

XPression

XPression

XPression Monitor User Guide

Version 11.0

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David Ross
CEO, Ross Video
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Ross Video Code of Ethics

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XPression Monitor - User Guide

- Ross Part Number: **3500DR-020-11.0**
- Release Date: August 23, 2022.
- Software Issue: **11.0**

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Patents

Patent numbers US 7,034,886; US 7,508,455; US 7,602,446; US 7,802,802 B2; US 7,834,886; US 7,914,332; US 8,307,284; US 8,407,374 B2; US 8,499,019 B2; US 8,519,949 B2; US 8,743,292 B2; GB 2,419,119 B; GB 2,447,380 B; and other patents pending.

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Ross Video Limited (Ross) warrants its XPression systems to be free from defects under normal use and service for the following time periods from the date of shipment:

- **XPression Server** — 12 months
- **XPression Software Upgrades** — 12 months free of charge
- **System and Media hard drives** — 12 months

If an item becomes defective within the warranty period Ross will repair or replace the defective item, as determined solely by Ross.

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This warranty is void if products are subjected to misuse, neglect, accident, improper installation or application, or unauthorized modification.

In no event shall Ross Video Limited be liable for direct, indirect, special, incidental, or consequential damages (including loss of profit). Implied warranties, including that of merchantability and fitness for a particular purpose, are expressly limited to the duration of this warranty.

This warranty is TRANSFERABLE to subsequent owners, subject to Ross' notification of change of ownership.

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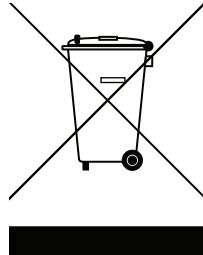
For customers that require a longer warranty period, Ross offers an extended warranty plan to extend the standard warranty period by one year increments. For more information about an extended warranty for your XPression system, contact your regional sales manager.

Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

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Introduction

The XPression Monitor service collects statuses and alerts from every XPression application running on a single computer, as well as its hardware platform, and presents them to external monitoring tools via SNMP.

The XPression Monitor typically runs on every hardware platform that uses an XPression workflow component and it performs the role of an SNMP agent. In normal circumstances a third-party SNMP manager would then connect to the different XPression Monitor services that are part of the overall XPression workflow (engines, gateway, project server, etc.). The default SNMP port is UDP port 161. The structure of the monitored data content available for the SNMP manager to retrieve from the XPression Monitor is defined in what are called MIB files. The MIB files for the XPression product line are included as part of the XPression Monitor installer and usually must be loaded into the SNMP manager.

The XPression Monitor can also send asynchronous alerts – SNMP (v2) notifications – to a list of target hosts (usually the target would be the same SNMP manager that also polls for status). The default port is UDP port 162. The list of notifications available and the statuses to which they are associated is also defined in the MIB files.

Internally, the different applications communicate with the XPression Monitor using TCP port 9875. This port is stored in the Windows registry.

The XPression Monitor Admin application can be used to configure the different XPression Monitor ports and notification targets, and start or stop the XPression Monitor service.

About This Guide

This user guide describes the XPression Monitor, its installation, configuration, and functions.

If, at any time, you have a question pertaining to the installation, configuration, or operation of the XPression Monitor, please contact us at the numbers listed in the section “**Contacting Technical Support**” on page 1–2. Our technical staff are always available for consultation, training, or service.

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and submenus that must be followed to reach a particular command.

Bold text	Bold text is used to identify a user interface element such as a dialog box, menu item, or button. For example: In the 3D Model Files section, use the Mode list to select the folder used to store 3D model files.
<code>Courier text</code>	Courier text is used to identify text that a user must enter. For example: Enter <code>localhost</code> when the DataLinq server is running on the same computer as XPression.
>	Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example, if a step reads “ Display > Widgets ,” you would click the Display menu and then click Widgets .

Getting Help

The *XPression Monitor User Guide* is supplied as a print-ready PDF file. Locate the guide in the C:\Archive folder to open a guide PDF in Adobe® Reader® for viewing or printing.

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (eastern time), technical support personnel are available by telephone any time. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

- **Technical Support:**
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 - › +800 1005 0100 (International)
- **After Hours Emergency:** (+1) 613-349-0006
- **E-mail:** techsupport@rossvideo.com
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XPression Monitor Setup

The following topics are discussed in this section:

- Installing XPression Monitor
- Starting and Stopping the XPression Monitor
- Configuring the XPression Monitor

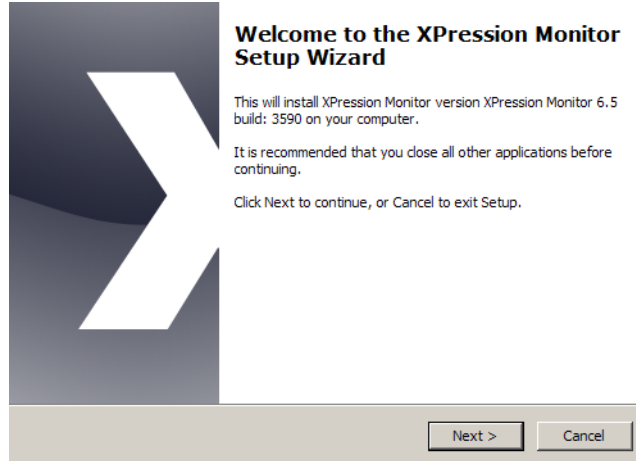
Installing XPression Monitor

Use the following procedures to complete the install of the XPression Monitor:

To install the XPression Monitor:

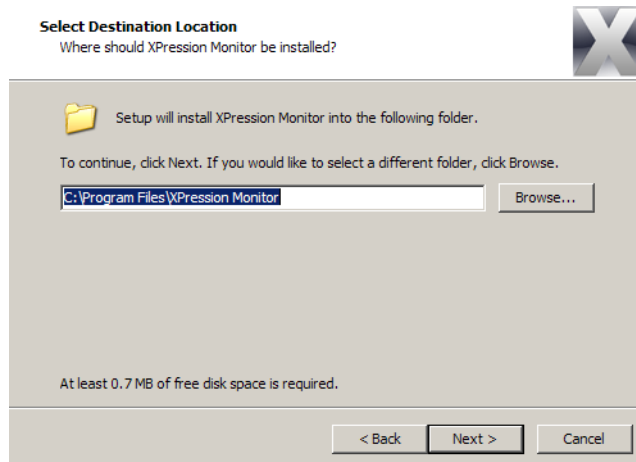
1. Locate and double-click the **xpMonitor-X.X_XXXX.exe** file.

The **Setup - XPression Monitor** window opens.



2. Click **Next**.

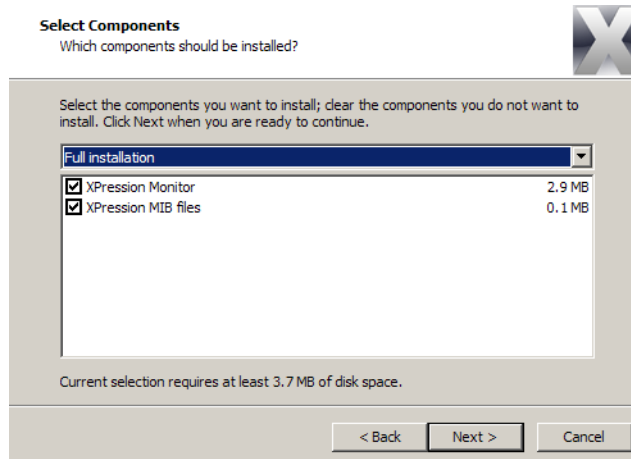
The **Select Destination Location** section opens.



3. Use the default destination folder location or click **Browse** to locate and select a different destination location.

4. Click **Next**.

The **Select Components** section opens.



5. Select **Full Installation** (default installation):

- Select the **XPression Monitor** check box.
- Select the **XPression MIB files** check box.

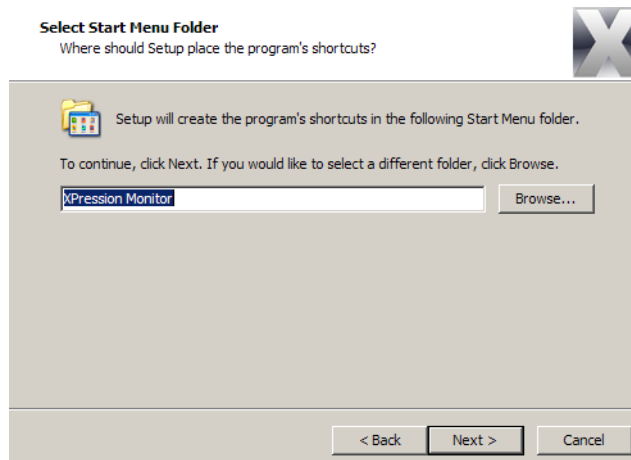
Or, choose the **Custom Installation** by configuring the install as follows:

- Select the **XPression Monitor** check box.
- De-select the **XPression MIB files** check box.

The XPression Monitor does not require the MIB files, however the SNMP manager does require them. If installing multiple monitors, only one set of MIB files is required. The files can then be added to the SNMP manager that is used.

6. Click **Next**.

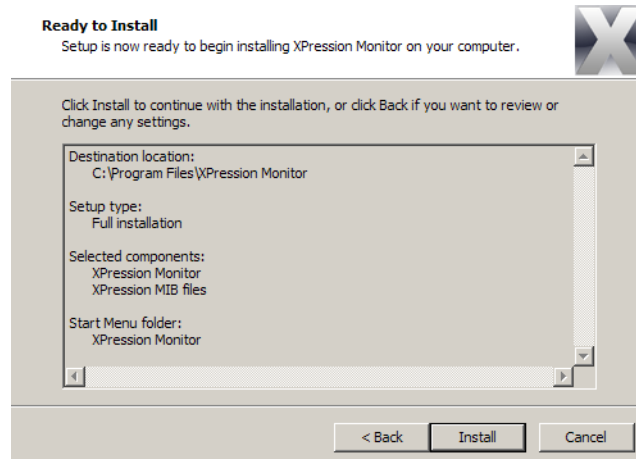
The **Select Start Menu Folder** section opens.



7. Use the default Start menu folder location or click **Browse** to locate and select a different Start menu location.

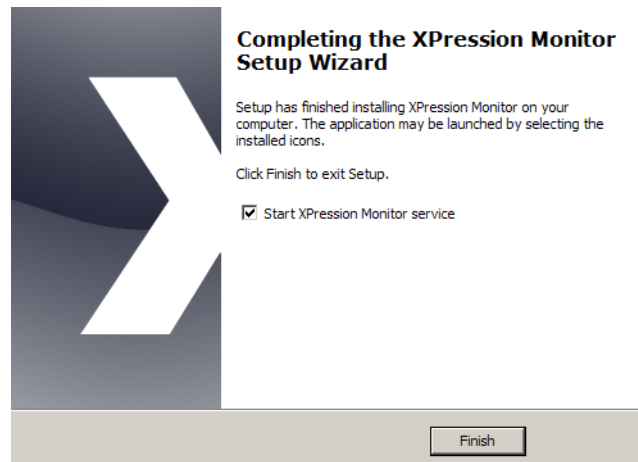
8. Click **Next**.

The **Ready to Install** section opens.



9. Click **Install**.

The installation begins. Once the installation is complete, the **Completing the XPression Monitor Setup Wizard** section opens.



10. Click **Finish**.

If the **Start XPression Monitor Service** check box is left as selected by default and the installation was successful, an information box is displayed that indicates that the XPression Monitor was successfully started.


Starting and Stopping the XPression Monitor

After installing the XPression Monitor, its service is automatically started. However, if the option to start after install is de-selected, if the service has been stopped at any point, or if the service needs to be stopped, use the following procedures to start and stop the Monitor services:

- Start the XPression Monitor
- Stop the Monitor


Start the XPression Monitor

To start the monitor from the Start menu:

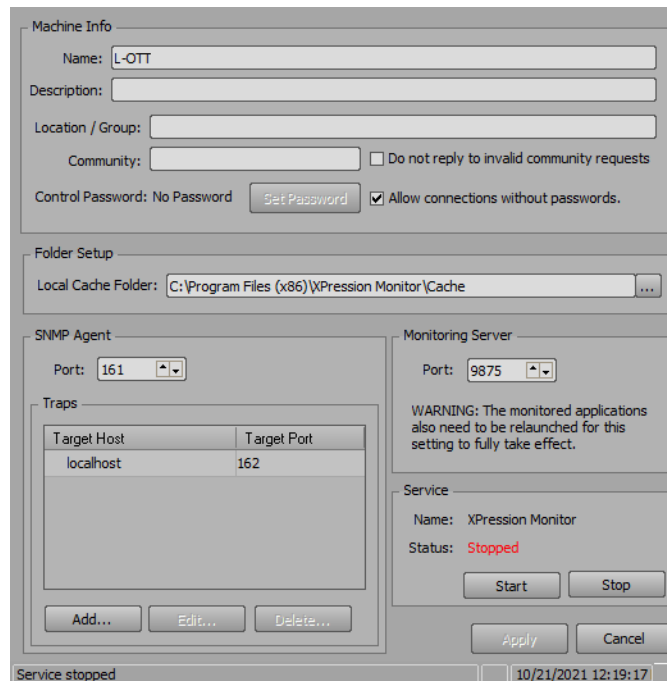
1. On the machine that has the XPression Monitor installed, locate the **XPression Monitor** folder using the **Start** menu.
2. Select **Start Monitor** ().

If the Monitor has successfully started, an information message indicates that the XPression Monitor was successfully started.

To start the monitor from the XPression Monitor Admin window:

1. On the machine that has the XPression Monitor installed, locate the **XPression Monitor** folder using the **Start** menu.
2. Select **XPression Monitor Admin** ().

The **XPression Monitor Admin** window opens.



3. In the **Service** section, click the **Start** button.

The service begins restarting. Once the service has restarted successfully, the **Status** is indicated as **Running**.

The screenshot shows the XPression Monitor configuration window with the following sections:

- Machine Info:** Name: L-OTT, Description: (empty), Location / Group: (empty), Community: (empty), Do not reply to invalid community requests, Control Password: No Password, Allow connections without passwords.
- Folder Setup:** Local Cache Folder: C:\Program Files (x86)\XPression Monitor\Cache
- SNMP Agent:** Port: 161, Traps table with Target Host: localhost, Target Port: 162,
- Monitoring Server:** Port: 9875, WARNING: The monitored applications also need to be relaunched for this setting to fully take effect.
- Service:** Name: XPression Monitor, Status: **Running**,

Service started 10/21/2021 12:20:40

Stop the Monitor

To stop the monitor from the Start menu:

1. On the machine that has the XPression Monitor installed, locate the **XPression Monitor** folder using the **Start** menu.
2. Select **Stop Monitor** (🛑).
If the Monitor has been successfully stopped, an information message indicates that the XPression Monitor was successfully stopped.

To stop the monitor from the XPression Monitor Admin window:

1. On the machine that has the XPression Monitor installed, locate the **XPression Monitor** folder using the **Start** menu.
2. Select **XPression Monitor Admin** (🔧).
The **XPression Monitor Admin** window opens.

The screenshot shows the XPression Monitor Admin window with the following sections:

- Machine Info:** Name: L-OTT, Description: (empty), Location / Group: (empty), Community: (empty), Do not reply to invalid community requests, Control Password: No Password, Allow connections without passwords.
- Folder Setup:** Local Cache Folder: C:\Program Files (x86)\XPression Monitor\Cache
- SNMP Agent:** Port: 161, Traps table with Target Host (localhost) and Target Port (162),
- Monitoring Server:** Port: 9875, WARNING: The monitored applications also need to be relaunched for this setting to fully take effect.
- Service:** Name: XPression Monitor, Status: Running,
- Buttons:**
- Footer:** Service started 10/21/2021 12:20:40

3. In the **Service** section, click the **Stop** button.

The service begins to stop and the **Status** in the **Service** section indicates that the XPression Monitor has been **Stopped**.

The screenshot shows the XPression Monitor configuration window with the following sections:

- Machine Info:** Name: L-OTT, Description: (empty), Location / Group: (empty), Community: (empty), Do not reply to invalid community requests, Control Password: No Password, Allow connections without passwords.
- Folder Setup:** Local Cache Folder: C:\Program Files (x86)\XPression Monitor\Cache
- SNMP Agent:** Port: 161, Traps table with Target Host (localhost) and Target Port (162),
- Monitoring Server:** Port: 9875, WARNING: The monitored applications also need to be relaunched for this setting to fully take effect.
- Service:** Name: XPression Monitor, Status: **Stopped**,

Service stopped 10/21/2021 12:19:17

Configuring the XPression Monitor

Use the **XPression Monitor Admin** to configure the XPression Monitor.

★ All monitor settings are stored in `xpMonitor.dat` in the installation folder of the XPression Monitor except for the Monitoring Server port, which is stored in the Windows registry.

1. On the machine that has the XPression Monitor installed, locate the **XPression Monitor** folder using the **Start** menu.
2. Select **XPression Monitor Admin** (🔗).

The **XPression Monitor Admin** window opens.

Target Host	Target Port
localhost	162

3. In the **Machine Info** section, configure the following:
 - **Name** — use this box to enter the name of the machine. It is auto-populated with the machine currently in use.
 - **Description** — use this box to enter a brief description for the machine if necessary.
 - **Location / Group** — use this box to enter the location of the machine or a group the machine is associated with.
 - **Community** — use this box to assign a custom SNMP community.
 - **Do not reply to invalid community requests** — select this check to not send replies to invalid community requests. It is not selected by default, sending a reply when an invalid request has been sent.
 - **Allow connections without passwords** (selected by default) — when selected, a control password is not required to access control of the monitor. If selected, click **Set Password** to enter and verify a password for control of the monitor.
4. In the **Folder Setup** section, use the **Local Cache Folder** box to enter a file path for the local cache folder for the monitor or click **Browse** (...) to select a file path. It is set to the XPression Monitor cache folder in the Program Files by default.

5. In the **SNMP Agent** section, use the **Port** box to enter or select an SNMP port number.

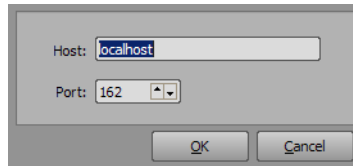
On a system that does not have the Windows SNMP agent or another SNMP agent running, the default SNMP port 161 can be used and does not have to be changed. The third-party SNMP manager will need to be configured accordingly.

6. Use the **Traps** list to add, delete, and edit a list of host/port targets for SNMP traps (notifications).

The default is one target on local host port 162. However, this would usually be changed to the corresponding setting in the third-party SNMP manager (it is also likely that it will not be local, as there will probably be a single SNMP manager that all XPression Monitor services on different machines will target for notifications).

- a. To add a target host, click **Add**.

The **Add Trap Target** dialog box opens.

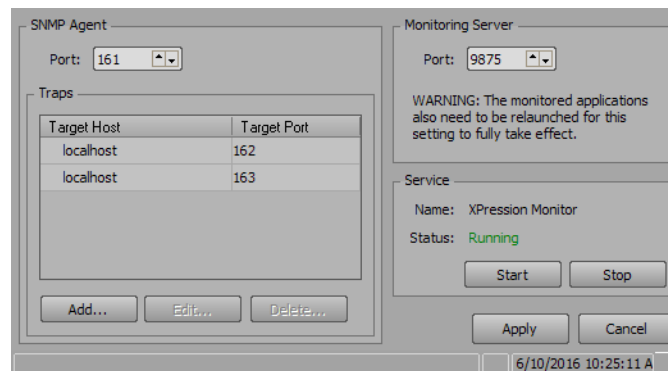


- b. Use the **Host** box to enter or select the target host IP address for the SNMP traps.

- c. Use the **Port** box to enter or select the target port number for the SNMP traps.

- d. Click **OK**.

The trap target is added to the **Traps** list.

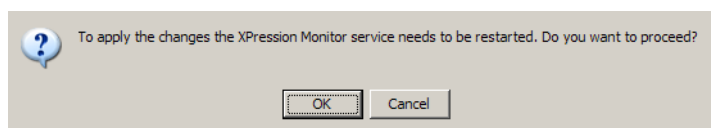


7. In the **Monitoring Server** section, use the **Port** box to enter or select a port number for XPression applications to communicate with the XPression Monitor.

By default, every XPression application will try to communicate with the XPression Monitor on local host port 9875. This communication is purely internal, and there is no reason to change the Monitoring Server port, unless it conflicts with another application using the same port.

8. Click **Apply** for the changes to take effect.

A confirmation prompt opens that indicates a need to restart the XPression Monitor service.



9. Click **OK**.

The **Status** in the **Service** section momentarily indicates that the XPression Monitor has been **Stopped** while the service is restarting. Once the service has restarted successfully, the Status is indicated as **Running**.

10. If the **Monitoring Server** port has been changed, restart the XPression Monitor and relaunch any monitored applications.

Management Information Base (MIB) Files

MIB Tree

The structure of the data in SNMP is organized in a static tree. That tree hierarchy is described in a collection of MIBs. Each MIB defines a node in that hierarchy – a module – of conceptually grouped “managed objects”, using a subset of the ASN.1 language. Managed objects are uniquely identified with an OID. MIBs are “published”, and once they are defined, OIDs are defined permanently.

For instance, Ross Video has an assigned OID under the ‘enterprises’ node:

- .iso.org.dod.internet.private.enterprises.rossVideo
- .1.3.6.1.4.1.27399 (numerically)

The XPression top-level is defined in (ROSS-XPRESSION-MIB) under 1.3.6.1.4.1.27399.4. Specifically, everything currently provided by the XPression Monitor is under:

- iso.org.dod.internet.private.enterprises.rossVideo.xpression.xpressionObjects
- .1.3.6.1.4.1.27399.4.1

The values of MIB objects can be queried using the SNMP GET request. The object queried is identified by its OID and an instance number. For scalar objects, the instance is always 0. For objects within a table, the instance is an index value, as defined by the index type of the table entry (in the simplest case, an integer). For objects within a table with multiple dimensions, the instance is a dot-separated list of indices, with one index for each of the table's dimensions.

For instance, to get the number of applications on an XPression workstation, one would query for:

- .1.3.6.1.4.27399.4.1.3.1.1.0
- (iso.org.dod.internet.private.enterprises.rossVideo.xpression.xpressionObjects.xpressionAppMib.xpressionAppObjects.xpNumberOfApps.0)

The SNMP GETNEXT request is also supported. It is usually used to query the content of whole table.

MIB Files

ROSS-XPRESSION-APP.mib – Status and notifications generally pertaining to any XPression application are defined in `ROSS-XPRESSION-APP.mib`. The main entry in this MIB is the XPression application table, which collects the data that is commonly available for all the XPression executables. This includes the title, filename, version, process ID, status, heartbeat, last exception thrown, dongle status, set of licenses, editions, and options used by the application, etc.

ROSS-XPRESSION-ENGINE.mib – Status and notifications pertaining specifically to an XPression engine (Studio, BlueBox, Prime, GO, Tessera, etc.) are defined in `ROSS-XPRESSION-ENGINE.mib`. The main entry in this MIB is the engine table (since there is usually a single engine per workstation, this table usually has a single row). Alongside it is the projects table (for loaded projects), the remote connection table (clients connected to the engine remote server), and the I/O board table (for I/O boards configured on this engine), and board temperature (if available). The engine table includes the render and UI thread statuses, performance meter, memory usage, number of configured inputs, outputs and I/O boards, remoter server status, etc.

ROSS-XPRESSION-GATEWAY.mib – Status and notifications pertaining specifically to an XPression gateway are defined in `ROSS-XPRESSION-GATEWAY.mib`. The main entry in this MIB is the gateway table (since there is usually a single gateway per workstation, this table usually has a single row). Alongside it are the server and connection tables for each server on the gateway (plug-in, MOS, remote sequencer), as well as the status for the output engine and offline/preview engine connections, and a running orders table.

ROSS-XPRESSION-HW.mib – Status and notifications pertaining to the hardware platform are defined in `ROSS-XPRESSION-HW.mib`. For the XPression Monitor to report these, the openHardwareMonitor application must be running (openHardwareMonitor software is a widely available free downloadable open source application). A table of hardware devices is defined – it matches what openHardwareMonitor supports and detects. A table of sensors is also defined – again reporting the data collecting by openHardwareMonitor. Each sensor has a type and reports a min value and max value in a given unit. Note that each sensor belongs to a hardware device, but SNMP does not support nested tables, so the sensor table is alongside the device table.

★ Refer to the descriptions in the MIB files for more details about the data available for monitoring.

Notes:

Notes:

Notes:

Contact Us

Contact our friendly and professional support representatives for the following:

- Name and address of your local dealer
- Product information and pricing
- Technical support
- Upcoming trade show information

Technical Support

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