Projector Controller

Version 3.0
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Overview

Projector Controller enables you to monitor and control all projectors connected to your computer via LAN or Serial Port.

From a single screen layout you can view all projectors and access settings for an individual projector or for a group of projectors.

The software allows you to:

- Create groups of projectors which can be controlled simultaneously
- View essential information, such as model, name, ON/OFF status and lamp status, about all projectors on the network at a glance
- View logs containing all interaction between the software and the projectors on the network
- View network information such as IP and MAC address
- Switch power on and off, open and close the shutter
- Remove projectors from the network
- Edit and control an array of settings, including:
  - Inputs and test patterns
  - Lens, image, color and geometry
  - Edge Blend and PIP settings
  - Plus many more
Network requirements

LAN
To use a LAN connection, make sure DHCP is switched off on each projector in the network. You can switch off DHCP from the Setup > Network > Control menu.

We recommend a small dedicated local area network using UDP as shown in the illustration.

1. Hub
2. Computer
3. Projectors

Alternatively, you can use a TCP/IP network. If using TCP/IP, make sure the correct IP is assigned to each projector in the network.

Serial
You can connect one or more projectors using RS232, depending on your network setup.

Use a null-modem cable to connect a projector directly to your computer, or a straight cable to use a modem.

Notes

- The LAN port cannot be used to work with Projector Controller. Always use the Update port for this purpose.

- The computer and all projectors in the network share the same subnet mask and their IP addresses are identical up to the third octet. The last octet is unique for each device. Projector Controller assigns these settings to each projector automatically; however, if you are having trouble connecting a projector, consider assigning these settings manually from the Setup > Network > Control menu.

- Provided a projector is already in the network, you can edit its IP address using Projector Controller. See Changing the IP address of a projector further in this guide.

- When creating a serial connection, always make sure Projector Controller has selected the correct COM port. See Setting up network connections further in this guide.
**Connection**

To add a projector to your dedicated LAN network, connect the projector using the **Update port 1**.

To control the projector via a serial connection, use the **RS232 port 2**.

The illustration here shows the location of the Update port and the RS232 port on a Titan Quad projector. To locate these ports on a different projector, please refer to your projector manual (see the chapter called *Connection Guide*).

**Notes**

- The LAN port cannot be used to work with Projector Controller. Always use the Update port for this purpose.
- See also *Setting up network connections* further in this guide.
**Installation**

1. Ensure you have Microsoft .NET 2.0 framework installed on your computer.

2. Start the installer, `DPProjectorControllerSetup.exe`, and follow the instructions of the wizard.

The setup creates a Start menu shortcut at the following location:

- **All Programs > Digital Projection > Projector Controller > Projector Controller 3.0.0.0** (Windows Vista and above).
- **Programs > Digital Projection > Projector Controller > Projector Controller 3.0.0.0** (Windows XP).
Working With Projector Controller

The workspace

1. **Menus**
   Sets of menus in three tabs, **Home**, **Logging** and **Advanced**.

2. **Available projectors**
   Monitor the projectors in your network and change settings. Switch between the two tabs:
   - **Projectors** - view all projectors at once and work with one projector at a time.
   - **Groups** - view and work with groups of projectors.
   
   Use the **Arrange** buttons to change the order of the projectors.

3. **Individual projector**
   View the model, name, lamp status and configuration, and whether the projector is powered on. The currently selected projector has a darker background. Click on a projector to select it. On the **Projectors** tab all commands work only on the currently selected projector.

4. **Information bar**
   This area provides information about the currently selected projector: model, serial number, IP, MAC address and network type.

5. **Task pane**
   All settings for the currently selected projector can be controlled from this area.

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Notes
Saving and opening workspaces
You can save your workspace for future use. Projector Controller records the current projectors, their order in the workspace, as well as any groups and the projectors they contain.

When you open a saved workspace, it replaces your current workspace.

Unavailable projectors are also added to the workspace.

Workspaces are saved with the `.workspace` extension. The default location for your saved workspaces is `My Documents\Digital Projection\Projector Controller\Workspaces`. You can save your workspaces to any location of your choice.

To save a workspace or open a saved workspace:

1. Click the DP icon 1 at the top left corner of the Projector Controller window.

2. Choose from the following actions:
   - **Open** a previously saved workspace 2
   - **Open a recent workspace** 3
   - **Save** the current workspace 4
   - **Exit** Projector Controller 5

Notes
1
2
3
4
5
Arranging projectors in the workspace

To change a projector’s position within the workspace,

1. Select the projector.

2. Use the Arrange toolbar:
   - Move to the beginning 1
   - Move toward the beginning, one step at a time 2
   - Move toward the end, one step at a time 3
   - Move to the end 4
Working with individual projectors

1. **Tabs**
   - The **Projectors** tab shows all projectors in the workspace. You can edit settings of one projector at a time.
   - The **Groups** tab allows you to work with several projectors simultaneously.

2. **Currently selected projector**
   - The currently selected item has a dark background. Click on a projector to select it.

3. **Projector model and serial number**

4. **Projector name**
   - When a projector is added to the network, the software assigns a default name. You can edit this text and assign a name of your choice.

5. **Quick controls**
   - The ribbon at the top of each item allows you to:
     - switch the projector on and off;
     - open and close the shutter;
     - view lamp status.

6. **Disconnected projector**
   - A disconnected projector will remain visible until removed.

7. **Information bar**
   - This area provides information about the currently selected projector: name, serial number, IP and MAC address.

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Notes

You can select multiple projectors in order to copy them into a group. To do so, hold the SHIFT key down and click on each projector you wish to copy.

To work with multiple projectors, see **Using Groups** later in this guide.
Adding and removing projectors

To add a projector,
- Simply connect the projector to the network. The software will detect the new projector and add it to the view automatically.

To remove a projector:
1. Disconnect the projector from the network.
2. Select the disconnected projector.
3. On the Projector menu, click Remove.

Notes
- If you need to edit network settings manually, see Setting up network connections further in this guide.
- You can only remove a projector if it is disconnected from the network.
**Setting up network connections**

Typically, Projector Controller will detect automatically all connected projectors.

If necessary, you can set up a network connection manually using the Connections menu. You can also add one or more virtual projectors to your network, for testing purposes.

**Setting up LAN connections**

When connecting projectors via LAN, always use the Update port. You can choose between UDP and TCP/IP:

1. On the Connections menu, click Connect (Fig. 1).
2. Select UDP or TCP/IP.

**Setting up serial connections**

1. On the Connections menu, click Serial (Fig. 2).
2. Select the COM port configured for the projector.

**Adding a virtual projector for testing purposes**

1. On the Connections menu, click Virtual.
2. Select a projector series and model from the list.

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**Notes**

- We recommend using a UDP network.
Changing the IP address of a projector

To change an IP address:

1. On the Projector menu, click Change IP.

   The Change IP window opens.

2. Type the new IP address in the New IP field and then click OK to close the Change IP window and return to Projector Controller.

Notes

- All IP addresses in your network must be identical up to the third octet; each IP address must have a unique last octet.
- All IP addresses within a network share the same subnet mask. You cannot edit the subnet.
- Each MAC address is unique. MAC addresses are assigned automatically and cannot be edited.
Back up projector settings

For each individual projector, you can back up settings and restore backed up settings.

To back up settings:
1. On the Projector menu, click Backup ①.
2. In the Backup Projectors window, select which projector to back up. You can select multiple projectors ②.
3. If necessary, change the backup location ③.
4. Click Start ④.
5. You can monitor the backup progress ⑤. When the backup is over, a message appears. Click OK ⑥ to close the message and return to the Backup Projectors window.
6. Click Exit ⑦ to return to the main Projector Controller window.

Notes

Only global settings can be backed up.
Restoring backed up projector settings

To restore backed up settings:

1. On the Projector menu, click Restore.
2. In the Restore Projectors window, select which projector to back up. You can select multiple projectors.
   If necessary, navigate to a different backup location.
3. Click Start.
4. You can monitor the restore progress. When the restore is complete, a message appears. Click OK to close the message and return to the Restore Projectors window.
5. Click Exit to return to the main Projector Controller window.

Notes

- Only global settings can be backed up.
- If a backed up projector is not in the workspace, its backup will be unavailable.
**Editing projector settings**

Projector settings are accessible from the following locations:

- Select an item to edit from **Menu > Tasks 1**.

  or

- Select an item from **the Task pane 2**.

Depending on the projector model and existing configuration, some settings may be unavailable.

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**Notes**

For further information about projector settings, refer to the **Operating Guide** section of the projector manual.
Lamp status

You can monitor lamp statuses from the Quick Controls ribbon 1 at the top of each projector.

Each lamp is represented by a lightbulb symbol. Lamp status is indicated by the color of the lightbulb, as follows:

<table>
<thead>
<tr>
<th>Color</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray</td>
<td>The lamp is switched off.</td>
</tr>
<tr>
<td>Green</td>
<td>The lamp is switched on and working.</td>
</tr>
<tr>
<td>Green (flashing)</td>
<td>The lamp is switched on and warming up.</td>
</tr>
<tr>
<td>Amber (flashing)</td>
<td>The lamp is cooling down.</td>
</tr>
<tr>
<td>Amber</td>
<td>The lamp is working at less than full capacity.</td>
</tr>
<tr>
<td>Red</td>
<td>An error.</td>
</tr>
</tbody>
</table>

Notes

A two-lamp projector
**Using groups**

Groups enable you to edit settings for several projectors simultaneously, without the need to open each projector.

You can have a number of groups and each projector can be added to any group.

A projector can be added to more than one group.

You can delete and rename groups as needed.

To use groups, open the **Groups** tab **1**. The **Groups** menu **2** is now enabled.

Individual groups appear as **tabs** **3**. The first group, **Default**, is automatically added by the application. You cannot delete or rename it.

Within a group you can still change settings for individual projectors as normal, or you can work with the whole group. To do so, enable group settings by doing either of the following:

- On the **Tasks** menu, click **Group** **4**.
- In the **Task** pane, click **Group Settings** **5**.

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**Notes**

Group names cannot contain spaces or special characters.
Create a group
To create a group, click the **New Group** command 1 in the **Groups** menu.

Delete a group
To delete a group, click **Delete** 2.

Rename a group
Groups are assigned a name automatically when created.
To change the default name of the selected group:
1. Click **Rename** 3 in the **Groups** menu.
2. Type the new name in the **Edit Group Name** box 4 and then click **OK**.

**Notes**
Group names cannot contain spaces or special characters.
Add a projector to a group
1. Select the projector in the Projectors tab or in another group and copy it using Copy from the Clipboard menu, or Ctrl+C.
2. Paste the projector into the destination group using Paste from the Clipboard menu, or Ctrl+V.
To move a projector from one group to another, use Cut (Ctrl+X) instead of Copy.

Remove a projector from a group
1. Select the projector within the group.
2. On the Arrange toolbar, click Delete.
The projector disappears from the group but remains in the workspace. You can access it from the Projectors tab, or from any other groups it has been added to.

Add and remove multiple projectors
To add or remove several projectors at the same time, hold down the SHIFT key while selecting the projectors.
**Edit group settings**

1. Open the group you wish to edit and select any projector within the group to activate the Task pane.

2. Switch to group settings by doing either of the following:
   - In the *Tasks* menu, click *Group* ![1](image1)
   - In the *Task* pane, click *Group Settings* ![2](image2)

   The *Group Tasks* pane appears. Edit the settings as required.

3. To exit group settings, in the *Task* pane, click *Home* ![3](image3).

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**Notes**

Initially all group settings appear blank. When you edit a setting, the *Group Tasks* pane shows the new group value.
Viewing logs

The Logging tab consists of the following commands:

- **View Log** shows a record of interaction between the software and the available projectors logged within the current session.
  You can choose to view communications, errors or diagnostics.

- **Clear Log** deletes the current record.

- **Comms Log** opens a text file containing the entire log for the current session.
  You can save a copy of this log on your computer.

- **Error Log** opens a text file containing all error messages logged during the current session.
  You can save a copy of this log on your computer.

- **Status Log** opens a text file containing all status messages logged during the current session.
  You can save a copy of this log on your computer.
Applying themes
You can customize the software by applying different themes.

To apply a theme,

- On the Advanced tab, click Themes and select a theme from the list.

Choose from the following themes:
Identifying a projector

To identify a projector in the array, select the projector in the *Projectors* pane and click **Home tab > Projector > Identify**.

The following will then occur to allow identification:

- The keypad lights on the selected projector will flash for 10 seconds.
- The image projected by the selected projector will be replaced by a test pattern for 10 seconds.
The Gamut tool

The Gamut tool (Fig. 1) allows you to edit projector gamut data and load the edited gamut into one of two target gamut tables supported by the projector - User Table 1 and User Table 2.

To open the Gamut tool,

- On the Advanced tab, click Target Gamut. 

Fig. 1: Gamut tool
Warp Generator

Warp Generator is a software tool used for creating and editing warp maps for projection onto uneven surfaces.

To open Warp Generator,

- On the Advanced tab, click Warp Generator 1.

Notes

- Warp Generator can also be used as a standalone application.
- Refer to Warp Generator Help for information on working with Warp Generator.