SOFTWARE INSTALLATION MANUAL

LAP-XM®
2.6.0.0

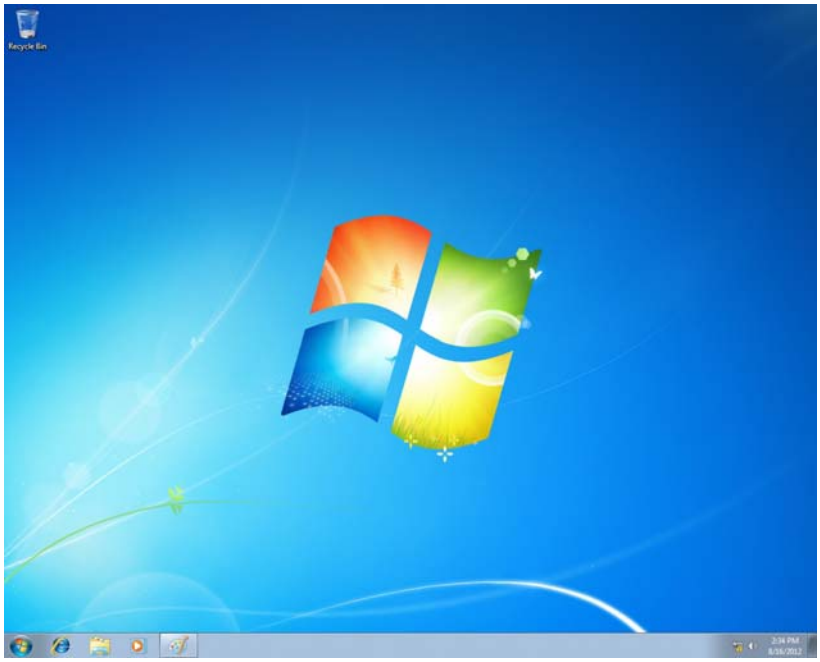

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Table of Contents

CHAPTER 1

GENERAL INFORMATION 6

1.1 About This Instruction 6

1.1.1 Contents of This Instruction 6

1.1.2 Version Information 7

1.1.3 Related Manuals 7

1.2 Trademarks 7

1.3 License Agreement 8

1.4 Warranty 8

CHAPTER 2

LAP-XM® 2.6.0.0 SOFTWARE INSTALLATION 9

2.1 Minimum System Requirements 9

2.2 Install the LAP-XM® 2.6.0.0 Software 10

2.3 Install the LAP-XM® 2.6.0.0 Software Reference and User Manuals 11

2.4 Configure the Windows® Firewall Settings 11

2.5 Install the LAP-XM® Configuration Files 12

2.5.1 Information About Configuration Files Created for Earlier Versions of LAP-XM® 12

CHAPTER 3

LAP-XM® WEB INTERFACE CONFIGURATION 14

3.1 Install Microsoft Peer Web Services 14

3.1.1 Install IIS7 14

3.1.2 Configure IIS7 14

3.1.3 Enable ISAPI 15

3.1.4 Edit Anonymous Authentication Credentials 15

3.1.5 Enable ISAPI modules 15

3.1.6 Edit Permissions for virtual directory 16

3.1.7 Add Default FTP site 16

3.1.8 Add virtual FTP directory 17

3.1.9 Enable 32-bit dlls on 64-bit Windows® 7 installations 17

3.1.10 Turn off unnecessary Windows® messages from the browser DwellDisplay 17

3.1.11 Initialize Internet Explorer 17

CHAPTER 4

MONITOR INSTALLATION AND CONFIGURATION 19

4.1 Install MSDE and LAP® Monitor Database 19

4.2 Install SLIK ODBC View 19

4.3 Configure the Data Source Connection 20

4.4 Install the Third Party Device Drivers 21

4.4.1 DLP232 USB Data Acquisition Module Driver 21
4.4.2 USB-COMi-SI-M USB to RS-485 Driver 22

CHAPTER 5
DATA DISPLAY SOFTWARE 23
5.1 Install LAPMom™ 23
5.2 Install GraphXM™(optional software) 23

CHAPTER 6
AUDIO CONFIGURATION AND SHORTCUTS 25
6.1 Configure Windows® Scheme Sounds 25
6.2 Create Support Software Application Shortcuts 27

CHAPTER 7
SERVICE SUPPORT 28
7.1 Contact Information 28

APPENDIX A
LAP-XM® UPGRADE PROCEDURE 29
A-1 Uninstall the Current Version of LAP-XM® 29
A-2 Create Static IP Addresses 30
A-2.1 Local Area Connection 1 30
A-2.2 Local Area Connection 2 31

APPENDIX B
SUPPORT SOFTWARE 32
B-1 Install the Simple Network Time Protocol Server (optional) 32
B-2 Configure the LAP-XM® GPS Service 33
B-3 Configure the LAP-XM® Manage Disk Space Service 33

APPENDIX C
LEGACY HARDWARE IDENTIFICATION AND INSTALLATION 34
C-1 PIRAQ III Digital IF Version Identification 34
C-2 ISA RASS Source Card Identification 34
C-3 Configuring the DWD LAP®-16000 Pulse Shaper 35

APPENDIX D
MGE UPS CONFIGURATION 36
D-1 Simple Network Management Protocol (SNMP) 36
D-2 Configure the Eaton (MGE) UPS and SNMP IP Address36
D-2.1 Configure the radar computer to an Internet Protocol (IP) address compatible with the default SNMP adapter address 36
D-2.2 Configure the UPS SNMP adapter using the Ethernet connection 37
D-2.3 Reconfigure the radar computer to an Internet Protocol (IP) address compatible with the new SNMP adapter address 38

D-2.4 Test the network connection to UPS..... 38
D-3 Configure LAP-XM® to Communicate with the UPS Network Management Card 39

CHAPTER 1

GENERAL INFORMATION

This chapter provides basic information regarding the Vaisala LAP-XM® 2.6.0.0 Wind Profiler control and data acquisition software.

1.1 About This Instruction

The manual assumes a thorough working knowledge of the Windows® operating system on which the Vaisala LAP-XM® 2.6.0.0 software product.

The Windows® operating systems provide many user-configurable display and desktop options, therefore the descriptions used in this document may appear slightly different from what appears on your screen. The procedures nevertheless provide all the pertinent information needed to complete a full installation for the product.

At the beginning of each installation step there is a small underline placeholder. It is highly recommended that a pencil checkmark is made in this space after the completion of each step. This helps to ensure that each step is completed and in the correct order.

1.1.1 Contents of This Instruction

This manual consists of the following chapters:

- Chapter 1, General Information, provides basic information regarding the Vaisala LAP-XM® 2.6.0.0 Wind Profiler control and data acquisition software.
- Chapter 2, LAP-XM® 2.6.0.0 Software Installation, describes the steps required to install and configure the LAP-XM® control and data acquisition software for a LAP® Wind Profiler. LAP-XM® requires that the Windows® OS has two partitions. One is used for the operating system and the other for data collection.
- Chapter 3, LAP-XM® Web Interface, describes the steps required to install and configure the LAP-XM® web interface for controlling a LAP® Wind Profiler.

- Chapter 4, Monitor Installation, provides installation and configuration for the a LAP® Wind Profiler system monitor database. This procedure is required only for systems that will use a system Monitor.
- Chapter 5, Data Display Software, provides installation and configuration for the a LAP® Wind Profiler data display software applications.
- Chapter 6, Audio Configuration, describes configuration of the audio sound source for Radio Acoustic Sounding System (RASS). This procedure is required only for systems that will use RASS.
- Chapter 7, Service Support, provides service contact information for Vaisala technical support..
- Appendix A, LAP-XM® Upgrade Procedure
- Appendix B, Support Software
- Appendix C, Legacy Hardware Identification and Installation
- Appendix D, MGE UPS Configuration

1.1.2 Version Information

Table 1 Manual Revisions

Manual Code	Description
M211134EN-B	This instruction, the Software Installation Guide for LAP-XM® 2.6.0.0

1.1.3 Related Manuals

Table 2 Related Manuals

Manual Code	Manual Name
M211132EN-D	Windows® 7 Installation, Wind Profiler Workstation, DELL R5500
80018301 rev P	LAP-XM® Software Manual Technical Reference
80018001 rev L	LAP®-3000 Wind Profiler User's Guide
80168001 rev C	LAP®-8000 Wind Profiler User's Guide
80028001 rev H	LAP®-12000 Wind Profiler User's Guide
80068001 rev G	LAP®-16000 Wind Profiler User's Guide

1.2 Trademarks

LAP®-3000, LAP®-8000, LAP®-12000, LAP®-16000, and the LAP® logo are registered trademarks of Vaisala Inc.

LAP-XM® is also a registered trademark of Vaisala Inc. It has been developed jointly with Sonoma Technology, Inc. and the Earth Systems Research Laboratory, Physical Sciences Division of the National Oceanic and Atmospheric Administration.

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1.3 License Agreement

All rights to any software are held by Vaisala or third parties. The customer is allowed to use the software only to the extent that is provided by the applicable supply contract or Software License Agreement.

1.4 Warranty

For certain products Vaisala normally gives a limited one year warranty, but warranty periods may vary according to the agreed upon terms of the sales contract. Please observe that any such warranty may not be valid in case of damage beyond normal wear and tear, negligent handling or installation, unauthorized modifications, or unauthorized removal or tearing of any LAP® component warranty label. Please see the applicable supply contract or conditions of sale for details of the warranty for each product.

CHAPTER 2

LAP-XM® 2.6.0.0 SOFTWARE INSTALLATION

This chapter describes the steps required to install and configure the LAP-XM® control and data acquisition software for a LAP® Wind Profiler. LAP-XM® requires that the Windows® OS has two partitions. One is used for the operating system and the other for data collection.

2.1 Minimum System Requirements

System requirements for this product are listed in Table 3 below.

Table 3 Minimum System Requirements

Component	Minimum Requirement
Processor	Intel® Core 2: dual-core or quad-core (recommended), Pentium 4 (minimum)
Operating System (OS)	Windows® 7 Pro 32 bit recommended
Memory	4 GB (recommended) 2 GB (minimum)
OS partition size	12 GB operating system partition 1) (minimum)
Ethernet communications	2x Gigabit Ethernet ports (minimum) required for digital IF receiver employing RVP910 2x 100 Megabit Ethernet ports (minimum) required for baseband (ISA) and PCI digital IF receiver employing PIRAQ-III
USB ports	1x USB 2.0 port (minimum) required for all configurations 3x USB 2.0 ports (minimum) required for configurations with system monitor
Accessory Drives	DVD-ROM Drive (minimum) DVD/RW (recommended) 3.5" Diskette Drive (recommended)
Video	SVGA 1024 x 768 (Minimum) SVGA 1280x1024 (Recommended)
Internet Browser	Microsoft Internet Explorer 6.x or higher 2)

1) Recommended HD size of 300 GB or greater.
2) LAP-XM® only supports Microsoft Internet Explorer.

For a LAP® profiler using the PIRAQ-III PCI digital IF receiver, the computer system must provide at least four contiguous unused full-length 32-bit PCI slots (with both +5.0 and +3.3 VDC present) for the signal processing boards. If the system has RASS, then an additional PCI-33 slot must also be available.

For a LAP® profiler using a baseband conversion receiver using the DSP-32C DSP, etc., the computer system must provide at least four contiguous unused full-length ISA slots for the signal processing boards. If the system has RASS, then an additional ISA slot must also be available.

2.2 Install the LAP-XM® 2.6.0.0 Software

NOTE	For new software installations perform the procedures presented in the document M211132EN - Windows® 7 Installation, Wind Profiler Workstation before proceeding further. To upgrade an existing LAP-XM® system, refer to Appendix A.

___ a. Insert the “LAP-XM 2.6.0.0” Installation CD into CD-ROM drive.

___ b. Browse the CD-ROM drive and double-click on the directory:
\Lapxm 2600 Installer

___ c. Select the *setup.exe* installation program.

___ d. Click [Open] button to accept setup program.

NOTE	The JAVA VM and .NET Framework are both required by the LAP-XM® software. The LAP-XM® installer automatically detects if they are missing and starts installing them at this point. If they are already installed on the radar processor, the installer will skip to step g below.

___ e. Click [Install] button to install *Java SE 6 1.6.0_20* and *Microsoft .NET Framework 2.0 SP2*.

___ f. Click [Next>] button at the *Welcome to the InstallShield Wizard for LAP-XM 2.6.0.0* dialog box.

___ g. Select the *I accept the terms in the license agreement* radio button.

___ h. Click [Next >] button.

___ i. Click [Install] button.

___ j. Click [Finish] button to complete installation.

___ k. Click [Yes] button to restart the Windows® 7 operating system.

___ l. Log into the workstation *lapxmuser* account – password *lapxm*.

2.3 Install the LAP-XM® 2.6.0.0 Software Reference and User Manuals

___ a. Browse the CD-ROM drive and double-click on the directory:
\LAP 2600 Manuals Installer

___ b. Highlight the *Setup.exe* installation program.

___ c. Click [Open] button to accept setup program.

___ d. Click [Install] button to launch Adobe Reader installation program.

NOTE	Click [Skip] button for systems that already have Adobe Reader installed. The installer will jump to step h.

___ e. Click [Next>] button at the *Destination Folder* dialog.

___ f. Click [Install] button at the *Ready to Install the Program* dialog.

___ g. Click [Finish] button at the *Adobe Reader 9.1 Setup* dialog.

NOTE	If a restart dialog box appears, click the [No] button.

___ h. Click [Next>] button at the *LAP-XM 2.6.0.0 Manuals Installation* page.

___ i. Select either LAP®-3000, LAP®-8000, LAP®-12000, or LAP®-16000.

___ j. Click [Next>] button to *Start Installation*.

___ k. Click [Install]

___ l. Click [Finish] button at the *Vaisala LAP 2.6.0.0 Manuals* dialog.

___ m. Go to [Start | All Programs | Adobe Reader 9]

___ n. Click [Accept] button.

___ o. Close Adobe Reader application.

2.4 Configure the Windows® Firewall Settings

___ a. Open Windows® Firewall, [Start | Control Panel | Windows Firewall | Allow a program or feature through Windows Firewall]

___ b. Click [Allow another program] button.

___ c. Click [Browse...] button and go to the folder location:
C:\Program files\Crada\Lapxm\Bin

___ d. Highlight the *Lapxm_main.exe* program.

___ e. Click [Open] button on the *Browse* window.

___ f. Click [Add] button on the *Add a program* window.

___ g. Close the *Windows Firewall* window - Click the [X] in the upper right hand corner.

2.5 Install the LAP-XM® Configuration Files

___ a. Open Windows® Explorer, [Start | All Programs | Accessories | Windows Explorer]

___ b. Insert the USB memory with the configuration files for the delivery into a USB port.

___ c. From drive E: copy the *.hdw file into the
C:\Program Files\Crada\LapXM\Config directory.

___ d. From drive E: copy the *.site file into the
C:\Program Files\Crada\LapXM\Config directory.

___ e. From drive E: copy the Lapxm_BaseModules.cfg file into the
C:\Program Files\Crada\LapXM\Config directory.

___ f. From drive E: copy all *.tpl file(s) into the
C:\Program Files\Crada\LapXM\Config\Templates directory.

___ g. Close Windows® Explorer.

2.5.1 Information About Configuration Files Created for Earlier Versions of LAP-XM®

The **hardware** files (._dw and .hdw file name extension) made for versions of LAP-XM® previous to 2.4.0.0 are not compatible with LAP-XM® 2.6.0.0. These files contain information specific to the individual wind profiler and profiler safety limit values that should not be changed by the user. Before the LAP-XM® upgrade is begun, the hardware files from the previous version should be sent to wp.support@vaisala.com for an update to the LAP-XM® 2.6.0.0 configuration. Install the LAP-XM® 2.6.0.0 compatible hardware files in the C:\Program Files\Crada\Lapxm\Config directory. There can be only one copy of each of the "._dw" and ".hdw" file name extensions in this directory. These files must be present in the C:\Program Files\Crada\Lapxm\Config directory for LAP-XM® to operate.

The **configuration** files (.tpl and .cfg file name extension) made for versions of LAP-XM® previous to 2.4.0.0 are not compatible with LAP-XM® 2.6.0.0 without modification. The user should refer to the chapter 3 of the LAP-XM® Software Reference manual (Vaisala part number PN 80018301) and the example files "DwellMode Module Examples.txt"and "Process Module Examples.txt" in the C:\Program Files\Crada\Lapxm\Config\Examples directory for information about the format of the configuration files. Use WordPad or a similar application to modify any older configuration files. Older and modified configuration files are not compatible with the LAP-XM® configuration file editor. A template file is provided with the LAP-XM® distribution that is compatible with the LAP-XM® configuration file editor.

The **Lapxm_BaseModules.cfg** file from previous versions of LAP-XM® may be compatible with LAP-XM® 2.6.0.0. If the previous version of LAP-XM® did not use a "BaseModules.cfg", then use the file provided with the LAP-XM® distribution. The file must be placed in the C:\Program Files\Crada\Lapxm\Config directory. There can be only one copy of the "BaseModules.cfg" file name in this directory. This file must be present in the C:\Program Files\Crada\Lapxm\Config directory for LAP-XM® to operate.

The **site** file (.site file name extension) from previous versions of LAP-XM® is compatible with LAP-XM® 2.6.0.0. The file must be placed in the C:\Program Files\Crada\Lapxm\Config directory. There

can be only one copy of the ".site" file name extension in this directory. This file must be present in the C:\Program Files\Crada\Lapxm\Config directory for LAP-XM® to operate.

CHAPTER 3

LAP-XM® WEB INTERFACE CONFIGURATION

This chapter describes the steps required to install and configure the LAP-XM® web interface for controlling a LAP® Wind Profiler.

3.1 Install Microsoft Peer Web Services

3.1.1 Install IIS7

___ a. Click on [Start | Control Panel | Programs and Features | Turn Windows Features on or off].

___ b. Check the box for [Internet Information Services].

___ c. Check the box for [Internet Information Services | FTP Server | FTP Service].

___ d. Check the box for [Internet Information Services | World Wide Web Services | Application Development Features | ISAPI Extensions].

___ e. Check the box for [Internet Information Services | World Wide Web Services | Application Development Features | ISAPI Filters].

___ f. Click [OK] button.

___g. Close the *Program and Features* window.

___h. Close the *Control Panel* window.

3.1.2 Configure IIS7

___ a. Open IIS Manager [Start | Control Panel | Administrative Tools | Internet Information Services (IIS) manager].

___ b. Expand [Admin Name] at the top of the directory tree in the left hand column.

___ c. Expand [Sites] in left hand menu.

___ d. Click [Default Web Site] in left hand column.

___ e. Click [Basic Settings] in right hand menu.

___ f. Set [Physical path] to "C:\program files\crada\lapxm\webserver".

___ g. Click [OK].

___ h. Right click on [Default Web Server] in right hand column.

___ i. Select [Add Virtual Directory].

___ j. Enter “scripts’ for [Alias].

___ k. Set [Physical path] to “C:\program files (x86)\crada\lapxm\webserver\scripts".

___ l. Click the [OK] button.

___ m. Click the [Connect as] button.

___ n. Check the [Specific User radio] button.

___ o. Click on the [Set] button.

___ p. Enter ‘lapxmuser’ for [Username].

___ q. Enter ‘lapxm’ for [Password].

___ r. Enter ‘lapxm’ for [Confirm Password].

___ s. Click [OK] to close *Set Credentials* window.

___ t. Click [OK] to close *Connect As* window.

___ u. Click [OK] to close *Virtual Directory* window.

3.1.3 Enable ISAPI

___ a. Expand [Default Web Site] in left hand column.

___ b. Left click on [scripts] in left hand column.

___ c. Double click [Handler mappings] in center section.

___ d. Left click on [Edit Feature Permissions] in the right hand menu.

___ e. Check the [Execute] box.

___ f. Click [OK] to close windows.

3.1.4 Edit Anonymous Authentication Credentials

___ a. Click on [scripts] in left hand column.

___ b. Double click the [Authentication] icon

___ c. Select [Anonymous Authentication].

___ d. Click [Edit] in right hand menu.

___ e. Check [Application pool identity].

___ f. Click [OK] to close *Edit anonymous Authentication Credentials* window.

3.1.5 Enable ISAPI modules

___ a. Expand [Admin Name] at the top of the directory tree in the left hand column.

___ b. Double click the [ISAPI and CGI Restrictions] icon.

___ c. Click [Edit Feature Setting] in right hand menu.

___ d. Check [Allow unspecified ISAPI modules].

___ e. Click [OK] to close *Edit Isapi and CGI Restrictions Settings* window.

3.1.6 Edit Permissions for virtual directory

___ a. Expand [Admin Name] at the top of the directory tree in the left hand column.

___ b. Expand [Sites] in the left hand column.

___ c. Expand [Default Web Sites] in the left hand column.

___ d. Right click [scripts] in left hand column.

___ e. Click [Edit Permissions]

___ f. Click [Security] tab.

___ g. Click [Edit] button.

___ h. Click [Add] button.

___ i. Enter "IIS_IUSRS" in the *Object Name* box.

___ j. Click [OK] to close *Select Users or Groups* window.

___ k. Click [OK] to close *Permissions for Scripts* window.

___ l. Click [OK] to close *Scripts Properties* window.

3.1.7 Add Default FTP site

___ a. Click on [Sites] in left hand column.

___ b. Click on *Add FTP Site* in the right hand menu.

___ c. Enter “Default FTP Site” for [FTP site name].

___ d. Set [Physical path:] to ‘D:\LapxmData’.

___ e. Click [OK].

___ f. Click [Next].

___ g. Select [No SSL].

___ h. Click [Next].

___ i. Select [Anonymous].

___ j. Select [All Users] .

___ k. Select [Read].

___ l. Click [Finish].

3.1.8 Add virtual FTP directory

___ a. Expand [Sites] in left hand column.

___ b. Right click default FTP site in left hand column.

___ c. Select [Add Virtual Directory].

___ d. Enter ‘crada’ for [Alias].

___ e. Set [Physical path:] to ‘C:\Program files (x86)\Crada’.

___ f. Click [OK].

___ g. Click [OK] to close *Add Virtual Directory* window.

3.1.9 Enable 32-bit dlls on 64-bit Windows® 7 installations

NOTE	The tasks in section 3.1.9 are not required on 32-bit operating systems

___ a. Left click on [Application Pools] in left hand column.

___ b. Left click on [DefualtAppPool]

___ c. Left click on [Advance Settings] in right hand menu.

___ d. Change [Enable 32-bit Applications] to [True]

___ e. Click [OK] to close windows.

3.1.10 Turn off unnecessary Windows® messages from the browser DwellDisplay

___ a. Open the Service Manager [Start | Control Panel | Administrative Tools | Services].

___ b. Double click [Interactive Services Detection].

___ c. Click [Stop].

___ d. Select [Disabled].

___ e. Click [OK].

___ f. Close *Services* window.

___ g. Close *Control Panel*.

3.1.11 Initialize Internet Explorer

___ a. Open Internet Explorer

___ b. Type "localhost" into the URL box

___ c. Click on *Tools* in the upper right corner of I.E.

___ d. Select *Internet Options*.

___ e. Remove all entries under *Home Page*.

___ f. Click [Use Current].

___ g. Click [Apply].

___ h. Click [OK].

___ i. Close Internet Explorer.

CHAPTER 4

MONITOR INSTALLATION AND CONFIGURATION

This chapter provides installation and configuration for the a LAP® Wind Profiler system monitor database. This procedure is required only for systems that will use a system Monitor.

4.1 Install MSDE and LAP® Monitor Database

___ a. Insert the *LAP-XM® V2.6.0.0* Installation CD into CD-ROM drive.

___ b. Browse the CD-ROM drive and double-click on the directory:
\Lapxm 2600 Monitor Database Install

___ c. Select the *MonitorDBSetup.EXE* installation program.

___ d. Click the [Open] button.

___ e. Click [Next >] button to initiate the installation.

___ f. Ensure that both the *MSDE* and *Monitor Database* check boxes are selected.

___ g. Click [Next] button.

___ h. Click [Next] button to start the *Microsoft SQL Server Desktop Engine* installation.

___ i. Click [Finish] button to complete the installation.

4.2 Install SLIK ODBC View

___ a. Insert the *LAP-XM® V2.6.0.0* Installation CD into CD-ROM drive.

___ b. Browse the CD-ROM drive and double-click on the directory:
x:\ SLIK ODBC View 3.1

___ c. Double click *SLIK_Setup.bat*.

___ d. Click [Next>] button to initiate SLIK installation.

___ e. Select the *I accept the terms in the license agreement* option.

___ f. Click [Next>] button to continue.

___ g. Click [Next>] button to accept the default *Destination Folder*.

___ h. Click [Install] button to continue.

___ i. Deselect *Launch the program* and *Show the read me file*.

___ j. Click [Finish] button to continue.

___ k. Wait for *Press any key to continue…* prompt to appear then select the [Enter] key to close the Command Prompt window.

NOTE	A text file containing typically used SQL commands can be found at *C:\Program files\SLIK Software\ODBCView\ SQL Commands.txt*

4.3 Configure the Data Source Connection

___ a. Start the ODBC View program.

___ b. [Start | All Programs | SLIK Software | ODBC View]

___ c. Click [DataSource…] button.

___ d. Select the *Machine Data Source* tab in the popup dialog box.

___ e. Click [New…] button.

___ f. Select the radio button labeled: *System Data Source (Applies to this machine only)* .

___ g. Click [Next>] button.

___ h. Select the *SQL Server* at the bottom of the scrolling text window.

___ i. Click [Next>] button.

___ j. Click [Finish] button.

___ k. Enter *Monitor Database* in the *Name* field.

___ l. Enter *local* In the *Server* text field.

___ m. Click [Next>] button.

___ n. Select the radio button labeled: *With SQL Server authentication using a login ID and password entered by the user*.

___ o. In the *Login ID* field enter the text *LapxmSA*

___ p. In the *Password* field enter the text *j1f2m3a4m5j6j7a8s9o10n11d12*.

___ q. Click [Next>] button.

___ r. Select the checkbox for *Change the default database to:*

___ s. Ensure that the *Vaisala_Monitor* is selected.

___ t. Click [Next>] button.

___ u. Click [Finish] button. (Make no changes in this dialog box).

___ v. Click [Test Data Source…] If the connection is working correctly a dialog box will pop up stating "TESTS COMPLETED SUCCESSFULLY".

___ w. Click [OK] button to cancel information box.

___ x. Click [OK] button

___ y. Enter the *LapxmSA* password to open a SLIK ODBC session with the Monitor Database.

___ z. Click [OK] button.

___ aa. Exit the ODBC View Program.

4.4 Install the Third Party Device Drivers

NOTE

Third party device drivers are often required for the LAP-XM® monitor software to communicate with the hardware devices that implement the monitor functions. Two forms of serial communications have typically been used for LAP® wind profilers.

The LAP® hardware delivered prior to LAP-XM® 2.5.0.0 but after LAP-XM® 2.5.0.0 typically use RS-485 communications protocol. Implementations using a serial to RS-485 converter do not require third party drivers. If the implementation uses a USB to RS-485 converter, then a third party driver is required. The USB to RS-485 drivers are provided by the vendor of the converter and should be included with the profiler hardware.

The LAP® hardware delivered after LAP-XM® 2.5.0.0 typically use USB communications protocol to DLP232 data acquisition modules. Drivers for the DLP232 are provided with LAP-XM® 2.6.0.0 installation.

Any of the drivers that are required must be installed when the hardware is initially connected to the radar processor.

4.4.1 DLP232 USB Data Acquisition Module Driver

___ a. Open Device Manager [Start | Control Panel | Device Manager].

___ b. Right click one of the monitor devices listed under *Other Devices* with a yellow icon next to it.

___ c. Click *Update Driver Software*.

___ d. Click *Browse my computer of driver software*.

___ e. Click [Browse].

___ f. Select *C:\Program files\Crada\Lapxm\Bin\drivers\DLP232\CMD20814*.

___ g. Click [OK].

___ h. Click [Next].

___ i. Click [Close].

___ j. Close *Device Manager*.

___ k. Close *Control Panel*.

4.4.2 USB-COMi-SI-M USB to RS-485 Driver

___ a. Open Device Manager [Start | Control Panel | Device Manager].

___ b. Right click one of the monitor devices listed under *Other Devices* with a yellow icon next to it.

___ c. Click *Update Driver Software*.

___ d. Click *Browse my computer of driver software*.

___ e. Click [Browse].

___ f. Select *C:\Program files\Crada\Lapxm\Bin\drivers\RS485*.

___ g. Click [OK].

___ h. Click [Next].

___ i. Click [Close].

___ j. Close *Device Manager*.

___ k. Close *Control Panel*.

CHAPTER 5

DATA DISPLAY SOFTWARE

This chapter provides installation and configuration for the a LAP® Wind Profiler data display software applications.

5.1 Install LAPMom™

___ a. Insert the LAP-XM® V2.6.0.0 Installation CD into CD-ROM drive.

___ b. Browse the CD-ROM drive and double-click on the directory:
x:\ LAPMom 1.0.8

___ c. Double click *LAPMom Setup.exe*.

___ d. Click [Next>] button to initiate LAPMom™ installation.

___ e. Enter *lapxmuser* in the *Full Name* field.

___ f. Ensure that the Anyone who uses this computer radio button is selected.

___ g. Click [Next>] button to continue.

___ h. Click [Next>] button to accept the Destination Folder.

___ i. Click [Next>] button to accept the application install.

___ j. Click [Finish] button to exit installation.

5.2 Install GraphXM™(optional software)

___ a. Insert the *GraphXM™ Installation* CD into CD-ROM drive.

___ b. From [Start | Run], browse the CD-ROM drive and select the root directory.

___ c. Double click *GraphXM Setup*.exe.

___ d. Click [Next>] button to start the installation program.

___ e. Insure that the *Anyone who uses this computer* radio button is selected.

___ f. Click [Next>] button to accept *User Information*.

___ g. Click [Next>] button to accept the *Destination Folder*.

___ h. Click [Next>] button to accept the application install.

NOTE	The GraphXM™ installation may require a system restart at this point. If not, proceed to step m.

___ i. Click [Yes] to proceed with restart.

___ j. Log in as *Lapxmuser*, GraphXM™ installation program will restart automatically.

___ k. Click [Next>] button at Welcome dialog box.

___ l. Click [Next>] button to resume GraphXM™ installation.

___ m. Click [Finish] button to complete installation.

___ n. Remove GraphXM™ installation CD-ROM.

CHAPTER 6

AUDIO CONFIGURATION AND SHORTCUTS

This chapter describes configuration of the audio sound source for Radio Acoustic Sounding System (RASS). This procedure is required only for systems that will use RASS.

6.1 Configure Windows® Scheme Sounds

NOTE	For radar processors that do not have an integrated sound interface, a SoundBlaster® audio card must be installed before proceeding. Install the SoundBlaster® software according to the instructions supplied with the audio card.

___ a. Go to [Start | Control Panel | Sound]

___ b. Select the *Sounds* tab.

___ c. Select *No Sounds* in the *Sound schemes* drop-down menu.

___ d. Uncheck Play *Windows Startup Sounds*.

___ e . Click [Apply] button.

NOTE	If the Windows® sound control panel asks "Do you want to save previous Scheme?", click the [No] button.

___ f . Select the *Playback* tab.

___ g . Left click the *Speakers* Icon.

___ h . Click the [Configure] button.

___ i . Ensure *Stereo appears in the Audio Channels* box.

___ j . Click [Next] button and check the *Front Left* and *Right* box.

___ k . Uncheck the *Surround Speakers* box.

___ l . Click [Next] button.

___ m . Click [Finish] button.

___ n . While still in the *Playback* tab, click the [Properties] button.

___ o . Select the *Enhancement* tab.

___ p . Check the *Disable All Enhancements* box.

___ q . Select the *Advanced* tab.

___ r . Check "*Allow applications to take exclusive control of this device*" box.

___ s . Check "*Give exclusive mode applications priority*" box.

___ t . Click [Apply] button.

___ u . Click [OK] button.

___ v . Click [OK] button.

___ w . Close the *Control Panel*.

6.2 Create Support Software Application Shortcuts

Create Desktop shortcuts for the following software applications. See Windows® operating system help for details on creating application shortcuts.

___ a. LAPMom™: application found at *C:\Program files\LAPMom\LAPMom.exe*

___ b. GraphXM™: application found at *C:\Program files/GraphXM\GraphXM.exe* (If installed).

___ c. Services: shortcut found at [Start | Control Panel | Administrative Tools | Services]

___ d. SLIK ODBC View 3.1: application found at *C:\Program files\SLIK Software\ODBCView\ ODBCView.exe*

CHAPTER 7

SERVICE SUPPORT

This chapter provides service contact information for Vaisala technical support..

7.1 Contact Information

For technical questions or for comments on the LAP-XM® installation procedures, contact the Vaisala technical support:

E-mail	helpdesk@vaisala.com or wpsupport@vaisala.com
Telephone	+358 9 8949 2789 or in U.S. 1-877-824-7252 opt 2
Fax	+358 9 8949 2790

Local technical support by a Vaisala partner company in the country of the profiler installation may be available according to the terms of the sales contract.

APPENDIX A

LAP-XM® UPGRADE PROCEDURE

A-1 Uninstall the Current Version of LAP-XM®

___ a. Using the LAP-XM® Console, stop data acquisition.

___ b. Make a backup copy of existing configuration file directory located at:
C:\Program files (x86)\Crada\Lapxm\Config
to a new directory location – e.g. *C:\temp\Config*.

___ c. Open [Start | Settings | Control Panel | Administrative Tools | Services]

___ d. Highlight and right-click on the *Lapxm_Main* entry and select *Stop* from the menu.

___ e. Highlight and right-click on the *World Wide Web Publishing* entry and select *Stop* from the menu.

.___ f. If LAP® Monitor is being used then highlight and right-click on the *MSSQLSERVER* entry and select *Stop* from the menu.

NOTE	A warning dialog box may appear stating that other services will be stopped. Click [Yes] to proceed.

___ g. If GPS time synchronization is being used then highlight and right-click on the *Lapxm_GPS* entry and select *Stop* from the menu.

___ h. If software watchdog is being used then highlight and right-click on the *Lapxm_Watchdog_Software* entry and select *Stop* from the menu.

___ i. Close *Services* utility window.

___ j. Go to [Start | Control Panel | Program and Features]

___ k. Double-click on *Add/Remove Programs* icon.

___ l. Highlight the *LAP-XM® 2.x.x.x* entry and select the *Uninstall/Change* button.

NOTE	If multiple LAP-XM® entries exist, select the latest major revision number first. Remove all instances of LAP-XM® present.

___ m. Complete all steps to remove LAP-XM® from the computer.

NOTE	If the requested to restart, select [Yes]. Once the system has restarted and you have logged back in as lapxmuser, return to the Add/Remove utility

___ n. Highlight *the LAP-XM® 2.x.x.x Manuals* entry and select the *Change/Remove* button.

NOTE	If multiple LAP-XM® manuals entries exist, select the latest major revision number first. Remove all instances of LAP-XM® manuals present.

___ o. Complete all step to remove LAP-XM® Manuals from the computer.

___ p. Close *Add/Remove Programs* utility window.

___ q. Close *Control Panel*.

___ r. Open Windows® Explorer, [Start | Programs | Accessories | Windows Explorer]

___ s. Locate and highlight the directory *C:\Program files\Crada* (32-bit OS installations) or *C:\Program files (x86)\Crada* (64-bit OS installations).

___ t. Choose the menu options [File | Delete] to remove the old *C:\Program files\Crada\Lapxm* directory.

NOTE	If an access denied warning appears, delete all sub-directories in the tree individually.

___ u. Close Windows® Explorer.

A-2 Create Static IP Addresses

A-2.1 Local Area Connection 1

___ a. Open Network Connections
[Start | Control Panel | Network And Sharing Center | Change Adapter Setting | Local Area Connection 1]

___ b. Click the [properties] button.

___ c. Click *Internet Protocol Version 4(TCP/IPv4)*

___ d. Click the [properties] button.

___ e. Select the *Use the following IP address* radio button.

___ f. Enter *10.0.2.1* into the *IP Address* entry field.

___ g. Enter 255*.255.255.0* into the *Subnet mask:* entry field.

___ h. Click the [OK] button on the *Internet Protocol (TCP/IP) properties* window.

___ i. Click the [Close] button on the *Local Area Connection 1 Properties* window.

___ j. Click the [Close] button on the *Local Area Connection 1 Status* window.

A-2.2 Local Area Connection 2

___ a. Open Network Connections
[Start | Control Panel | Network And Sharing Center | Change Adapter Setting | Local Area Connection 2]

___ c. Click the [properties] button.

___ b. Click *Internet Protocol Version 4(TCP/IPv4)*

___ c. Click the [properties] button.

___ d. Select the *Use the following IP address* radio button.

___ e. Enter *10.0.1.12* into the *IP Address* entry field.

___ f. Enter 255*.255.255.0* into the *Subnet mask:* entry field.

___ g. Click the [OK] button on the *Internet Protocol (TCP/IP) properties* window.

___ h. Click the [Close] button on the *Local Area Connection 2 Properties* window.

___ h. Click the [Close] button on the *Local Area Connection 2 Status* window.

APPENDIX B

SUPPORT SOFTWARE

B-1 Install the Simple Network Time Protocol Server (optional)

This installation is optional and is intended to be used on systems that include the GPS option. Adding SNTP allows computers connected to this machine to synchronize their clocks, thus maintaining a stable time reference for a local area network.

___ a. Insert the *LAP-XM® 2.6.0.0* Installation CD into CD-ROM drive.

___ b. Browse the CD-ROM drive and select the directory:
x: \ NetTime

___ c. Double click *NetTime-2b7.exe*.

___ d. Click [Yes] button to start installation.

___ e. Click [Next>] button.

___ f. Click [Next>] button to accept the default destination directory.

___ g. Click [Next>] button to accept adding NetTime to the start menu folder.

___ h. Click [Install] button to start installing the software.

___ i. Click [Install Service] button.

___ j. Click [Configure] to configure NetTime NTP server.

___ k. In the top entry under *Host name or IP Address* enter the IP address of this computer.

___ l. In the next column under *Protocol" select "RFC868 (TCP)*. Port 37 is the correct default.

___ m. Select the *Allow other computers to sync to this computer* check box.

___ n. Select the *Never warn* check box.

___ p. Click [OK] button.

___ q. If a *Windows Firewall Alert* dialog box appears, click [Allow Access].

___ r. Click [Finish] button.

B-2 Configure the LAP-XM® GPS Service

___ a. Open [Start | Control Panel | System and Security | Administrative Tools | Services]

___ b. Highlight and right-click on the *Lapxm_GPS* entry.

___ c. Choose Properties.

___ d. At the General tab, Startup type: Select: Automatic

___ e. Click [OK] button.

___ f. Choose from the menu options [Action | Start]

___ g. Exit the Services utility.

B-3 Configure the LAP-XM® Manage Disk Space Service

___ a. Open [Start | Control Panel | Administrative Tools | Services]

___ b. Highlight and right-click on the *Lapxm_ManageDisk* entry.

___ c. Choose Properties.

___ d. At the General tab, Startup type: Select: Automatic

___ f. Choose from the menu options [Action | Start]

___ g. Exit the Services utility.

APPENDIX C

LEGACY HARDWARE IDENTIFICATION AND INSTALLATION

C-1 PIRAQ III Digital IF Version Identification

The PIRAQ III digital IF PCI board assembly can be identified by the single type SMA RF connector on the mounting bracket. The serial number is normally located on the board near the mounting bracket. Write down this serial number value. Ignore the "PIRAQ III Rev x" message silk screened on the board. It does not correspond to the Vaisala version.

If the digital IF board is marked with a Vaisala serial number less than 11500, then this is version – (dash).

If the digital IF board is marked with a Vaisala serial number between 11500 and 12100, then this is version A.

If the digital IF board is marked with a Vaisala serial number greater than 12100, then this is version B or later.

For a LAP® profiler using the PIRAQ III digital IF conversion receiver, there must be at least four contiguous unused full-length 32-bit PCI slots (with both +5.0 and +3.3 VDC present) for the signal processing boards. If the system has RASS, then an additional PCI-33 slot must be available.

C-2 ISA RASS Source Card Identification

If the radar processor uses the baseband receiver with ISA DSP-32C and RASS boards, then one must determine the version of the RASS source board in the radar processor.

If the RASS source output connector is a 15-pin type D (DA-15S), then it is an "old" type source. Check the RASS signal cable leading from the radar processor to the audio amplifier to confirm this.

If the RASS source output connector is a RCA phono jack, then it is a "new" type source. Check the RASS signal cable leading from the radar processor to the audio amplifier to confirm this.

C-3 Configuring the DWD LAP®-16000 Pulse Shaper

___ a. Insert the USB cable coming from the Pulse Shaper in the MII into the radar processor. Windows® will automatically detect the Pulse Shaper hardware.

___ b. When the *Found New Hardware Wizard* dialog window select "*No, not this time*" radio button.

___ c. Click [Next>] button.

___ d. Choose *Install from a list or specific location (Advanced)* radio button.

___ e. Click [Next>] button.

___ f. Select *Don't search. I will choose the driver to install.*

___ g. Click [Next>] button.

___ h. Select *Show All Devices* in the *Common hardware types:* window.

___ i. Click [Next>] button.
It may take a few minutes for the next dialog to appear.

___ j. Click [Have Disk…] button.

___ k. Browse to the file *c:\program files (x86)\crada\lapxm\bin\Lapxm USB PulseShaper.inf*.

___ l. Click [Open] button.

___ m. Click [OK] button

___ n. Highlight the *Lapxm USB PulseShaper – EzLoader* entry.

___ o. Click [Next>] button

___ p. Click [Continue Anyway] button at the *Hardware Installation* dialog.

___ q. Click [Finish] button

APPENDIX D

MGE UPS CONFIGURATION

D-1 Simple Network Management Protocol (SNMP)

NOTE	If a Windows® installation dialog box appears during this procedure, close it before proceeding.

___ a. Open the [Start | Control Panel].

___ b. Double-click the *Programs and features* icon.

___ c. On the left side of the window, click *Turn Windows Features On or Off*.

___ e. When the dialog box appears, check *Simple Network Management Protocol*.

___ f. Click [OK] button.

___ g. Close *Programs and Features*.

___ h. Close the *Control Panel*.

D-2 Configure the Eaton (MGE) UPS and SNMP IP Address

NOTE The default IP addresses for a LAP wind profiler are:

10.0.2.1	Radar processor workstation
10.0.2.4	Communications processor workstation (optional)
10.0.2.5	UPS SNMP adapter
10.0.2.6	Printer (optional)
10.0.2.7	Service workstation (optional)

D-2.1 Configure the radar computer to an Internet Protocol (IP) address compatible with the default SNMP adapter address

___ a. Open Network Connections

[Start | Control Panel | Network And Sharing Center | Change Adapter Setting | Local Area Connection 1]

___ b. Click the [properties] button.

___ c. Click *Internet Protocol Version 4(TCP/IPv4)*

___ d. Click the [properties] button.

___ e. Select the *Use the following IP address* radio button.

___ f. Enter *192.168.1.1* into the *IP Address* entry field.

___ g. Enter 255*.255.255.0* into the *Subnet mask:* entry field.

___ h. Click the [OK] button on the *Internet Protocol (TCP/IP) properties* window.

___ i. Click the [Close] button on the *Local Area Connection 1 Properties* window.

___ j. Click the [Close] button on the *Local Area Connection 1 Status* window.

D-2.2 Configure the UPS SNMP adapter using the Ethernet connection

For more information about the SNMP adapter and the UPS browser interface please refer to the Eaton Network Management Card User Manual.

___ a. Place a CAT 5e or better Ethernet cable between LAN1 port on the radar processor and the Ethernet port of the network management card.

___ b. Open *Internet Explorer*.

___ c. Enter *192.168.1.2* in the URL box and type return. This should bring up the UPS properties window in the network management card browser interface.

___ e. Click *SNMP* in the left hand Settings menu.

___ f. Enter *admin* for the user name and *admin* for the password.

___ g. Enter *public* in the *Community Read Only* box.

___ h. Click [Save].

___ i. Click [OK].

___ j. Click *Time* in the left hand Settings menu.

___ k. Click *Set Manually* radio button.

___ l. Enter the current date and time using the same values as the radar processor.

___ m. Click [Save].

___ n. Click [OK].

___ o. Click *Network* in the left hand Settings menu.

___ p. Scroll the BootP/DHCP entry to select *Disabled*.

___ q. Enter *10.0.2.5* in the *IP Address box*. If the radar processor and UPS will reside on a network with other devices, then the IP address and subnet mask selected should be compatible with that network.

___ r. Enter *255.255.255.0* in the *Subnet Mask* box.

___ s. Enter *10.0.2.1* in the *Gateway Address* box.

___ t. Enter 10.0.2.0 in the *SMTP Server* box

___ u. Click [Save].

___ v. Click [OK].

___ w. Click *System* in the left hand Settings menu.

___ x. Click the *Reset Communications* button. The UPS and network management board will reset and change to the new IP address.

D-2.3 Reconfigure the radar computer to an Internet Protocol (IP) address compatible with the new SNMP adapter address

___ a. Open Network Connections
[Start | Control Panel | Network And Sharing Center | Change Adapter Setting | Local Area Connection 1]

___ b. Click the [properties] button.

___ c. Click *Internet Protocol Version 4(TCP/IPv4)*

___ d. Click the [properties] button.

___ e. Select the *Use the following IP address* radio button.

___ f. Enter *10.0.2.1* into the *IP Address* entry field. If the radar processor and UPS will reside on a network with other devices, then the IP address and subnet mask selected should be compatible with that network.

___ g. Enter 255*.255.255.0* into the *Subnet mask:* entry field.

___ h. Click the [OK] button on the *Internet Protocol (TCP/IP) properties* window.

___ i. Click the [Close] button on the *Local Area Connection 1 Properties* window.

___ j. Click the [Close] button on the *Local Area Connection 1 Status* window.

D-2.4 Test the network connection to UPS

___ a. Open *Internet Explorer*.

___ b. Enter *10.0.2.5* in the URL box and type return. If the radar processor and UPS reside on a network with other devices and the default IP address and subnet mask are different than the default, enter the IP address used for the UPS network management card here. If the network management card IP address was successfully changed in the section on page 37, then should bring up the UPS properties window in the network management card browser interface.

D-3 Configure LAP-XM® to Communicate with the UPS Network Management Card

___ a. Edit the "C:\Program files \CRADA\Lapxm\Config\Lapxm_BaseModules.cfg" file using Wordpad or a similar text editor..

___ b. Verify that the "Monitor_HwInterface_Ups_Snmp" section contains an option like the following (changing the IP address as appropriate):

```
// IP address of the UPS SNMP card
sIpAddress = "10.0.2.5";
```

___ c. If the value of sIpAddress is incorrect, then correct it.

___ d. Save the corrected Lapxm_BaseModules.cfg file and close the text editor.

___ e. Close the LAP-XM® Console if it is running.

___ f. Close any "Internet Explorer" or other web browsers that may be accessing LAP-XM®.

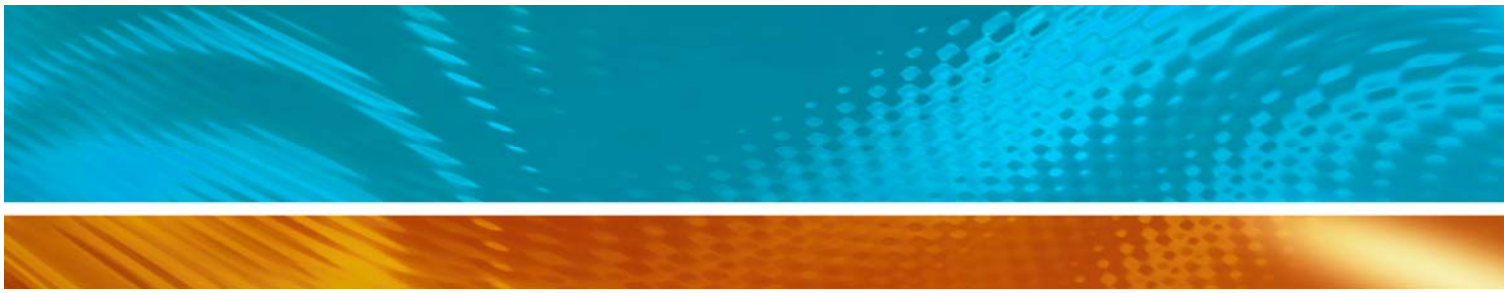
___ g. Open the Service Manager [Start | Control Panel | Administrative Tools | Services]

___ h. Double click [Lapxm_Main] service.

___ i. Click [Stop] and wait at least 5 seconds

___ j. Click [Start]

___ k. Close the *Services* window.



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