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FLEX MATRIX

Complete Guide to the Intelix Flex Matrix Switcher Series

Flex some signal distribution muscle with Liberty's full line of Intelix Flex Matrices!

The Intelix Flex Matrix Series was designed with ultimate flexibility in mind. There are over 80 possible input card to output card combinations. Since the systems are modular, system integrators can customize their installation according to their customer's needs, not the limitations of available hardware.

Ideal for any facility requiring high-definition multimedia distribution, the Intelix line of Matrix Switchers offers a comprehensive variety of solutions for Pro AV Installer.

Contents //

WHICH INTELIX MATRIX SWITCHER IS RIGHT FOR **YOUR** INSTALLATION?

THE MATRIX **MATRIX**

COMING SOON!

NEW 4K!

	FLX-3232	FLX-1616	FLX-88	FLX-64	FLX-44	DIGI-88B	DIGI-44B	DL-HDM44
Inputs	MODULAR - Up to 32 (HDMI, DVI, HDBaseT, or Universal Scaling VGA/YUV/SVID/CVID)	MODULAR - Up to 16 (HDMI, DVI, HDBaseT, or Universal Scaling VGA/YUV/SVID/CVID)	MODULAR - Up to 8 (HDMI, DVI, HDBaseT, or Universal Scaling VGA/YUV/SVID/CVID)	[4] HDMI [2] HDBaseT	[4] HDMI	[8] HDMI	[4] HDMI	[4] HDMI
Outputs	MODULAR - Up to 32 (HDMI, DVI, or HDBaseT)	MODULAR - Up to 16 (HDMI, DVI, or HDBaseT)	MODULAR - Up to 8 (HDMI, DVI, or HDBaseT)	[4] HDBaset + [2] HDMI (Mirrored with HDBT out 1&2)	[4] HDBaset + [2] HDMI (Mirrored with HDBT out 1&2)	[4] HDBaseT + [4] HDMI (Mirrored with HDBT out 1-8)	[4] HDBaseT + [4] HDMI (Mirrored with HDBT out 1-8)	[4] HDMI
PoE (Power Over Ethernet)				X	X			
Max Resolution	WUXGA (1920X1200)	WUXGA (1920X1200)	WUXGA (1920X1200)	WUXGA (1920X1200)	WUXGA (1920X1200)	1080p & 3D	1080p & 3D	4096x2160 @30hz
Advanced HDCP handling	X	X	X	X	X			
Audio Embedding	X	X	X	X				
Audio De-embedding	X	X	X	X	X			
Audio Breakaway				X				
RS232 Routing				X	X			
RS232 Tunneling	X	X	X	X	X			
IR Routing					X	X	X	
IR Tunneling	X	X	X	X	X	X	X	
IR,RS232 Control	X	X	X	X	X	X	X	X
TCP/IP Control	X	X	X	X	X	X	X	
WEB Gui				X	X	X	X	X

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FLEXIBLE CARD-BASED MATRIX SWITCHER - 8 INPUT X 8 OUTPUT

The Intelix *FLX-88* is a modular video matrix switcher that supports up to eight inputs and eight outputs. There are two input slots and two output slots; each modular input or output card supports up to four device connections. In addition to front panel control, the FLX-88 can be controlled via IR, RS232, or TCP/IP connections.

Features and Benefits:

· Plug and play card-based design allows user to select between HDBaseT, HDMI, and DVI-D inputs and outputs

· VGA input cards are available

· Any input type to any output type (VGA - input only)

· 200ms internal switching time - viewable switching times will vary according to destination devices

· RS232, IR, and TCP/IP control

· HDMI and HDCP compliant

Application:

· HDBaseT, HDMI, DVI-D, and VGA signal switching and routing

· Extend 1080p up to 229 feet with FLX-BI4 and DIGI-HD70-R (video and audio) or DIGI-HDE (video, audio and control) or up to 195 ft using the DIGI-HD60C-R (video, audio, and control)

· Ideal for digital signage, corporate facilities, churches, schools, conference centers, and any other facility that requires high definition multimedia distribution

FLEX

3

GO DIRECTLY TO WEB PAGE

DOWNLOAD

Did You Know?

We provide control drivers for our Flex Matrices that save you hours of programming time!

Download our free drivers right from the product pages at www.LibAV.com

See page 6 for I/O card optoins

Tech Specs

PART NUMBERS

FLX-88

SUPPORTED INPUT CARDS

FLX-BI4, FLX-DI4, FLX-HI4, FLX-RI4, FLX-HI4A

SUPPORTED OUTPUT CARDS

FLX-BO4, FLX-DO4, FLX-HO4, FLX-BO4A, FLX-HO4A

INPUT AND OUTPUT CARD SECURING MECHANISM

Thumbscrew

CONTROL, REAR PANEL

RS232 via DE-9, TCP/IP via 8P8C Connector

CONTROL, FRONT PANEL

Push Button, IR

MATERIAL

Black Painted Aluminum

DIMENSIONS

483mm x 356mm x 89mm (19 in. x 14 in. x 3.5 in.)

RACK SPACING

2 RU

SHIPPING WEIGHT

5.9 kg (13 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 SUPPLY

100-240VAC 50/60 Hz

POWER CONSUMPTION

60 watts fully populated

ESD PROTECTION

15kV

REGULATORY

CE, RoHS

WARRANTY

2 years

DIAGNOSTIC INDICATORS

LCD output status and power LED

INCLUDED ACCESSORIES

Installation Guide, IR Remote, RS232 Cable, Power Cable, Modular Metal Blank (4 ea), Rubber Feet (4 ea) and Intelix Pocket Screwdriver

*Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches. Intelix specifications are based on straight-through cabling with standard-grade Cat 5e unless noted otherwise.

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FLEXIBLE CARD-BASED MATRIX SWITCHER - 16 INPUT X 16 OUTPUT

The Intelix *FLX-1616* is a modular video matrix switcher that supports up to 16 inputs and 16 outputs. There are four input slots and four output slots; each modular input or output card supports up to four device connections. In addition to front panel control, the FLX-1616 can be controlled via IR, RS232, or TCP/IP connections.

FLEX

4

GO DIRECTLY TO WEB PAGE

Features and Benefits:

· Plug and play card-based design allows user to select between HDBaseT, HDMI, and DVI-D inputs and outputs
· VGA input cards are available
· Any input type to any output type (VGA - input only)
· 200ms internal switching time - viewable switching times will vary according to destination devices
· RS232, IR, and TCP/IP control
· HDMI and HDCP compliant

Application:

· HDBaseT, HDMI, DVI-D, and VGA signal switching and routing
· Extend 1080p up to 229 feet with FLX-BI4 and DIGI-HD70-R (video and audio) or DIGI-HDE (video, audio and control) or up to 195 ft using the DIGI-HD60C-R (video, audio, and control)
· Ideal for digital signage, corporate facilities, churches, schools, conference centers, and any other facility that requires high definition multimedia distribution
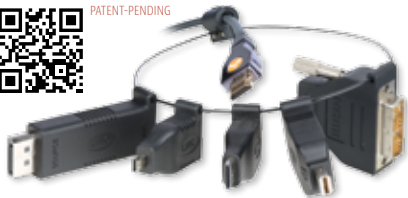
DIGITALINX

YOU MIGHT ALSO NEED:
HDMI Presentation Adapter Ring

Keep adapters secured and at ready to go in any presentation environment!

DL-AR
www.LibAV.com

PATENT-PENDING

Tech Specs

PART NUMBERS

FLX-1616

SUPPORTED INPUT CARDS

FLX-BI4, FLX-DI4, FLX-HI4, FLX-RI4, FLX-HI4A

SUPPORTED OUTPUT CARDS

FLX-BO4, FLX-DO4, FLX-HO4, FLX-BO4A, FLX-HO4A

INPUT AND OUTPUT CARD SECURING MECHANISM

Thumbscrew

CONTROL, REAR PANEL

RS232 via DE-9, TCP/IP via 8P8C Connector

CONTROL, FRONT PANEL

Push Button, IR

MATERIAL

Black Painted Aluminum

DIMENSIONS

483mm x 356mm x 133mm (19 in. x 14 in. x 5.25 in.)

RACK SPACING

3 RU

SHIPPING WEIGHT

7.71 kg (17 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 SUPPLY

100-240VAC 50/60 Hz

POWER CONSUMPTION

135 watts fully populated

ESD PROTECTION

15kV

REGULATORY

CE, RoHS

WARRANTY

2 years

DIAGNOSTIC INDICATORS

LCD output status and power LED

INCLUDED ACCESSORIES

Installation Guide, IR Remote, RS232 Cable, Power Cable, Modular Metal Blank (4 ea), Rubber Feet (4 ea) and Intelix Pocket Screwdriver

*Distances and picture quality may be affected by cable grade, cable quality, source and destination equipment, RF and electrical interference, and cable patches. Intelix specifications are based on straight-through cabling with standard-grade Cat 5e unless noted otherwise.

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FLEXIBLE CARD-BASED MATRIX SWITCHER - 32 INPUT X 32 OUTPUT

The Intelix *FLX-3232* is a modular video matrix switcher that supports up to 32 inputs and 32 outputs. There are eight input slots and eight output slots; each modular input or output card supports up to four device connections. In addition to front panel control, the FLX-3232 can be controlled via IR, RS232, or TCP/IP connections.

Features and Benefits:
· Plug and play card-based design allows user to select between HDBaseT, HDMI, and DVI-D inputs and outputs
· VGA input cards are available
· Any input type to any output type (VGA - input only)
· 200ms internal switching time - viewable switching times will vary according to destination devices
· RS232, IR, and TCP/IP control
· HDMI and HDCP compliant

Application:
· HDBaseT, HDMI, DVI-D, and VGA signal switching and routing
· Extend 1080p up to 229 feet with FLX-BI4 and DIGI-HD70-R (video and audio) or DIGI-HDE (video, audio and control) or up to 195 ft using the DIGI-HD60C-R (video, audio, and control)
· Ideal for digital signage, corporate facilities, churches, schools, conference centers, and any other facility that requires high definition multimedia distribution

FLEX
5
GO DIRECTLY TO WEB PAGE

Liberty WIRE & CABLE
YOU MIGHT ALSO NEED: **HDMI Patch Cables**
Liberty's wide selection of HDMI cables offer reliability and perfect options for any installation! www.LibAV.com

See page 6 for I/O card optoins

Tech Specs

PART NUMBERS
FLX-3232

SUPPORTED INPUT CARDS
FLX-BI4, FLX-DI4, FLX-HI4, FLX-RI4, FLX-HI4A

SUPPORTED OUTPUT CARDS
FLX-BO4, FLX-DO4, FLX-HO4, FLX-BO4A, FLX-HO4A

INPUT AND OUTPUT CARD SECURING MECHANISM
Thumbscrew

CONTROL, REAR PANEL
RS232 via DE-9, TCP/IP via 8P8C Connector

CONTROL, FRONT PANEL
Push Button, IR

MATERIAL
Black Painted Aluminum

DIMENSIONS
483mm x 356mm x 222mm (19 in. x 14 in. x 8.75 in.)

RACK SPACING
5 RU

SHIPPING WEIGHT
9.98 kg (22 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 SUPPLY
100-240VAC 50/60 Hz

POWER CONSUMPTION
280 watts fully populated

ESD PROTECTION
15kV

REGULATORY
CE, RoHS

WARRANTY
2 years

DIAGNOSTIC INDICATORS
LCD output status and power LED

INCLUDED ACCESSORIES
Installation Guide, IR Remote, RS232 Cable, Power Cable, Modular Metal Blank (4 ea), Rubber Feet (4 ea) and Intelix Pocket Screwdriver

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FLX-HI4A // INPUT CARD

Features & Benefits:
· HDBaseT input card for FLX-88, FLX-1616, FLX-3232
· Four HDMI inputs
· RS232 and bidirectional IR embedding
· HDMI and HDCP compliance
· Stereo analog audio embedding on each input

Application:
· Ideal for corporate facilities, churches, schools, conference centers, and any other application requiring HDMI connectivity

FLX-BI4 // INPUT CARD

Features & Benefits:
· HDBaseT input card for FLX-88, FLX-1616, FLX-3232
· Four HDBaseT RJ45 inputs
· RS232 and bidirectional IR embedding
· Can be used with DIGI-HD60C-S, DIGI-HD70-S or DIGI-HDE-S to receive signal from remote sources
· Supports HDBaseT Specifications; HDMI and HDCP compliance

Application:
· Ideal for installations requiring long HDMI runs and remote control of source & destination devices
· Receive signal from remote sources: 1080p up to 229 feet

FLX-DI4 // INPUT CARD

Features & Benefits:
· Single link DVI-D input card for FLX-88, FLX-1616, FLX-3232
· Four DVI-D inputs
· HDMI and HDCP compliance

Application:
· Ideal for the medical industry and other applications requiring high-definition locking connectors

FLX-RI4 // INPUT CARD

Features & Benefits:
· VGA input card for FLX-88, FLX-1616, FLX-3232
· Four VGA inputs
· Supported signal types: VGA-UXGA, RGBHV, RGsB, RsGsBs, Component Video, S-Video & Composite Video

Application:
· Analog video scaling card
· Ideal for applications with legacy devices

FLX-HO4A // OUTPUT CARD

Features & Benefits:
· HDMI output card for FLX-88, FLX-1616, FLX-3232
· Four HDMI outputs
· HDMI and HDCP compliant

Application:
· Ideal for corporate facilities, churches, schools, conference centers, and any other application requiring HDMI connectivity

FLX-BO4A // OUTPUT CARD

Features & Benefits:
· HDBaseT output card for FLX-88, FLX-1616, FLX-3232
· Four HDBaseT RJ45 outputs
· RS232 embedding
· Stereo analog audio de-embedding on each output
· Can be used with DIGI-HD60C-S, DIGI-HD70-S or DIGI-HDE-S to transmit signal to remote displays
· Supports HDBaseT Specifications; HDMI and HDCP compliance

Application:
· Ideal for installations requiring long HDMI runs and remote control of source & destination devices
· Transmit signal from remote sources: 1080p up to 229 feet

FLX-DO4 // OUTPUT CARD

Features & Benefits:
· Single link DVI-D output card for FLX-88, FLX-1616, FLX-3232
· Four DVI-D outputs
· HDMI and HDCP compliance

Application:
· Ideal for the medical industry and other applications requiring high-definition locking connectors

6

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DIGITALINX **intelix**

HDMI/HDBASET MATRIX SWITCHER - 4 INPUT X 4 OUTPUT

The DIGIALINX *FLX-44* is a four input by four output HDBaseT/HDMI matrix switcher. The Intelix FLX-44 matrix improves the ease of installation similar to previous Intelix HDMI matrix switchers.

The FLX-44 features HDBaseT twisted pair extension for each output, and simultaneous HDMI on the first two outputs, 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, matrixcontrol via IR, RS232 tunneling, and HDCP up to 60 meters (196 feet).

Each HDBaseT output port supplies power to the attached extender, eliminating the need for a power supply at the display end. Each output features a stereo audio de-embedder for connection to amplifiers or DSPs.

FLEX
7
GO DIRECTLY
TO WEB PAGE

Features and Benefits:
· 4 HDMI inputs
· 4 HDBaseT outputs
· 2 HDMI outputs
· Matrix powers remote HDBaseT receivers
· RS232 and IR transmission for display control
· IR callback for source control
· Audio de-embedding per output
· RS232, Ethernet, IR and front panel control

Application:
· Corporate board, training and conference room HD AV distribution
· Higher education classroom and lecture hall multiple input and output presentation solution
· Residential HDMI multimedia switching and distribution
· House of worship AV distribution

YOU MIGHT ALSO NEED:
Liberty WIRE & CABLE
Dual Shielded HDBaseT Cable
Perfect for horizontal LAN 10/100/1000BaseT networking, verified to exceed Category 5e performance
LLINX-HD

THE PERFECT MATCH!
CATEGORY 5E SHIELDED PLUG
RJ45-STP-L5E

Tech Specs

HDMI INPUTS
One (1) HDMI Type A Receptacle Connector per input

HDMI OUTPUTS
One (1) HDMI Type A Receptacle Connector per output

HDBaseT OUTPUTS
One (1) 8P8C port (Shielded RJ45) per output, 1 and 2 only

IR INPUT
Four (4) 3.5 mm jack (TRS)

IR OUTPUT
Four (4) 3.5 mm jack (TS) per output

12V DC POWER
One (1) 5.5 mm Outside Diameter, 2.1 mm Inside Diameter Barrel

CONTROL, REAR PANEL
RS232 via DE-9, TCP/IP via RJ45, IR via 3.5mm TRS

CONTROL, FRONT PANEL
Push Button, IR

DIP SWITCH
Three switch DIP

HDTV VIDEO RESOLUTIONS
480i, 480p, 576i, 576p, 720p, 1080i, 1080p

VESA VIDEO RESOLUTIONS
Up to 1920x1200

EMBEDDED AUDIO COMPATIBILITY
Up to PCM 5 channel, Dolby Digital TrueHD, and DTS-HD Master Audio

MAXIMUM DISTANCE PER LINKED UNIT (CAT 5E)
1080p 3D: 66 feet, 1080p: 100 feet, 1080i/720p: 200 feet, 480i/480p/576i/576p: 200 feet

MAXIMUM DISTANCE PER LINKED UNIT (SHIELDED CAT 6A)
1080p 3D: 100 feet, 1080p: 150 feet, 1080i/720p: 300 feet, 480i/480p/576i/576p: 300 feet

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 AMPLIFIER BANDWIDTH
1.65 Gbps

INPUT DDC SIGNAL
5.0 volts p-p (TTL)

INPUT VIDEO SIGNAL
0.5 to 1.0 volts p-p

SUPPORTED IR CARRIER FREQUENCY
36 - 40 kHz at 5 volts

ENCLOSURE
Painted Steel

DIMENSIONS
438mm x 213mm x 41mm (17.25 in. x 8.375 in. x 1.625 in.)

RACK SPACING
1 RU

SHIPPING WEIGHT
4.08 kg (9 lbs)

OPERATING TEMPERATURE
0° to +40°C (+32° to +104°F)

OPERATING HUMIDITY
20% to 90%, Non-condensing

COMPATIBLE RECEIVERS
HDBaseT receivers

STORAGE TEMPERATURE
-10° to +60°C (+14° to +140°F)

STORAGE HUMIDITY
20% to 90%, Non-condensing

POWER SUPPLY
12vDC / 5A

POWER CONSUMPTION
13 watts

ESD PROTECTION
15kV

REGULATORY
FCC, CE

WARRANTY
2 years

DIAGNOSTIC INDICATORS
LCD output status and power LEDs

INCLUDED ACCESSORIES: Power supply, installation guide, IR remote, IR emitter (4 ea.), IR receiver (4 ea.), IR extension cable, mounting brackets with screws, chassis feet

LIBERTY AV SOLUTIONS

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COMPLETE GUIDE TO THE INTELIX FLEX MATRIX SWITCHER SERIES

LIBERTY
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Phone: 719-260-0061

Fax: 719-260-0075

Toll-Free: 800-530-8998

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