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Documentation Conventions

This manual uses some special symbols and fonts to call your attention to important information. The following symbols appear throughout this manual:

**CAUTION:** The Caution symbol calls your attention to information that, if ignored, can adversely affect the performance of your Harmonic product, or that can make a procedure needlessly difficult.

**NOTE:** The Note symbol calls your attention to additional information that you will benefit from heeding. It may be used to call attention to an especially important piece of information you need, or it may provide additional information that applies in only some carefully delineated circumstances.

**TIP:** The Tip symbol calls your attention to parenthetical information that is not necessary for performing a given procedure, but which, if followed, might make the procedure or its subsequent steps easier, smoother, or more efficient.

In addition to these symbols, this manual uses the following text conventions:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typed Command</td>
<td>Indicates the text that you type in at the keyboard prompt.</td>
</tr>
<tr>
<td>Buttons and Menus</td>
<td>Indicates a button to click, or a menu item to select.</td>
</tr>
<tr>
<td>&lt;Ctrl&gt;, &lt;Ctrl&gt;+&lt;Shift&gt;</td>
<td>A key or key sequence to press.</td>
</tr>
<tr>
<td>Links</td>
<td>The <em>italics in blue</em> text to indicate Cross-references, and hyperlinked cross-references in online documents.</td>
</tr>
<tr>
<td>Bold</td>
<td>Indicates a new term. For example: <em>SpanWindow</em> - the transmission frequency along the 1GHz spectrum allocated for each RF Port. It spans across 384MHz.</td>
</tr>
<tr>
<td>LCD Screen Output</td>
<td>The text that is displayed on an LCD console output.</td>
</tr>
<tr>
<td>ScreenOutput</td>
<td>The text that is displayed on a computer screen.</td>
</tr>
<tr>
<td>Emphasis</td>
<td>The <em>italics</em> text used for emphasis and document references.</td>
</tr>
</tbody>
</table>

**NOTE:** You require Adobe Reader or Adobe Acrobat version 6.0 or later to open the PDF files. You can download Adobe Reader free of charge from www.adobe.com.
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**Appendix A** Opened Ports
This guide describes the quick start procedures for Harmonic’s ProMedia Xpress.

1.1 Organization of this guide

This user guide is organized as follows:
- Chapter 1, Preface (this chapter), outlines the guide’s organization.
- Chapter 2, ProMedia Xpress Overview, describes the overview of ProMedia Xpress.
- Chapter 3, System Roles, describes how to delegate system roles for ProMedia Xpress.
- Chapter 4, Installation, describes the software installation procedure of ProMedia Xpress.
- Chapter 5, Contacting Support, describes Harmonic Support contact information.
- Appendix A, Opened Ports, describes ports required to be open during installation.
Chapter 2
ProMedia Xpress Overview

ProMedia Xpress enables faster-than-real-time transcoding of broadcast-quality video for multiscreen VOD applications. The application allows content owners and service providers to significantly increase content hours delivered in a cost-effective and scalable manner.

ProMedia Xpress employs Harmonic’s new Microgrid parallel-computing technology to achieve a dramatic improvement in transcoding performance over standard processing architectures. The application is managed by the Harmonic WFS workflow system and integrates seamlessly with the ProMedia Carbon transcoder and ProMedia Package stream packager, resulting in a complete file-based, multiscreen workflow that scales from several to hundreds of nodes and provides the operational integrity required for demanding 24/7 VOD environments.

This chapter includes the following sections:
- Terms and Abbreviations
- The Building Blocks of ProMedia Xpress

2.1 Terms and Abbreviations

The following is a list of terms and their descriptions used in this Installation Guide.

Table 2-1: Terms and Abbreviations

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xpress Controller</td>
<td>The Controller is the engine service of ProMedia Xpress. It acts as the consumer of workflow control, management, and execution.</td>
</tr>
<tr>
<td>Xpress Node</td>
<td>The Node is the work service of ProMedia Xpress. It acts as the core consumer of task. Tasks are requested by the Node from the Controller and passed to proper worker service.</td>
</tr>
<tr>
<td>Xpress Manager</td>
<td>The Manager is the GUI used for management and monitoring.</td>
</tr>
<tr>
<td>Job</td>
<td>A complete workflow.</td>
</tr>
<tr>
<td>Task</td>
<td>An atomic part of a workflow consumable by a single service.</td>
</tr>
<tr>
<td>Watch Folder</td>
<td>A folder on a Windows® share or FTP server that has an associated workflow. When new files are placed in this folder ProMedia Xpress automatically triggers the associated workflow.</td>
</tr>
<tr>
<td>WFS</td>
<td>Harmonic’s WFS workflow system.</td>
</tr>
</tbody>
</table>
2.2 The Building Blocks of ProMedia Xpress

2.2.1 Xpress Controller

The Controller is the engine service of ProMedia Xpress. It acts as the core consumer of workflow jobs and a core distributor of job tasks in the process of workflow control, management, and execution. To provide scale, reliability, redundancy, and load balancing, the Controller utilizes a central database for all system, job, and task data.

2.2.2 Xpress Node

The Node is the work service of ProMedia Xpress. It acts as the core consumer of tasks. Tasks are requested by the Node from the Controller and passed to the proper worker service. Worker services like transcoding, file transfer, notification, and watch folder monitoring are all registered with the Node as a task type. This task type ensures the Controller’s response to a task request from a Node is met with a matching task.

2.2.3 Xpress Manager

The Manager is the management and monitoring application for ProMedia Xpress. The Manager provides control over the creation and manipulation of presets, workflows, and workflow execution methods. It also allows for monitoring and review of all job and task activities.

![Diagram of ProMedia Xpress Components](image)

Figure 2–1: ProMedia Xpress Components
This chapter describes how to delegate the system roles for ProMedia Xpress. It includes the following sub-sections:

- **All-in-One**
- **Role-Based**

### 3.1 System Requirements

There are two sets of requirements based on how you want your system to be configured:

- All in One
- Role Based

Before installing the ProMedia Xpress components, you should determine the roles of your systems within your farms. Roles within ProMedia Xpress are as described in the building blocks of ProMedia Xpress. A system can take on a single role or all three roles, which are determined by your system performance and farm size.

Figure 3–1 shows recommendations according to environment scale.

![Figure 3–1: System Roles](image)
3.1.1 All-in-One

In this configuration, all ProMedia Xpress components reside on a single system.

- Processor: Intel® or AMD 3.0GHz or faster Memory: 4 GB (minimum), 12+ GB suggested.
  (Faster processors, more processing cores, and more memory will increase performance.)
- Windows FSD (File System Driver) 3.1.2 or higher is required when working with MediaGrid.

3.1.2 Role-Based

In this configuration the ProMedia Xpress components are on separate systems. This requires proper licensing on each system.

3.1.2.1 Xpress Controller (without DB)

- Processor: Intel or AMD 3.0GHz or faster Memory: 4 GB (minimum), 6+ GB suggested.
  (Faster processors, more processing cores, and more memory will increase performance.)

3.1.2.2 Xpress Node

- Processor: Intel or AMD 3.0GHz or faster Memory: 4 GB (minimum), 12+ GB suggested.
  (Faster processors, more processing cores, and more memory will increase performance.)
- Windows FSD (File System Driver) 3.1.2 or higher is required when working with MediaGrid.

3.1.2.3 Xpress Manager

- Processor: Intel or AMD 3.0GHz or faster Memory: 4 GB (minimum). (Faster processors, more processing cores, and more memory will increase performance.)

3.1.2.4 Database (SQL Server 2008 R2 Enterprise)

- Processor: Intel or AMD 3.0GHz or faster Memory: 2GB (minimum).
- Microsoft .Net Framework 3.5 SP1 or better.
- For more requirement information please visit the following link:
Chapter 4
Installation

This chapter describes the process for installing ProMedia Xpress application. It includes the following sections:

- **Opened Firewall Port**
- **Installing the SQL Database**
- **Installing the ProMedia Xpress Components**

There are two installers for ProMedia Xpress. `ProMediaXpressInstaller.exe` is the ProMedia Xpress components' installer. `XpressDBEP_xxx_yyyyy.exe` is the ProMedia Xpress database package. Installation should be performed on all systems prior to configuring ProMedia Xpress. This will provide a smoother configuration process of settings' interdependencies.

**NOTE:** Before you begin the installation, make sure that you are logged on with administrative privileges. For Microsoft Windows 2008 users, Desktop Experience must be enabled and installed prior to the installation of Xpress Node.

### 4.1 Opened Firewall Port

ProMedia Xpress requires specific ports to be open in firewalls for proper communication and operation. The installer opens all the required ports during the installation. For a list of the opened ports, please see *Appendix A, Opened Ports*.

Be sure to determine your system roles prior to installation. See *System Roles* for more information.

### 4.2 Installing the SQL Database

1. Copy the `XpressDBEP_xxx_yyyyy.exe` file to your system or insert the DVD containing the `XpressDBEP_xxx_yyyyy.exe` file into the system's DVD drive.
2. Double-click the `XpressDBEP_xxx_yyyyy.exe` file to extract the Database package for installation.
3. Follow the on-screen instructions to perform the extraction.
4. After the extraction is completed, the Database Installer (`XpressDBEP_xxx_yyyyy.exe`) will launch automatically.

**NOTE:** The extracted package will not be deleted after installation, it must be manually deleted.

5. The Database Installer will determine if prerequisites are required for your system. If required, click **Next** to install the required prerequisites. System reboot may be needed.
6. Read the Welcome information and click **Next** to continue.
7. Read the License agreement, check the “I agree...” box, and then click **Next** to continue.
8. Read the SQL Server Setup information; enter the SQL Instance Name and password for the “sa” user.
4.3 Installing the ProMedia Xpress Components

1. Copy the ProMediaXpressInstaller.exe file to your system or insert the DVD containing the ProMediaXpressInstaller.exe file into the system’s DVD drive.

2. Double-click the ProMediaXpressInstaller.exe file to run the wizard and then follow the onscreen instructions.

3. The installer package will determine if your system is compatible and extract its content for installation.

4. Read the Welcome information and click Next to continue.

5. Read the License agreement, check the “I agree…” box, and then click Next to continue.

6. Select the Installation Option that fits your system, change the install path if required, and then click Next to continue.

   Please refer to System Roles if you need guidance deciding which installation option to choose. Typically, All-in-One is for users with a single system and Role-Based is for users with more than one system in their farm.

7. If you chose the All-in-One option in the previous step, skip to the next step.

   Otherwise, select the appropriate ProMedia Xpress components for your system, and then click Next to continue.

   **NOTE:** A disk icon next to a component means it will be installed. A red X next to a component means it will not be installed, or if the component already exists, it will be removed from the system.

8. Change the Start menu group, if required.

9. Select the Create Shortcuts option, and then click Next to continue.

10. Read the Ready to install components information, verify the components summary for installation, and then click Next to start the installation process.

   **CAUTION:** Once installation begins, do not cancel the process midway. If component selection changes are required, allow the installation to finish, then uninstall and install with your component selection changes.
11. Monitor the installation progress, depending on your system environment; installation
messages may require your attention.

12. Read the **Installation Complete** information, and click **Finish** to close the installer.

13. ProMedia Xpress is now installed and ready to be configured.

   Proceed to Xpress Panel to configure your ProMedia Xpress system. Normally the Xpress
   Panel should be opened from the Windows task bar, but if it is closed or not available
   from the task bar, the Xpress Panel can be accessed from **Start > All Programs >
   ProMedia Xpress > Xpress Panel**.

**NOTE:** For configuration information, please refer to the ProMedia Xpress user guide for details.
Chapter 5
Contacting Support

5.1 Contacting Harmonic Support

The Harmonic Customer and Technical Support groups are available to help you with any questions or problems you may have regarding Harmonic products.

For assistance, refer to the following table for contact information in your region:

<table>
<thead>
<tr>
<th>Region</th>
<th>Telephone Technical Support</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>888-673-4896 (888-MPEG-TWO) or 408-490-6477</td>
<td><a href="mailto:techhelp@harmonicinc.com">techhelp@harmonicinc.com</a></td>
</tr>
<tr>
<td>Europe, Middle East</td>
<td>+44 1252 555 450</td>
<td><a href="mailto:support.emea@harmonicinc.com">support.emea@harmonicinc.com</a></td>
</tr>
<tr>
<td>Asia (excluding India and Russia)</td>
<td>+852-2116-1119</td>
<td><a href="mailto:hongkongtechsupport@harmonicinc.com">hongkongtechsupport@harmonicinc.com</a></td>
</tr>
<tr>
<td>India</td>
<td>+91 22 6793 9291</td>
<td><a href="mailto:support.sm@harmonicinc.com">support.sm@harmonicinc.com</a></td>
</tr>
<tr>
<td>Russia</td>
<td>+7 495 926 4608</td>
<td><a href="mailto:support.sm@harmonicinc.com">support.sm@harmonicinc.com</a></td>
</tr>
<tr>
<td>Africa</td>
<td>+972-54-900-7740</td>
<td><a href="mailto:support.sm@harmonicinc.com">support.sm@harmonicinc.com</a></td>
</tr>
<tr>
<td>China</td>
<td>+852-2116-1119</td>
<td><a href="mailto:dlchinatechsupport@harmonicinc.com">dlchinatechsupport@harmonicinc.com</a></td>
</tr>
</tbody>
</table>

The corporate address for Harmonic Inc. is:

Harmonic Inc.
4300 North First St.
San Jose, CA 95134, U.S.A.
Attn: Customer Support

The corporate telephone numbers for Harmonic Inc. are:

Tel. 1.800.788.1330 (from the U.S. and Canada)
Tel. +1.408.542.2500 (outside the U.S. and Canada)
Fax. +1.408.490.6770

The web address for Harmonic Inc. is [www.harmonicinc.com](http://www.harmonicinc.com).
Appendix A
Opened Ports

The following ports are opened during installation:

<table>
<thead>
<tr>
<th>Port</th>
<th>Protocol</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1301</td>
<td>TCP</td>
<td>Xpress Controller</td>
</tr>
<tr>
<td>8731</td>
<td>TCP</td>
<td>Xpress API</td>
</tr>
<tr>
<td>7284</td>
<td>TCP</td>
<td>Xpress Node</td>
</tr>
<tr>
<td>3702</td>
<td>UDP</td>
<td>Xpress Auto Discovery</td>
</tr>
<tr>
<td>4385</td>
<td>TCP</td>
<td>Xpress Preset Connector</td>
</tr>
<tr>
<td>1433</td>
<td>TCP</td>
<td>Default SQL Port</td>
</tr>
<tr>
<td>1434</td>
<td>UDP</td>
<td>Default SQL Port</td>
</tr>
</tbody>
</table>

ProMedia Xpress requires these ports to be open in firewalls for proper communication and operation.

Please take note that MSDTC is used by ProMedia Xpress. During installation, firewall exceptions for MSDTC.exe are added. If external firewalls are deployed in your network, it is important that ports used for MSDTC are not blocked. In this case, static port assignment for MSDTC is recommended, as the RPC process (TCP 135) for MSDTC opens ports dynamically.

Microsoft® defined a process to bind MSDTC to static port range by editing registry.

http://support.microsoft.com/kb/306843