DIGI-88B Installation and Operation Guide

Rev 140813

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Important Safety Instructions

➢ **Please completely read and verify you understand all instructions in this manual before operating this equipment.**

➢ Keep these instructions in a safe, accessible place for future reference.

➢ Heed all warnings.

➢ Follow all instructions.

➢ Do not use this apparatus near water.

➢ Clean only with a dry cloth.

➢ Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

➢ Use only accessories specified or recommended by Intelix.

➢ Explanation of graphical symbols:

  o Lightning bolt/flash symbol: the lightning bolt/flash and arrowhead within an equilateral triangle symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product enclosure which may be of sufficient magnitude to constitute a risk of shock to a person or persons.

  o Exclamation point symbol: the exclamation point within an equilateral triangle symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

➢ **WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.**

➢ Use the mains plug to disconnect the apparatus from the mains.

➢ **THE MAINS PLUG OF THE POWER CORD MUST REMAIN READILY ACCESSIBLE.**

➢ Do not defeat the safety purpose polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of your obsolete outlet. **Caution! To reduce the risk of electrical shock, grounding of the center pin of this plug must be maintained.**

➢ Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and the point where they exit from the apparatus.

➢ Do not block the air ventilation openings. Only mount the equipment per Intelix's instructions.

➢ Use only with the cart, stand, table, or rack specified by Intelix or sold with the equipment. When/if a cart is used, use caution when moving the cart/equipment combination to avoid injury from tip-over.

➢ Unplug this apparatus during lightning storms or when unused for long periods of time.

➢ **Caution!** Shock Hazard. Do not open the unit.

➢ Refer to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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Overview

The Intelix DIGI-88B is an eight input by eight output HDBaseT HDMI matrix switcher. The Intelix DIGI-88B matrix improves the ease of installation compared to previous Intelix HDMI matrix switchers.

The DIGI-88B has dual outputs on each output port, allowing the same signal to be routed to the HDMI connector and a remote destination with an HDBaseT receiver. The HDBaseT ports support 1080p HDMI video with audio, bi-directional wide-band IR, matrix control via IR and HDCP compliance. The matrix is HDMI compatible and supports up to 2K resolutions, Deep Color and full 3D capabilities.

The DIGI-88B can be controlled via front panel buttons, front panel IR, external IR, remote IR through HDBaseT extenders, RS232, RS485, and Ethernet. The matrix includes a simple IR remote control to allow IR switching. This IR remote control can be learned into universal remotes and IR based control systems. The matrix also features a full command set for RS232, RS485, and Ethernet control with third party control systems.

Package Contents

Please verify the following items are in the shipping box prior to installation of the DIGI-88B.

1 ea.	DIGI-88B 8 Input 8 Output HDBaseT Matrix Switcher
8 ea.	DIGIB-EYE IR Receivers
8 ea.	DIGIB-EMT IR Transmitters
1 ea.	IR Extension Cable
1 ea.	Power Cable
1 ea.	USB to Serial Cable
1 ea.	Infrared Remote Control with Battery (CR2025 3V)
2 ea.	Rackmount Ears
6 ea.	Rackmount Ears Mounting Screws
1 ea.	DIGI-88B Installation and Operation Guide

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Front Panel
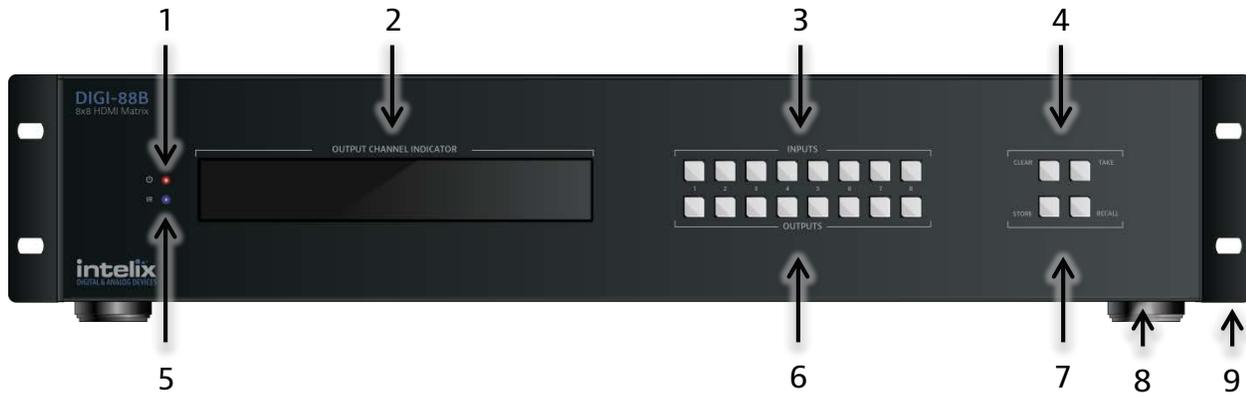
1 – Power LED – Device is ON when LED is lit
2 - LED Display – Routing information is displayed.
3 - Input Buttons –Buttons labeled "1-8".
4 - Operational Buttons (Top Row) –Buttons labeled "CLEAR" and "TAKE".
      CLEAR – Used to cancel the current input selection.
      TAKE – Used to make the changes active.
5 - IR Receiver – For use with the included IR remote.
6 - Output Buttons – Buttons labeled "1-8".
7 - Preset Buttons (Bottom Row) –Buttons labeled "STORE" and "RECALL".
      STORE – Used to save a preset to memory.
      RECALL – Used to load a preset from memory.
8 – Chassis Feet –Factory installed feet for shelf top installations
9 – Rack Ears – Optional rack ears for rack mounting the DIGI-88B in an equipment rack.

Explanation of use for the front panel control is located in the section *Front Panel and IR Remote Operation* (page 10).

Rear Panel
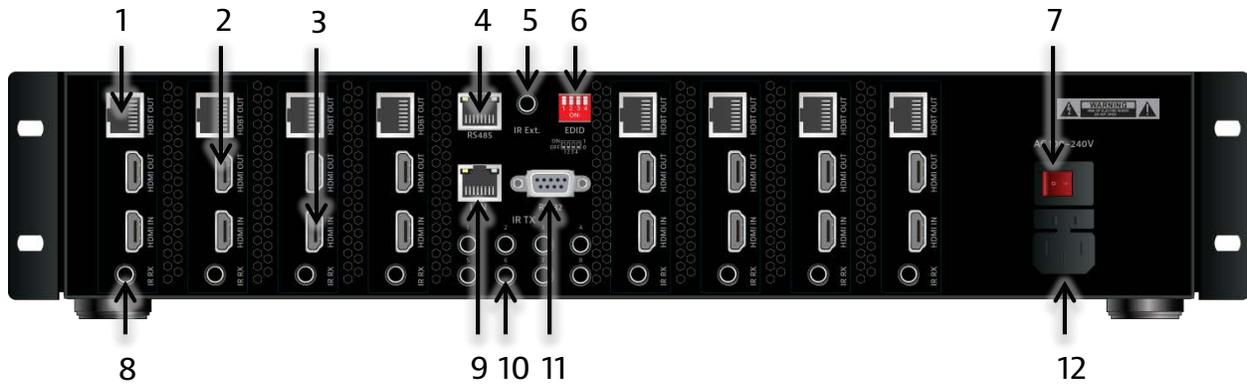
1 - Outputs – HDBaseT Outputs
2 - Outputs – HDMI Outputs
3 - Inputs – HDMI Inputs
4 - RS485 – Balanced serial connection for third party control
5 - IR Extended Input – input for extending the local IR input.
6 - EDID Dipswitches – select the EDID management mode.
7 - Power Switch
8 - IR Receiver Ports – IR receiver ports to send IR signals to the remote HDBaseT receivers.
9 - Ethernet – webserver and UDP control.
10 - IR Emitter Ports– IR emitters to control HDMI sources in the rack.
11 - RS232 Control – serial communication for third party control.
12 - AC Power Input – 110v-240vAC power inlet.

IR Remote
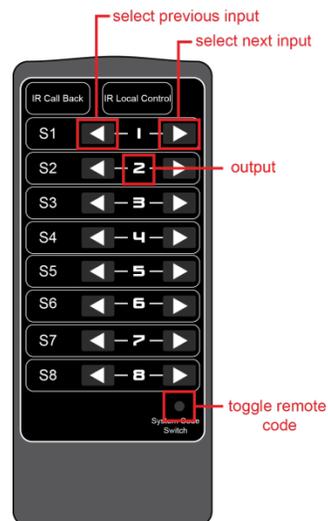
The included IR remote performs routing functions available on the front panel of the DIGI-88B.

Installation Instructions

Shelf Mounting Instructions

The DIGI-88B comes with pre-installed feet and can be shelf mounted directly out of the box.

Rack Mounting Instructions

The DIGI-88B requires one rack unit (2 RU) of space. At least 2 inches of free air space is required on both sides of the DIGI-88B for proper side ventilation. Avoid mounting the DIGI-88B near a power amplifier or any other source of significant heat. It is recommended that you leave an empty rack space above and below the DIGI-88B for additional cooling.

Remove the feet from the bottom of the chassis by unscrewing the 4 Phillips head screws inside of the feet. Set feet aside. Attach the rack ears using the 6 Phillips head screws provided. Mount the DIGI-88B in the desired location within the rack enclosure.

UTP Output Wiring

A compatible HDBaseT receiver is required to extend the output signals over Twisted Pair cabling. To connect the DIGI-88B to a compatible receiver, a Cat 6 or greater cable with a TIA-568B crimp termination on the RJ45 connector must be used. The Cat 6 cable must not exceed 40 meters for 3D content. The Cat 6 cable must not exceed 70 meters for 2D content.

T568B Pinout

1 2 3 4 5 6 7 8

1 = Orange / White
2 = Orange
3 = Green/White
4 = Blue
5 = Blue/White
6 = Green
7 = Brown/White
8 = Brown

This is a top view - ensure the connector tab is facing down
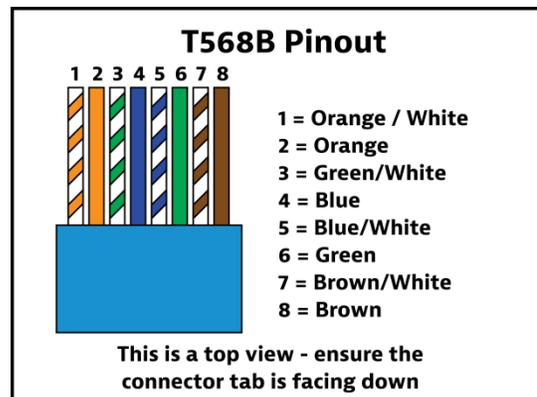
IR Port Wiring

To use the IR extension capabilities of the DIGI-88B, the DIGIB-EYE (wideband IR receiver) and DIGIB-EMT (wideband IR emitter) will need to be connected to the appropriate IR ports. DIGIB-EYE's should be connected to the IR RX ports and DIGIB-EMT's should be connected to the IR EMITTER ports. After connecting the DIGIB-EMT to the IR output, mount the IR emitter to the appropriate source gear.

*Note: Third party IR components such as connecting blocks or base stations are not compatible with the DIGI-88B ports

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EDID Management

HDMI signals require communication between the Source and Display equipment. The Display provides information to the source on supported formats for video and audio. The information that is passed from display to source is referred to as EDID. The DIGI-88B includes common EDID's for increased compatibility. The matrix also features an EDID copy mode that can be used when other EDID's do not meet the installation requirements.

The default EDID for the DIGI-88B is 1080p with stereo audio. All EDID modes are outlined in the table below:

EDID Table

EDID Setting	Dipswitch 1	Dipswitch 2	Dipswitch 3	Dipswitch 4
EDID Copy	0 (Down)	0 (Down)	0 (Down)	n/a
No Function	0 (Down)	0 (Down)	1 (Up)	n/a
1080p 7.1ch Audio	0 (Down)	1 (Up)	0 (Down)	n/a
1080p 5.1ch Audio	0 (Down)	1 (Up)	1 (Up)	n/a
1080i Stereo	1 (Up)	0 (Down)	0 (Down)	n/a
1080p Stereo (Default)	1 (Up)	0 (Down)	1 (Up)	n/a
1080p 3D Video / 2ch Audio	1 (Up)	1 (Up)	0 (Down)	n/a
No Function	1 (Up)	1 (Up)	1 (Up)	n/a

Changing EDID Modes

To change the EDID mode on the matrix:
1. Power down the DIGI-88B matrix.
2. Change the dipswitch to the desired EDID mode (outlined in the table above).
3. Power on the DIGI-88B matrix. The new EDID has been stored at all the inputs.

EDID Copy Instructions

To copy an EDID from a specific output to a specific input (for example, output 3 to input 2):
1. Power down the DIGI-88B matrix.
2. Change the dipswitches to 0, 0, 0, 0 (Down, Down, Down, Down).
3. Connect the HDMI cable of the display to the desired output on the DIGI-88B matrix (output 3). You can use either HDMI *or* HDBT outputs, but only connect one at a time for copy operation.
4. Power on the DIGI-88B matrix.
5. Using the front panel, setup the AV route, from the input you want the EDID to be copied to, to the output you connected the display you want to copy. (input 2 to output 3)
6. Press and Hold the Output Button connected in Step 3 (output 3).
7. Wait for Display to show "CPY" and "OK".
8. EDID has been successfully copied.

Front Panel and IR Remote Operation

Basic Routing

To set a single route using the front panel of the DIGI-88B:
1. Press the desired input button (source).
2. Press the desired output button (display).
3. Front panel will flash the New Input Number.
4. Press the "Take" button

To set multiple routes using the front panel of the DIGI-88B:
1. Press the desired input button (source).
2. Press the desired output button(s) (display). You can choose any or all outputs.
3. Front panel will flash the New Input Number(s).
4. Press the "Take" button.

Storing Presets

To store a preset:
1. Using the Basic Routing instructions setup the desired routing.
2. Press the "Store" button. The Input LED's will begin flashing.
3. Press and Hold the input button for the desired preset location.
   For example to store the current route into Preset #2 then press and hold input 2 button.
4. Continue to hold the input button until the LEDs stop flashing. When the LEDs stop flashing your preset has been stored.

Clearing Presets

To clear a preset repeat the "To store a preset" procedure to overwrite the current preset.

Recalling Presets

To recall a preset:
1. Press the "Recall" button.
2. The Input LED's will begin flashing.
3. Press the input button for the desired preset location.
   For example to recall Preset #2 then press the input 2 button.
4. The LED's will stop flashing, the HDMI routes are completed and the display updates to show the new routing information.

IR Remote Operation

Overview

The included IR remote includes features that allow several different control options. When using the remote with front panel window or IR Ext, the remote can be used to cycle each input through *previous* or *next* input source. When using the remote in an extended zone (a room with a DIGI-HD60C-R or DIGI-HDE-R), attaching a DIGIB-EYE to the IR RX of the extender will allow you to not only control the source you are watching, but also control ONLY the matrix zone you are in.

In-Zone Operation

When using the included IR remote to control the matrix from the zone you are in, the remote will operate only the output you are watching. This requires the use of an compatible HDBT receiver (DIGI-HD60C-R or DIGI-HDE-R) and an IR RX (DIGIB-EYE). In this instance, the remote will have discrete input selection buttons.

1. Determine which source you which to watch.
2. Press the *"arrow left"* button next to the source number you wish to watch.

On the determined output, cycle through the inputs by pressing the *previous input* or *next input* button
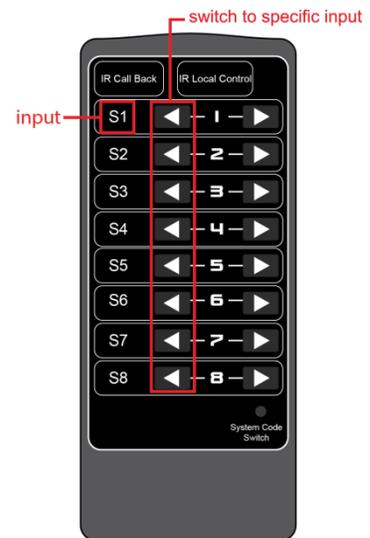
Front Panel Control or IR Ext

The IR remote includes buttons for Next Input, Previous Input, and selection of a specific input.

3. Determine which output you wish to change.

4. On the determined output, cycle through the inputs by pressing the *previous input* or *next input* button.

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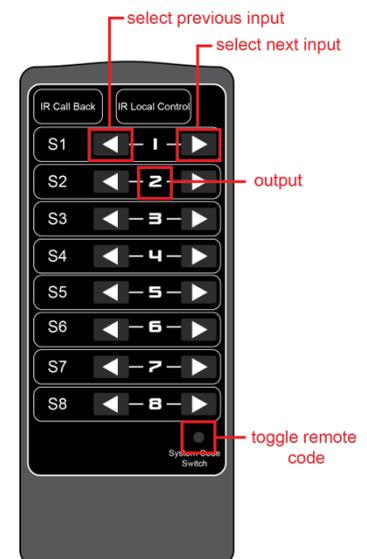
IR Remote Code

The IR remote includes a System Code Switch that will allow you to toggle between two [2] command sets. This is useful for locations where two DIGI-88B units are installed.

1. Press the *System Code Switch* button three times in quick succession. This will change the remote from the default (x00) command set to the alternate (x04) command set.
2. Press the *System Code Switch* button three times in quick succession to toggle back to the default (x00) command set.
3. The matrix will respond to either command set.

select previous input
select next input

IR Call Back   IR Local Control

S1
S2   output
S3
S4
S5
S6
S7
S8

toggle remote code

System Code Switch

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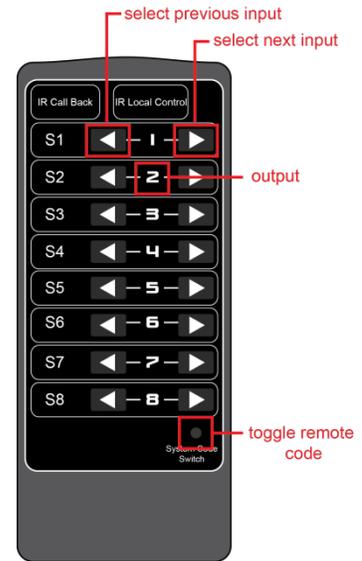
IP Address Assignment

The DIGI-88B ships from the factory with a default IP address of 192.168.0.178. You can change this IP address to a different static IP address or to DHCP using the DIGI-88B Docklight configuration file, which can be found on the Intelix website.

Static IP assignment via RS232

The Static IP address can be changed using RS232
1. Download Docklight and the DIGI-88B from the Intelix website.
2. Connect the included USB -> RS232 adapter to an open USB port on your computer, or if you have a serial port, connect a straight through serial cable. When using the USB->RS232 adapter for the first time, device drivers should be automatically installed.
3. Open the Docklight Configuration File.

4. Confirm the Docklight communication settings (Docklight -> Tools -> Project Settings) match the device. 9600/8/n/1 on the COM port named *USB Serial Port* (or COM 1 if using your computer's serial port instead of the adapter.

5. Start Communication.

6. Turn the power to the DIGI-88B on – after 5 seconds, the DIGI-88B will send some lines of information you can see in the communications window. This confirms that you are communicating properly.

7. In the "Send Sequences" window, press the *Set IP (Use Wildcards)* button.

8. Type the desired IP address in 3 byte sequences, pressing the *Enter* key on your keyboard after each sequence.
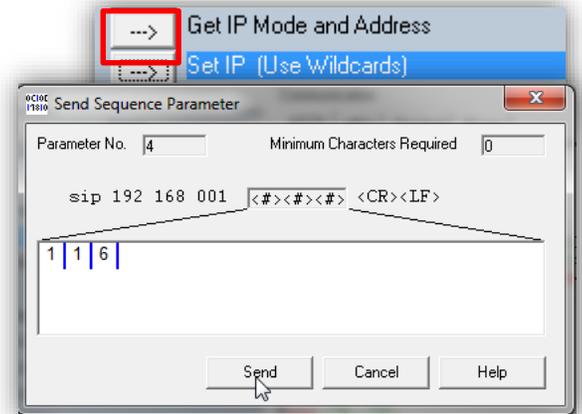
9. Verify that the IP address changed in the communication window. . *Note – it can take 5-10 seconds for the unit to report back the confirmed change.*

DHCP IP assignment via RS232

You can change the IP mode to DHCP using RS232

1. Download Docklight and the DIGI-88B from the Intelix website.

2. Connect the included USB -> RS232 adapter to an open USB port on your computer, or if you have a serial port, connect a straight through serial cable. When using the USB->RS232 adapter for the first time, device drivers should be automatically installed.

3. Open the Docklight Configuration File.

4. Confirm the Docklight communication settings (Docklight -> Tools -> Project Settings) match the device. 9600/8/n/1 on the COM port named *USB Serial Port* (or COM 1 if using your computer's serial port instead of the adapter.

5. Start Communication.

6. Turn the power to the DIGI-88B on – after 5 seconds, the DIGI-88B will send some lines of information you can see in the communications window. This confirms that you are communicating properly.

7. In the "Send Sequences" window, press the *Set IP Mode DHCP* button
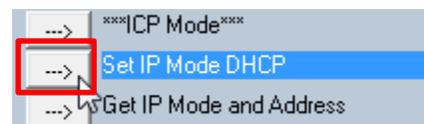
8. Verify that the IP address changed in the communication window. *Note – it can take 5-10 seconds for the unit to report back the confirmed change.*
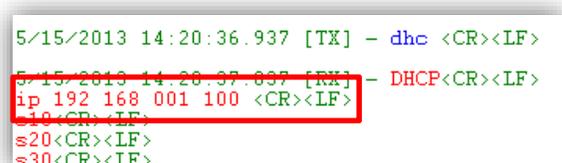
Static IP assignment via TCP/IP

The Static IP address can be changed using TCP/IP

1. Download Docklight and the DIGI-88B from the Intelix website.
2. Connect a network crossover cable (not included) between your computer and the DIGI-88B *LAN Port.*
3. Change the IP address of your computer to fit in the same subnet as the DIGI-88B current IP address. The unit's default IP address is 192.168.0.178, so set your IP address to 192.168.0.177 for first time connection. To change your computer's IP address in Windows7, follow this path (START Menu -> Control Panel -> Network and Internet -> Network and Sharing Center)
   a. Select "Local Area Connection"
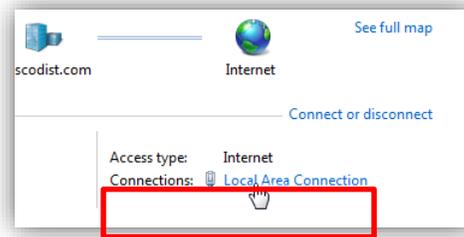
   b. Select "Properties"
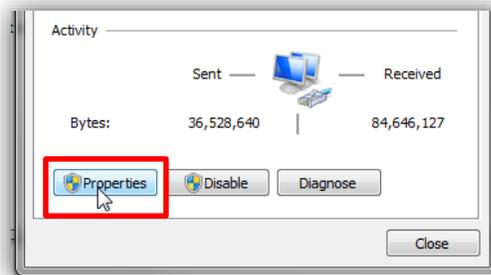
4. Select "Internet Protocol Version 4 (TCP/IPv4)", then select "Properties".
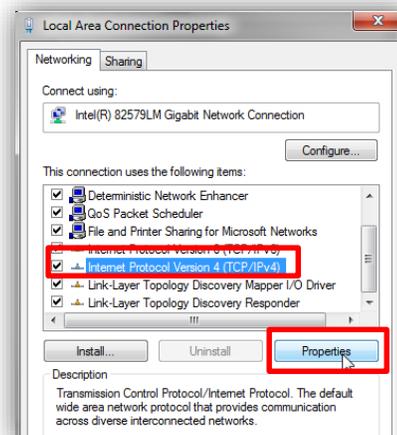
5. Select "Use the following IP address", and then enter the IP address you would like your computer to become. Then select "OK"
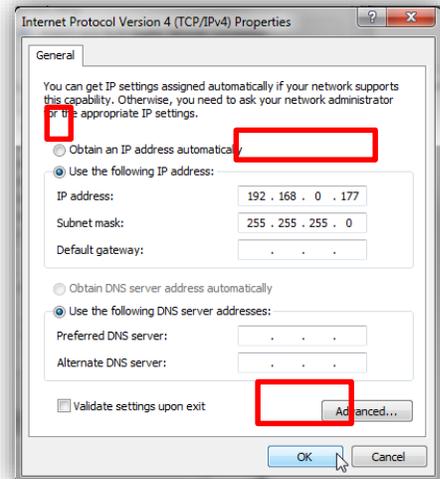
6. Open the Docklight Configuration File

7. Confirm the Docklight communication settings (Docklight -> Tools -> Project Settings) match the DIGI-88B. *Note – add a colon and the number [23] after the IP address you enter to signify the communication port.*

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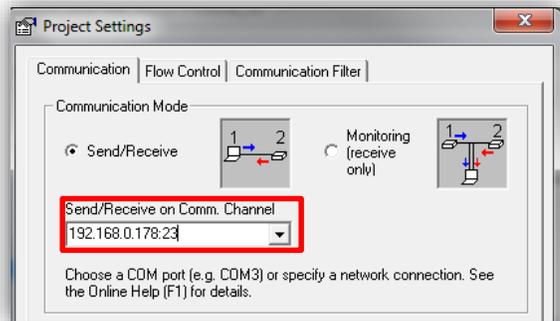
8. Start Communication.
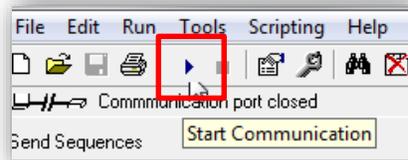
9. Turn the power to the DIGI-88B on – after 5 seconds, the DIGI-88B will send some lines of information you can see in the communications window. This confirms that you are communicating properly.

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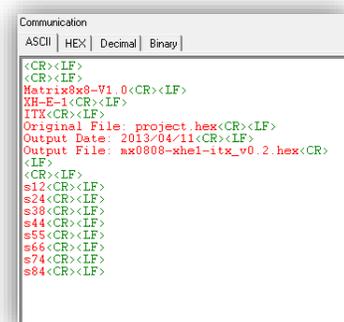
10. In the "Send Sequences" window, press the *Set IP (Use Wildcards)* button.
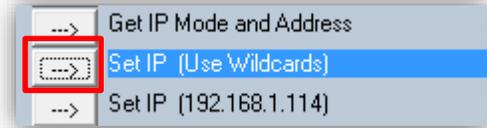
11. Type the desired IP address in 3 byte sequences, pressing the *Enter* key on your keyboard after each sequence.
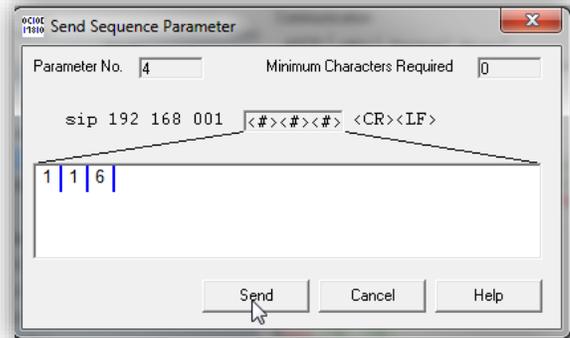
12. Verify that the IP address changed in the communication window. . *Note – it can take 5-10 seconds for the unit to report back the confirmed change.*

DHCP IP assignment via TCP/IP

Setting the DIGI-88B to DHCP while connected via TCP/IP is not recommended.

Web Control

Logging into the DIGI-88B via Web Browser.

The DIGI-88B routing can be controlled through a standard web browser.

1. Open up Internet Explorer (Firefox, Chrome, and Safari crop the configuration options).

2. Type the IP Address of the matrix into the Web Browser's address bar. The Login screen will load. (The unit leaves the factory with a default IP address of 192.168.0.178)

3. The Default password is "0000000000" (ten zeroes).

4. Press the LOGIN button. A "Welcome" screen will briefly be shown before forwarding to the control page below:

5. Clicking the buttons after each output changes the HDMI routing accordingly.

*Note: Do not select "Update Firmware" unless instructed by Intelix Support to do so. This puts the unit into a bootloader mode, which can be cancelled by power cycling the DIGI-88B.

Changing the Password to the Web Control

1. Log into the Web Control utility by using the instructions above.

2. Click the "Change Password" link at the bottom of the Web Control screen. The following screen will appear:
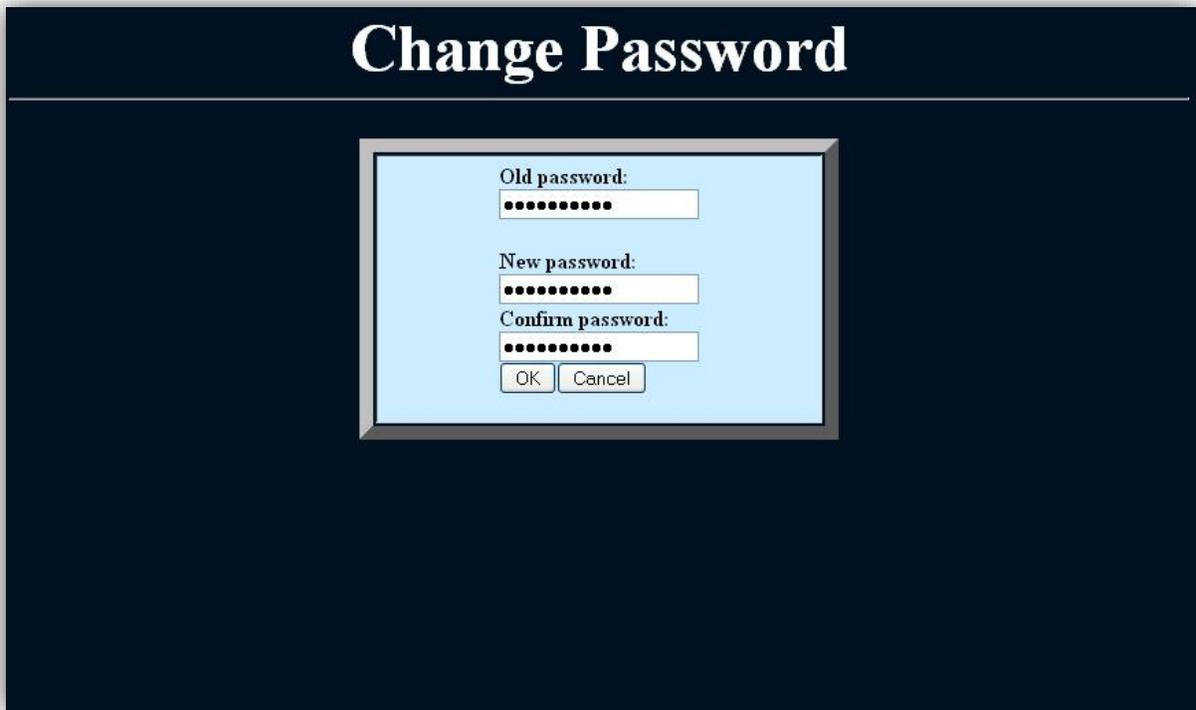
3. Type in the Old Password in the "Old Password" filed.

4. Type in the New Password in the "New Password" field.

5. Confirm the New Password in the "Confirm Password" field.

6. Click "OK".

7. A Password Change Success page will be briefly displayed before forwarding to the Login page.

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RS232 and TCP/IP Commands

RS232 Connection

The RS232 control port requires a standard straight-through serial cable for operation. The default settings for the RS232 port are:

- 9600 baud
- 8 Data Bits
- 1 Stop Bit
- Parity = none
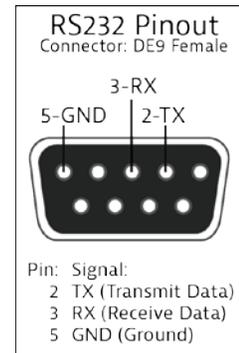
RS485 Connection

The RS485 control port can be used instead of the RS232 port for connection to devices with RS485 communication. This allows serial communication to be extended to devices at great distance (up to 4000') by balancing the TX and RX lanes. The default settings for the RS485 port are:

- 4-Wire Full Duplex
- 9600 baud
- 8 Data Bits
- 1 Stop Bit
- Parity = none
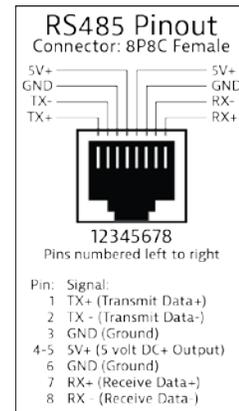
TCP/IP Connection

TCP/IP Settings: User defined IP address, port 23 (The unit leaves the factory with a default IP address of 192.168.0.178)

Special Characters

<CR> = Carriage Return (0x0d hex)
<LF> = Line Feed (0x0a hex)
<SP> = Space (0x20 hex)

DIGI-88B Command Protocol

Important Note: Be sure to include a carriage return after the command line when the command includes the "<CR><LF>" suffix. Also, there is a space between *"cir"* and the code, which is required.

RS232, RS485, and TCP/IP Routing Commands

Output 1 Commands			
Function	**Command**	**Response**	
Select Input 1	cir<SP>00<CR><LF>	s11<CR><LF>	The updated status for output 1. Represented as an ASCII string in the format of "sXY" where:
Select Input 2	cir<SP>01<CR><LF>	s12<CR><LF>	
Select Input 3	cir<SP>02<CR><LF>	s13<CR><LF>	• X is the output channel
Select Input 4	cir<SP>03<CR><LF>	s14<CR><LF>	• The value of Y maps as follows:
Select Input 5	cir<SP>04<CR><LF>	s15<CR><LF>	0 = input 1
Select Input 6	cir<SP>05<CR><LF>	s16<CR><LF>	1 = input 2
Select Input 7	cir<SP>06<CR><LF>	s17<CR><LF>	2 = input 3
Select Input 8	cir<SP>07<CR><LF>	s18<CR><LF>	3 = input 4
Select Input Down	cir<SP>08<CR><LF>	*new route*	Etc….
Select Input Up	cir<SP>09<CR><LF>	*new route*	
Output 2 Commands			
Function	**Command**	**Response**	
Select Input 1	cir<SP>10<CR><LF>	s21<CR><LF>	The updated status for output 2. Represented as an ASCII string in the format of "sXY" where:
Select Input 2	cir<SP>11<CR><LF>	s22<CR><LF>	
Select Input 3	cir<SP>12<CR><LF>	s23<CR><LF>	• X is the output channel
Select Input 4	cir<SP>13<CR><LF>	s24<CR><LF>	• The value of Y maps as follows:
Select Input 5	cir<SP>14<CR><LF>	s25<CR><LF>	0 = input 1
Select Input 6	cir<SP>15<CR><LF>	s26<CR><LF>	1 = input 2
Select Input 7	cir<SP>16<CR><LF>	s27<CR><LF>	2 = input 3
Select Input 8	cir<SP>17<CR><LF>	s28<CR><LF>	3 = input 4
Select Input Down	cir<SP>18<CR><LF>	*new route*	Etc….
Select Input Up	cir<SP>19<CR><LF>	*new route*	
Output 3 Commands			
Function	**Command**	**Response**	
Select Input 1	cir<SP>20<CR><LF>	s31<CR><LF>	The updated status for output 3. Represented as an ASCII string in the format of "sXY" where:
Select Input 2	cir<SP>21<CR><LF>	s32<CR><LF>	
Select Input 3	cir<SP>22<CR><LF>	s33<CR><LF>	• X is the output channel
Select Input 4	cir<SP>23<CR><LF>	s34<CR><LF>	• The value of Y maps as follows:
Select Input 5	cir<SP>24<CR><LF>	s35<CR><LF>	0 = input 1
Select Input 6	cir<SP>25<CR><LF>	s36<CR><LF>	1 = input 2
Select Input 7	cir<SP>26<CR><LF>	s37<CR><LF>	2 = input 3
Select Input 8	cir<SP>27<CR><LF>	s38<CR><LF>	3 = input 4
Select Input Down	cir<SP>28<CR><LF>	*new route*	Etc….
Select Input Up	cir<SP>29<CR><LF>	*new route*	
Output 4 Commands			
Function	**Command**	**Response**	
Select Input 1	cir<SP>30<CR><LF>	s41<CR><LF>	The updated status for output 4. Represented as an ASCII string in the format of "sXY" where:
Select Input 2	cir<SP>31<CR><LF>	s42<CR><LF>	
Select Input 3	cir<SP>32<CR><LF>	s43<CR><LF>	• X is the output channel
Select Input 4	cir<SP>33<CR><LF>	s44<CR><LF>	• The value of Y maps as follows:
Select Input 5	cir<SP>34<CR><LF>	s45<CR><LF>	0 = input 1
Select Input 6	cir<SP>35<CR><LF>	s46<CR><LF>	1 = input 2
Select Input 7	cir<SP>36<CR><LF>	s47<CR><LF>	2 = input 3
Select Input 8	cir<SP>37<CR><LF>	s48<CR><LF>	3 = input 4
			Etc….

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Output 4 Commands			
Function	**Command**	**Response**	
Select Input Down	cir<SP>38<CR><LF>	*new route*	
Select Input Up	cir<SP>39<CR><LF>	*new route*	
Output 5 Commands			
Function	**Command**	**Response**	
Select Input 1	cir<SP>40<CR><LF>	s51<CR><LF>	The updated status for output 5. Represented as an ASCII string in the format of "sXY" where:
Select Input 2	cir<SP>41<CR><LF>	s52<CR><LF>	• X is the output channel
Select Input 3	cir<SP>42<CR><LF>	s53<CR><LF>	• The value of Y maps as follows:
Select Input 4	cir<SP>43<CR><LF>	s54<CR><LF>	0 = input 1
Select Input 5	cir<SP>44<CR><LF>	s55<CR><LF>	1 = input 2
Select Input 6	cir<SP>45<CR><LF>	s56<CR><LF>	2 = input 3
Select Input 7	cir<SP>46<CR><LF>	s57<CR><LF>	3 = input 4
Select Input 8	cir<SP>47<CR><LF>	s58<CR><LF>	Etc….
Select Input Down	cir<SP>48<CR><LF>	*new route*	
Select Input Up	cir<SP>49<CR><LF>	*new route*	
Output 6 Commands			
Function	**Command**	**Response**	
Select Input 1	cir<SP>50<CR><LF>	s61<CR><LF>	The updated status for output 6. Represented as an ASCII string in the format of "sXY" where:
Select Input 2	cir<SP>51<CR><LF>	s62<CR><LF>	• X is the output channel
Select Input 3	cir<SP>52<CR><LF>	s63<CR><LF>	• The value of Y maps as follows:
Select Input 4	cir<SP>53<CR><LF>	s64<CR><LF>	0 = input 1
Select Input 5	cir<SP>54<CR><LF>	s65<CR><LF>	1 = input 2
Select Input 6	cir<SP>55<CR><LF>	s66<CR><LF>	2 = input 3
Select Input 7	cir<SP>56<CR><LF>	s67<CR><LF>	3 = input 4
Select Input 8	cir<SP>57<CR><LF>	s68<CR><LF>	Etc….
Select Input Down	cir<SP>58<CR><LF>	*new route*	
Select Input Up	cir<SP>59<CR><LF>	*new route*	
Output 7 Commands			
Function	**Command**	**Response**	
Select Input 1	cir<SP>60<CR><LF>	s71<CR><LF>	The updated status for output 7. Represented as an ASCII string in the format of "sXY" where:
Select Input 2	cir<SP>61<CR><LF>	s72<CR><LF>	• X is the output channel
Select Input 3	cir<SP>62<CR><LF>	s73<CR><LF>	• The value of Y maps as follows:
Select Input 4	cir<SP>63<CR><LF>	s74<CR><LF>	0 = input 1
Select Input 5	cir<SP>64<CR><LF>	s75<CR><LF>	1 = input 2
Select Input 6	cir<SP>65<CR><LF>	s76<CR><LF>	2 = input 3
Select Input 7	cir<SP>66<CR><LF>	s77<CR><LF>	3 = input 4
Select Input 8	cir<SP>67<CR><LF>	s78<CR><LF>	Etc….
Select Input Down	cir<SP>68<CR><LF>	*new route*	
Select Input Up	cir<SP>69<CR><LF>	*new route*	
Output 8 Commands			
Function	**Command**	**Response**	
Select Input 1	cir<SP>70<CR><LF>	s81<CR><LF>	The updated status for output 8. Represented as an ASCII string in the format of "sXY" where:
Select Input 2	cir<SP>71<CR><LF>	s82<CR><LF>	• X is the output channel
Select Input 3	cir<SP>72<CR><LF>	s83<CR><LF>	• The value of Y maps as follows:
Select Input 4	cir<SP>73<CR><LF>	s84<CR><LF>	0 = input 1
Select Input 5	cir<SP>74<CR><LF>	s85<CR><LF>	1 = input 2
Select Input 6	cir<SP>75<CR><LF>	s86<CR><LF>	2 = input 3
Select Input 7	cir<SP>76<CR><LF>	s87<CR><LF>	3 = input 4
Select Input 8	cir<SP>77<CR><LF>	s88<CR><LF>	Etc….
Select Input Down	cir<SP>78<CR><LF>	*new route*	
Select Input Up	cir<SP>79<CR><LF>	*new route*	

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RS232, RS485, and TCP/IP System Commands

Misc. Commands			
Function	**Command**	**Response**	
Get Device Type	br<SP><CR><LF>	aDIGI-88B	ASCII string containing the letter "a" followed by the name of the device

Get Device Status	bc<SP><CR><LF>	Ex:
		s11<CR><LF>
		s22<CR><LF>
		s33<CR><LF>
		s44<CR><LF>
		s55<CR><LF>
		s66<CR><LF>
		s77<CR><LF>
		s88<CR><LF>
			ASCII string in the format of: "s1Ys2Ys3Ys4Ys5ys6Ys7Ys8Y" where Y is the input source being routed to each output. Each segment is separated by a <CR><LF>.
			
			The value of Y maps as follows:
			    0 = input 1
			    1 = input 2
			    2 = input 3
			    3 = input 4 etc…
			
			The output channels map as follows:
			    s1 = output 1
			    s2 = output 2
			    s3 = output 3
			    s4 = output 4 etc…

Get IP Mode and Address	gipm<CR><LF>	Static IP Ex:
		GIPM<CR><LF>
		ipm<SP>sip<SP>192<SP>168<SP>001<SP>114<SP><CR><LF>
		
		DHCP IP Ex:
		GIPM<CR><LF>
		ipm<SP>dhc<SP>192<SP>168<SP>001<SP>101<SP><CR><LF>
			ASCII string containing "GIPM<CR><LF> followed by IP mode, the IP address, <CR><LF>
			
			The value of the IP mode map as follows:
			    sip = Static IP Mode
			    dhc = Dynamic IP Mode

Misc. Commands			
Function	**Command**	**Response**	
Set IP Mode - DHCP	dhc<SP><CR><LF>		"DHCP<CR><LF>"
Set IP Mode - Static	sip www xxx yyy zzz<CR><LF> Where: www = 1st octet xxx = 2nd octet yyy = 3rd octet zzz = 4th octet Each octet is separated by a <SP>. Ex: Set IP to 192.168.1.114: sip<SP>192<SP>168<SP>001<SP>114<CR><LF>	Ex: IP<SP>192<SP>168<SP>001<SP>114<CR><LF>	ASCII string that includes the IP address set by the command. "IP www xxx yyy zzz<CR><LF>" ***When using this command via a TCP/IP connection, the response may be truncated due to the loss of communications caused by changing the IP address.

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Discrete IR Commands

An addendum to this manual can be found on the Intelix website that contains discrete IR codes for all crosspoint commands. You can import these codes into your 3rd party control system for use with an IR driver.

Troubleshooting

Matrix does not power on

Verify power outlet is active.
Verify continuity in power cable.

Cannot view 3D content

Copy EDID from output to input.
Verify display is 3D compatible.
Verify source device can output 3D content.
Verify twisted pair cable does not exceed 40 meters.

Cannot hear surround sound audio

Copy EDID from output to input.
Verify output can broadcast surround sound audio.
Verify source device is configured to output surround sound audio.

Technical Specifications

DIGI-88B

I/O Connections	
HDMI Inputs	Eight (8) HDMI Type A Receptacle Connector (1 per input)
HDMI Outputs	Eight (8) HDMI Type A Receptacle Connector (1 per output)
HDBaseT Outputs	Eight (8) 8P8C port (Shielded RJ45) (1 per output)
IR Input	Eight (8) 3.5 mm jack (TRS) (1 per input)
IR Output	Eight (8) 3.5 mm jack (TS) (1 per output)
AC Power Inlet	IEC C14
Control, Rear Panel	RS232 via DE-9, RS485 via 8P8C, TCP/IP via 8P8C, IR via 3.5mm TRS
Control, Front Panel	Push Button, IR
DIP Switch	Four switch DIP
Supported Audio, Video, and Control	
HDTV Video Resolutions	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
VESA Video Resolutions	Up to 1920x1200
Maximum Video Compatibility at 70 m	Deep Color 36/30/24 Bit at 1080p
Maximum Video Compatibility at 40 m	Deep Color 48 Bit at 1080p and 3D
Supported 3D Formats	Field Alternative (interlaced), Frame Packing, Line Alternative Full, Side-By-Side Half, Side-By-Side Full, 2D + Depth, 2D + Depth + Graphics + Depth
DIP Switch Modes	1080i/2.0, 1080p 3D/2.0, 1080p/2.0, 1080p/5.1, 1080p/7.1, Copy and Use EDID from Display
Video Compliance	HDMI, HDCP, and CEC (Consumer Electronics Control)
Embedded Audio	Up to PCM 8 channel, Dolby Digital TrueHD, and DTS-HD Master Audio
Input DDC Signal	5.0 volts p-p (TTL)
Input Video Signal	0.5 to 1.0 volts p-p
IR Carrier Frequency Range	33-55kHz at 5 volts
Ethernet	100BaseT
RS232 Baud Rate	9600 baud
HDBaseT Signal Characteristics	
Maximum Distance	70 m
Cable Requirements	Solid core shielded Category 5e, Category 6 or greater with TIA/EIA-568B crimp pattern
Bandwidth	10.2 Gbps
Gain	0 dB – 10 dB at 100 MHz
Signal to Noise Ratio (SNR)	> 70 dB at 100 MHz over 100 m
Return Loss	< -30 dB at 5 KHz
Total Harmonic Distortion (THD)	< 0.005% at 1 KHz
Min-Max Signal Level	< 0.3 V – 1.45 Vp-p
Differential Phase Error	±10° at 135 MHz over 100 m
Chassis and Environmental	
Enclosure	Painted Steel
Dimensions	440 mm x 340 mm x 100 mm (17.32 in x 13.4 in x 3.91 in)
Rack Spacing	2 RU
Shipping Weight	6.85 kg (15.1 lbs)
Operating Temperature	0° to +40° C (+32° to +104° F)
Operating Humidity	20% to 90%, Non-condensing
Storage Temperature	-10° to +60° C (+14° to +140° F)
Storage Humidity	20% to 90%, Non-condensing
Power, ESD, and Regulatory	
Power Supply Input	100-240VAC
Power Consumption	70 watts (max)
ESD Protection	15kV
Regulatory	CE, RoHS
Other	
Warranty	2 years
Diagnostic Indicators	LCD output status and power LEDs
Included Accessories	Installation Guide, IR Remote, IR Emitter (8 ea), IR Receiver (8 ea), USB/RS232 adaptor, US Power Cable, Mounting Brackets with screws, Chassis Feet
Compatible Receivers (A/V Only)	DIGI-HD70-R
Compatible Receivers (A/V and IR)	DIGI-HDE-R, DIGI-HD60C-R

DIGIB-EMT

Signal Characteristics	
Wide-Band Infrared (IR)	30 KHz to 56 KHz at 5V DC reference
Physical Characteristics	
Material, Emitter Housing	Deep red translucent plastic
Dimensions, Emitter Housing	6 mm x 9.5 mm x 15 mm (0.24 in. x 0.37 in. x 0.59 in.)
Cable Length	2 m (6.56 ft)
Cable Connector	3.5 mm (1/8 in.) mono (TS) plug
Shipping Weight	0.5 lbs. (0.23kg)
Other	
Warranty	2 years
What's in the Box	(4) DIGIB-EMT
Compatible Devices	FLX-BI4, FLX-BO4, DIGI-HDE-S, DIGI-HDE-R, DIGI-HD70C-S, DIGI-HD70C-R, DIGI-HD-IR3-S, DIGI-HD-IR3-R, DIGI-HD-IR3-WP-S, DIGI-HD-IR3-WP-R, DIGI-HD-8X8, DIGI-HD-4X8, DIGI-HD-4X4, DIGI-HD-4X2, DIGI-VGASD2-S, DIGI-VGASD2-R, DIGI-VGASD2-T4, DIGI-VGASD2-T8

DIGIB-EYE

Signal Characteristics	
Wide-Band Infrared (IR)	30 KHz to 56 KHz at 5V DC reference
Physical Characteristics	
Material, Emitter Housing	Black plastic housing; smoke gray lens housing
Dimensions, Emitter Housing	13.5 mm x 9 mm x 29.5 mm (0.53 in. x 0.35 in. x 1.16 in.)
Cable Length	1 m (3.28 ft)
Cable Connector	3.5 mm (1/8 in.) stereo (TRS) plug
Shipping Weight	0.5 lbs. (0.23kg)
Other	
Warranty	2 years
What's in the Box	(1) DIGIB-EYE (hardware not included)
Compatible Devices	FLX-BI4, FLX-BO4, DIGI-HDE-S, DIGI-HDE-R, DIGI-HD70C-S, DIGI-HD70C-R, DIGI-HD-IR3-S, DIGI-HD-IR3-R, DIGI-HD-IR3-WP-S, DIGI-HD-IR3-WP-R

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Thank you for your purchase.

Please contact us with your questions and comments.

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