

# VideoReQuest Netlinx Module Guide

Version 1.1.0

Control of a single VideoReQuest™ from an AMX™ Netlinx™ control system through RS232 or Ethernet



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## Revision History

Revision Number	Changes
1.0	Initial Version
1.0.1	Updated Appendix A with channel changes
1.0.2	Updated for version 1.0.2 of the module
1.1.0	Updated graphics and info for version 1.1.0 of the module

## AMX Netlinx Install Checklist

Client Name: \_\_\_\_\_  
Date Installed: \_\_\_\_\_ Module Version: \_\_\_\_\_  
Connection to VideoReQuest:  Ethernet  Serial Processor: \_\_\_\_\_

### Hardware Requirements

- 1) Netlinx Processor and VideoReQuest Digital Video Controller
- 2) It is STRONGLY recommended that you use Ethernet control. If you must use RS232, the recommended Baud Rate is 57600.
- 3) Female→Female NULL Modem serial cable if connecting serially. It is HIGHLY recommended to use a cable that is no longer than 10ft to prevent ground problems. If making your own cable and using any baud rate other than 9600, be sure to connect ONLY pins 2, 3, 5, 7 and 8.
- 4) 1-4 Sony CX777-ES DVD Changers

### Hardware Configuration

- 1) Install VideoReQuest unit and Netlinx processor in rack
  - 2) Connect cables for control (NULL Modem Serial or Ethernet)
- \*NOTE: Please follow VideoReQuest instructions for connecting the DVD changers*

### Software Requirements/Setup

- 1) Ensure that you have all the latest Netlinx software and components installed.
  - 2) If connecting via RS232, configure the VideoReQuest Baud Rate by going to **Menu→Configuration→Control Port**.
- NOTE: All Baud Rates EXCEPT 9600 require HW Flow Control!!***

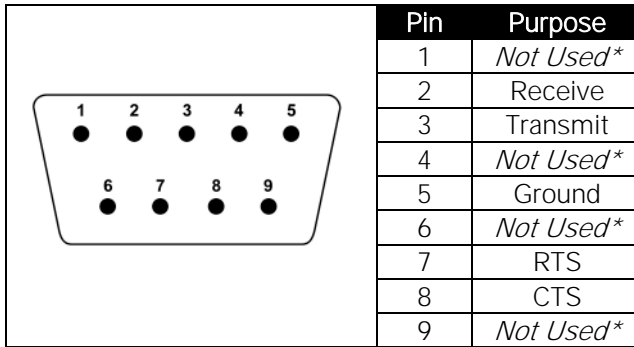
### Software Configuration

- 1) Open the VideoReQuest demo program into Netlinx Studio.
- 2) Follow the instructions given in the rest of this document to configure the program for your system.

## Introduction:

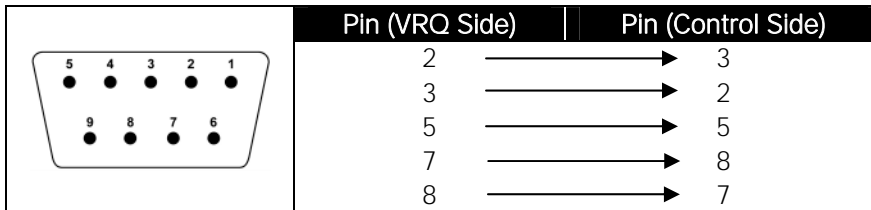
This document explains how to interface the VideoReQuest Digital Video Controller with AMX Netlinx control systems. It will not give a detailed explanation of the protocol used to communicate with the VideoReQuest via Ethernet, Serial, or IR control. For this information, please download the VideoReQuest Communication Protocol Guide from [www.request.com](http://www.request.com). This document is designed to be used in conjunction with the VideoReQuest Netlinx demo program version 1.1.0.

## Rear Serial Port Pinout



\* Any pin labeled as "*Not Used*" should NOT be connected at all. Doing so could cause communication problems.

## Serial Cable Pinout



## COM Settings (rear serial port)

The **rear serial port** is used for integrating the VideoReQuest with a control system. These settings can be found by going to **Menu**→**Configuration**→**Control Port** on the VideoReQuest.

Parameter	Value	Value	Value	Value
Baud	9600	19200	38400	57600
Data Bits	8	8	8	8
Stop Bits	1	1	1	1
Parity	None	None	None	None
Flow Control	None	HW	HW	HW
				<i>default</i>

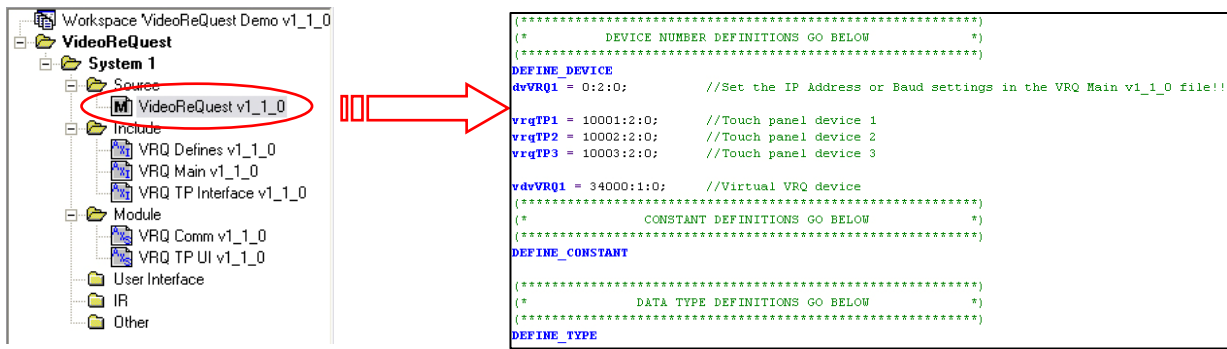
## Getting Started:

- Download the following files from [www.request.com](http://www.request.com):
  - Touch Panel files (optional)
  - Sample project ([VideoReQuest AMX Netlinx Demo v1.1.0.zip](#))
- Unzip the archive(s).
- Open Netlinx Studio 2. It is recommended that you run the most recent version of Netlinx Studio software. Visit [www.amx.com](http://www.amx.com) for more information on updating your software.
- Open the project file you unzipped (*VideoReQuest Demo v1.1.0.apw*).

## Customizing the Program

### Modifying the Master Source File:

- From the Workspace, double-click on *VideoReQuest v1\_1\_0*.



- Under **DEFINE\_DEVICE**, modify the device numbers as necessary to fit your system.
- Under **DEFINE\_START**, make sure that you have 1 instance of the **VRQ TP UI v1\_1\_0** module defined FOR EACH touch panel you have in the system. For example, if you have 4 touch panels in the system that will control the VideoReQuest, you will need 4 instances of the module defined. See **Modifying the VRQ TP Interface File** below for more info.
- Under **DEFINE\_PROGRAM**, modify the 2<sup>nd</sup>-to-last parameter for the TP modules depending on whether or not you wish to browse the movie list by large cover art images.

```

DEFINE_MODULE 'VRQ TP UI v1_1_0' VRQ_TP_3 (vrqTP3, //Virtual Touch Panel Device
vdvVRQ1, //Virtual VideoReQuest Device
VRQ_CMDS, //VRQ Command Channel Array
VRQ_LET_CH, //VRQ Letters Channel Array
VRQ_NUM_CH, //VRQ Numbers Channel Array
VRQ_FB_CH, //VRQ Variable Text Channel Array
VRQ_PAGES, //VRQ Page Name Array
VRQ_NAV_THUMB_IMAGES, //VRQ Browse thumbnail image resource names
VRQ_NAV_FULL_IMAGES, //VRQ Browse large image resource names
VRQ_PLAYER_IMAGE, //VRQ Player Cover Art Image
VRQ_SYSTEM_ICONS, //VRQ Player Cover Art Image
VRQ_BROWSE_BY_LIST, //VRQ_BROWSE_BY_LIST or VRQ_BROWSE_BY_COVERS
VRQ_LINE_PRESS_DOUBLE); //VRQ Line Press Type (single or double)

```

- Under **DEFINE\_PROGRAM**, add necessary code to control a video switcher (if you are using one).

```

DEFINE_PROGRAM
IF (VRQ_COMM_1.VIDEO_MODE[6]) { //Indicates that the video mode has changed
  VRQ_COMM_1.VIDEO_MODE[6] = 0

  IF (VRQ_COMM_1.VIDEO_MODE[1]) {
    //Add code HERE to switch video to VRQ output
  }
  IF (VRQ_COMM_1.VIDEO_MODE[2]) {
    //Add code HERE to switch video to Changer 1 Output
    SEND_STRING 0, "Changer 1 Aspect Ratio = ", FTOA(VRQ_COMM_1.ASPECT_RATIO)
  }
  IF (VRQ_COMM_1.VIDEO_MODE[3]) {
    //Add code HERE to switch video to Changer 2 Output
    SEND_STRING 0, "Changer 2 Aspect Ratio = ", FTOA(VRQ_COMM_1.ASPECT_RATIO)
  }
  IF (VRQ_COMM_1.VIDEO_MODE[4]) {
    //Add code HERE to switch video to Changer 3 Output
    SEND_STRING 0, "Changer 3 Aspect Ratio = ", FTOA(VRQ_COMM_1.ASPECT_RATIO)
  }
  IF (VRQ_COMM_1.VIDEO_MODE[5]) {
    //Add code HERE to switch video to Changer 4 Output
    SEND_STRING 0, "Changer 4 Aspect Ratio = ", FTOA(VRQ_COMM_1.ASPECT_RATIO)
  }
}

```

## Modifying the VRQ Main File:

1. Under **DEFINE\_START**, set the **BAUD\_RATE**, **IP\_ADDRESS**, and **IP\_PORT** parameters for the **VRQ\_COMM\_1** variable defined above. For Ethernet control, all parameters should remain the same as in the demo, except for **IP\_ADDRESS**, which should be set to the IP Address of your VideoReQuest. You can find the IP Address by going to **Menu→System Information** on the VideoReQuest.

For serial data, set the **BAUD\_RATE** to one of the following: 9600, 19200, 38400 or 57600. The baud rate should be set to the same baud rate as is set on the VideoReQuest under **Menu→Configuration→Control Port**. In order for the DVD Cover Art to work, you must still provide an IP address

```
#if_defined vdvVRQ1
VRQ_COMM_1.BAUD_RATE = 0;
VRQ_COMM_1.IP_ADDRESS = '10.1.6.210'
VRQ_COMM_1.IP_PORT = 3663;
VRQ_COMM_1.WEB_PORT = 2992;
VRQ_COMM_1.VIDEO_MODE[1] = 1;
VRQ_COMM_1.VIDEO_MODE[2] = 0;
VRQ_COMM_1.VIDEO_MODE[3] = 0;
VRQ_COMM_1.VIDEO_MODE[4] = 0;
VRQ_COMM_1.VIDEO_MODE[5] = 0;
#end_if
```

## Modifying the VRQ TP Interface File:

1. Under **DEFINE\_VARIABLE**, modify the following:
  - a. **VRQ\_PAGES** is an array of the names of the pages on the Touch Panels. It is ESSENTIAL to the functionality of the interface that these names are correct.
  - b. **VRQ\_CMDS**, **VRQ\_LET\_CH** and **VRQ\_NUM\_CH** are arrays of the channel numbers for all the VideoReQuest commands. These arrays must remain intact with the same number of entries. You may set any unused commands to channel 9999 to prevent using up channels on commands that will not be used.
  - c. The **VRQ\_FB\_CH** array should contain the channel numbers for the variable text feedback. This array also must maintain the correct number of entries.



## Appendix A - Complete List of TP Channel Arrays

```

CHAR VRQ_PAGES[][50] = {'VRQ-Main'           //This page is the main VRQ page where all popups are displayed
                        , 'VRQ-Browse'       //Page with 6 Browse lines, displayed when VRQ is on Browse page
                        , 'VRQ-Browse CoverArt' //Page with 6 Cover Art dynamic images, displayed when VRQ is on Browse
                                                page and Browse By Covers is used.
                        , 'VRQ-Player Chapters' //Similar to Browse, displayed when VRQ is on Chapters page
                        , 'VRQ-Player Details' //Page with Movie title, Genre, Cast, etc. Displayed when VRQ is on
                                                Details page
                        , 'VRQ-Now Playing Chapters' //Similar to Chapters, but has extra info on the left side. Displayed
                                                when VRQ is in DVD mode (playing a movie)
                        , 'VRQ-Now Playing Details' //Similar to Details, but has extra info on the left side. Displayed
                                                when VRQ is in DVD mode (playing a movie)
                        , 'VRQ-Search Letter Row' //Search keyboard popup page
                        };

CHAR VRQ_NAV_THUMB_IMAGES[][15] = {'nav_thumb_1' //Thumbnail image for line 1
                                    , 'nav_thumb_2' //Thumbnail image for line 2
                                    , 'nav_thumb_3' //Thumbnail image for line 3
                                    , 'nav_thumb_4' //Thumbnail image for line 4
                                    , 'nav_thumb_5' //Thumbnail image for line 5
                                    , 'nav_thumb_6' //Thumbnail image for line 6
                                    };

CHAR VRQ_NAV_FULL_IMAGES[][15] = {'nav_full_1' //Full size image for line 1
                                    , 'nav_full_2' //Full size image for line 2
                                    , 'nav_full_3' //Full size image for line 3
                                    , 'nav_full_4' //Full size image for line 4
                                    , 'nav_full_5' //Full size image for line 5
                                    , 'nav_full_6' //Full size image for line 6
                                    };

CHAR VRQ_PLAYER_IMAGE[] = 'player_full'; //Full size image for Player page

CHAR VRQ_SYSTEM_ICONS[][25] = {'' //intentionally blank (no image)
                                , 'NOWPLAYING.png' //Now Playing icon
                                , 'ALLDISCS.png' //All Discs icon
                                , 'GENRES.png' //Genres icon
                                , 'RATINGS.png' //Ratings icon
                                , 'ACTORS.png' //Actors icon
                                , 'DIRECTORS.png' //Directors icon
                                , 'RECENTLYADDED.png' //Recently Added icon
                                , 'RECENTLYPLAYED.png' //Recently Played icon
                                , 'CHANGERS.png' //Changers icon
                                };

/*****
INTEGER VRQ_CMDS[]: This array contains the channel numbers for all the commands
available in the module. For any command you do not wish to use or is marked
"Not Used" or "reserved", please set the value to 9999, as is the case for some
of the values already.
**NOTE: It is ESSENTIAL that you keep the array IN ORDER and do not delete
any of the indexes in the array. It will not work otherwise.
*****/
INTEGER VRQ_CMDS[] = { 1 //Connect to VRQ 1
                      , 9999 //Not Used 2 *reserved for future use
                      , 9999 //Not Used 3 *reserved for future use
                      , 9999 //Not Used 4 *reserved for future use
                      , 9999 //Not Used 5 *reserved for future use
                      , 9999 //Not Used 6 *reserved for future use
                      , 7 //Recently Added 7
                      , 8 //Recently Played 8
                      , 9 //Changers 9
                      , 10 //All Movies 10
                      , 11 //Actors 11
                      , 12 //Directors 12
                      , 13 //Genres 13
                      , 14 //Ratings 14
                      , 15 //Now Playing 15
                      , 16 //Page Up 6 16
                      , 17 //Page Down 6 17
                      , 18 //Cursor UP 18
                      , 19 //Cursor Down 19
                      , 20 //Cursor Left 20
                      , 21 //Cursor Right 21
                      , 22 //Go to top 22

```

```

,23 //Go to bottom 23
,24 //Go to HOME 24
,25 //Play Now 25
,26 //Loading... 26
,27 //Enter 27
,28 //Play 28
,29 //Stop 29
,30 //Pause (toggle) 30
,9999 //Discrete Pause 31
,9999 //Discrete Unpause 32
,33 //FFwd 33
,34 //Rew 34
,35 //Next Chapter 35
,36 //Prev Chapter 36
,37 //Goto DVD Mode 37
,38 //Goto VRQ Mode 38
,39 //DVD Menu 39
,40 //Eject 40
,9999 //Power (toggle) 41
,9999 //Discrete Power ON 42
,9999 //Discrete Power OFF 43
,9999 //Search 44 *This feature available in future Firmware
,45 //More Plot Summary 45
,46 //Now Playing Chapters 46
,9999 //Right Arrow Flag 47 *Not Currently Supported
,9999 //Left Arrow Flag 48 *Not Currently Supported
,9999 //Up Arrow Flag 49 *Not Currently Supported
,9999 //Down Arrow Flag 50 *Not Currently Supported
,51 //Press Nav Line 1 51 *Line Press and Selection Feedback
,52 //Press Nav Line 2 52
,53 //Press Nav Line 3 53
,54 //Press Nav Line 4 54
,55 //Press nav Line 5 55
,56 //Press Nav Line 6 56
,9999 //Press Nav Line 7 57 (not used)
,9999 //Press Nav Line 8 58 (not used)
,9999 //reserved 59
,9999 //reserved 60
,61 //Chapter Line 1 61 *Channel for selection feedback
,62 //Chapter Line 2 62
,63 //Chapter Line 3 63
,64 //Chapter Line 4 64
,65 //Chapter Line 5 65
,66 //Chapter Line 6 66
,9999 //Chapter Line 7 67
,9999 //Chapter Line 8 68
,9999 //reserved 69
,9999 //reserved 70
,71 //Chapter NP Line 1 71 *Channel for which chapter is now playing
,72 //Chapter NP Line 2 72 *Also functions as line press
,73 //Chapter NP Line 3 73
,74 //Chapter NP Line 4 74
,75 //Chapter NP Line 5 75
,76 //Chapter NP Line 6 76
,9999 //Chapter NP Line 7 77
,9999 //Chapter NP Line 8 78
,79 //DVD Angle 79
,80 //DVD Subtitles 80
,91 //Nav Cover Art Image 81
,92 //Nav Cover Art Image 82
,93 //Nav Cover Art Image 83
,94 //Nav Cover Art Image 84
,95 //Nav Cover Art Image 85
,96 //Nav Cover Art Image 86
,9999 //Nav Cover Art Image 87
,9999 //Nav Cover Art Image 88
,97 //Player Cover Art Image 89
,81 //DVD Cursor UP 90
,82 //DVD Cursor Down 91
,83 //DVD Cursor Left 92
,84 //DVD Cursor Right 93
,85 //DVD Enter 94
};

```

```

/*****
INTEGER VRQ_LET_CH[]: This array contains the channel numbers for all the letters
of the alphabet. This has not yet been implemented in the demo program.
**NOTE: It is ESSENTIAL that you keep the array IN ORDER and do not delete
any of the indexes in the array. It will not work otherwise.
*****/

```

```

INTEGER VRQ_LET_CH[] = {100 // Letter A
,101 // Letter B
,102 // Letter C
,103 // Letter D
,104 // Letter E
,105 // Letter F
,106 // Letter G
,107 // Letter H
,108 // Letter I
,109 // Letter J
,110 // Letter K
,111 // Letter L
,112 // Letter M
,113 // Letter N
,114 // Letter O
,115 // Letter P
,116 // Letter Q
,117 // Letter R
,118 // Letter S
,119 // Letter T
,120 // Letter U
,121 // Letter V
,122 // Letter W
,123 // Letter X
,124 // Letter Y
,125 // Letter Z
};

```

```

/*****
INTEGER VRQ_NUM_CH[]: This array contains the channel numbers for numbers 1-9
and 0. This has not yet been implemented in the demo program.
**NOTE: It is ESSENTIAL that you keep the array IN ORDER and do not delete
any of the indexes in the array. It will not work otherwise.
*****/

```

```

INTEGER VRQ_NUM_CH[] = {126 // Number 1
,127 // Number 2
,128 // Number 3
,129 // Number 4
,130 // Number 5
,131 // Number 6
,132 // Number 7
,133 // Number 8
,134 // Number 9
,135 // Number 0
};

```

```

/*****
INTEGER VRQ_FB_CH[]: This array contains the channel numbers for all the text
feedback available in the module. For any item you do not wish to use or is
marked "Not Used" or "reserved", please set the value to 9999, as is the case for
some of the values already.
**NOTE: It is ESSENTIAL that you keep the array IN ORDER and do not delete
any of the indexes in the array. It will not work otherwise.
*****/

```

```

INTEGER VRQ_FB_CH[] = {1 // Nav List Title Full 1 **Complete path from HOME
,9999 // Nav List Title 1 2 **Piece 1 of path (HOME)
,9999 // Nav List Title 2 3 **Piece 2 of path (actors, ratings, genres, etc)
,9999 // Nav List Title 3 4 **Piece 3 of path (which actor, rating, genre, etc)
,36 // Nav List Title cur 5 **The title of the current list you are in
,2 // Window Title 6
,3 // Nav Column 1 Header 7
,4 // Nav Column 2 Header 8
,5 // Nav Column 1 Data 9
,6 // Nav Column 2 Data 10
,7 // Nav Long Desc 11
,10 // NAV LINE 1 12
,11 // NAV LINE 2 13
,12 // NAV LINE 3 14
,13 // NAV LINE 4 15
,14 // NAV LINE 5 16
,15 // NAV LINE 6 17
,9999 // NAV LINE 7 18 (not used)

```

```
,9999 // NAV LINE 8 19 (not used)
,9999 // reserved 20
,9999 // reserved 21
,9999 // reserved 22
,16 // Player Ch. Line 1 23
,17 // Player Ch. Line 2 24
,18 // Player Ch. Line 3 25
,19 // Player Ch. Line 4 26
,20 // Player Ch. Line 5 27
,21 // Player Ch. Line 6 28
,9999 // Player Ch. Line 7 29 (not used)
,9999 // Player Ch. Line 8 30 (not used)
,25 // Player Title 31
,26 // Player Genre 32
,27 // Player Cast 33
,28 // Player Directors 34
,29 // Player Plot Summary 35
,9999 // Player Long Desc 36
,34 // Changer Number 37
,35 // Slot Number 38
,9999 // reserved 39
,9999 // reserved 40
,41 // Nav Line 1 Icon 41
,42 // Nav Line 2 Icon 42
,43 // Nav Line 3 Icon 43
,44 // Nav Line 4 Icon 44
,45 // Nav Line 5 Icon 45
,46 // Nav Line 6 Icon 46
};
```



## Appendix B - Support:

For technical questions on using the Touch Panel file or the sample project, please contact ReQuest at (800) 236-2812 or on the web at [www.request.com](http://www.request.com).

For technical support regarding AMX hardware or software, please contact AMX Technical Support at (800) 932-6993 or visit them on the web at <http://www.amxcorp.com/techsupport>

A large, stylized version of the ReQuest logo, with the letters in various shades of green and blue, and a 3D effect.

A large, stylized version of the AMX logo, in a dark blue color, with a bold, blocky font.