



QNAP NVR control module

For use with.....



Driver software written and provided by...



Introduction

This module has been designed to provide one way control of supported QNAP NVRs (network video recorders), via TCP/IP.

This AMX module has been tested with the following QNAP product:

- VS-2104 Pro+ (firmware version: 5.0.0)

Module release version: v1.00.

NVR Configuration

It is recommended that the NVR be configured with a static IP address. This is achieved by navigating to **Control Panel > System Settings > Network** and choosing to edit the relevant Interface. Select **Use static IP address** and enter the relevant details, before clicking **Apply**.

It is necessary to install an application called "Remote Control Agent" onto the NVR, which allows third party systems to control it.

- Display the NVR desktop screen either by attaching the video output on the rear of the NVR to a television screen, or by entering the IP address of the NVR into the address bar of your computer's browser.
- Login using the username and password (by default these are "admin" and "admin").
- Click on the **App Center** icon.
- Browse or search for the application "Remote Control Agent".
- Choose **Add to QVR** to install the application.

AMX Configuration

Adding the module to your project

Copy the following file from the zip package to the folder where your project is stored:

QNAP_NVR.tko

Add the above file to your project. Next, add parameter definitions and a define_module line to your master source file, similar to the following:

define_device

```
dvQNAP_NVR = 0:4:0
vdvQNAP    = 33003:1:0
dvTP       = 10001:1:1
```

define_variable

```
char QNAP_IP[15] = '172.16.105.224';
char QNAP_USERNAME[15] = 'admin';
char QNAP_PASSWORD[15] = 'admin';
```

```
define_module 'QNAP_NVR' NVR ( DEVICE,
    dvQNAP_NVR,
    QNAP_IP,
    QNAP_USERNAME,
    QNAP_PASSWORD,
    BTN_COMMANDS,
    BTN_PTZ )
```

Configure Module Parameters

Name	Explanation
DEVICE	Array of all touch panel and virtual devices using the module. NOTE: Feedback will only be sent to the first DEV in the table.
dvQNAP_NVR	Ethernet port
QNAP_IP	The IP address of the NVR
QNAP_USERNAME	The username used to login to the NVR
QNAP_PASSWORD	The password used to login to the NVR
BTN_COMMANDS	An AMX integer array. This contains the button channel number at the correct index in the array (see "buttons.axi" for an example).
BTN_PTZ	An AMX integer array. This contains the button channel number at the correct index in the array (see "buttons.axi" for an example).

Interfacing with the Modules

For a complete example of the usage of this module, see the accompanying demonstration project included in the zip package.

Push Index table for "BTN_COMMANDS" parameter:

Index	Name	Explanation
1	BTN_GO_PLAYBACK	Display the playback screen
2	BTN_PAGE_DOWN	Display the previous page
3	BTN_PAGE_UP	Display the next page
4	BTN_LAYOUT_DOWN	Display the previous layout
5	BTN_LAYOUT_UP	Display the next layout
6	BTN_RECORD_TOGGLE	Begin/end recording of the selected channel
7	BTN_GO_LIVE_VIEW	Display the Liveview screen
8	BTN_MONTH_PREVIOUS	Display the previous month

9	BTN_MONTH_NEXT	Display the next month
10	BTN_DAY_PREVIOUS	Display the previous day
11	BTN_DAY_NEXT	Display the next day
12	BTN_PLAY	Begin playback of a recording
13	BTN_PAUSE	Pause playback of a recording
14	BTN_SKIP_BACKWARD	Skip to the previous file
15	BTN_SKIP_FORWARD	Skip to the next file
16	BTN_BACKWARD	Decrease the playback speed
17	BTN_FORWARD	Increase the playback speed
18	BTN_STOP	Stop playback
19	BTN_CHANNEL_DOWN	Select the previous channel
20	BTN_CHANNEL_UP	Select the next channel
21	BTN_MUTE_TOGGLE	Mute/un-mute audio
22	BTN_FULL_SCREEN_TOGGLE	Display the current selection in full screen mode
23	BTN_0	Enter number 0
24	BTN_1	Enter number 1
25	BTN_2	Enter number 2
26	BTN_3	Enter number 3
27	BTN_4	Enter number 4
28	BTN_5	Enter number 5
29	BTN_6	Enter number 6
30	BTN_7	Enter number 7
31	BTN_8	Enter number 8
32	BTN_9	Enter number 9

Push Index table for "BTN_PTZ" parameter:

Index	Name	Explanation
1	BTN_PTZ_DEG_PAN_PLUS	Pan the selected camera to the left

2	BTN_PTZ_DEG_TILT_PLUS	Tilt the selected camera up
3	BTN_PTZ_DEG_ZOOM_PLUS	Zoom the selected camera in
4	BTN_PTZ_DEG_PAN_MINUS	Pan the selected camera to the right
5	BTN_PTZ_DEG_TILT_MINUS	Tilt the selected camera down
6	BTN_PTZ_DEG_ZOOM_MINUS	Zoom the selected camera out

Sending Commands

The module supports the following commands, sent using **send_command**. For example:

send_command <COMMAND HEADER>_<VALUE>;

Command Header	Value	Explanation
CHANNEL	1 to 64	Selects a camera to view on the NVR
DEBUG	0 or 1	Service only
PRESET	1 to 10	Selects a preset position
LAYOUT	1 to 9	Selects a layout
VERSION	?	Requests version

Feedback

The module supplies the following feedback, sent as strings to the virtual device. Note: each keyword is followed by a space.

Command Header	Explanation
VERSION <VALUE>;	VALUE = version number
STATUS <TYPE>=<DESC>	TYPE = READY, BUSY, ERROR. DESC = debug message