PM Tools program is an utility program that mimics the PureMedia chassis’ front panel touch screen function. PM Tools is designed to control PureMedia chassis via RS232 or LAN control from Mac or Windows PC.

**PM Tools Installation Guide**
In order for PureMedia chassis to communicate with PM Tools, firmware version of 3.43 or higher is required. Firmware version can be checked from front panel touch screen on System info section 6. Software ver.

Please contact PureLink support team if you need new firmware for the chassis.


PM Tools link: [https://drive.google.com/file/d/0ByG0lZGK55ilS0tyR1RhWW5JZDA/view?usp=sharing](https://drive.google.com/file/d/0ByG0lZGK55ilS0tyR1RhWW5JZDA/view?usp=sharing)

Please unzip PM Tools and run PM Tools. If the program does not start, please check your zip program’s preference and file association and make sure disable .JAR format and run it again.
<Disabling JAR format from zip program>

It is recommended to connect PureMedia chassis and your computer via LAN (wired or wireless) or RS232 (null modem cable) before you run the PM Tools program.

**PM Tools User Guide**

PM Tools is designed with seven (7) main menus.

- System Info
- Create
- Preset
- EDID
- Test Pattern
- Sys Config
- Scaling
1. System Info

It displays the overview of current system's status

1.1) System Information

- It displays frame's maximum capacity of I/O ports
- It displays current system's communication setting status (RS-232 Baud rate, IP address, product ID, and firmware version)
- It displays touch screen's lock/un-lock status
  - In security-lock mode, user only has access to "System info" menu, other menus will be locked.
- It displays cooling fan's status
  - If the status shows as Cool Fan Error, please turn off the system and contact your PureLink representative immediately.

1.2) Channel info

- It displays Matrix Router's current Video and Audio switching status
  - 1st row in white color represents Output numbers
  - 2nd row in green color represents Video Input numbers
  - yellow color represents Test Pattern mode
  - orange color represents Fixed Video Input numbers
2) Input, Output, Audio and Extenders status check

PureMedia Matrix Router has built-in signal analyzing function which enables user to check the detail information of incoming and outgoing signals.

- It displays Input port number, Board type, EDID information, firmware version, incoming signal's resolution, Video format, and transmission status.
- It displays Output port number, Board type, selected Input channel number, connected monitor's EDID information, firmware version, incoming signal's resolution, Video format, and transmission status.
- It displays Audio Matrix Router's switching status and Output volume.
- It displays input transmitter's type, signal information (resolution & audio) and firmware version.
- It displays output receiver's type, signal information (resolution & audio) and firmware version.

PM Tools offers debugging window where user can check all the command communication between the PC and the PureMedia chassis. This is very useful tool for 3rd party controller programming.
2. Create

PureMedia series Matrix Router is designed to create an independent Video/Audio switching or switching Video/Audio together. This section will guide user how to create/disconnect switching Video and Audio connection.

1) Video

This section is to switch Video connection only. Select Input and Output numbers to route source signal to destination devices and push "Enter" button on the bottom right to execute. User can select multiple Outputs for the Input.

2) Audio
This section is to switch Audio connection only. Select Input and Output numbers to route source signal to destination devices and push "Enter" button on the bottom right to execute. User can select multiple Outputs for the Input

**Set All**
"Set All" button is to select all the Output w/o pushing them individually.

**Clear All**
"Clear All" button is to clear all the Output that was selected w/o pushing them individually.

**One to One**
"One to One" button is to create an one to one connection between Input and Output; for example, connect Input #1 to Output #1, Input #2 to Output #2, ~ Input #15 to Output #15, Input #16 to Output #16.

**Enter**
"Enter" button is to execute the changes made.

**Cancel**
"Cancel" button is to cancel the changes made.
3. **Preset**

PureMedia series Matrix Router provides Preset function for user to execute predefined multiple switching at once. Presets can be saved and recalled from the front panel touch screen or from PM Tools.

- When a preset is recalled, it replaces the current configuration. The recalled preset overwrites the entire current configuration.
- Preset only applies to Video switching only.

**Creating & calling a preset**
- Type in preset name and press “Save” button
- “Preset save” window will pop-up
- Create input/output switching for the present and press “Save” button
- Now New preset is created
- Simply click preset name to call the preset

4. **EDID**

PureMedia Matrix Router provides Auto EDID management system; easy and fail safe way to handle EDID, via EDID library system (internal) and EDID emulation (external).
**What's EDID?**

Extended Display Identification Data (EDID) is an information set that digital display provides to describe its capabilities to a Video source. Video source will know what kinds of displays are connected and it will determine which resolution to Output according to the EDID information received from the display.

The EDID normally includes manufacturer name and serial number, sets of capable resolution including native resolution, supported timing, pixel mapping data (for digital displays only) and etc.

In a digital connectivity environment; in order to support the maximum resolution of connected monitor, EDID handshake is a critical because improper EDID handshake between sources to the display will result in no image on the display.

EDID handshake may sound simple; however, with multiple peripheral devices within the chain, display's EDID information easily get lost or blocked while it is traveling to the source device.

PureMedia series Matrix Router provides Auto EDID management system to meet today's sophisticated digital connectivity integration environment.
**EDID library (Internal EDID)**
9 most widely used EDID data is pre-programmed internal EEPROM chipset which user can take and save onto the any of the Matrix Router's Input EEPROM.

EDID library list

<table>
<thead>
<tr>
<th>Resolution</th>
<th>HDMI Resolution</th>
<th>HD Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1024 x 768 @ 60Hz</td>
<td>1280 x 1024 @ 60Hz</td>
<td>1920 x 1200 @ 60Hz</td>
</tr>
<tr>
<td>HD 1080i @ 60Hz</td>
<td>HD 1080p (2CH)</td>
<td>HD 1080p (Multi)</td>
</tr>
<tr>
<td>1920 x 1080 (DVI)</td>
<td>1920 x 1080 (VGA)</td>
<td>3840 x 2160</td>
</tr>
</tbody>
</table>

Factory default EDID is set to 1920 x 1080p@60Hz

- Select EDID from the list
- Select Input# where selected EDID data will be saved on to.
  * Multiple Inputs can be selected at once.
- Push enter button to save

**Emulation (External EDID)**
The user can easily save an EDID data from any display devices directly onto the Matrix Router's Input port or EDID library's empty spot. By saving display device's EDID information on the Matrix Router Input port, Input port will act as a display to the Video source.

**Note)** There may be display devices that are not allowing other device to emulate its EDID data.

**Note)** Certain EDID data may not be compatible with some devices, in this case, it is recommended to use scaling output option

- Select Output #
- Select Input# where selected EDID data will be saved on to.
  * Multiple Inputs can be selected at once.
- Push enter button to save.

**5. Test Pattern**
PureMedia series Matrix Router provides a built-in Test Pattern Generator, enabling easy testing from the Matrix Router to the display.

- Select timing
- Select pattern
- Select output
- Press “Enter”

Multiple Outputs can be selected at once.
Available timing options are:
1024 x 768 @ 60Hz
1920 x 1200 @ 60Hz
1280 x 720p @ 60Hz
1920 x 1080p @ 50Hz
1920 x 1080p @ 60Hz

Available pattern options are:
Color bars
Cross Hatch
16 Gray
256 Gray
Black

6. Sys Config
This section contains connection method and its configuration to communicate with PureMedia chassis. Plus, input/output device naming.
Connection Mode

- Serial port (via RS232) – null modem cable is required
- Ethernet port (LAN)

Ethernet Connection Setting

Enter the IP address of the PureMedia chassis. User can set IP address, Gateway address, Subnet mask information from the front panel touch screen.

Note) Please contact your Network Administrator for network information to avoid any IP conflict.

RS232C Port Setting

Select correct RS232 port # and baud rate of the PureMedia chassis. User can set baud value from the front panel touch screen.

Device Naming

User can label input and output port to the desired letters, numbers, or in combination.
Once labeling is saved, buttons on Create page will show the name.

7. **Scaling**

This menu is to set output scaling resolution timing for local output boards (HDMI, DVI, and SDI output cards)
- Select output board options (HDMI/DVI or SDI)
- Select timing
- Select output #
- Press “Enter”