

# KD-Pro2x1X | KD-Pro4x1X

**2x1/4x1 4K/18G HDMI Switchers  
with Analog & Digital Audio De-Embed Output,  
IR, RS-232, IP Control**

## Operating Instructions



**KD-Pro2x1X**



**KD-Pro4x1X**

**key digital**<sup>®</sup>

The Experts in Digital Video Technology and Solutions™

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[KD-Pro2x1X](#)

**Default IP Address: 192.168.1.239**

Please visit [www.keydigital.com](http://www.keydigital.com) for the latest product documentation and software downloads. Product features and specifications are subject to change without notice.



[KD-Pro4x1X](#)

**Always follow the instructions provided in this Operating Manual.**

## Introduction

Key Digital® KD-Pro2x1X/KD-Pro4x1X are 4K/18G HDMI switchers with analog and digital audio de-embedding, auto switching, and app-ready controllability. Designed for professional audio video installations in conference rooms, huddle spaces, classrooms, theater and gaming spaces, KD-Pro2x1X/KD-Pro4x1X enables multiple video sources to connect to a single video display while analog (3.5mm & balanced/unbalanced) and digital (optical & PCM) audio de-embed ports may feed audio of the selected source into an amplifier, DSP, or sound bar. Integrating KD-Pro2x1X/KD-Pro4x1X with KD-Amp220 will enable an app-ready all-in-one solution for control of video switching with sound and speech enforcement. KD-Pro2x1X/KD-Pro4x1X HDMI switchers support all SD, HD, VESA and Ultra HD/4K video standards with HDR header information included in a variety of 4K EDID handshakes. In addition to IR, RS-232, and TCP/IP control, KD-Pro2x1X/KD-Pro4x1X can also be controlled via trigger voltage and features status-monitoring LEDs.

## Key Features

- ▶ **HDMI Switching:** 2/4 HDMI sources to 1 HDMI output/display
- ▶ **Ultra HD/4K:** Supports up to 4096x2160 or 3840x2160 24/25/30/60hz at 4:4:4 (signals up to 18Gbps bandwidth)
- ▶ **HDCP Licensing:** Fully licensed and compatible with HDCP 2.2
- ▶ **HDR10 and Dolby Vision:** More life-like images through a greater range of luminance levels
- ▶ **Audio De-embedding:** Audio of the selected HDMI input is de-embedded at the analog (3.5mm stereo & L/R balanced/unbalanced) and digital (optical & PCM) connectors.
- ▶ **Key Digital® App Ready:** Scan & detect population for pre-built GUI and TCP/IP control via Key Digital® App
- ▶ **KD-AMP220 Control Mode:** Command forward to KD-AMP220 for an all-in-one user-friendly control UI of video switching, audio and speech enforcement
- ▶ **Auto-Sensing:** Automatic selection of newly detected source and switching from newly disconnected source via hot plug detection voltage when enabled
- ▶ **Resolution Support:** Supports all SD, HD, and VESA (VGA, SVGA, XGA, WXGA, SXGA, UXGA) up to 4096x2160p.
- ▶ **Deep Color Support:** Up to UHD/4K 30Hz 4:4:4/12 bits or 60Hz 4:4:4/8 bit
- ▶ **Full Buffer System™:** Manages TMDS re-clocking / signal re-generation, HDCP authentication to source & display, and EDID Control handshake
- ▶ **EDID Management:** Internal library with 15 internal EDID handshakes including 4K with HDR in addition to native EDID data copied from the output/display 1
- ▶ **Lossless Compressed Digital Audio:** Dolby® TrueHD, Dolby® Digital Plus, DTS-HD Master Audio™, and Dolby® Atmos
- ▶ **CEC Pass-thru:** From connected display to selected HDMI source
- ▶ **Control:** Front panel button, serial IR, optical IR, RS-232, trigger in, and TCP/IP controllable
- ▶ **Control System Support:** Key Digital® App ready. Compass Control® Pro ready. Fully controllable by all IR, RS-232, and TCP/IP supported control systems via open API.

## Included Accessories

- ▶ Power Supply: KD-PS12W5VC 5V/2.4A DC power jack, screw-in type
- ▶ IR Remote Control: KD-RMSWPROK
- ▶ 6ft USB 2.0 (Micro) to USB A cable
- ▶ Rack Ears: 1x long, 1x short rack ear for mounting in full-width rack
- ▶ 2x 6-pin terminal blocks for control, analog audio

## Quick Setup Guide

### CONNECT:

Test for proper operation of the unit and cables in your system before permanently securing the unit for final installation. Ensure that you leave enough ventilation space to provide sufficient airflow and cooling.

1. Begin with the KD-Pro2x1X/KD-Pro4x1X unit and all input/output devices turned off with power and CAT cables removed
2. Connect your HDMI sources to the input ports of KD-Pro2x1X/KD-Pro4x1X unit
3. Connect your HDMI display to the output port of KD-Pro2x1X/KD-Pro4x1X unit
4. Connect analog and/or digital audio outputs to amplifier, DSP, AV receiver, or sound bar
5. Connect control system and/or PC to TCP/IP, RS-232, Serial IR port or IR sensor
6. Screw-in the power supply to the KD-Pro2x1X/KD-Pro4x1X unit, then, plug-in to power outlet
7. Power on input and output devices

### CONFIGURE:

#### EDID

The default EDID handshake is 4Kx2K@60, 18G, HDR, 2ch audio (setting A). Use the EDID rotary dial to choose the desired handshake that will be provided to the connected source.

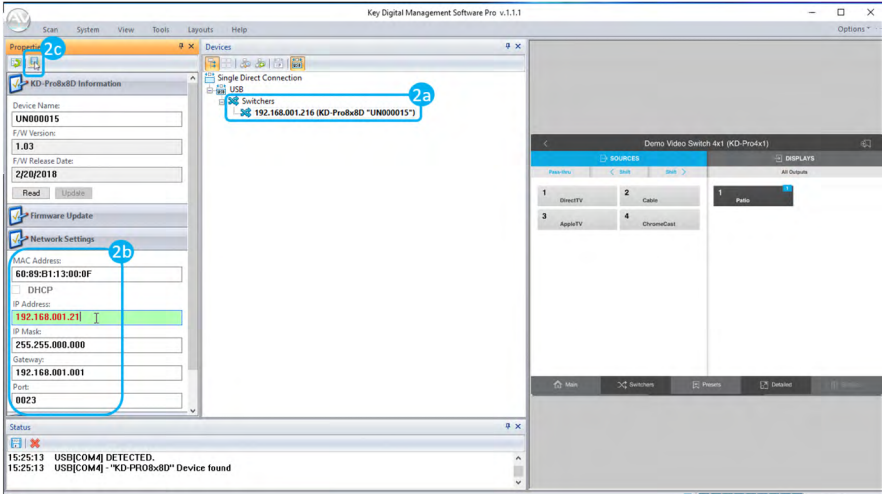


#### Key Digital® Management Software™ Pro

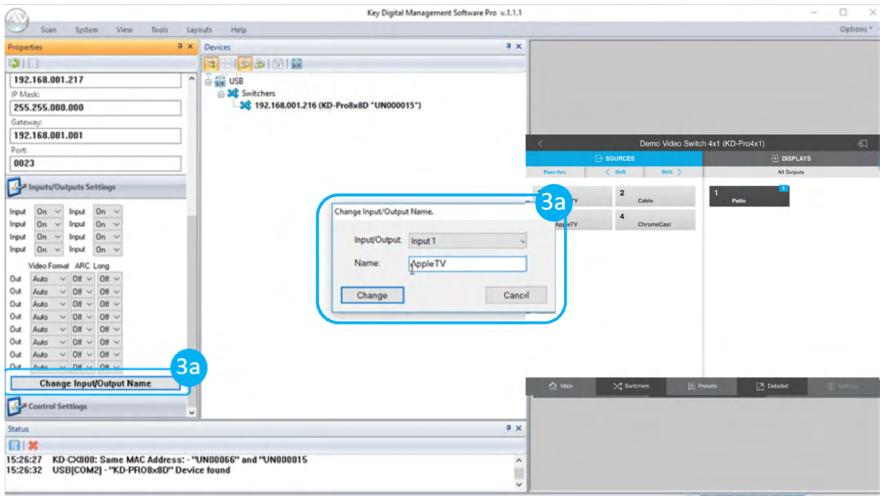
Configure other settings with Key Digital® Management Software™ Pro (KDMS™ Pro) ([downloaded here](#)), which may also be used to control your unit.

1. Open the Key Digital® Management Software™ Pro software and perform a USB scan (fig. 1)
2. Choose the detected device from the Devices window (fig. 2a)
3. In the Network Settings section of the Properties window, enter the desired IP settings (fig. 2b)
  - » a. IP Address (default is 192.168.1.239)
  - » b. Subnet Mask (default is 255.255.255.0)
  - » c. Gateway (default is 192.168.1.1)
  - » d. Port (default is 23)
    - » i. Note: If using KD-App, please do not change the port number.
4. Save (fig. 2c)





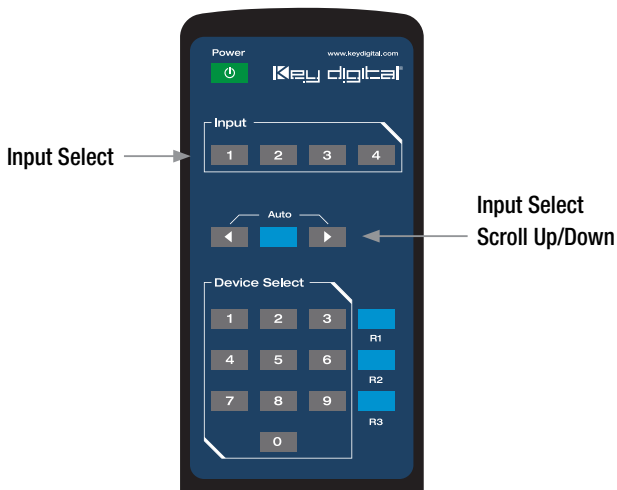
5. If using KD-App or Key Digital® Management Software™ (KDMS™) for control, set the desired Unit Name in the device information section, and Input/Output names by entering the Input/Output Settings section of the properties window, and selecting the Change Input/Output Name button (fig. 3a), selecting the desired input/output and entering the name (fig. 3b):



6. Additional settings may be adjusted in the KDMS™ software. Full access to all settings/commands is achieved via terminal session using Tera Term or PuTTY software.
7. Your unit is now ready to control from the KDMS™ Control Panel, KD-App, or by professional control system.

## Control

### Option 1: Control via Remote Control



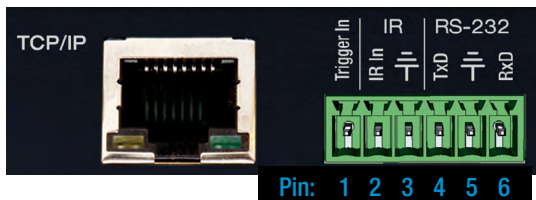
### Option 2: Control via KD-App, Key Digital® Management Software™

KD-Pro2x1X/KD-Pro4x1X are controllable by Key Digital's user-friendly [iOS App](#) (downloadable in the App Store) or Key Digital® Management Software™ ([downloadable here](#)).

- Connect and Configure your unit as described in this Quick Setup Guide.
- Download and open KD-App and/or KDMS
- Ensure the iOS device and/or PC computer are on the same network with KD-Pro2x1X/KD-Pro4x1X
- Perform a network scan in the KD-App/KDMS
- Select and control the selected KD-Pro2x1X/KD-Pro4x1X
- If desired, the KD-App allows users to create presets for KD-Pro2x1X/KD-Pro4x1X current input selection.

### Option 3: Control via professional control system

KD-Pro2x1X/KD-Pro4x1X allows control over serial interface for bi-directional communication.



- › For RS-232 control use pins 4, 5, and 6 of the Main Control port

### Connection Protocol:

- › Baud Rate = 57,600 bits per second
  - › Data Bits = 8
  - › Stop Bits = 1
  - › Parity = Non
  - › Flow Control = None
  - › Carriage Return: Required at end of string
- › For TCP/IP control, the **default static IP address is 192.168.1.239, with port 23**

Default static IP address:  
**192.168.1.239, port 23**

- › For the past 10 years, most Key Digital switches have supported a standard HDMI switching command. KD-Pro2x1X/KD-Pro4x1X is also controllable by this command, so if you have previously integrated Key Digital matrixes by third-party control systems you may have success using the same driver/module.
  - › **SP0xxSlyy** : Matrix Switching – Video + Audio together
    - › xx = output number (01)
    - › yy = input number (01-02 / 01-04)



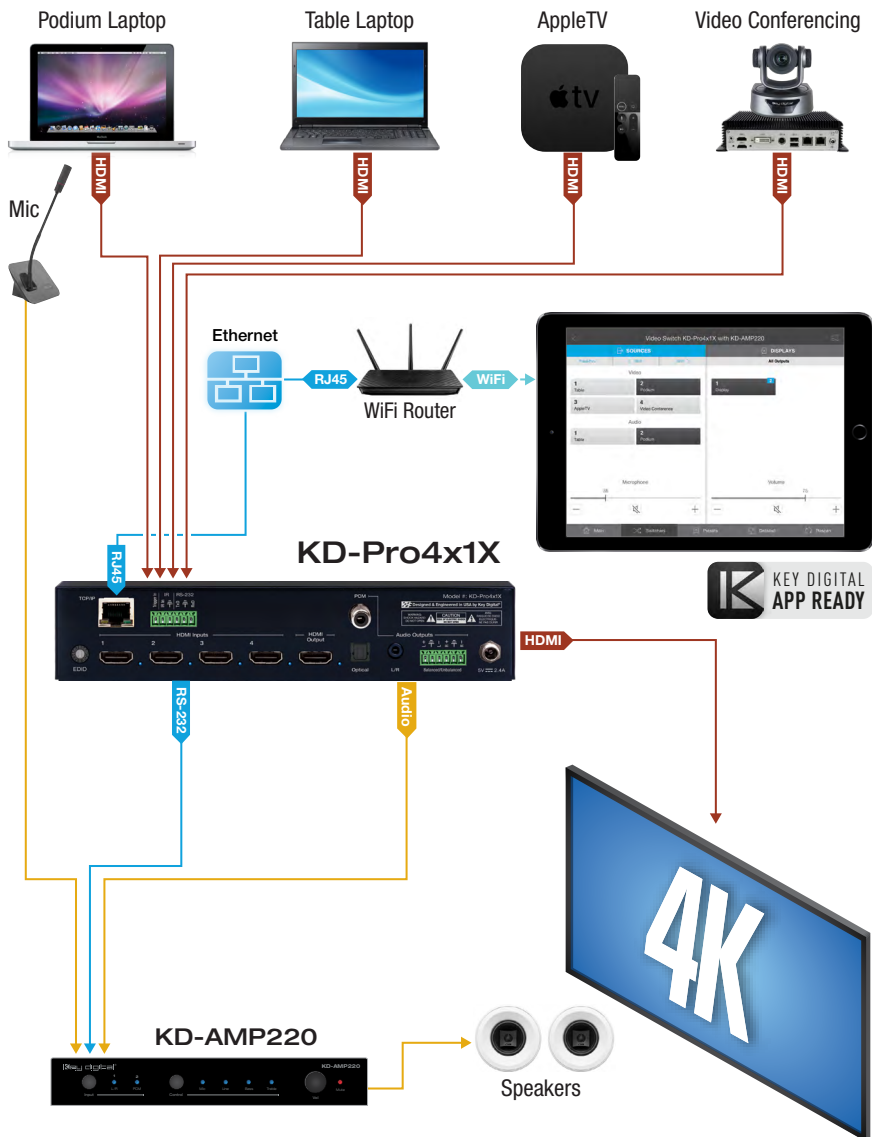
**Test for proper operation of the unit and cables in your system before permanently securing the unit for final installation. Ensure that you leave enough ventilation space to provide sufficient airflow and cooling.**

### Rack Mounting:

KD-Pro2x1X/KD-Pro4x1X includes a half-rack blank and a standard short rack ear for mounting in a standard-width rack. If you wish to mount two units side by side you may do so with optional KD-BKTHF.



## Application Example



Note: 18Gbps signal extension requires all 18Gbps supported HDMI cables.



# Connections, LEDs, Buttons, Slide Switches, Rotaries

## VIDEO



### HDMI Inputs

- The 2/4 HDMI inputs are located on the left side of the back panel.
- Blue LED illuminates solid to indicate an active HDMI signal is incoming.



### HDMI Output

- 1 HDMI located on the center to right side of the back panel.
- Blue LED illuminates solid when Hot Plug Detection (HPD) is received from the connected display/output device

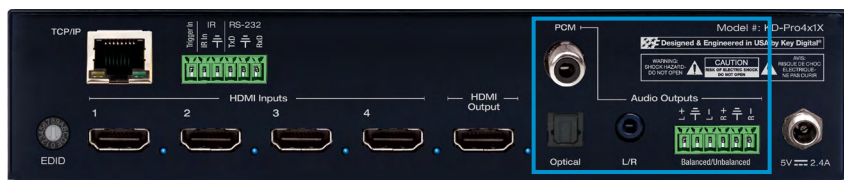
### HDMI Input/Output Port Specifications

- Supports up to UHD/4K @ 50/60 fps [4:4:4], 18Gbps signals
  - » See Supported standard 4K Video Formats table
- Supports HDR10
- Compliant with HDCP 2.2 and previous
- Supports lossless compressed audio formats including Dolby® TrueHD, Dolby® Digital Plus, Dolby Atmos®, and DTS-HD Master Audio™
- CEC pass-through from display to selected HDMI source
- For Display Port sources/monitors, use active converters

## Supported standard 4K Video Formats:

	Resolution	Bandwidth
1	4K@24/25/30 [4:4:4] 8bit	< 10.2Gbps
2	4K@24/25/30 [4:2:2] 8/10/12bit	< 10.2Gbps
3	4K@50/60 [4:2:0] 8bit	< 10.2Gbps
4	4K@24/25/30 [4:4:4] 10/12bit	< 18Gbps
5	4K@50/60 [4:2:2] 8/10/12bit	< 18Gbps
6	4K@50/60 [4:2:0] 10/12bit	< 18Gbps
7	4K@50/60 [4:4:4] 8bit	< 18Gbps

## AUDIO OUTPUTS

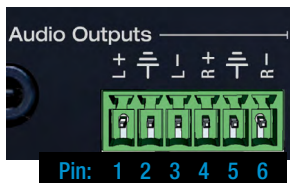


### Analog L/R Audio Output

- › 3.5mm stereo jack with de-embedded audio from the selected HDMI source
- › Drives audio signals up to 1 VRMS with a sampling rate of 192KHz
- › Automatically mutes if audio formatting is not PCM 2ch

### Analog L/R Balanced/Unbalanced Audio Output

- › 6-pin terminal block with de-embedded audio from the selected HDMI source
- › Drives audio signals up to 2 VRMS with a sampling rate of 192KHz
- › Automatically mutes if audio formatting is not PCM 2ch
- › The Pin assignment is as follows:
  - › Left + is Pin 1; Left - is Pin 3; Left Ground is Pin 2.
  - › Right + is Pin 4; Right - is Pin 6; Right Ground is Pin 5.



### Optical Audio Output

- › Optical audio output with de-embedded audio from the selected HDMI source
- › SPDIF IEC 60958 format
- › Compatible with sampling rates up to 96KHz
- › Supports multi-channel Dolby® and DTS™ surround formats up to 5.1
- › Automatically mutes if audio formatting is not PCM, Dolby®, or DTS™

## PCM Digital Audio Output

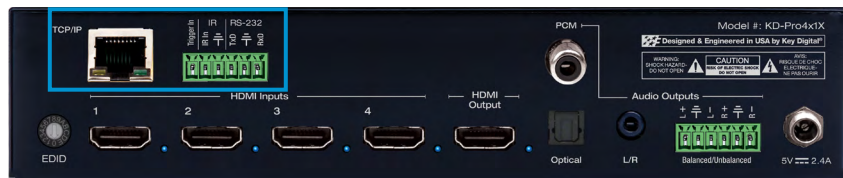
- RCA audio output with de-embedded audio from the selected HDMI source
- SPDIF IEC 60958 format
- Compatible with sampling rates up to 192KHz
- Supports multi-channel Dolby® surround formats up to 5.1 and DTS™ 6.1
- Automatically mutes if audio formatting is not PCM, Dolby®, or DTS™

## For All Audio De-embed Outputs

- There are no volume or tone control features
- There are no DSP features

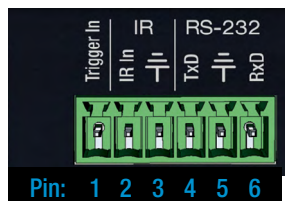
Audio Input Signal Format	Audio L/R Output	Digital Audio Output (PCM & Optical)
2ch PCM	Pass-Through	Pass-Through
Multi-Channel PCM	Front L/R Pass-Through	MUTE
Dolby DTS	MUTE	Pass-Through
HD Audio	MUTE	MUTE

## UNIT CONTROL



## Main Control Port

- 6-Pin Terminal Block for Trigger In, IR and RS-232
- TCP/IP and RS-232 commands may be found in the TCP/IP & RS-232 Commands section
- Pin out:
  - Pin 1 = Trigger In
  - Pin 2 = IR In
  - Pin 3 = IR/Trigger Ground
  - Pin 4 = RS-232 Tx Data
  - Pin 5 = RS-232 Ground
  - Pin 6 = RS-232 Rx Data




## TCP/IP Control Port

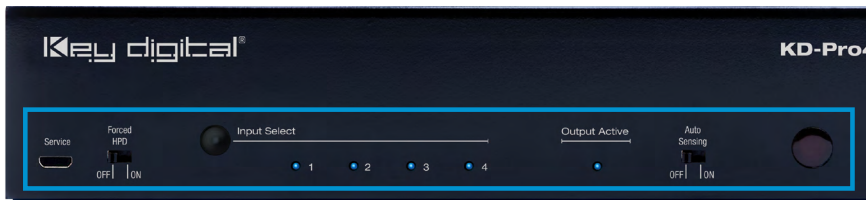
- » Default static IP address is 192.168.1.239, port 23
- » Connect an Ethernet cable from the KD-Pro2x1X/KD-Pro4x1X to a network router or connect a straight through cable directly from a PC
- » Unit configuration, control, and firmware updates are most commonly achieved with Key Digital Management software downloaded at [www.keydigital.com](http://www.keydigital.com)

## EDID Handshaking Rotary

- » EDID authentication is provided from the unit to the connected inputs/sources.
- » The EDID file (AKA "handshake") is selected using the EDID rotary on the unit and provides a list of compatible video and audio formats as well as digital data, informing the source device what it should output.
- » Most sources will comply with a new EDID file without a power-cycle, but devices do behave differently
- » Adjustments may speed up sync time during source selection.

Position	EDID Handshake Description	EDID Rotary	
0	Copy EDID from HDMI Output 1	 <p>Note: Default position is "A"</p>	
1	1080i, 2CH AUDIO		
2	1080i, DOLBY/DTS 5.1		
3	1080i, HD AUDIO		
4	1080p, 2CH AUDIO		
5	1080p, DOLBY/DTS 5.1		
6	1080p, HD AUDIO		
7	4Kx2K@60, 10.2G, HDR, 2CH AUDIO		
8	4Kx2K@60, 10.2G, HDR, DOLBY/DTS 5.1		
9	4Kx2K@60, 10.2G, HDR, HD AUDIO		
A	4Kx2K@60, 18G, HDR, 2CH AUDIO		
B	4Kx2K@60, 18G, HDR, DOLBY/DTS 5.1		
C	4Kx2K@60, 18G, HDR, HD AUDIO		<b>IMPORTANT:</b> Please apply light pressure to the EDID rotary when making your selection.
D	1280x720p@60 DVI (no audio)		
E	1920x1080p@60 DVI (no audio)		
F	4Kx2K@30, 10.2G, HDR, 2CH AUDIO		

## FRONT PANEL



### Input Select button

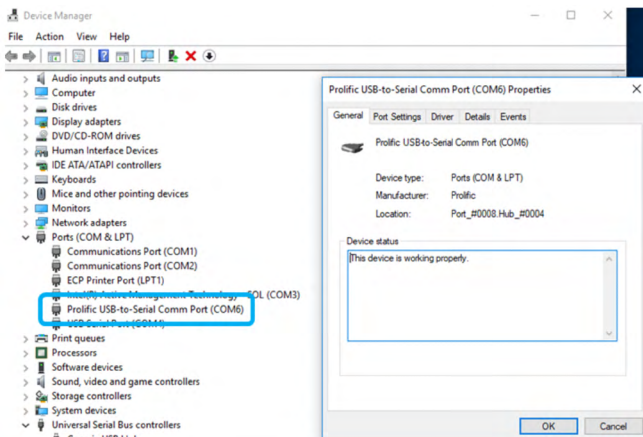
- » Used to choose which connected source is output to the connected display/device
- » Selecting a source with the Input Select button or IR remote will disable Auto Sensing Mode IF Auto Sensing has not been set via the front switch.
- » **To factory reset the unit**, press and hold for approx. 10 seconds until the front LEDs blink twice

### Output Active LED

- » Blue LED illuminates solid when Hot Plug Detection (HPD) is received from the connected display/output device

### Service USB

- » Micro USB port
- » Used for configuration and control from PC via KDMS Pro, KDMS, or third-party control terminal
- » Used for firmware updates (consult with Key Digital tech support before updating firmware)
- » Supports USB driver for Windows 10, 7, XP, Mac, Linux
- » Will register as "Prolific USB-to-Serial Comm Port in Device Manager
- » Can be used as RS-232 control port. Baud rate is 57,600.



## **Forced HPD Troubleshooting Tool**

- » When ON, Hot Plug Detection voltage is fixed on to the connected display
- » Standard HPD behavior when set to OFF position

## **Auto Sensing**

- » **ON** » Unit will automatically select a newly detected active source. If current source is disconnected or becomes inactive, auto sensing will sequentially advance to an active input/source
- » **OFF** » Unit is in normal mode and regular switching functionality will occur
- » **IF Auto sensing has been set via any method other than the front toggle switch**, it will be automatically disabled when the KD-Pro2x1X/4x1X is manually controlled by the front panel button, IR, RS-232, TCP/IP, or USB control. If fixed Auto Sensing is required, please set via the front toggle switch

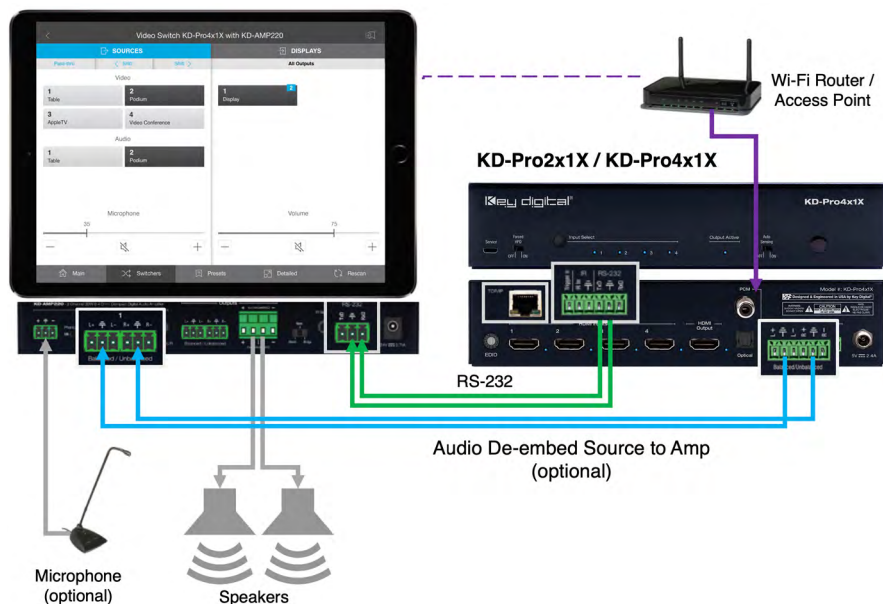
## **IR Sensor**

- » Used to collect line-of-sight IR from remote control
- » Receives signals from a 90° angle at up to 30ft away.
- » Mount an IR emitter from Compass Control Pro or to control by another professional control system

## Integration with KD-AMP220 (KD-AMP220 Control Mode)

### KD-App control of KD-Pro2x1X/KD-Pro4x1X & KD-AMP220

> KD-AMP220 Control mode enabled

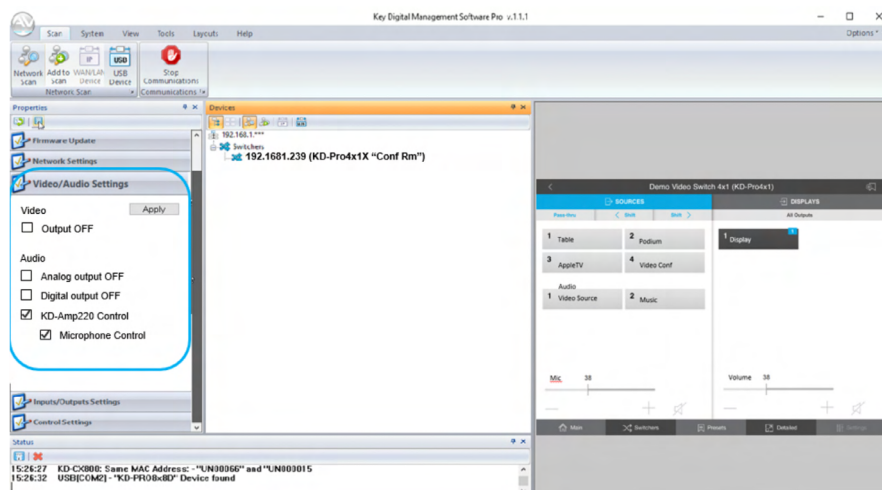


KD-Pro2x1X/KD-Pro4x1X can receive TCP/IP commands and forward to KD-AMP220 via RS-232 to enable a video switching + enforced sound and speech system with a user-friendly pre-built KD-App GUI. In this configuration, control of KD-AMP220 is 1-directional.

### Control Pinout:

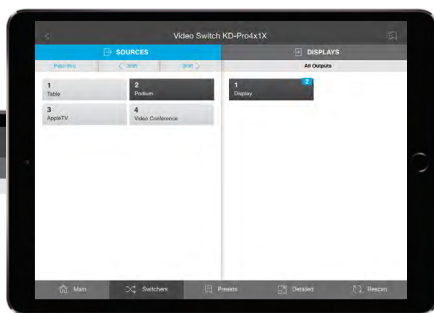
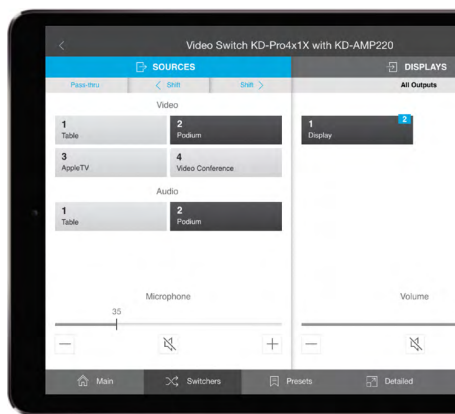
KD-Pro2x1X / KD-Pro4x1X		KD-AMP220
RS-232 TxD (Pin 4)	➔	RS-232 RxD (Pin 3)
Ground (Pin 5)	➔	Ground (Pin 2)

Enable KD-Amp220 Control Mode in KD Management Software™ Pro (KDMS™ Pro). Connect to the unit as described in the **Quick Setup Guide** section, and choose the KD-AMP220 Control selection box in the Audio/Video properties section. To control the mix level of KD-AMP220's microphone input, choose the selection box for Microphone Control.



As the Key Digital app scans the network and detects KD-Pro2x1X/KD-Pro4x1X, it will make the KD-AMP220 controls visible for an all-in-one page user interface.

### KD-App GUI without KD-AMP220 Mode enabled



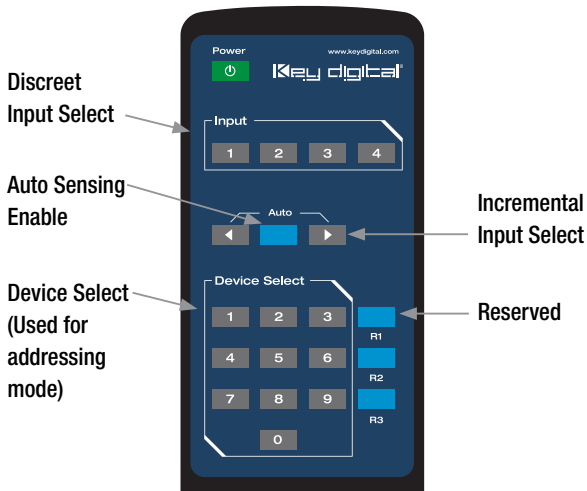
### KD-App GUI with KD-AMP220 Mode enabled



## IR Remote Control

Model: KDRMSWPROK (uses CR2025 battery)

Please note that some remote buttons may have no functionality



### Auto Sensing

See Auto Sensing section of Connections, LEDs, Buttons, Slide Switches, Rotaries section for more information.

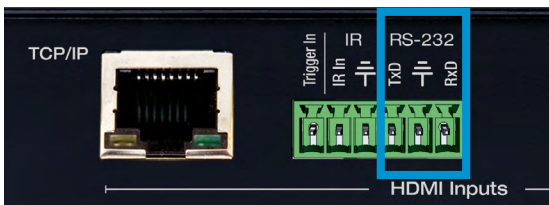
## TCP/IP & RS-232 Commands

KD-Pro2x1X/KD-Pro4x1X allows control over serial interface for bi-directional communication.

Use pins 4, 5, and 6 for RS-232 communication

Serial interface may also be accessed using a TCP/IP connection

➤ **Default IP address is 192.168.1.239, with default port 23**



## Connection Protocol:

- » Baud Rate = 57,600 bits per second
- » Data Bits = 8
- » Stop Bits = 1
- » Parity = Non
- » Flow Control = None
- » Carriage Return: Required at end of string

### > Notes:

- » Commands are not case-sensitive
- » Spaces are shown for clarity; commands should NOT have any spaces
- » After a new command is received, a prompt should be sent back

### KD-Pro2x1X Help Command (H). Returns entire API in readable format:

```
-----
--                               Key Digital Systems HELP                               --
-----
-- KD-Pro2x1X                      System Address = 00      F/W Version : 1.00      --
--
-- Azz          : All Commands may have Prefix System Address zz=[01-99]  --
-- H            : Help                                                    --
-- PF          : Power Off                                                --
-- PN          : Power ON                                                 --
-- STA        : Show Global System Status                                --
--
-- Video Output Setup Commands: yy = [01-02,U,D]                          --
-- SPO SI yy   : Set Output to Video Input yy                            --
-- SPO01 SI yy : Set Output to Video Input yy                            --
-- SPO ON/OFF  : Set Output ON/OFF                                        --
-- SPO DBG ON/OFF : Set Output Debug Mode ON/OFF                          --
--
-- Audio Output Setup Commands: [E=Enable, D=Disable]                      --
-- SPO AA E/D  : Enable/Disable External Analog Audio Output            --
-- SPO DA E/D  : Enable/Disable External Optical Audio Output           --
-- SPO AMP ON/OFF : Set AMP220 Control Mode ON/OFF                       --
-- SPO MIC ON/OFF : Set AMP220 MIC Mode ON/OFF                           --
--
-- Input/Output/Device Naming Commands (Max. 16 Chars)                    --
-- SPI xx WN cccccccccccccccc : Write Input xx Name                     --
-- SPI xx RN                   : Read Input xx Name                       --
-- SPO xx WN cccccccccccccccc : Write Output xx Name                     --
-- SPO xx RN                   : Read Output xx Name                       --
-- SPC WN cccccccccccccccc    : Write Device Name                       --
-- SPC RN                      : Read Device Name                         --
--
-- Network Setup, ( xxx=[000-255], zzzz=[0001~9999] )                      --
-- SPcETIPa xxx.xxx.xxx.xxx : Set Host IP Address to xxx.xxx.xxx.xxx     --
-- SPcETIPM xxx.xxx.xxx.xxx : Set Net Mask to xxx.xxx.xxx.xxx           --
-- SPcETIPR xxx.xxx.xxx.xxx : Set Route IP Address to xxx.xxx.xxx.xxx    --
-- SPcETIPP zzzz             : Set TCP/IP Port to zzzz                    --
-- SPcETIPB                  : Apply New Network Config                   --
--
-- System Address Setup Command: xx = [00-99], 00 = Single                 --
-- SPC Axx                   : Set System Address to xx                   --
--
-- System Control Setup Commands:                                          --
-- SPC AS x                  : Set Auto Sense Mode x = [0:OFF,1=AUTO,2=FORCED ON] --
-- SPC FB E/D                : Enable/Disable Front Panel Buttons         --
-- SPC RSB z                 : Set RS232 Baud Rate to z bps, z=[0-4]      --
-----
```

```

--                               [0:57600, 1:38400, 2:19200, 3:9600, 4:4800]           --
-- SPC DF      : Reset to Factory Defaults                                           --
-- SPC DF00    : Reset to Factory Defaults without Network Reset                     --
-----

```

### KD-Pro2x1X Status Command (STA). Returns unit status and settings in readable format:

```

-----
--                               Key Digital Systems HELP                           --
-----
-- KD-Pro4x1X          System Address = 00      F/W Version : 1.00                --
--
-- Azz                : All Commands may have Prefix System Address zz=[01-99]    --
-- H                  : Help                                                       --
-- PF                 : Power Off                                                  --
-- PN                 : Power ON                                                   --
-- STA                : Show Global System Status                                --
--
-- Video Output Setup Commands: yy = [01-02,U,D]                                  --
-- SPO SI yy          : Set Output to Video Input yy                              --
-- SPO01 SI yy        : Set Output to Video Input yy                              --
-- SPO ON/OFF         : Set Output ON/OFF                                          --
-- SPO DBG ON/OFF    : Set Output Debug Mode ON/OFF                              --
--
-- Audio Output Setup Commands: [E=Enable, D=Disable]                             --
-- SPO AA E/D        : Enable/Disable External Analog Audio Output                --
-- SPO DA E/D        : Enable/Disable External Optical Audio Output               --
-- SPO AMP ON/OFF    : Set AMP220 Control Mode ON/OFF                            --
-- SPO MIC ON/OFF    : Set AMP220 MIC Mode ON/OFF                                --
--
-- Input/Output/Device Naming Commands (Max. 16 Chars)                            --
-- SPI xx WN ccccccccccccccc : Write Input xx Name                               --
-- SPI xx RN              : Read Input xx Name                                    --
-- SPO xx WN ccccccccccccccc : Write Output xx Name                             --
-- SPO xx RN              : Read Output xx Name                                  --
-- SPC WN ccccccccccccccc    : Write Device Name                                 --
-- SPC RN                  : Read Device Name                                     --
--
-- Network Setup, ( xxx=[000-255], zzzz=[0001~9999] )                               --
-- SPCTIPA xxx.xxx.xxx.xxx : Set Host IP Address to xxx.xxx.xxx.xxx              --
-- SPCTIPM xxx.xxx.xxx.xxx : Set Net Mask to xxx.xxx.xxx.xxx                    --
-- SPCTIPR xxx.xxx.xxx.xxx : Set Route IP Address to xxx.xxx.xxx.xxx            --
-- SPCTIPP zzzz             : Set TCP/IP Port to zzzz                            --
-- SPCTIPB                  : Apply New Network Config                           --
--
-- System Address Setup Command: xx = [00-99], 00 = Single                         --
-- SPC Axx      : Set System Address to xx                                        --
--
-- System Control Setup Commands:                                                  --
-- SPC AS x      : Set Auto Sense Mode x = [0:OFF,1=AUTO,2=FORCED ON]            --
-- SPC FB E/D    : Enable/Disable Front Panel Buttons                            --
-- SPC RSB z     : Set RS232 Baud Rate to z bps, z=[0-4]                          --
--                               [0:57600, 1:38400, 2:19200, 3:9600, 4:4800]      --
-- SPC DF      : Reset to Factory Defaults                                           --
-- SPC DF00    : Reset to Factory Defaults without Network Reset                     --
-----

```

**KD-Pro4x1X Help Command (H). Returns entire API in readable format:**

```

-----
--                               Key Digital Systems STATUS                               --
-----
-- KD-Pro2x1X,      System Address=00,      Device Name: PRO2x1_0001      --
-- F/W Version : 1.00                                     --
-- Power : ON                                             --
-- Front Panel Button : Enabled                           --
-- Auto Sensing Mode : OFF                                --
-- RS232 : Baud Rate=57600bps, Data=8bit, Parity=None, Stop=1bit --
--                                                         --
-- Network Setting(Telnet Server) Status                 --
-- MAC Address = 60:89:B1:22:20:01                       --
-- Host IP Address = 192.168.001.239                     --
-- Net Mask = 255.255.255.000                            --
-- Router IP Address = 192.168.000.001                   --
-- TCP Port = 0023                                       --
--                                                         --
-- Video Input 01 : EDID = DEFAULT A, LINK = ON         --
-- Video Input 02 : EDID = DEFAULT A, LINK = OFF        --
--                                                         --
-- Video Output   : Input = 01, Output = ON , LINK = ON , DBG = OFF --
--                                                         --
-- Audio Output   : Analog = Enabled, Optical = Enabled  --
--                 AMP220 Mode = OFF, MIC Mode = OFF    --
-----

```

**KD-Pro4x1X Status Command (STA). Returns unit status and settings in readable format:**

```

-----
--                               Key Digital Systems STATUS                               --
-----
-- KD-Pro4x1X,      System Address=00,      Device Name: PRO4x1_0001      --
-- F/W Version : 1.00                                     --
-- Power : ON                                             --
-- Front Panel Button : Enabled                           --
-- Auto Sensing Mode : OFF                                --
-- RS232 : Baud Rate=57600bps, Data=8bit, Parity=None, Stop=1bit --
--                                                         --
-- Network Setting(Telnet Server) Status                 --
-- MAC Address = 60:89:B1:23:20:01                       --
-- Host IP Address = 192.168.001.239                     --
-- Net Mask = 255.255.255.000                            --
-- Router IP Address = 192.168.000.001                   --
-- TCP Port = 0023                                       --
--                                                         --
-- Video Input 01 : EDID = DEFAULT A, LINK = ON         --
-- Video Input 02 : EDID = DEFAULT A, LINK = OFF        --
-- Video Input 03 : EDID = DEFAULT A, LINK = ON         --
-- Video Input 04 : EDID = DEFAULT A, LINK = OFF        --
--                                                         --
-- Video Output   : Input = 01, Output = ON , LINK = ON , DBG = OFF --
--                                                         --
-- Audio Output   : Analog = Enabled, Optical = Enabled  --
--                 AMP220 Mode = OFF, MIC Mode = OFF    --
-----

```

# Specifications

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## Technical:

- » HDMI Input (Each): HDMI Connector, Type A, 19 Pin Female
- » HDMI Output: HDMI Connector, Type A, 19 Pin Female
- » HDMI Bandwidth: TMDS bandwidth 18Gbps
- » DDC Signal (Data): Input DDC Signal - 5 Volts p-p (TTL)
- » HDMI Video/Audio Signal: Input Video Signal - 1.2 Volts p-p
- » 3.5mm Stereo Audio Output: Line level audio on TRS connector. Drives 1 VRMS line audio output with a sampling rate of 192KHz
- » Balanced/unbalanced Audio Output: Line level audio on 6-pin terminal block. Drives 2VRMS line audio output with a sampling rate of 192KHz
- » Digital PCM Audio Output: RCA female for digital audio following SPDIF format (IEC 60958). Supports sampling rate up to 192KHz
- » Digital Optical Audio Output: Toslink optical female for digital audio following SPDIF format (IEC 60958). Supports sampling rate up to 96KHz
- » PCM Max Output Level: 1Vpp on 75 $\Omega$ , DC coupling
- » Audio Bandwidth: 20Hz to 20kHz @ 0dBu
- » TND + Noise: 0.33% @0dBu @ 1kHz
- » Wired IR: modulated IR signal input, 0-5V TTL or -10 to +10V
- » Power Supply: KD-PS12W5VC 5V/2.4A, 100-240VAC, 50-60Hz, Interchangeable head, screw-in connector

## General:

- » Regulation: CE, RoHS, WEEE, EAC
- » Enclosure: Black Metal
- » Product Dimensions: 8.25" x 4.0" x 1.7" (210.82 x 101.9 x 43.96mm)
- » Packaging Dimensions: 10.75" x 8.9" x 2.2" (275 x 225 x 55mm)
- » Product Weight: 0.9 lb
- » Shipping Weight: 2 lb

## Important Product Warnings:

---

1. Connect all cables before providing power to the unit.
2. Test for proper operation before securing unit behind walls or in hard to access spaces.
3. If installing the unit into wall or mounting bracket into sheet-rock, provide proper screw support with bolts or sheet-rock anchors.

## Safety Instructions:

---

Please be sure to follow these instructions for safe operation of your unit.

1. Read and follow all instructions.
2. Heed all warnings.
3. Do not use this device near water.
4. Clean only with dry cloth.
5. Install in accordance with the manufacturer's instructions.
6. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
7. Only use attachments/accessories specified by the manufacturer.
8. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way including:
  - » Damage to the power supply or power plug
  - » Exposure to rain or moisture

## Power Supply Use:

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You **MUST** use the Power Supply **PROVIDED** with your unit or you **VOID** the Key Digital® Warranty and risk damage to your unit and associated equipment.

## Contacting Key Digital®

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### Technical Support

For technical questions about using Key Digital® products, please contact us at:

- › Phone: 914-667-9700
- › E-mail: [tech@keydigital.com](mailto:tech@keydigital.com)

### Repairs and Warranty Service

Should your product require warranty service or repair, please obtain a Key Digital® Return Material Authorization (RMA) number by contacting us at:

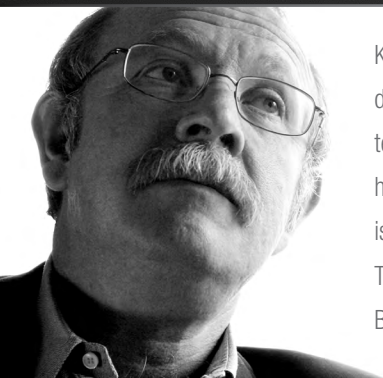
- › Phone: 914-667-9700
- › E-mail: [rma@keydigital.com](mailto:rma@keydigital.com)

### Warranty Information

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All Key Digital® products are built to high manufacturing standards and should provide years of trouble-free operation. They are backed by a Key Digital Limited 3 Year Product Warranty Policy.

<http://www.keydigital.com/warranty.htm>



Key Digital<sup>®</sup>, led by digital video pioneer Mike Tsinberg, develops and manufactures high quality, cutting-edge technology solutions for virtually all applications where high-end video and control are important. Key Digital<sup>®</sup> is at the forefront of the video industry for Home Theater Retailers, Custom Installers, System Integrators, Broadcasters, Manufacturers, and Consumers.

Key Digital<sup>®</sup> :: 521 East 3rd Street :: Mount Vernon, NY 10553

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