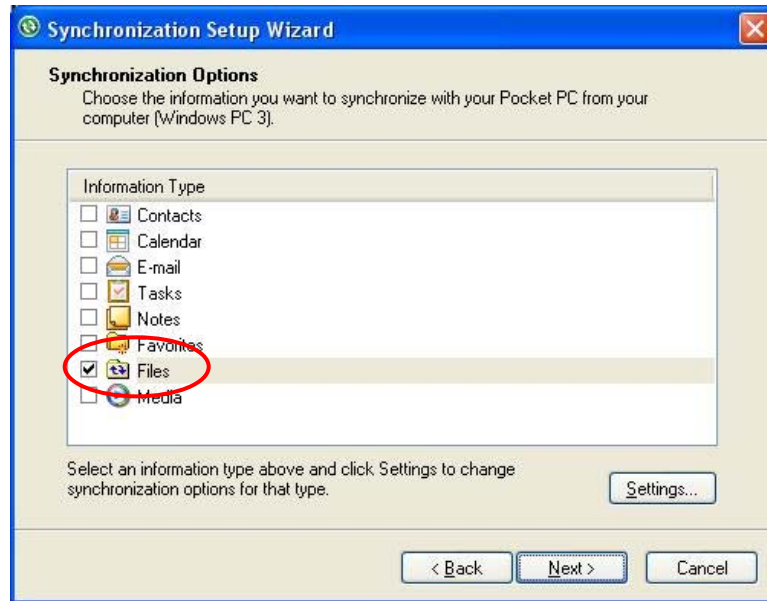


**Figure 10 – Setting Up a Partnership**

In order to synchronize the data in real-time between the Ultra-Rugged Field PC<sup>2</sup> and the desktop PC, you must set up a *sync partnership*. If you do not wish to synchronize data and

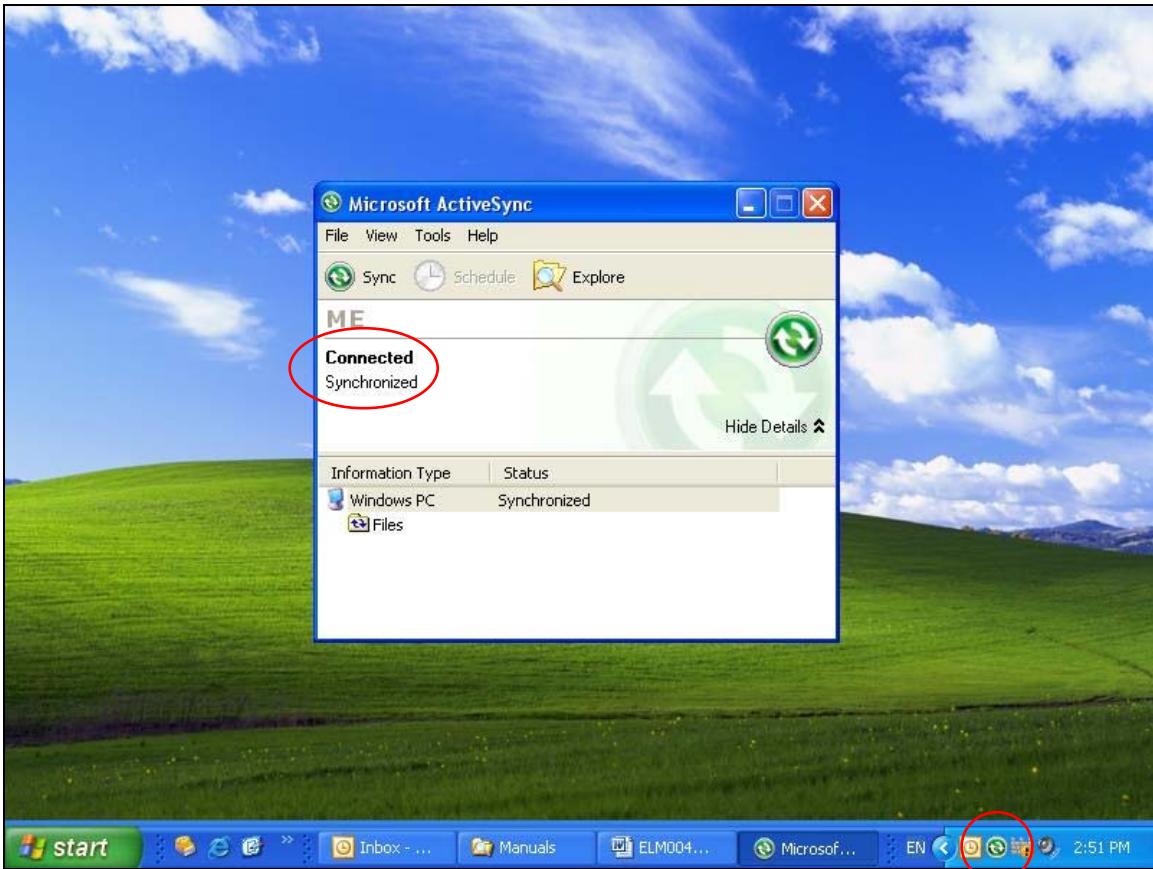
simply use Windows Explorer to copy files to and from the Ultra-Rugged Field PC<sup>2</sup>, click Cancel to leave the connection as *Guest Partnership* and skip the remaining instructions.

1. To set up a *sync partnership*, press *Next*.
2. Uncheck the option for synchronizing with Microsoft Exchange Server, press *Next*.
3. Decide what type of information you would like synchronized with the desktop computer. If you are only using the Ultra-Rugged Field PC<sup>2</sup> for the purposes of transferring ThermArray information, uncheck all the options and place a check mark next to the *Files Folder* (see below).



**Figure 11 – Synchronization Settings**

The software will notify you that it will create a folder on the desktop which links directly to the Ultra-Rugged Field PC<sup>2</sup> (*press OK*). Click *Next*, and then *Next* on following dialog, then *Finish* the installation. Once the partnership is established, the PC will recognize and automatically synchronize to the Ultra-Rugged Field PC<sup>2</sup> each time it is connected with the USB cable.



**Figure 12 – ActiveSync Screen**

**Important**

It is extremely important that the user realizes that the synchronized folder created on the desktop is an **active** link to the Ultra-Rugged Field PC<sup>2</sup>. Any changes you make in that folder will be reflected on the Ultra-Rugged Field PC<sup>2</sup>. For example, if you delete a file in the folder, the same file will be deleted on the Ultra-Rugged Field PC<sup>2</sup>. If the Ultra-Rugged Field PC<sup>2</sup> happens to be disconnected at the time, as soon as it is re-connected it will automatically see the missing file in the folder and the file will be deleted during the connection. It is therefore important to exercise good data management. Once the data is synchronized to the PC, move the ThermArray files to a safe location (i.e. a network server or hard drive).

For further instructions regarding synchronizing data between a PC and the Ultra-Rugged Field PC<sup>2</sup>, please refer to the supplied documentation and software which comes with the Ultra-Rugged Field PC<sup>2</sup> (CD-ROM).

## 7.2 SETTING UP MOBILE DEVICE CENTER ON WINDOWS VISTA, WINDOWS 7 OR WINDOWS 8

Before connecting to Ultra-Rugged Field PC<sup>2</sup>, it should be verified that desktop PC or laptop contains current version of Microsoft Mobile Device Center™. Communication between the two devices is achieved through an USB connection.

### Note

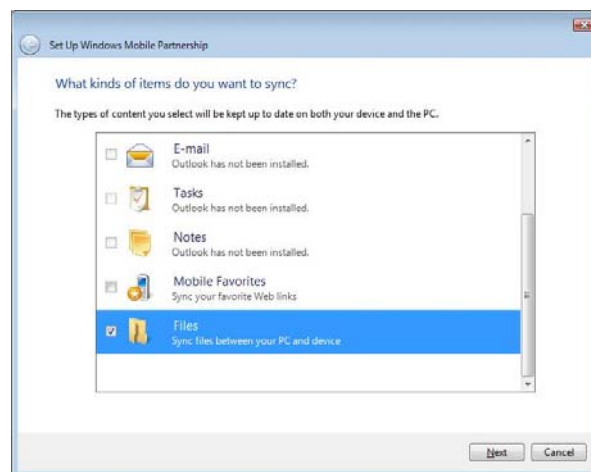
Microsoft's Mobile Device Center™ software can be freely downloaded from Microsoft's website. Choose 32 bit or 64 bit version depending on Windows Vista™, Windows 7 or Windows 8 operating system.

After Mobile Device Center™ is installed, connect the Ultra-Rugged Field PC<sup>2</sup> to desktop or laptop computer using USB cable provided with the ThermArray System. Windows should detect new connection and display following dialog box.



**Figure 13 – Mobile device Center Screen**

In order to synchronize the data in real-time between the Ultra-Rugged Field PC<sup>2</sup> and the desktop PC, you must click on *Set up your device*. If you do not wish to synchronize data and simply use Windows Explorer to copy files to and from the Ultra-Rugged Field PC<sup>2</sup>, click *Connect without setting up your device*. Data files can be copied from Ultra-Rugged Field PC<sup>2</sup> using File Management, as shown on Figure 15.



**Figure 14 – Synchronization Settings on Windows Vista™, Windows 7 or Windows 8**



If synchronizing files, decide what type of information you would like synchronized with the desktop computer. If you are only using the Ultra-Rugged Field PC<sup>2</sup> for the purposes of transferring ThermArray information, uncheck all the options and place a check mark next to the *Files* (see above).



**Figure 15 – Accessing Files on Windows Vista, Windows 7 or Windows 8**

**Important**

It is extremely important that the user realizes that the synchronized folder created on the desktop is an **active** link to the Ultra-Rugged Field PC<sup>2</sup>. Any changes you make in that folder will be reflected on the Ultra-Rugged Field PC<sup>2</sup>. For example, if you delete a file in the folder, the same file will be deleted on the Ultra-Rugged Field PC<sup>2</sup>. If the Ultra-Rugged Field PC<sup>2</sup> happens to be disconnected at the time, as soon as it is re-connected it will automatically see the missing file in the folder and the file will be deleted during the connection. It is therefore important to exercise good data management. Once the data is synchronized to the PC, move the ThermArray files to a safe location (i.e. a network server or hard drive).

For further instructions regarding synchronizing data between a PC and the Ultra-Rugged Field PC, please refer to the supplied documentation and software which comes with the Ultra-Rugged Field PC (CD-ROM).

## 8 SYSTEM SPECIFICATIONS

<b>Ultra-Rugged Field PC<sup>2</sup></b>	
Water Proof	IP68
Rugged Case	1.5 m or 5' drops onto concrete
Operating Temperature	Optimized for excellent performance in cold temperatures Operating temperature: -22F to 140F (-30C to 60C) Note: Bluetooth® wireless technology is rated to -4F (-20C)
Processor	1.0GHz ARM Cortex A8 i.MX53 processor
Memory	512 MB DDR2 RAM
Internal Flash Disk	8 GB
Operating System and Software	Microsoft® Windows Embedded Handheld 6.5.3 Microsoft Office Mobile 2010* (Word Mobile, Excel Mobile, PowerPoint Mobile, Outlook Mobile) Multiple languages (English, French, Spanish, German, Portuguese) Adobe Reader® LE
Battery	Intelligent Li-Ion battery 3.7VDC @ 10600mAh,38.7Whr Operates for up to 20 hours on one charge Charges in 2 to 4 hours Battery easily changeable in field
Wireless Connectivity Options	Bluetooth® wireless technology, 2.1 +EDR, Class 1.5, range greater than 100 feet (30m) Wi-Fi® 802.11b/g/n with extended range
Certifications and Standards	FCC Class B CE Marking (applicable EMC, R&TTE, and LVD directives) Industry Canada EN60950 Safety

**Table 1: Ultra-Rugged FiledPC<sup>2</sup> Specifications**

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## 9 CONTACT US

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