



TPControl BYOD License

A licensing solution for Apple, Android and Windows devices for use with AMX Control Systems



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What do I need to get started?

1. Any device capable of running; TPControl for Apple, Android or Windows
2. A TPControl BYOD License Token e.g. 'BLT-0-xxxx-xxxx'
60-Day BYOD Trial licenses can be generated via the TRY link on our [Products page](http://www.touchpanelcontrol.com) at www.touchpanelcontrol.com
3. An AMX NetLinx Master running v3 or later firmware, and its primary MAC address.
(see *How to locate the NetLinx Masters MAC address* below)
4. Access to TPCloud for initial administration via an Internet browser.
NOTE: With the exception of retrieval by TPControl of a BYOD UI file from TPCloud, Internet access is only required for the initial BYOD License registration. During operation, Internet access is NOT required by the NetLinx Master, nor TPControl devices.
5. A TP4/UI file. This is optional, but thoroughly recommended

How to locate the NetLinx Masters MAC address

The MAC address is typically located on the rear or bottom of the AMX NetLinx master, and is represented in alphanumeric character formats e.g. **00609F964FF8**.

Alternately, **telnet** to the NetLinx master, type *show device* followed by <enter> and note Device 00000's Physical Address (MAC address) value.

What does BYOD stand for?

Bring Your Own Device.

How is BYOD relevant to TPControl?

Firstly, **all** TPControl devices whether they themselves are licensed or not, will connect to a TPControl BYOD Licensed AMX NetLinx Master!

Secondly, upon connection, TPControl will retrieve and present the (*optionally*) hosted BYOD UI file for that NetLinx Master!

In a nutshell, you simply download TPControl from the respective device AppStore (Apple, Android, or Windows – all are free downloads), then configure TPControl to locate your BYOD Licensed NetLinx Master (super easy via a [QR code](#)), and before you know it, you are up and controlling your AMX system!

Is code required for TPControl BYOD to work?

For clarity, no code specific to TPControl BYOD operation is required to be running on the AMX System. Having said that, code authored by the AMX Integrator/Programmer is required to be running on the AMX system in order for any interface device; AMX or TPControl, to interact as intended.

How many TPControl devices can I use?

There is **no** restriction on how many TPControl devices can connect to a BYOD Licensed NetLinx Master, *outside of the normal AMX memory and/or concurrent device connection constraints!*

For more information, please see [AMX's Tech Note#1032](#).

What versions of TPControl support BYOD?

TPControl BYOD support is available in:



TPControl v2.5.0.0+ for Apple

TPControl v2.6.3.0+ for Apple (for TPCloud BYOD UI support)

[TPControl for Apple](#) is available for download via the [Apple iTunes Store](#).

Click [here](#) for more details.



TPControl v2.5.0.0+ for Android

TPControl v2.6.3.0+ for Android (for TPCloud BYOD UI support)

[TPControl for Android](#) is available for download from [Google Play](#), [Amazon](#) and various other Android device stores.

Click [here](#) for more details.



TPControl v1.4.0.0+ for Windows

TPControl v1.5.3.0+ for Windows (for TPCloud BYOD UI support)

[TPControl for Windows](#) is available for download from the Windows Store. Use the *Store* application on the Windows device and search for *TPControl*.

Click [here](#) for more details.

Let's get started!

Part 1: Create the BYOD License file

Do you have a TPC User ID/Email account?

- If you already have an account with Touch Panel Control (<http://www.touchpanelcontrol.com>), then you already have a *TPC User ID* and account for TPCloud.
Jump to 'Add the BYOD License Token to your TPCloud account'.
- If you do not have an account, go to TPCloud (<http://tpcloud.touchpanelcontrol.com>) and [Register](#) – it's free to do.
*The email you use to register becomes your **TPC User ID***

Add the BYOD License Token to your TPCloud account




If your BYOD Token is prefixed with '**BLT-0-**', then is it already assigned to an account. Ensure in Step 1 below that you log into the relevant TPCloud account that the BYOD Token is assigned to.
Tokens with this prefix have been distributed directly by Touch Panel Control.

BYOD Tokens that are prefixed with '**BLT-1-**' (or similar) are not initially assigned to an account.
Tokens with this prefix have been distributed via an AMX Distribution channel.


So:

1. Log into '[TPCloud](#)' then select the '**BYOD Tokens**' tab.
If the BYOD Token already appears in your list, go to Step 3.
2. Select the '**Add BYOD Token**' option.
Enter the *BYOD Token* value in the respective field.
Optionally enter a "Purchase Order/Reference".
When you are ready, press the '**Add Token**' button.
The BYOD Token will be added to your list of BYOD Tokens.

Generate the License Key file for your NetLinx Master

3. Select the BYOD Token icon  to present the BYOD tokens '*View Details*' tab.
4. Press the  option.
5. In the field provided, enter the AMX NetLinx Master's **MAC address**.
Ensure the accuracy of the MAC address. *Once generated, the Key is locked to the BYOD License Token.*
6. Follow up by pressing the  button.

Download the License Key file to your computer

7. Press the  option, and select to either;
 - a) have the license key file sent directly to your accounts email address
or
 - b) choose the 'Download Key' button, to save the file directly to your computer.

NOTE: The BYOD license filename is '**system_license.tpc**'.

*TPControl searches for the 'system_license.tpc' filename upon connection to the AMX system, so it is **important that you do not change the name of the BYOD license file.***

FTP the BYOD license file to the NetLinx Master

To place the '**system_license.tpc**' file on the NetLinx Master, use your preferred **FTP client**.

For example, Windows users can launch *Windows Explorer*, and type in:

ftp://<NetLinxMaster_IP_address>

...where *<NetLinxMaster_IP_address>* is the IP address of your NetLinx master, and press *<Enter>*.

An FTP session will be initiated and you will be presented with a login/credential window. Enter the *Username/Password* applicable for your AMX systems Security settings.

Once logged in to the NetLinx masters FTP repository, copy (*from a separate Windows Explorer session*) the '**system_license.tpc**' file and paste (*to the Windows Explorer FTP session*) into the **ftp root** folder of the NetLinx master.

Congratulations!

The AMX System is now BYOD licensed for use with **any** TPCControl device, and permitting unlicensed TPCControl devices to get connected.

Next, please review your options for hosting a BYOD UI file in the following section: **Part 2: Hosting a BYOD UI file.**

Part 2: Hosting a BYOD UI file

You have several options available;

1. Host a BYOD UI file in TPCloud

The simplest method, assuming that TPControl devices have Internet access, you can host the BYOD UI file in TPCloud.

2. Host a BYOD UI file on the AMX NetLinx master

If the network that the TPControl devices connect to does not provide/permit Internet access, this is your best option for BYOD UI file retrieval – directly from the AMX system.

3. Not hosting a BYOD UI file

This assumes that TPControl UI files have been or are going to be loaded into TPControl manually as and when required. Do so using TPTransfer, or additionally for licensed TPControl devices you can use TPCloud.

The following sections discuss option 1 and 2 in greater detail.

Option 1: Host a BYOD UI file in TPCloud

- Within TPCloud, select the '**BYOD Tokens**' tab, and choose the BYOD Token icon



This will present the BYOD tokens 'View Details' tab.

- From the **BYOD File** section, select the '**Assign BYOD UI file**' option.
- Press the '**Select File**' button after selection of either a previously uploaded UI file, or choosing to upload a new UI file from your computer.

That's it!

Now, any TPControl device **with Internet access** will upon connection to the BYOD Licensed AMX System, check to see if the TPCloud hosted UI file needs to be retrieved i.e. TPControl only retrieves the file if the file does not match what it may have previously retrieved.

See the **BYOD API command** for further discussion.

Please jump to **QR Code Scanner** for tips on getting TPControl devices connected to AMX systems very quickly.

Option 2: Host a BYOD UI file on the AMX NetLinx master

NOTE: UI files that you create in AMX TPDesign4 **must** be parsed via either **TPTransfer** or **TPCloud** i.e. you cannot simply rename an existing file to *system_license.tp4* and expect it to work.

Baring that in mind, there are 2 methods available for generating a TPControl BYOD UI file that is going to be placed on an AMX system; **TPTransfer** or **TPCloud**.

Method 1: Using TPTransfer

If you have not already, download and install **TPTransfer** v1.4.0.0 (or later) for Windows. At the bottom of the main application window, a drag-and-drop button area has been provided.



You can either;

- a) Drag-and-drop a file from the TPTransfer 'Filename' history column, or
- b) Drag-and-drop from a file-store location on your computer.

To avoid a potential file-open warning, ensure the file is not open in TPDesign4.

You will be prompted to save the BYOD UI file as '**system_license.tp4**' directly to your computer.

All that remains now is to **FTP the BYOD UI file to the AMX NetLinx master**.

Method 2: Using TPCloud

- Within TPCloud, select the '**Files**' tab.
If no files are listed use the 'Add File' option to firstly upload your UI file.
- From the file list, select a file and choose the **Download system_license.tp4 file** button.
- You will be presented with a file dialog window listing UI files that you have previously uploaded to TPCloud, from which you can choose one, and then press the 'Select File' button to save the '**system_license.tp4**' file directly to your computer.
An option to upload more files to TPCloud is provided.

All that remains now is to **FTP the BYOD UI file to the AMX NetLinx master**.

FTP the BYOD UI file to the AMX NetLinx master

As in *FTP the BYOD license file to the NetLinx Master*, FTP the `'system_license.tp4'` file to the NetLinx Master using your preferred *FTP client*.

IMPORTANT:

To further stress the importance of using **TPTransfer** or **TPCloud**, if you rename a regular TP4 file to `'system_license.tp4'`, the file *will not work properly* in TPControl. This is due to TPControl dependencies relating to correct font mapping etc that the TPTransfer and TPCloud processes provide.

Hence, you must use either **TPTransfer** or **TPCloud** to generate TPControl BYOD UI files and ensure you **do not rename the file** – it must remain as named: `'system_license.tp4'`.

BYOD API command

TPCCMD-Update,BYOD;

The process of BYOD UI file retrieval is automatic in TPControl, initiated each time TPControl connects to a BYOD licensed system. Additionally, TPControl will only download the BYOD UI file if the file does not match the previously retrieved file.

However, the '***TPCCMD-Update,BYOD;***' API provides the ability to **force** update/retrieval of the BYOD UI file as needed and in the process overwrites any existing BYOD UI file for that system that may have been on the TPControl device. For example, you can implement within AMX code, or within the UI file, a button to retrieve the BYOD UI file *now* rather than waiting for the TPControl device to disconnect/reconnect, which would in turn invoke its own automated check anyway.

How BYOD file retrieval works

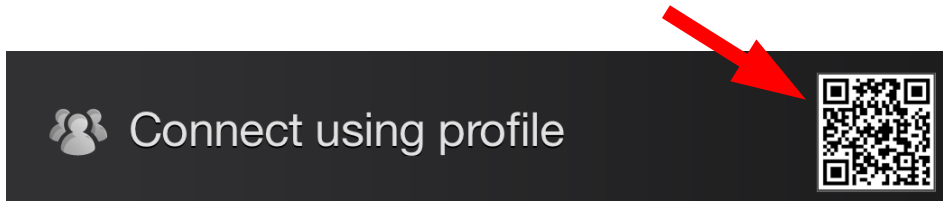
TPControl identifies BYOD licensed control systems when connecting to the AMX System, and if TPControl has Internet access, it queries TPCloud to see if a BYOD UI file has been configured via the "Assign BYOD UI file" option for the BYOD Token for the related AMX system. If so, the BYOD UI file will be retrieved from TPCloud. Otherwise, if TPControl does not have access to TPCloud (or there is no assigned BYOD UI file), and a BYOD UI file has been stored on the AMX system, TPControl will retrieve the BYOD UI file from the AMX system.

NOTE: Upon connection to a BYOD licensed AMX System TPControl automatically downloads the BYOD UI file from TPCloud (if available) or the AMX system, but only if the file does not match a previously retrieved file for that AMX system.

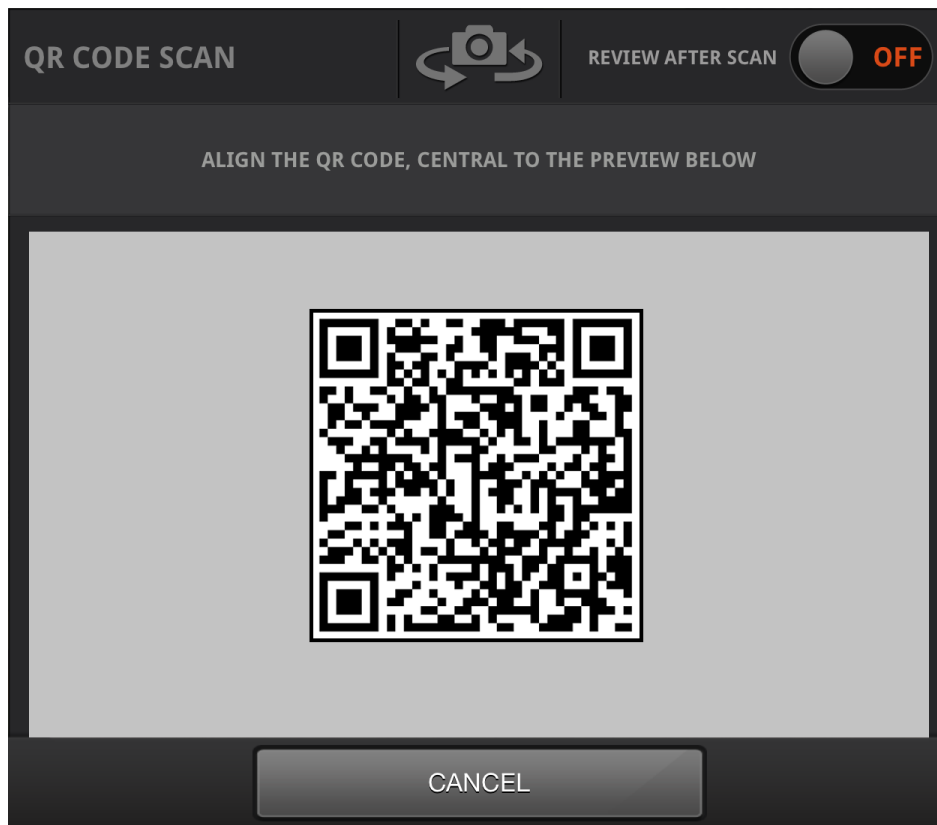
QR Code Scanner

TPControl v2.5.1.0+ for Apple and TPControl v2.5.1.0+ for Android include a built-in Quick Response (QR) Code scanner, which can be accessed via the '**Connect using profile**' window.

1. Use a 2-finger *swipe from left-to-right* gesture to present the *Connect using profile* window, and press the QR Code icon to begin.



2. Within the camera preview window, align the QR Code you want to scan.



That's it!

If the QR code is encoded with a valid TPControl API command or URI, it will be parsed accordingly.

The result of scanning the QR code above is:

```
'tpccmd-1;LocalHost,192.168.100.11;DeviceID,11001;ProfileName,Boardroom;ScreenResize,Scale;ApplyProfile;'
```

...and that command translates to:

Configure TPControl "Profile 1" to connect to the AMX system at IP address "192.168.100.11", using AMX Device ID "11001". Name this profile "Boardroom", and set the screen resize option to "Scale to fit". Apply this profile, to invoke these settings immediately.

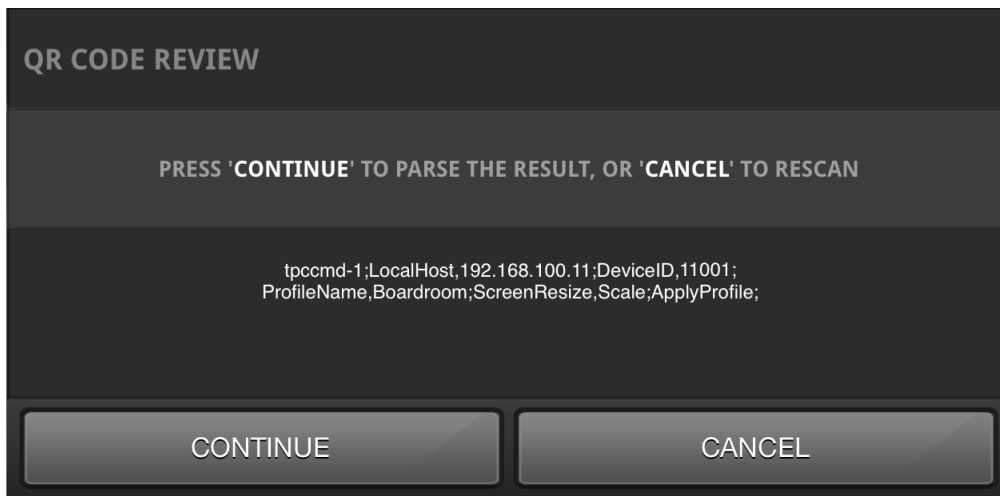
For more information on TPControl API commands, refer to the "[TPControl - API Commands](#)" document, available for download from our website [Downloads](#) section.

QR Scanner options

REVIEW AFTER SCAN:

When turned ON, after successfully scanning a QR code, TPControl will present the scanned result for review.

For example;



Then, upon selection of the 'CONTINUE' option, TPControl will parse the scanned result. Otherwise, selecting 'CANCEL' will return to the QR Code Scan window as in step 2 above.

SWAP CAMERA:

Pressing the Swap Camera icon will toggle between any available device cameras, if applicable.

How do I create a QR Code?

You can [Create QR Codes](#) via the [Touch Panel Control](#) website, direct link here:

<http://www.touchpanelcontrol.com/qr-code-generator>

Manage AMX Device ID's from code

For example code demonstrating how to manage multiple devices connecting to a system using a common QR Code and AMX Device ID, please refer to our [TPControl Dynamic DeviceID assignments from code.AXW](#) workspace, available from our [Downloads](#) page.

QR Scanner Tips

Besides configuring TPControl settings and getting connected to AMX control systems, scanning QR Codes within TPControl can have other uses.

Some examples are shown below, which result in launching the respective websites within the devices default web browser:

tpc



<http://www.touchpanelcontrol.com>



<https://itunes.apple.com/au/app/tpcontrol/id348715945?mt=8>



<https://play.google.com/store/apps/details?id=com.touchpanelcontrol.tpcontrol>



<http://apps.microsoft.com/windows/en-GB/app/tpcontrol/ee110ec-9caa-4977-8289-508ecdac89fa>



Additional references and documentation

Refer to the following guides for additional information:



[TPControl for Apple, TPCloud and TPTransfer guide](#)

[TPControl for Apple - Device Settings](#)



[TPControl for Android, TPCloud and TPTransfer guide](#)

[TPControl for Android - Device Settings](#)



[TPControl for Windows 8/RT, TPCloud and TPTransfer guide](#)

[TPControl for Windows 8/RT - Device Settings](#)

For more information on TPControl API commands, refer to the "**[TPControl - API Commands](#)**" document.

These documents are available from the [Downloads](#) section of the [Touch Panel Control](#) website.

Things of Note and Tips

NOTE: Only **one** BYOD UI file is stored on the BYOD Licensed NetLinx Master at any time, and similar if hosting the BYOD UI file in TPCloud. All devices that connect to the BYOD Licensed NetLinx Master will retrieve the relevant/same BYOD UI file.

TIP: If required, using TP4 File Slots within TPControl (where applicable), will provide the ability to recall alternate TPControl device stored files, independent of the BYOD NetLinx Master BYOD UI file.

See the [TPControl - API Commands](#) document for information on managing file-slots, including BYOD file selection.

TIP: Refer to the example [TPControl Dynamic DeviceID assignment from code](#) workspace for an introduction to managing AMX Device ID assignments via code.

Problem Reporting

We aim to make your integration experience of TPControl within your AMX environment, as seamless as possible.

If you encounter any difficulties using the product or any of its features, please let us know and we will be happy to assist.

The helpdesk on our website at support.touchpanelcontrol.com operates from:

- Monday to Friday; 09:00 to 17:00 (GMT)
- Monday to Friday; 07:00 to 15:00 (AEST)

We appreciate your support,

Touch Panel Control Team.

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