PureLink™

Owner´s Manual

MX - 800
8 x 8 Digital Modular Matrix Router

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1. Product Overview

1.1 Safety Precautions

- **Always use the correct external power supply (indicated on the product label) when operating this unit.**
- **Please refrain from using frayed power cords and damaged wall outlets.**
- **Mishandling of this product may lead to a fire or explosion hazard.**
- **Do not place any heavy objects or equipment on top of the unit.**
- **Keep away from wet, magnetic, and flammable surfaces or substances.**
- **Air vents should be kept clean and unobstructed at all times.**
- **Any external impact may cause damage to the operation of this unit.**
- **Be sure this unit is properly grounded (earthed) in order to prevent the risk of electrical shock.**
- **Please contact our technical support team at any time for assistance with the user-manual, installation, or operation of this unit.**

1.2 Introduction

The MX-800 matrix router supports DVI 1.0, HDMI Ver1.3, and HDSDI interface settings in a single unit. The modular input/output ports allow users to connect multiple displays to the router.

The MX-800 features a switching mechanism that splits signals from 8 channels to any designated output port.

Through channel-input configuration, the MX-800 can recognize up to 32 DVI, HDMI, and HDSDI signals and send them to 8 output ports on command.

- DVI 1.0 and HDMI Ver. 1.3 matrix transmits advanced video and audio signals
- 19" Standard RACK TYPE CASE(2U)
- Router-to-router cascading (up to 3 levels)
- Supports EDID-Save functionality. The unit will detect the output source's EDID and record it in the unit.
- PRESET feature allows users to program up to 16 channels
- Compliant with HDCP (High-bandwidth Digital Content Protection) using DVI and HDMI standards
- Supports high-bandwidth digital signals

Other Specifications:

1. Up to 1920 x 1200 (WUXGA) resolution, 480i/p ~1080i/p video
2. Designed to support 5 slot-types depending on desired use:

    DVI / DVI&3.5 / STEREO / HDSDI / CAT-5 / OPTICAL

3. With the ability to cascade units, up to 32 computer or A/V sources can be connected to 8 display sources.
4. The LCD display window allows users to easily view the current operational mode of the router.
4. Output ports can be designated using four convenient methods based on user-preference:

    - Manual input through KEY SWITCH in the front panel

    - RS-232C configuration

    - LAN (TCP/IP) configuration

5. Integrated noise-cancellation and error-correction logic for both input and output ports to prevent any damage caused by electrical noise.

What's Included:

- MX-800 main frame and card slots
- Power adapter (DC12V , 6.6A/ 80Watt)
- RS232C & LAN Cable
- User Manual

1.3 Part Names & Reference

Front Panel:
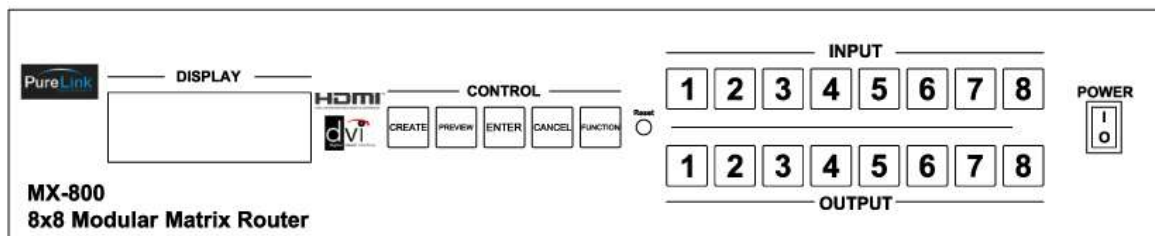
POWER: Main power switch ON / OFF

DISPLAY: View menu and system mode

RESET: Revert the matrix router to its original settings.

FUNCTION: Navigate menu and control options

CREATE: Program input channels

PREVIEW: View saved channel

ENTER: Save/select desired setting

CANCEL: Revert to previous setting

IN1~8: Select input channels (1~8)

OUT1~8: Select output channels (1~8)

Back Panel

DVI REAR PANEL
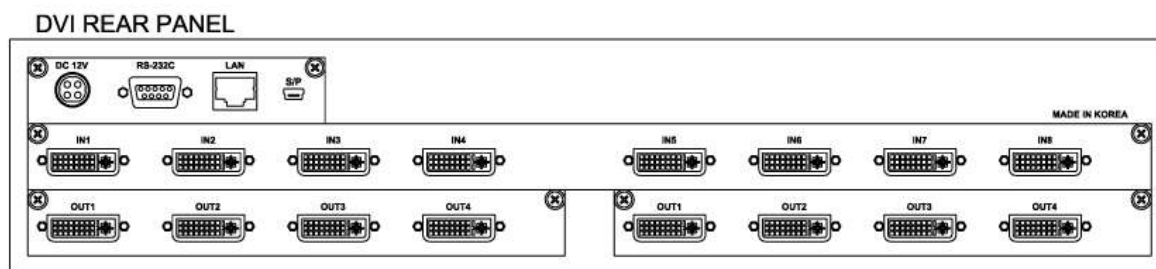
DC 12V: Power supply (DC +12V) input port

LAN: LAN (TCP/IP) input port

RS-232 C: RS-232C input port

INPUT SLOT : DVI , DVI&3.5 STEREO , HDSDI , CAT-5 , OPTICAL ports (IN1~8)

OUTPUT SLOT : DVI , DVI&3.5 STEREO , HDSDI , CAT-5 , OPTICAL ports (OUT1~4)x2 EA

DVI 8CH INPUT

DVI&3.5 STEREO 8CH INPUT

HDMI 8CH INPUT

OPTICAL 8CH INPUT

HDSDI 8CH INPUT

DVI 4CH OUTPUT
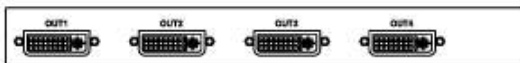
DVI&3.5 STEREO 4CH OUTPUT
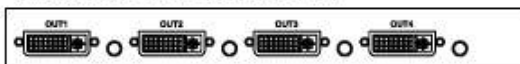
HDMI 4CH OUTPUT

OPTICAL 4CH OUTPUT
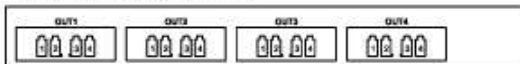
CAT5 4CH OUTPUT

HDSDI 4CH OUTPUT
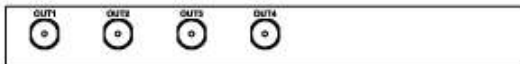
1.4 Installation Guidelines and Procedures

1. Installation Environment

The following settings are recommended in order to achieve optimal performance:

- **Operational temperature should be 30° C (best condition) or below**
- **Operational humidity should be 60% (best condition) or below**
- **Operational space should be dust-free and well ventilated**
- **AC power supply safety (AVR-based power supply is highly advised)**

2. Product Features

2-1. Key Functions

The MX-800 matrix router is compliant with DVI 1.0, HDMI V1.3, and HDSDI. The back-pane card slot design allows users to create a customized digital interface for connecting multiple display sources.

The MX-800 is an 8-input router with the ability to switch multiple signals to any designated output port, as well as distribute a single input source to multiple output ports. By cascading units, the MX-800 can detect up to 32 DVI, HDMI, and HDSDI input sources and transmit signals to 8 output ports on command.

When the routers are cascaded in three levels, high-bandwidth DVI and HDMI video (1920*1080p) command signals can be controlled manually or through an external computer via RS232C / LAN communication code.
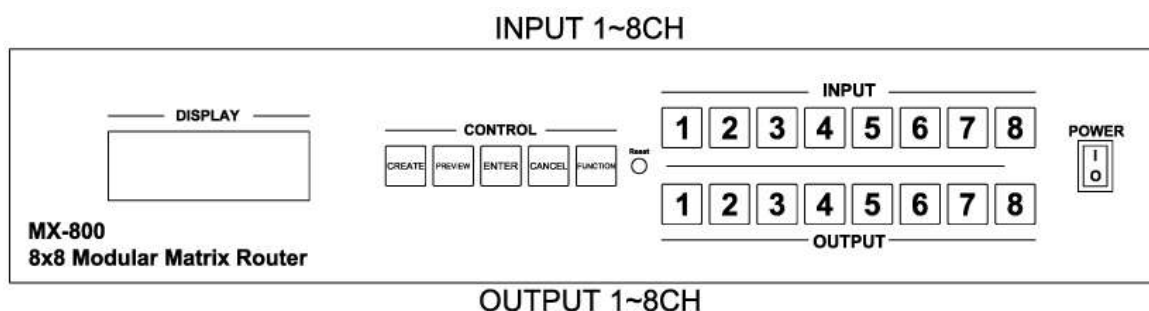
1. Cascading Units (3-level Set-up)

Input: 32-Channel

Output: 8-Channel

In/Out Configuration: [8 8]*4set, [8 :8]*2set , [8 8]*1set

In/Out Connection: match a single output port with any designated port out of the 32 input ports

Enabled configuration: 32in-32out -> 16in -16out -> 8in-8out

1-Level:

2-Levels:
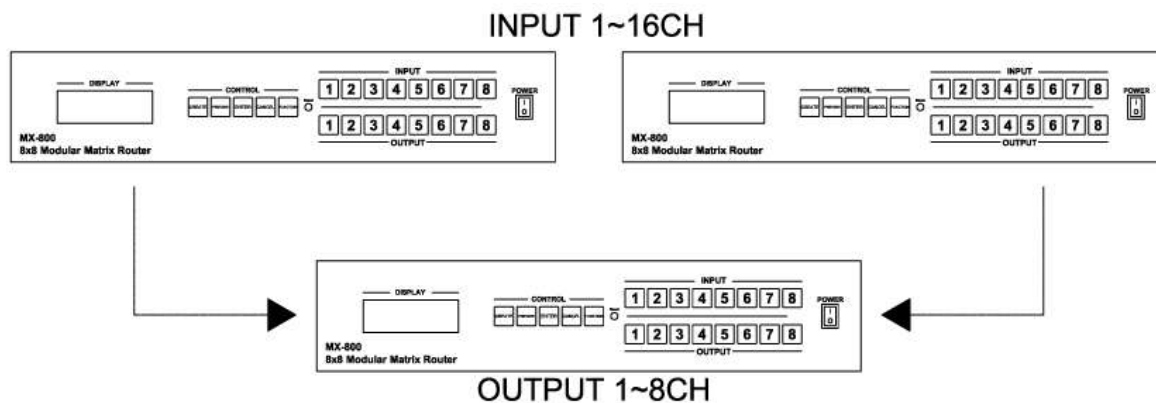
3-Levels:
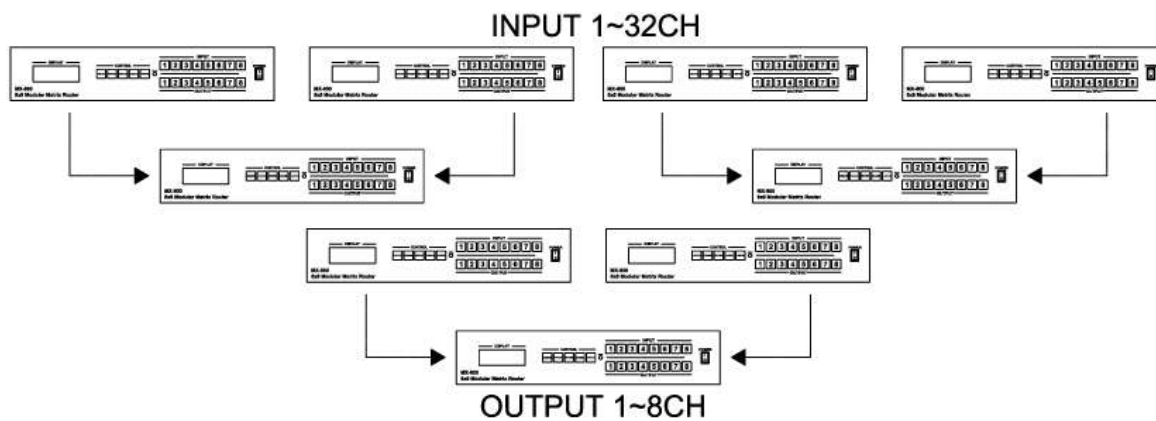
2. System Diagram

The figure below illustrates a connectivity diagram.

Input signals can be switched manually through the front panel or through external control sources (IR, RS-232C, LAN (TCP/IP)), and distributed to any combination of designated output ports.

DVI MATRIX ROUTER BLOCK DIAGRAM

DVI(HDMI) INPUT SIGNAL X8 → VIDEO&AUDIO INPUT BUFFER X8 → DVI(HDMI) MATRIX ROUTER X8 → VIDEO&AUDIO OUTPUT BUFFER X8 → DVI(HDMI) INPUT SIGNAL

DVI MATRIX ROUTER INPUT/OUTPUT CONFIGURATION

IN 1 IN 2 IN 3 IN 4 IN 5 IN 6 IN 7 IN 8

OUT 1 OUT 2 OUT 3 OUT 4 OUT 5 OUT 6 OUT 7 OUT 8
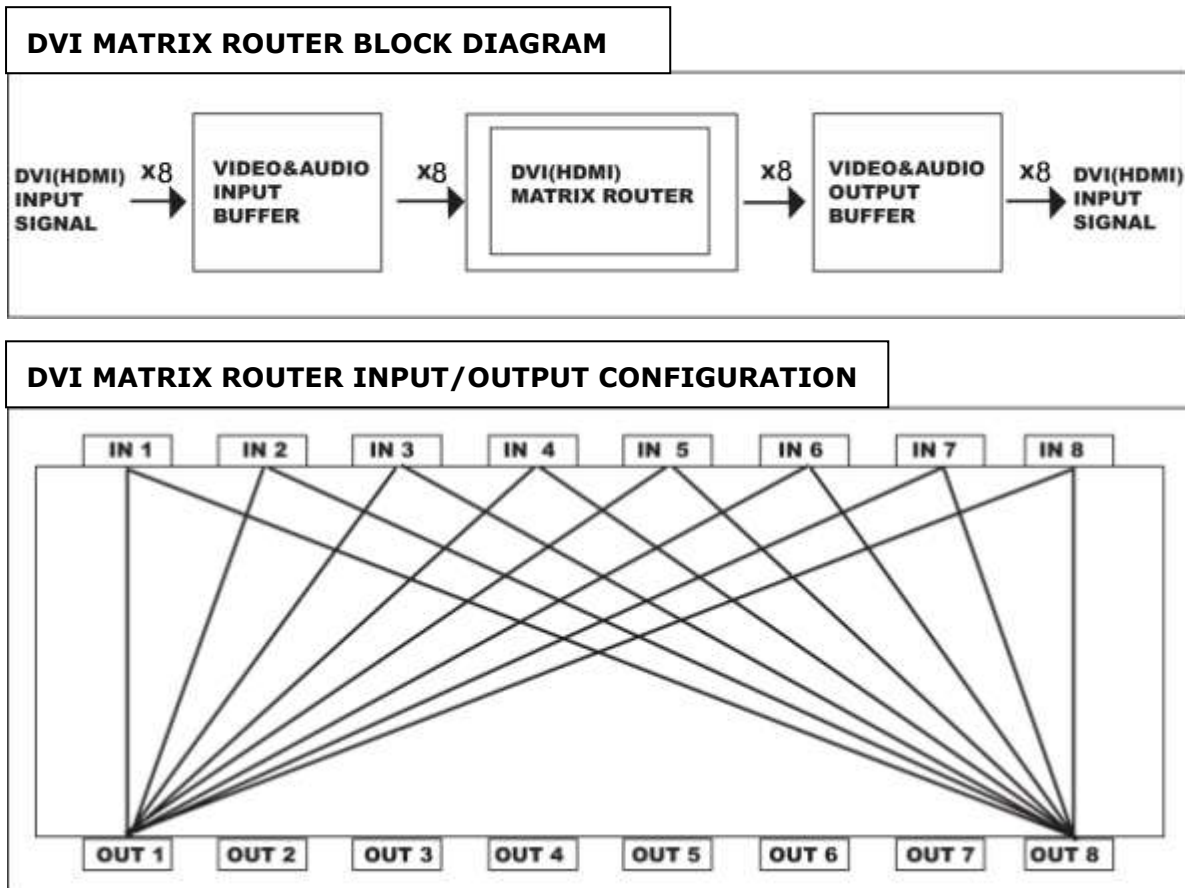
2-2 Features & Specifications

Signal Type : TMDS SIGNAL , DIGITAL R.G.B. & DIGITAL AUDIO

Data Transmission Speed : UP TO 2.25 Gbps(Single Link)

Highest Resolution: WUXGA(1920*1200) , 480i/p ~ 1080 i/p

LCD Display Window: 20*4 LINES LCD

Output Port Set-up: Front panel SWITCH, RS-232C configuration, LAN(TCP/IP) configuration

Input Port Set-up: input *8 / output *4x2 EA

Source Connection: DVI-D 29pin Female

HDMI 19pin Female , BNC Female

Power Supply : DC12V , 6.6A

Power Consumption : 25 Watt / 35Watt

Dimensions (W x D x H, inch) : 17.1' x 8.6' x 3.5' (2U)

Total Weight: 9.15 Lbs

3. Operational Guidelines

3.1 MAIN MENU User Guide

Turn the power switch on

Once all channel indicator lights are on, the first step is complete

1. Initial page on the LCD display
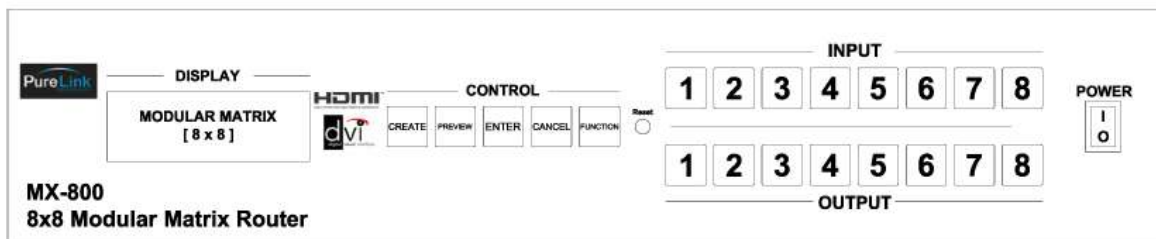
2. Channel View and Input Selection
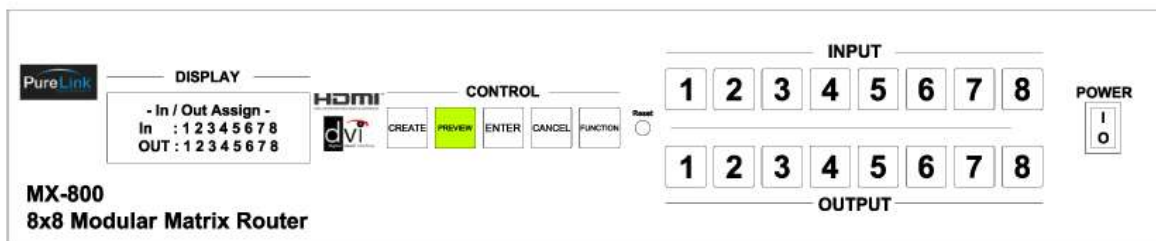
IN / OUT indicates connection status

Press the IN / OUT KEY to display each channel's connection status and video resolution

Press the CANCEL KEY to return to the initial screen

3. MX-800 MAIN MENU

1	.		C	R	E	A	T	E									
2	.		P	R	E	S	E	T									
3	.		P	R	O	D	U	C	T	_	I	D					
4	.		R	S	2	3	2										

Press the FUNCTION KEY to view the menu screen

Use the CREATE(**UP**) / PREVIEW(**DOWN**) KEYS to control the menu options

1. CREATE

2. PRESET

3. PRODUCT_ID

4. RS232

5. LAN

6. SYSTEM INFO

7. EDID

8. SYSTEM CONFIG

  Press the ENTER KEY to select an option.

  Press the CANCLE KEY to return to the main menu

4. CREATE MENU

		-		I	N	/	O	u	t		C	R	E	A	T	E		-	
			P	r	e	s	s		A	n	y		I	n	p	u	T		

  Select an INPUT channel

  Press the IN / OUT KEY to set a channel

  Press the ENTER KEY to save or switch input channels

  Press CANCEL to reverse a selection and return to the previous screen

5. PRESET MENU

				-		P	R	E	S	E	T		-				
1	.		P	R	E	S	E	T		C	a	l	l				
2	.		P	R	E	S	E	T		E	d	i	t				

- PRESET Call : Establish IN/OUT channels
- PRESET Edit: Edit and save up to 20 IN/OUT channels
  Use the CREATE(**UP**) / PREVIEW(**DOWN**) KEYS to select desired menu option
  Use the UP / DOWN / IN / OUT KEYS to edit and press ENTER to save or execute
  Press the CANCEL KEY to reverse current settings and return to the previous screen

6. PRODUCT ID MENU

		-		P	R	O	D	U	C	T		I	D		-			
S	e	t		:		1												
E	d	i	t	:														

Create up to 20 PRODUCT ID's

- Set : Displays current number or PRODUCT ID's
- Edit : Use the UP / DOWN KEY to select the ID and press ENTER to edit or save.
- Press CANCEL to reverse selection and return to the previous screen

7. RS232 MENU

B	a	u	d		R	a	t	e		:						
D	a	t	a		B	I	t	s		:						
S	t	o	p		B	I	t	s		:						
P	a	r	i	t	y					:						

- Select RS232 FUNCTION to view the current RS232 set-up
- Use the UP / DOWN KEY to make a selection and press ENTER to continue
- Use the UP / DOWN KEY to select desired setting and press ENTER to save
- Press CANCEL to reverse selection and return to the previous screen

8. LAN MENU

			-		L	a	n		E	d	i	t		-			
1	.	I	P		A	d	d	r	e	s	S						
2	.	G	a	t	e	w	a	y		A	d	d	r	e	s	S	
3	.	S	u	b	n	e	t		M	a	s	k					

- Use the UP / DOWN KEY to select from MENU and press ENTER to continue.
- Use the IN / OUT KEY to change desired codes and press ENTER to save
- KEY NUMER Assignment

  IN1(1) , IN2(2) , IN3(3), IN4(4), IN5(5), IN6(6), IN7(7) , IN8 (8)

  OUT1(9) , OUT2(0) , OUT3(.)

  ∗ Press the OUT3(.) KEY to reassign numbers

- Press CANCEL to reverse changes and return to the previous screen

9. SYSTEM INFO FUNCTION

1	.	M	a	i	n		S	l	o	T					
2	.	I	n	p	u	t	S	l	o	t					
3	.	O	u	t	1		S	l	o	T		(	1	~	4	)
4	.	O	u	t	2		S	l	o	T		(	5	~	8	)

- Displays the firmware version associated with each SLOT.
- Use the UP / DOWN KEY to select from menu and press ENTER to continue.
- Press CANCEL to reverse selection and return to the previous screen.

10. EDID MENU

1	.	E	x	t		E	d	i	d		L	o	a	d		
2	.	I	n	t		E	d	i	d		L	o	a	d		
3	.	E	x	t		E	d	i	d		S	a	v	e		
4	.	I	n	p	u	t		E	d	i	d		C	h	e	C	k

• Ext Edid Load: Press the OUTPUT KEY to select desired EDID SOURCE and INPUT KEY and press ENTER to continue.

                : LOADING status will appear as follows:

                F → FAIL

                P → PASS

• Int Edid Load: MX-800 has 14 selectable pre-programmed EDID data and 6 empty memory spaces that can be used to upload EDID data from any external display device in advance.

        ∗ 1 ~ 14: Internally assigned EDID DATA

        15 ~ 20: User-saved EDID DATA

- Ext Edid Save: User can save EDID DATA for 15~20 monitors connected to the output ports
- Input Edid Check: To view EDID DATA saved in the input slots

                : Press INPUT KEY to check EDID DATA coming from the input port

                : #Notice: When checking for EDID DATA the screen may flash

9. SYSTEM CONFIG FUNCTION

		-		S	Y	S	T	E	M		C	O	N	F	I	G		-	
		1	.	S	w	i	t	c	h	i	n	g		D	e	l	a	Y	
		2	.	I	n	p	u	t		S	e	l	e	c	t				

- Switching Delay: controlling channel conversion speed
  - ∗ Fast: quickest conversion (DVI or 2CH HDMI)
  - ∗ Normal: 2-3 sec. delay
  - ∗ Slow: 3-5 sec. delay
  - ∗ Switching delay may vary with each monitor or TV source.

If the video or audio is not displaying properly, adjusting the conversion speed may help correct it.

- Input Select: choosing the input port. (HDMI or CAT5)
  - ∗ HDMI INPUT SLOT only
  - ∗ Use the UP/DOWN Key to select the desired input source and press ENT or MEN to continue.

  - ∗ H : HDMI   ,   C : CAT5   ,   A : AUTO
  - ∗ AUTO MODE : If there is no VIDEO DATA in the newly configured the input port, the data will automatically be transferred to a different input port. (3-5 seconds)

4. Communication Code Configuration

4-1.COMMAND LINE OPERATIONS

■ Control Programmer's Guide (Code Structure and Examples)

This section is designed for programmers who wish to create their own control programs using the command code. All Pure Link digital matrix routers provide a simple character stream control used by external control devices attached to a Pure Link device. Command codes are used primarily for control, during system installation and setup, and for diagnostic purposes.

Overview

Command code is a set of alphanumeric characters that combine to form control commands. Command code strings are entered into a terminal emulation program (such as windows HyperTerminal) running on an external control device. The control device (PC, third-party controller) sends the commands to the system. Control devices must be able to send and receive ASCII or HEXA code via an RS-232 or Ethernet port.

Command Code Formats

A command code is a series of command characters and numbers used to send commands to the system. Commands include basic formulas for creating and disconnecting switches, as well as for verifying the status of switches.

In a command code, each character is either general command (e.g, C for connect) or an identifier that indicates what the following number designates (e.g, "O" and the number following it designate an "output number"). The command code *255CI01O01! Can be interested as follows: (*) Starting the command code (255) Router ID is 255 (C) Create connection on (I01) Input 01 to (O01) Output 01 (!) take the command. For a complete list of command characters and their functions, see pages 17-24

Ack value (Acknowledge value: Response from Pure Link device) will be echoed back to the terminal screen as the unit accepts them. When a command is successfully executed, all of the characters appear containing the character "s" which stands for status. For example,

Ex 1) Command (Connect Input 1 to Output 1)

      *255CI01O01! ¶

  Ack value

      *255sC I01O01!

Ex 2) Command (Check Input connection status on Output 3)

      *255?O03! ¶

 Ack Value

      *255s? I03O03!

General Rules for Command Codes

The commands are coded in ASCII and HEXA. Please refer to Table 3.1 on pg. 18 for detailed descriptions of keys and functions. A basic command code setup is shown below;

    Ex) *255CI01O01! ¶

      Start (*) + Router ID (255) + Command (C) + Input number (I01) + Output number (O01) + End (!) + Enter (¶)

▶ A command line allows execution of only one command. Multiple commands require execution of multiple strings; one command per string.

▶ All s begin with * (Start) byte.

▶ All s end with ! (End) byte.

▶ All s will be executed when ¶ (Enter) is entered.

▶ The correct Router ID must be entered in a command code. Systems will not react to the command if a wrong Router ID is entered. The Factory Default Router ID is set to 255 and the universal Router ID is 999. Systems will react to the command whenever universal Router ID is entered in command code.

▶ Command codes typically are not case-sensitive.

▶ To specify multiple inputs and outputs, enter a "," (Comma) between numbers.
(Ex., *255CI01O01,02,03! ¶ : Connects Input 01 to Output 01, 02, and 03)

▶ Use - (Hyphen) for range connection.
(EX., *255CI01O01-04! ¶ : Connects Input 01 to Output 01,02,03, and 04)

Table 3.1 Command Codes Characters Table

The table below shows command code characters (keys), which are used to generate control commands, their functions, and short function descriptions.

Key		Function	Description and Example	Byte
HEX	ASCII			
0x2A	*	Start the command	Header Code	1
0x21	!	End the command	Tail Code	1
	¶	Execute the command	Execute the command	
0x43 0x63	C c	Connect (Video and Audio)	Initiates a Connect (switch) command for both Video and Audio; this must precede input and output specification	1
0x56,0x43 0x76,0x63	VC vc	Connect (Video only)	Initiates a Connect (switch) command for Video only; this must precede input and output specification	2
0x41,0x43 0x61,0x63	AC ac	Connect (Audio only)	Initiates a Connect (switch) command for Audio only; this must precede input and output specification	2
0x3F	?	Status	Status command; this must precede input and output specification	1
0x44 0x64	D d	Disconnect	Disconnect command for both Video and Audio; this must precede input and output specification	1
0x56,0x44 0x76,0x64	VD vd	Disconnect (Video only)	Disconnect command for Video only; this must precede input and output specification	2
0x41,0x44 0x61,0x64	AD ad	Disconnect (Audio only)	Disconnect command for Audio only; this must precede input and output specification	2
	,	Space	Separates the numbers within entries that contain multiple numbers	1
	-	Range	Specifies a range of numbers in	1

			entries containing multiple numbers	
0x49 0x69	I i	Router ID check	Router ID check command; check router's current ID number	1
	?version	Firmware version check	Firmware version check command; *255?version! ¶	
0x40	@	Baud rate setting	Baud rate sting command; *255@001!¶ → 19200 *255@002!¶ → 38400 *255@003!¶ → 57600 *255@004!¶ → 115200	
0x4E 0x6E	N n	Networking setting	Network configuration setting command: - IP Setting *255NIP125.135.199.004! ¶ - Subnet Mask Setting *255NSM255.255.255.000! ¶ - Gate Way Setting *255NGW192.168.000.001! ¶ - MAC Address Setting *255NMA00.50.C2.B0.20.05! ¶ - Port Number Setting *255NPN3000! ¶ - Network Information *255NNI000! ¶	1
0x48 0x68	H h	Connection check	Router communication connection check command: *255H000! ¶	1

Command Ack (Acknowledge) Value Response

When command codes are entered into a terminal emulation program (such as HyperTerminal) and are accepted by the system, they respond back to the terminal screen one at a time, as noted below in the table. The complete command has executed successfully when all of the entered characters including "s" which stands for status, appear. If a command character is not accepted, a different character than the one entered appears and all or part of the command has not been executed.

Ack (Acknowledge) Value Response Table

The following table shows ack value response characters along with their descriptions and meanings, which may appear instead of the initially entered character or number. If these characters appear, all or part of the command has not been executed.

Table 3.2 Descriptions of Acknowledge (ACK) Signals

Ack value	Description
Input 1 is not connected	No information in each channel.
Command Code Error	Indicates that system has rejected all or part of the command
Router ID Error	Indicates that the wrong ID number was entered

Command Code Ack Value Examples

Command Code Entered	Ack Value as appears in the control program	Explanation of Result
*255CI01O01! ¶	*255sC I01O01 !	The command was successfully executed
*255CO01! ¶	Command Code Error	The command was not executed because the input number was not included
*255CI01O01 ¶	Command Code Error	The command was not executed because "!" (End) was not included
*300CI01O01! ¶	Router ID Error	The command was not executed because the actual Router ID and entered Router ID did not match

4-1.1 Connecting Switches

A switch is an active connection between an input (source) signal and one or more output (display) devices. The signals connected in a switch command are either individual signals or groups of signals coming through the connectors on the rear of the unit.

The "C" key initiates a Connect command for routing a switch. The characters and numbers that follow the "C" command tell the system, which inputs and outputs to connect. The last character "!" is found at the end of a command code which tells the system to execute the command.

For example, the command code *255CI01O01! ¶

can be interpreted as follows: (*) Starting the command code (255) Router ID is 255 (C) Create connection on (I01) Input 01 to (O01) Output 01 (!) take the command. For a complete list of command characters and their functions, see examples below.

To connect a switch:

1. Enter the Connect command below. Replace the "#"s with the input and output number(s).

*255CI#O#! ¶

Examples (Connect **Video and Audio**):

Command Codes	Action
*255CI01O01! ¶	Connect Input 1 to Output 1
*255CI01O08,I08O02! ¶	Connect Input 1 to Output 8 and Input 8 to Output 2
*255CI01O01,I02O02,I03O03! ¶	Connect Input 1 to Output 1, Input 2 to Output 2, and Input 3 to Output 3
*255CI01O01,02,03! ¶	Connect Input 1 to Output 1, 2, and 3
*255CI01O01-07! ¶	Connect Input 1 to Output 1, 2, 3, 4, 5, 6, and 7

Examples (Connect **Vide**o only):

Command Codes	Action
*255VCI01O01! ¶	Connect Input 1 to Output 1
*255VCI01O08,I08O02! ¶	Connect Input 1 to Output 8 and Input 8 to Output 2
*255VCI01O01,I02O02,I03O03! ¶	Connect Input 1 to Output 1, Input 2 to Output 2, and Input 3 to Output 3
*255VCI01O01,02,03! ¶	Connect Input 1 to Output 1, 2, and 3
*255VCI01O01-07! ¶	Connect Input 1 to Output 1, 2, 3, 4, 5, 6, and 7

Examples (Connect **Audio** only):

Command Codes	Action
*255ACI01O01! ¶	Connect Input 1 to Output 1
*255ACI01O08,I08O02! ¶	Connect Input 1 to Output 8 and Input 8 to Output 2
*255ACI01O01,I02O02,I03O03! ¶	Connect Input 1 to Output 1, Input 2 to Output 2, and Input 3 to Output 3
*255ACI01O01,02,03! ¶	Connect Input 1 to Output 1, 2, and 3
*255ACI01O01-07! ¶	Connect Input 1 to Output 1, 2, 3, 4, 5, 6, and 7

4-1.2 Disconnecting Switches

The characters and numbers in a Disconnect command tell the system which input or output to disconnect. The "D" key initiates a Disconnect command for routing a switch. The characters and numbers that follow the "D" command tell the system that inputs and outputs to disconnect. The last character "!" is found at the end of the Command code, which tells the system to execute the command.

For example, the command code

   *255DI01O00! ¶

It can be interpreted as follows: (*) Starting the command code (255) Router ID is 255 (D) Disconnect on (I01) Input 01 to (O00) Output 00 (!) take the command. For a complete list of command characters and their functions, see the command list below

1. Enter the Disconnect command below. Replace the "#"s with the input and output number(s).
   *255DI#O#! ¶

Examples (Disconnect Video and Audio):

Command Codes	Action
*255DI01O00! ¶	Disconnect Input 1 to no Output (00)
*255DI00O03,04,05! ¶	Disconnects Outputs 3, 4, and 5
*255DI00O03-06! ¶	Disconnects output 3, 4, 5, and 6
*255DALLIO! ¶	Disconnects all inputs and outputs

Examples(Disconnect Video only):

Command Codes	Action
*255VDI01O00! ¶	Disconnect Input 1 to no Output (00)
*255VDI00O03,04,05! ¶	Disconnects Outputs 3, 4, and 5
*255VDI00O03-06! ¶	Disconnects output 3, 4, 5, and 6
*255VDALLIO! ¶	Disconnects all inputs and outputs

Examples(Disconnect Audio only):

Command Codes	Action
*255ADI01O00! ¶	Disconnect Input 1 to no Output (00)
*255ADI00O03,04,05! ¶	Disconnects Outputs 3, 4, and 5
*255ADI00O03-06! ¶	Disconnects output 3, 4, 5, and 6
*255ADALLIO! ¶	Disconnects all inputs and outputs

4-1.3 Connection Status Check

A connection status can be checked to confirm that the switch has been correctly executed or to confirm correct routing to multiple outputs. The characters and numbers in a status command tell the system which input or output to check.

1. Enter the Connection status check command below. Replace the "#"s with the input and output number(s).

      *255?I#!¶ or *255?O#! ¶

Examples:

Command Codes	Action
*255?I01! ¶	Check Output connection status on Input 1
*255?O07! ¶	Check Input connection status on Output 7
*255?ALLIO! ¶	Check all Input and Output connection status

4-1.4 Router ID Check

User can confirm the router's Current ID setting.
      ● Universal Router ID is 999

Example:

Command Codes	Action
*999I000! ¶	Check Router's ID

4-1.5 Firmware Version Check

User can confirm router's current firmware version.

Example:

Command Codes	Action
*999?version! ¶	Check Router's Firmware version

4-1.6 Baud Rate Setting

User can set baud rate for RS-232 command control.

    1. Enter the Baud rate setting command below. Replace the "#"s with the input and output number(s).

       *255@#! ¶

@001: Baud rate at 19200

@002: Baud rate at 38400

@003: Baud rate at 57600

@004: Baud rate at 115200

Example:

Command Codes	Action
*255@001! ¶	Set baud rate at 19200
*255@002! ¶	Set baud rate at 38400
*255@003! ¶	Set baud rate at 57600
*255@004! ¶	Set baud rate at 115200

Network Configuration:

User can check and set network configuration for LAN control.

Examples:

Command Codes	Action
*255NNI000! ¶	Check current Network Information
*255NIP192.168.000.004! ¶	Set IP address at 125.135.199.004
*255NSM255.255.255.000! ¶	Set Subnet Mask at 255.255.255.000
*255NGW192.168.000.001! ¶	Set Gate Way at 192.168.000.001
*255NMA00.00.C2.B0.20.05! ¶	Set Mac Address at 00.00.C2.B0.20.05
*255NPN3000! ¶	Set Port Number at 3000

Connection Checking:

User can check the connection status.

Example:

Command Codes	Action
*255H000! ¶	Check connection status

Function Key On/Off:

User can enable or disable the function key located on physical router's front panel.

Example:

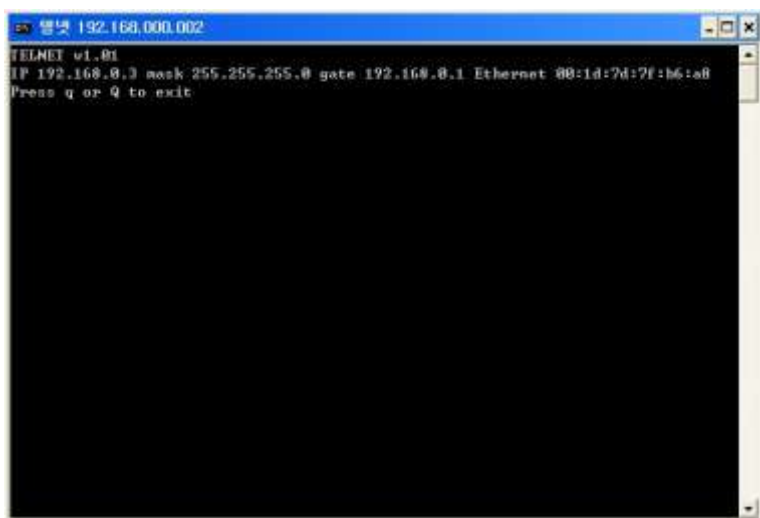| Command Codes	Action
*255K000! ¶	Function key On/Off

4-2 LAN CODE CONFIGURATION

4-2.1 Using   TELNET protocol with LAN(TCP/IP)

 The MX-800 router can be controlled from remote locations through the LAN port using WINDOWS XP DOS prompts, hyper-terminal, or   TELNET program (the control code is fully compliant with RS-232C).
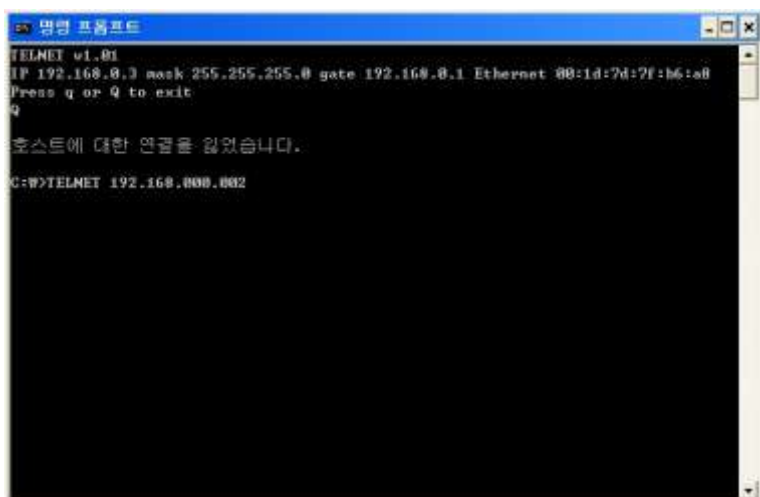
Enter TELNET <Router IP Address> in the DOS prompt

Message indicating TELNET connection will appear

Router ID verification command code
Send " *255I000! "
Router will send response:
" *255sI Router ID 255"

4-2.2 Using HTTP protocol with LAN(TCP/IP

- Control PC Search

Searching data for channel configuration

Character train should begin with "LCD.CGI" to "O01=I08" to Output 01 = Input 8. The sequence and size of the character train must be the same.

To RESET the protocol, a new connection to the server (Switcher) must be established.

Switching Channels

http://192.168.0.2/LCD.CGI?O01=I01&O02=I02&O03=I03&O04=I04&O05=I05&O06=I06 &O07=I07&O08=I08&Submit_=SEND

RESET

http://192.168.0.2/LCD.CGI?O01=I01&O02=I02&O03=I03&O04=I04&O05=I05&O06=I06 &O07=I07&O08=I08&Submit_=RESET

- Control PC Transmission

Information from each channel that needs to be sent must be extracted to prevent the entire Explore html data from being transmitted.

–   8:8 html transmitting
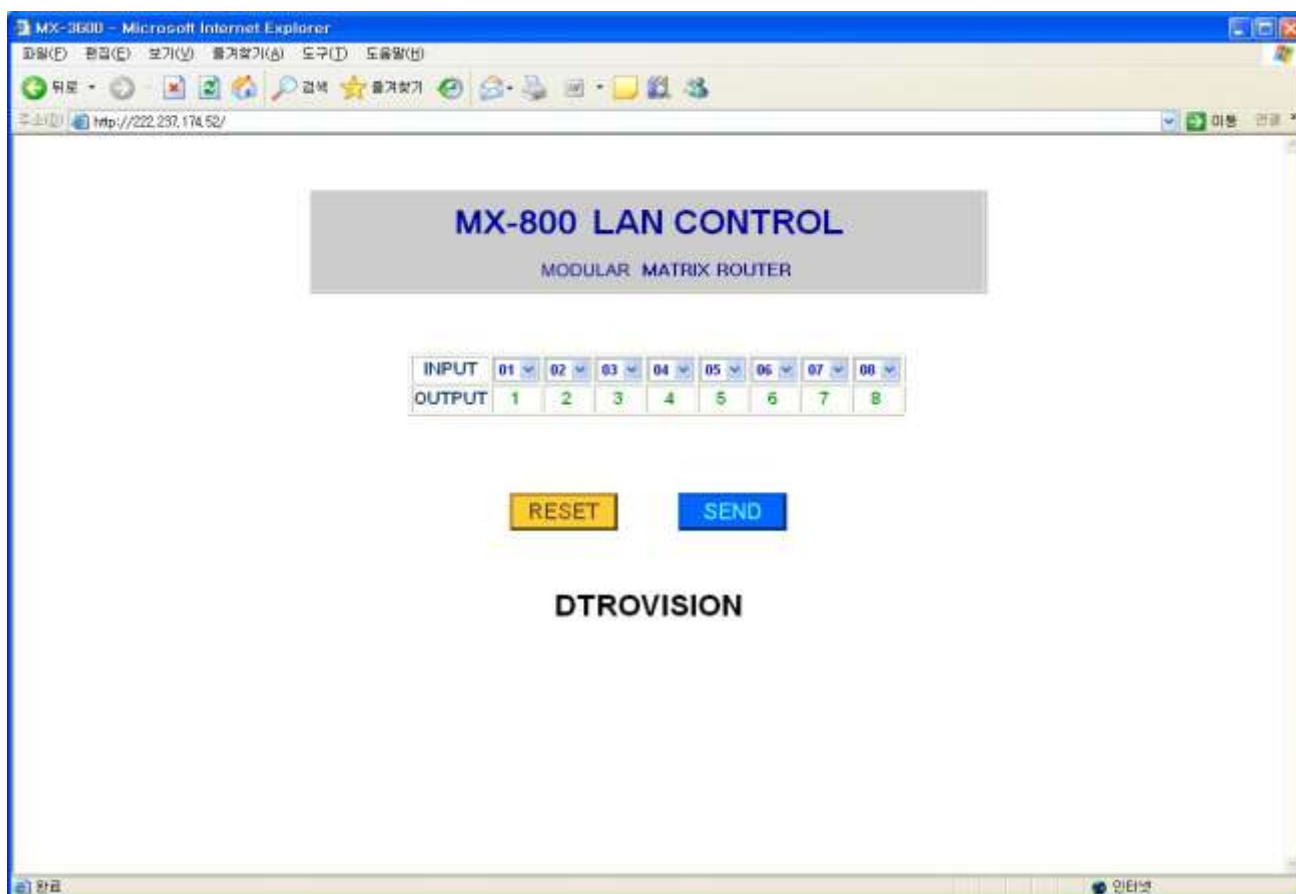
Run Explorer and enter the newly configured IP address to open the channel configuration window above.

Select desired channel and click **SEND** to change the channel.

4-3 Connector Pin Assignment

Power Input

Part Name	Pin	Description	Remarks
Power Jack	1	VCC(DC12V)	
	2	VCC(DC12V)	
	3	GND	
	4	GND	

RS-232C Input

Part Name	Pin	Description	Remarks
D-SUB 9-Pin Connector	1	Not used	
	2	Rx D	
	3	Tx D	
	4	Not used	
	5	GND	
	6	Not used	
	7	Not used	
	8	Not used	
	9	Not used	

LAN Connector

Part Name	Pin	Description	Remarks
RJ-45 8-Pin Connector	1	Transmit data (+)	
	2	Transmit data (-)	
	3	Receive data(+)	
	4	Not used	
	5	Not used	
	6	Receive data(-)	
	7	Not used	
	8	Not used	

5. Additional Information

Manufacturer's Warranty (2-Year)

Dtrovision warrants this MX-800 modular matrix router to be free from defects in workmanship and materials, under normal use and service, for a period of two (2) year from the date of purchase from Dtrovision or its authorized resellers.

If the product does not operate as warranted during the applicable warranty period, Dtrovision shall, at its option and expense, execute one of the following as necessary:

1. Repair the defective product or part
2. Deliver to customer and equivalent product or part to replace the defective item
3. Refund to customer the purchase price paid for the defective product

All products that are replaced become the property of Dtrovision, LLC.

Replacement products may be new or reconditioned.

Repaired or replacement products or parts come with a 90-day warranty or the remainder of the warranty period. Dtrovision shall not be responsible for any software, firmware, information, or memory data loss of contained in, stored on, or integrated with any products returned to Dtrovision for repair under warranty.

Customer Service

Any customer service inquiries can be submitted electronically through the Q&A form on our website (www.purelinkav.com). For immediate assistance please contact us at (201) 488-3232 to reach our customer care or tech support team.

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