# UNDER TABLE 5X2 HDMI SWITCHER    User's Guide

**Welcome!**

Everyone at Altinex greatly appreciates your purchase of the UT260-052. We are confident that you will find it to be reliable and simple to use. If you need support, please do not hesitate to call us at 714-990-2300.

At Altinex, we are committed to developing unique and state of the art Signal Management Solutions® for demanding audiovisual installations. Welcome to the Altinex family of satisfied customers around the world!

## 1. Precautions and Safety Warnings

- Please read this manual entirely before using your UT260-052. You can download a full version of this manual at www.altinex.com. These instructions are to ensure the reliable operation of your switcher and to prevent fire and shock hazards. Please read them carefully and heed all warnings.

**1.1 General**

- Qualified Altinex service personnel or their authorized representatives must perform all service.

**1.2 Installation Precautions**

- To prevent fire or shock, do not expose this unit to water or moisture. Do not place the UT260-052 in direct sunlight, near heaters or heat-radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.

- Handle the UT260-052 carefully. Dropping or jarring can cause damage.

- Do not pull any cables attached to the UT260-052.

**1.3 Cleaning**

- Clean the UT260-052 with a dry cloth only. Never use strong detergents or solvents such as alcohol or thinner. Do not use a wet cloth or water to clean the card. Do not clean or touch any component or PCB.

**1.4 FCC Notice**

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 2 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions found herein, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

- Any changes or modifications to the unit not expressly approved by Altinex, Inc. could void the user's authority to operate the equipment.

## 2. Installation Procedures

Note:    Download and read the entire online manual to become familiar with the UT260-052 and for detailed installation instructions and configuration details.



Step 1:   The enclosure mounts to the underside of the table using standard 6-32 self-tapping screws; mounting wings are built-on.

Step 2:   Connect video input cables including all ShareTime and retractable units. Do NOT connect to HDMI sources until later.

Step 3.   Connect the input select "Show Me" buttons to the 5-pin terminal blocks.

Step 4.   Connect the digital video outputs directly to the HDTVs. If only one display is used, connect it to Output 1 on the switcher.

Step 5.   Connect the switcher to the LAN to allow the switcher to be configured or for TCP control. The default IP address is 192.168.10.84, port 23 for connecting directly without a LAN. On the LAN, the switcher takes a DHCP assigned IP.

Step 6.   Apply power to the unit; initialization takes about 20 seconds by which time the internal media player idle image is displayed. The switcher is shipped with a basic configuration and can be controlled using the input select buttons or the ShareTime series CEC controllers. Inputs can now be connected to HDMI sources.

Step 7.   On a LAN, the switcher IP can be discovered via a UDP broadcast of "?Altinex" to port 30304.

## 3. Warranty and Return Policies

Please visit the Altinex website at www.altinex.com for details on warranty and return policies. In the case of a unit needing repair, please complete a RMA (return material authorization) form by clicking the Warranty link located on the bottom of the Altinex homepage. Once completed, please email the form to support@altinex.com.

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## 4. Technical Specifications

Specifications are subject to change due to design improvements. Please see www.altinex.com for up to date information.

| Features/Description | UT260-052 |
|---|---|
| **Input Connectors** | |
| Digital Video + Audio | HDMI F, Type A (5) |
| Power | DC Jack 2.5 mm F (1) |
| Configuration/Control | RJ-45, Ethernet (1) |
| Media Player | USB 2.0 Type A F (1) |
| **Output Connectors** | |
| Digital Video + Audio | HDMI F, Type A (2) |
| Analog Audio | 3.5 mm Audio F (2) |
| **Control Connectors** | |
| Output Select | 5-pin terminal block (5) |
| **Compatibility** | |
| Signal types | HDMI |
| Signal resolution | HD Resolutions up to 1080p |
| **Accessories Included** | |
| Power adapter | +5V VDC, 3A |
| AC Power Cord, NEMA to IEC | PC5301US |
| Mounting Hardware | #6-32x1/2 self-tapping screws (4) |
| **Optional Accessories** | |
| Collaborative Control Adapter – ShareTime | ST100-001 |
| Digital Scaler | VP500-102 |
| Retractable HDMI Control Adapter | RT300-101 |
| Retractable HDMI Cable | RT300-125 |
| ShareTime HDMI cable | CB300-101 |
| Active Flat HDMI Cable | CB300-102 |
| Cable –Nook Jr. Table top with display select | CNK321 |
| Cable –Nook Jr. Table top with US AC power/display select | CNK341 |

Table 1. UT260-052 General

| Mechanical | UT260-052 |
|---|---|
| Material | Aluminum |
| Color | Black |
| Height | 1.0 in (25 mm) |
| Width | 7.5 in (191 mm) |
| Depth | 3.9 in (99 mm) |
| Weight | 0.76 lbs. (0.35 kg) |
| Connector Panel | Black Anodized |
| T° Operating | 10℃-45℃ |
| Humidity | 90% non-condensing |
| MTBF (calc.) | 38,000 hrs. |

Table 2. UT260-052 Mechanical

| Electrical | UT260-052 |
|---|---|
| **Video Input Signals** | |
| Digital Video + Audio | HDMI Standard |
| **Video Output Signals** | |
| Digital Video + Audio | HDMI Standard |
| **Power** | |
| +5V | 1.5 A (7.5W) max. |

Table 3. UT260-052 Electrical

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**5. About Your UT260-052**

- Automatic TV power on/off through CEC Control for compatible HDTVs

- Automatic input detection

- TCP/IP control of input select

- HDMI resolutions up to 1080p (no MHL support)

- Automatic switching using ShareTime controllers

- Show Me button support for CNK inputs

- Breakout analog stereo audio

- 4 GB USB flash drive provided for internal Media Player

The UT260-052 switcher has 5 HDMI video inputs that can be routed to 2 outputs. In addition to the 5 external inputs, there is a sixth internal media player input available to play MPEG files from a USB stick as a screensaver or logo presentation. Each of the five inputs is paired with an LED to indicate the presence of a signal. Input selection is supported through any of the following: ShareTime controllers, TCP/IP commands using a third-party controller, Altinex tabletop units with display select (Show Me) support, and automatic switching to the last input connected.

TV power and input selection is controlled through the use of CEC commands from the switcher. At power up or upon waking up the system, the switcher turns on the TVs and then sets the TV inputs to those connected to the switcher outputs. The entire system is ready to go in only a few seconds; no TV remote controls are necessary. The TVs must be CEC compatible with the CEC option enabled.

Additionally, the switcher can be used with the Altinex Digital Scaler VP500-102. The switcher provides power for the scaler using standard minimum 28AWG 3 ft. HDMI cable; no external scaler power required. The scaler can be used to drive a constant resolution to a display preventing annoying on screen messages such as loss of signal or input resolution changes.

The low profile and compact design of the HDMI switcher has several modes of operation.

Collaborative mode for productive meetings allows users to interactively share their content with others. Users select their content to display. Upon de-select, the internal screen saver from the media player is displayed on the output.

Video conferencing mode uses Input 5 to override the media player and replace its content with that from the video conferencing equipment.

TCP/IP control using third party controllers and touch screens.

When not in use the switcher has standby and sleep modes. In standby mode, the selected USB MPEG file is played as a screensaver.

Sleep mode turns off the displays and enters power save mode to finish the day. The switcher can be configured for a "never sleep" mode where the switcher remains on and displaying media player content even when no inputs are present.

Last is upgrade mode in which the switcher is set for a firmware update. Once in upgrade mode, the upgrade must be completed or the switcher's power must be reset.

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## 6. Application Diagrams
**Diagram 1: Typical Setup**



Computer

HD TV

Control over Ethernet

AC Power

HDMI Cable

Audio Cable

HDMI Cable

HD TV

HDMI Cable

Control Cable

Power Supply included with unit

HDMI Cable

ETHERNET

Audio Cable

UT260-052
UNDER TABLE 5X2 HDMI SW
SHOW ME + IP

Ethernet cable

HDMI Cable

HDMI Cable

HDMI Cable

HDMI Cable

ST100-001
Controller

RT300-101
ShareTime Cable

ST100-001
Controller

IP TV

iPhone

DVD player

Laptop

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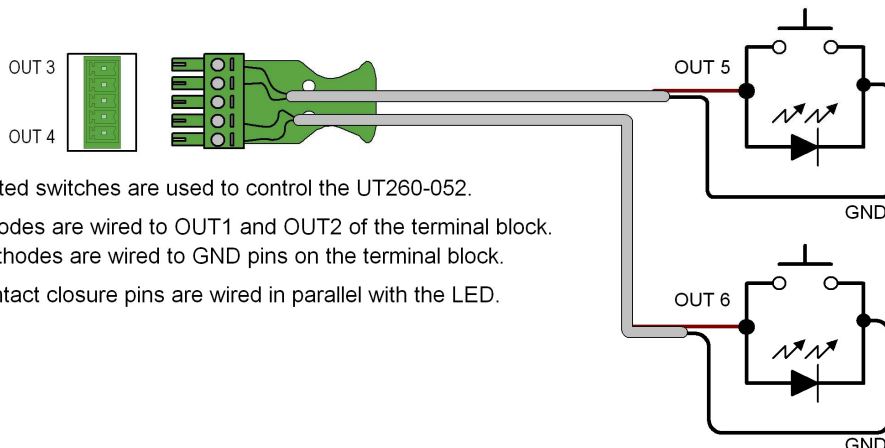
**Diagram 2: Internal View**

**Diagram 3: Dimensions**
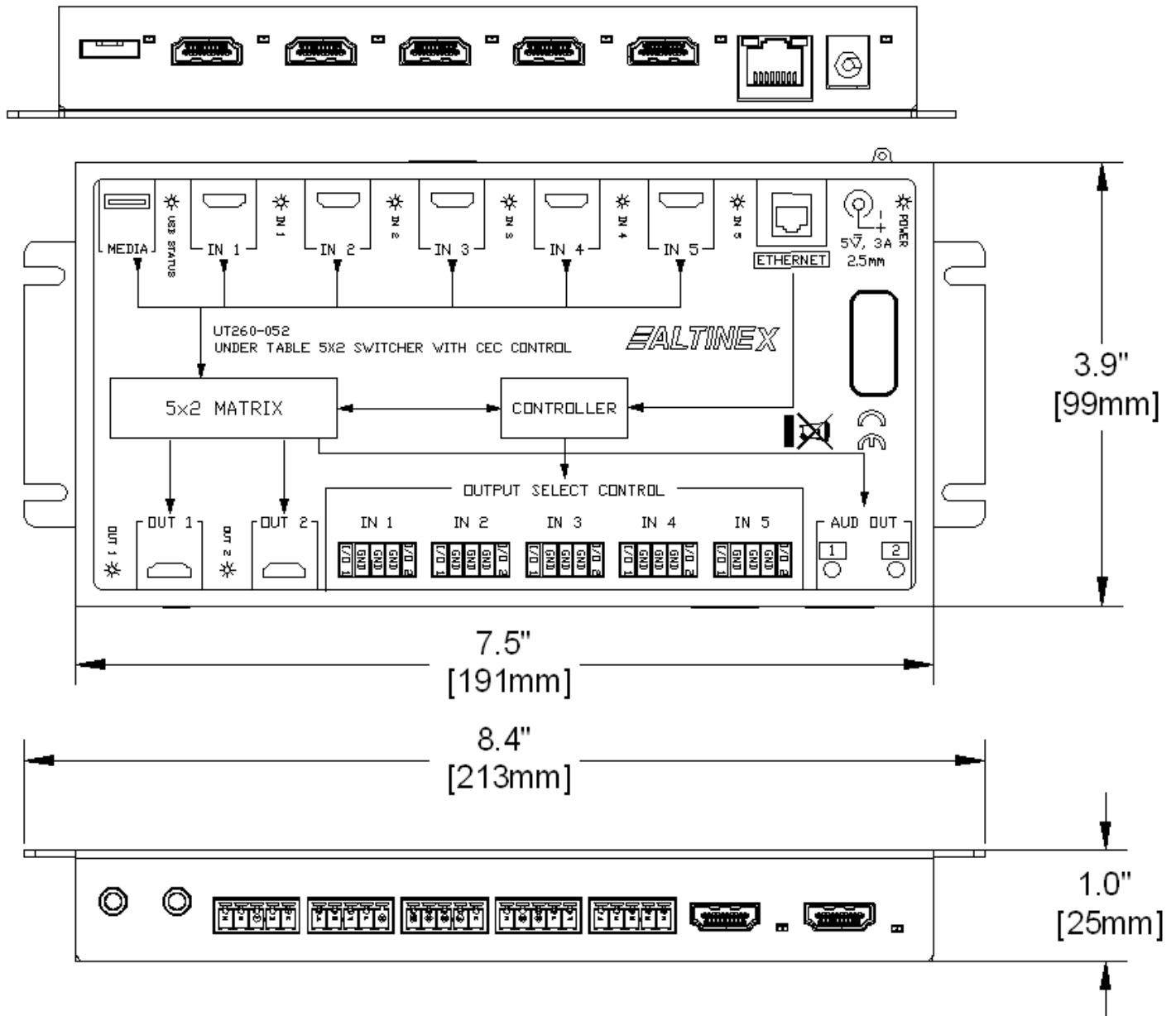
**Diagram 4: Input Select Controls**

Below there are two examples on how to connect the terminal blocks.

Terminal blocks are not included.

──────── **EXAMPLE 1 - ILLUMINATED SWITCHES** ────────
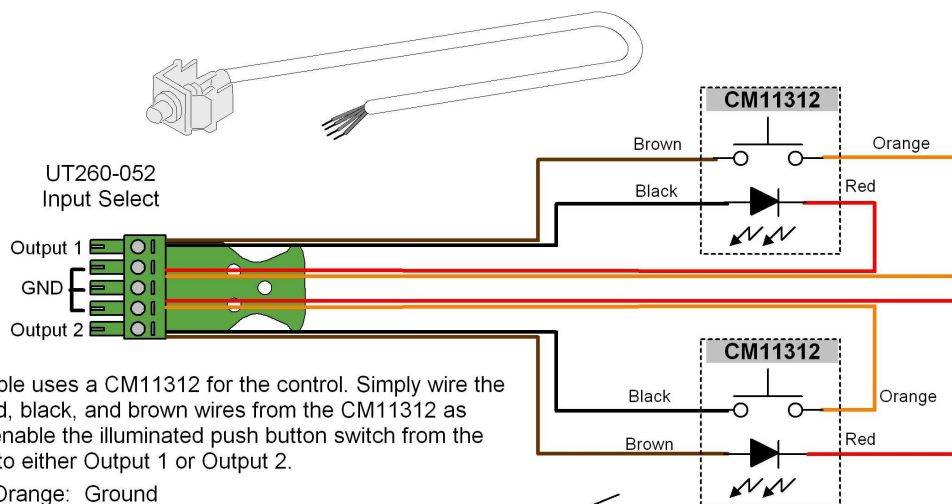
OUT 3

OUT 4

OUT 5

GND

OUT 6

GND

Illuminated switches are used to control the UT260-052.

LED anodes are wired to OUT1 and OUT2 of the terminal block. LED cathodes are wired to GND pins on the terminal block.

The contact closure pins are wired in parallel with the LED.

──────── **EXAMPLE 2 - using CM11312** ────────

UT260-052
Input Select

Output 1

GND

Output 2

CM11312

Brown          Orange

Black          Red

CM11312

Black          Orange

Brown          Red

This example uses a CM11312 for the control. Simply wire the orange, red, black, and brown wires from the CM11312 as shown to enable the illuminated push button switch from the CM11312 to either Output 1 or Output 2.
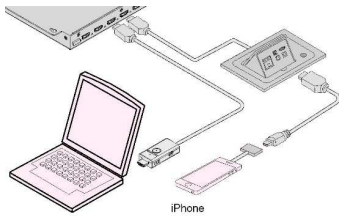
Orange:  Ground
Red:  Ground
Black:  Output
Brown:  Output

Alternate CM11312 Wire Colors

CM11312

White          White with Blue Stripe

Blue          Blue with White Stripe
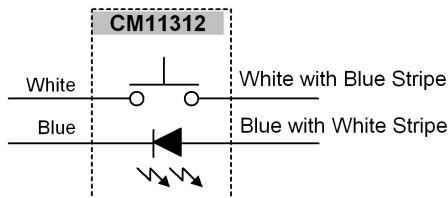
## 7. Operation

Users connect their device (phone, laptop, etc.) to one of the input connections; ShareTime or TNP with Show Me Button.

If the switcher is sleeping, the switcher automatically wakes up on signal detection or when a Show Me button is pressed. On wake up, the switcher sends CEC commands to turn on the TVs and switch to the appropriate input. Next, the media player input is selected and routed to the outputs.

The switcher is now in collaborative mode. Users switch to their source device using any combination of ShareTime, Show Me, or controller via TCP/IP.

### 7.1 Modes of operation

### 7.1.1 Collaborative Mode (Input Select/CEC/TCP)

During standard collaborative mode, the input to output selection control can be achieved using Show Me buttons connected to the input select controls on the front of the switcher, CEC controllers at the sources, and/or a third party control and touch screen. Any or all methods can be used are work interactively with each other.

The input select control inputs on the front of the UT260-052 allow up to 5 users direct control of video switching. Each user typically has a control panel with 2 illuminated switches along with a video input connector. When a user presses a control switch, the video from their control panel is displayed at the output of the UT260-052 and the LED on the switch is illuminated. If the switch's LED is on and the switch is pressed, the output is de-selected and the LED turns off.
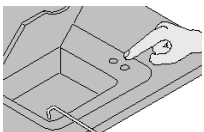
See Diagram 4 for input select button details.

CEC controllers like the Altinex ShareTime series can also be used to control the UT260-052. The ShareTime controller connect directly to an HDMI video source like a laptop, tablet, or other handheld device. Simply touch the ShareTime once to share content and again to de-select.

TCP/IP control using a third part controller or touch panel is also a good means to control the switcher. Using one or more controllers connected to the same network as the switcher allows individual control of input selection, sleep, or track play using the internal media player and USB stick.

### 7.1.2 Video Conference (VC) Mode

VC mode functions the same as the standard collaborative mode with the exception of the VC input, Input 5. In VC mode, when a user de-selects an input, instead of the image from the internal media player or USB stick being displayed, the video from Input 5 is displayed. If there is no video on Input 5, the internal media player image or default USB track is displayed.

> By default video conference is disabled and must be enabled for Input 5 to override the media player.

The default track is Track 1 on the USB stick. The default track may be set to any of 8 total tracks that can be stored on the USB stick.

### 7.1.3 TCP/IP Control

The UT260-052 can be fully controlled using a TCP/IP connection over the local LAN or Ethernet.

See Section 7.5.4 for details and a full list of control and configuration commands.

### 7.1.4 Standby

Standby mode is the time during which there are no more input signals present but before the switcher enters sleep mode. In standby, the switcher continues to play the image from the internal media player and USB stick (or Input 5 if video conference mode). By default video conference is disabled and must be enabled for Input 5 to override the media player.

Unlike sleep mode, the switcher responds immediately to inputs when in standby mode. There is no need for the switcher to turn on TVs or go through the complete initialization process.

The timeout for standby mode is normally set long enough to allow one presentation to end and the next one to begin without have the switcher enter sleep mode.

### 7.1.5 Sleep

After the standby (standard mode) or shutdown (video conference mode) timers expire, the switcher enters sleep mode. In sleep mode, the switcher turns off the TVs on the outputs using CEC control. Next, most internal circuitry is disable and the switcher enters low power mode.

The switcher wakes upon receipt of the command [WKUP] and can also be configured to wake when an input signal is connected or an input select key is pressed. Waking the system includes turning on the TV at both outputs, initializing inputs, etc. and takes several seconds to complete before the first video is displayed.

See the [STBM] and [SSDM] commands of section 7.5.4 for details on standby and shutdown timers.

## 7.1.6 Update

Update mode is available to allow the switcher's internal firmware to be updated. Send the command [PRG] or press and hold any input select key for about 7 seconds to enter update mode. All LEDs (switcher and input select) flash several times to indicate update has started.

Once in update mode, the firmware must be updated. If update mode is entered by accident, reset the switcher power to reset the system.

## 7.2 Switcher LEDs

At power up, all the LEDs on the switcher flash and then turn solid green while the switcher initializes. Once the switcher is up and running, the LEDs enter normal operation.

Each switcher input LED is on and green when a signal is present. Otherwise the LEDs are off.

The output LEDs are on and green when signal are present. In most cases, the output LEDs are only off when the switcher is in sleep mode.

The power jack has an LED indicating power is applied. This LED is always on if DC power is present.

The USB LED is always on or flashing depending on the USB state. The three LED states are as follows:

- A solid LED means the USB flash drive is present and MPEG files are present.
- A slow flash (about once per second) indicates the USB flash drive is detected but no MPEG files are present.
- A quick flash (about twice per second) indicates a missing or failed USB flash drive.

## 7.3 Analog Audio Outputs

The UT260-052 has stereo analog audio outputs for Output 1 and Output 2. The audio on these outputs is the same audio that is present in the HDMI video stream, but it has been converted to an analog stereo format.

There is always audio present on Audio Output 1 when there is audio present in the HDMI stream to video Output 1. However, if both outputs have the same video, there is no audio available on Audio Output 2.
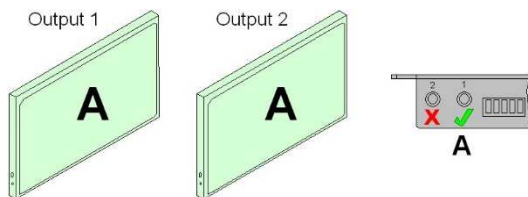


Audio Output 2 is only available when the video streams to Output 1 and Output 2 are different. If the same video is displayed on both outputs, there is no analog audio on Audio Output 2. However, Audio Output 1 has audio present even when the outputs are the same.
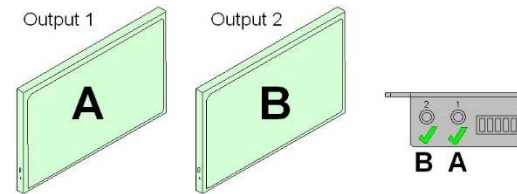


## 7.4 Network Discover

The default IP address for all UT260-052s is 192.168.10.84 on port 23 with DHCP set to automatic. If the switcher is on a network, its IP is assigned automatically. If you connect the switcher directly to a laptop, the IP is 192.168.10.84.

> See section 7.5 for connecting a laptop directly to the switcher for configuration or control.

In order to find out the address assigned to switchers on a network, broadcast the UDP discover command to the network on port 30304. The discover command is as follows:

?Altinex

Send "?Altinex" in a single packet. Do not type the characters individually or the command is ignored.

Any UT260-052s on the network respond with feedback similar to the following single line:

> [ALT010400000,00:1E:C0:E6:D5:BE,00023, 192.168.1.121,255.255.255.0,192.168.1.254]

> The data inside the brackets includes the switcher alias, switcher MAC address, and TCP/IP port, plus the IP address, subnet mask, and gateway address assigned to the switcher by the network.

Use this information to establish a TCP/IP connection to the switcher for control and/or configuration.

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## 7.5 TCP/IP Control

A third party controller or touch panel can be used to control the UT260-052.The TCP/IP control commands provide full control of the switcher; inputs can be selected, the TV can be turned on or off, the status of the switcher can be read, firmware can be updated, etc.

The control commands for the UT260-052 are in a simple ASCII character format. Control can be achieved from the same room, or remotely via the Ethernet using a CAT5/6 cable terminated in the T568B standard.

Installation or Update - direct connect, no network

Control and Configuration - DHCP and discover

## 7.5.1 Direct Connect – Laptop to Switcher

Connect directly to the switcher for control or configuration. The default switcher IP is 192.168.10.84. In order to establish a TCP/IP connection between the laptop and the switcher with no server in between, you must make sure the laptop LAN port is on the same network as the switcher.

1) Set the IP address of the laptop to 192.168.10.44 using the Change Adapter Settings tool in the Network and Sharing Center.
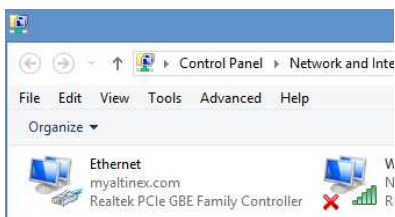
   Control Panel

     Network and Internet

       Network and Sharing Center
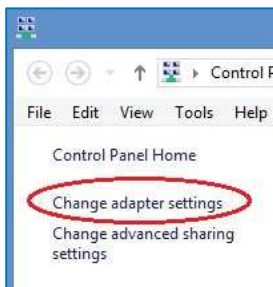


2) Select the Local Area Connection (Ethernet) properties.



3) Select the Internet Protocol Version 4 (TCP/IPv4) option and click Properties.
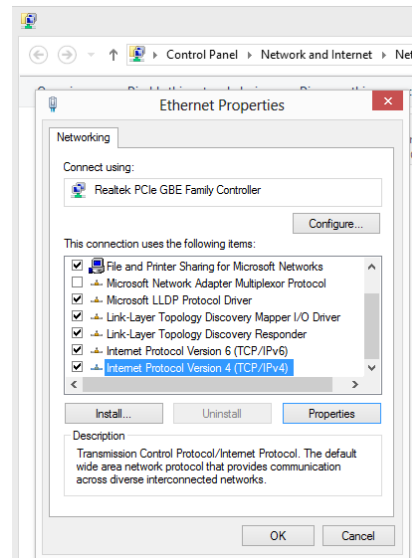


This IP address must be on the same network as the switcher. The default switcher IP is 192.168.10.84 so choose something like 192.168.10.44.
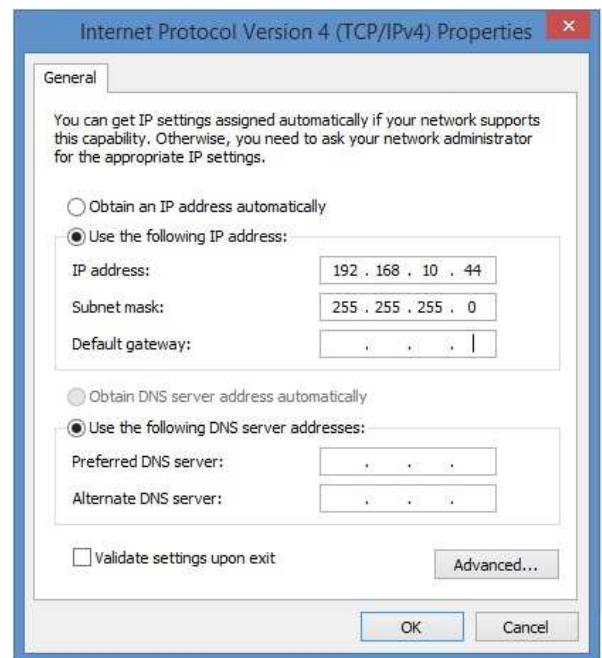


You are now ready to establish a TCP connection between the switcher and the laptop using a network cable (straight or crossover) and communication software like AVSnap or HyperTerminal.

## 7.5.2 Direct Connect – Firmware Update

Prepare the laptop with the firmware update software as described in section 7.5.1 for a direct connection.

The firmware update application must see the switcher at IP 192.168.10.81 port 23.

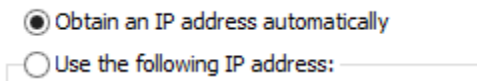## 7.5.3 Network Connect – Control and/or Configuration

The laptop (or other PC) should be set for DHCP or to have its IP address assigned automatically by the network.

Follow the steps in section 7.5.1, but select Obtain an IP address automatically:

◉ Obtain an IP address automatically

◯ Use the following IP address:

The switcher IP can be set for a fixed IP or for DHCP; see the [DHCP] command for details. The default is DHCP enabled. Connect the switcher to the network and the server assigns an IP automatically.  This IP can be discovered using UDP protocol as follows:

Send "?Altinex" in a single packet. Do not type the characters individually or the command is ignored.

Any UT260-052s on the network respond with feedback similar to the following single line:

> [ALT010400000,00:1E:C0:E6:D5:BE,00023, 192.168.10.84,255.255.255.0,192.168.10.1]

> The data inside the brackets includes the switcher alias, MAC address, TCP/IP port, IP address, subnet mask, and gateway address.

## 7.5.4 TCP/IP Protocol

This section lists all the TCP control and configuration command formats and their ranges. The default IP address is 192.168.10.84 and the port is always port 23.

All commands begin with an open "[" bracket and end with a close "]" bracket. Do not send carriage returns or line feeds; these are not valid characters and are ignored.

Control Command Feedback: Commands that are used to control the switcher provide the following feedback responses:

[ ]          Command executed

[ER]        Command error (bad format, out of range, etc.)

[STBY]     The switcher is in sleep mode and the command is not available.

The feedback for query commands (version, status, etc.) is dependent on the command sent.

1. **[AUTOx]**

   This command enable or disables the auto-switch function of the switcher. Enabling auto-switch causes the switcher to automatically switch a newly connected HDMI source to one or more outputs. If disabled, users must select inputs using ShareTime CEC controllers, Input Select (Show Me) buttons, or a third party control system.

   Command format: [AUTOx]

   x     =   Mode (x = # from 0 to 3)
          0 = Off
          1 = Output 1
          2 = Output 2
          3 = Outputs 1 and 2

2. **[BLANKxy]**

   This command enables or disables TMDS blanking and is designed for use with the Altinex scaler VP500-102

   Command format [BLANKxy]

   x     =   Output (x = # from 1 to 3)
          1 = Set Output 1 only
          2 = Set Output 2 only
          3 = Set Outputs 1 and 2

   y     =   Enable or disable blanking (y = 1 or 0)
          1 = Enable
          2 = Disable

3. **[CECx]**

   Verification of CEC enabled device on all outputs. Use this command to verify a display, TV, or monitor is CEC compatible. If the destination device is not responsive it is not rated for this HDMI specific feature.

   Command format: [CECx]

   x     =   Send control (x is 0 or 1)
          0 = Turn TV off
          1 = Turn TV on

   Example:

   Send [CEC1] to turn on all TVs and [CEC0] turns off all TVs. Note that some TVs do not respond to on/off commands if they are sent to quickly. It may be necessary to wait several seconds after sending the off command before sending the on command.

## 4. [CRC]

This command displays current network settings.

Command format: [CRC]

Send the command [CRC] and receive feedback similar to the following:

[SRC,ALT010500000,192.168.10.84,23,255.255.255.0, 192.168.10.1,00-1E-C0-E6-D5-BE]

Each property is separated by a comma. The SRC indicates this is the response to the CRC command. Next comes the following switcher properties:

    Alias
    IP
    TCP/IP Port
    Subnet Mask
    Gateway
    MAC Address

The switcher alias contains the following:

| | |
|---|---|
| ALT | |
| 01 | 2-digit hardware revision, |
| 05 | 2-digit software version |
| 00000 | ID number (not implemented) |

## 5. [CRC+]

This command displays the network settings that will be in place after restarting the switcher. This command is used together with the [CSP], [CSB], and [CSG] commands to verify the new network properties before making them permanent.

## 6. [CSPx.x.x.x]

Preset the new IP address for the switcher; requires switcher restart to activate.

Command format: [CSP###.###.###.###]

### = Valid IP octet

Send [CSP192.168.1.123] to preset the switcher IP address to 192.168.1.123.

## 7. [CSBx.x.x.x]

Preset the new SUBNET MASK address for the switcher; requires switcher restart to activate.

Command format: [CSB###.###.###.###]

### = Valid SUBNET octet

Send [CSG255.255.255.0] to preset the switcher subnet mask address to 255.255.255.0.

## 8. [CSGx.x.x.x]

Set new GATEWAY address for the switcher; requires switcher restart to activate.

Command format: [CSG###.###.###.###]

### = Valid GATEWAY octet

Send [CSG192.168.1.1] to preset the switcher gateway address to 192.168.1.1.

## 9. [DHCPx]

Enable or disable the switcher's ability to request a dynamic IP address from the network. If DHCP is enabled, the switcher obtains its IP address automatically from the server. If a server is not available or if DHCP is disabled, the switcher defaults to its fixed IP address.

If DHCP is enabled, see the discover command for details on how to find which IP was assigned to the switcher.

Command format: [DHCPx]

x = Enable/disable (x is 1 or 0)
    1 = enabled
    0 = disabled

## 10. [FRST]

This command restores the switcher to its factory defaults.

Command format: [FRST]

Send [FRST] to restore factory defaults. The individual commands are as follows:

| | |
|---|---|
| [DHCP1] | Obtain IP automatically |
| [CSP192.168.10.84] | IP 192.168.10.84 |
| [CSB255.255.255.0] | Subnet Mask 255.255.255.0 |
| [CSG192.168.10.1] | Gateway 192.168.10.1 |
| n/a | TCP/IP Port 23 |
| n/a | UDP Port 30304 |
| [INX] | Two independent outputs |
| [WKINP9] | Wake on any signal connection |
| [WKKEY9] | Wake on any input select button |
| [VC0] | VC mode is disabled. |
| [TRKNO1] | Track 1 for standby/lost signal |
| [STBM30] | Standby time 15 minutes |
| [SSDM16] | Shutdown time 4 hours |
| [BLANK30] | Do not blank TMDS lines |
| [UFA0] | Unsolicited feedback disabled |
| [AUTO0] | Auto-switch inputs disabled |
| [HPDTYPE1] | Standard hot plug pulse |

## 11. [HPDTYPE]

Set the hot plug pulse options.

Command format: [HPDTYPEx]

x = Hot plug type (x # from 0 to 2)
    1 = default
    2 = extended
    0 = single

Send [HPDTYPE1] to set the standard hot plug.

**12. [IxOy]**

This command switches any input to any output and is only available in matrix mode. This command returns [ ] if successful, [ER] if the format is wrong or there is no input signal, and [STBY] if the switcher is in sleep mode.

Command format: [IxOy]

x    =    Input (x # from 0 to 5, 0 = internal media player)
y    =    Output (y # from 1 to 3)
             1 = Output 1
             2 = Output 2
             3 = Output 1 and Output 2

Connect Input 1 to Outputs 1 and 2 by sending [I1O3].

**13. [INn]**

This command switches any available input to both outputs in mirror mode; Output 2 always follows Output 1.

Command format: [INx]

x    =    Input (x # from 0 to 5, 0= internal media player)

Connect the internal media player to Outputs 1 and 2 by sending the command [IN0] while in mirror mode.

**14. [INM]**

This command sets the switcher to operate in mirror mode where Output 2 always follows Output 1. A switcher restart is required to activate.

Command format: [INM]

Set mirror mode by sending the command [INM]. After sending this command, you need to either reset power to the switcher or execute a soft reset using the command [SFT].

**15. [INX]**

This command set the switcher to operate in matrix mode, providing individual control over the outputs. A switcher restart is required to activate.

Command format: [INX]

Set matrix mode by sending the command [INX]. After sending this command, you need to either reset power to the switcher or execute a soft reset using the command [SFT].

**16. [PRG]**

Enter update mode to enable a firmware update. Contact Altinex Technical Support for details on this feature.

Command format: [PRG]

**17. [SLEEP]**

This command puts the switcher to sleep and turns off the TVs. In this mode, the switcher enters a low power state until needed again. The switcher still responds to most commands. The switcher cannot be put to sleep if there are any input signals present on Inputs 1~ 5 in 5x2 mode, or 1~4 in Video Conference mode.

Command format: [SLEEP]

Send [SLEEP] to force the switcher to sleep. If the switcher is already asleep an [ER] message is generated.

Input signals prevent the switcher from going to sleep, the message [SIGNALS PRESENT] is returned.

**18. [SSDMx]**

This command is used with Video Conference (VC) mode. It sets the shutdown delay of the switcher, or how long the switcher displays the screensaver (internal media player) image or VC image when there are no more active signals present. After this time, the switcher enters sleep mode.

If Input 5 (VC) is removed, the standby timer [STBM] is used to determine when the system goes to sleep. If the standby time is set to zero, the shutdown timer [SSDM] continues the countdown.

If both the shutdown [SSDM] and standby [STBM] timers are set to zero, the switcher never automatically enters sleep mode. The switcher must be force to sleep using TCP/IP control, TV remote control, or CEC controllers.

This timer is set in 15 minute increments up to 12 hours.

Command format: [SSDMx]

x    =    15 minute multiplier (x # from 0 to 48)
             0 = never sleep
             1 = 15 minutes
             48 = 12 hours

Send [SSDM4] to set the shutdown delay with In 5 present and in VC mode to 1 hour.

**19. [STBMx]**

This command sets the standby time of the switcher, or how long the switcher displays the screensaver (internal media player) image when there are no more active signals present. After this time, the switcher enters sleep mode.

If both the shutdown [SSDM] and standby [STBM] timers are set to zero, the switcher never automatically enters sleep mode. The switcher must be force to sleep using TCP/IP control, TV remote control, or CEC controllers.

This timer is set in 30 second increments up to 8 hours.

Command format: [STBMx]

x    =    30 second multiplier (x # from 0 to 960)
             0 = never sleep
             1 = 30 seconds
             960 = 8 hours

Send [STBM60] to set the standby time to 1 hour.

## 20. [STATUS]

This command displays a status of the switcher's key settings and state. Below is a sample status followed by a brief explanation of the items that are not self-explanatory.

```
IP:       192.168.10.84, OK
System:   Awake
DHCP:     Auto IP
VERSION:  005, 30.40.7
MODE:     Matrix
INPUTS:   1 0 0 0 0 0
OUTPUTS:  0 0
BLANKING: 0 0
USB:      OK
TVs:      1000, 1000
WAKE:     Any Input, Any Input Select
TRKNO:    1
VID CONF: Disabled
STBM:     030 - 00:15:00
SSDM:     016 - 04:00:00
AutoSw:   Off
Audio 1:  512x, 48 kHz
Audio 2:  0x, 0 kHz
HPD Type: 1
```

IP: The fixed IP assigned to the switcher. If DHCP is enabled, the IP assigned by the network. After the IP, OK or NC is displayed; OK indicating a TCP/IP connection and NC for not connected.

VERSION: Displays the last 3 digits of the firmware application revision, followed by the BIOS revision.

INPUTS: The input status of the 6 inputs; reading left to right inputs 0 (media player) through 5. A "1" indicates a signal is present and a "0" means no signal.

OUTPUTS: The inputs connected to Output 1 and 2.

BLANKING: Shows the output blanking for Output 1 and Output 2. A '0' is disabled and '1' means enabled.

USB: Gives the status of the USB drive. OK means all is good and there are MPG files present.

TVs: The physical address of each TV on Output 1 and Output 2 respectively without the decimals; ex: 1.0.0.0.

TRKNO: The default track that is played when an input is de-selected or there are no inputs present.

VID CONF (VC): Displays whether or no video conferencing (Input 5) is enabled or disabled.

STBM: Standby timeout before going to sleep in normal mode (not VC mode) when there are no input signals.

SSDM: Shutdown timeout before going to sleep in VC mode when only Input 5 remains or there are no input signals at all.

AUTOSW: Display whether auto-switching is on or off.

AUDIO: The internal digital audio format before conversion to analog audio Outputs 1 and 2.

HPDTYPE: The factory configure HPD option; default=1.

## 21. [STP]

This command returns a comma-delimited, parseable status of the switcher's key settings and state.

Command format: [STATUS]

The feedback returned is similar to the following:

[,192.168.10.84,1,0,1,005,30.40.7,0,1,0,0,0,0,0,0,0,0,1,1000,1000,9,9,1,0,030,016,0,512,48,0,0,1,]

The table below lists each property. The first column lists the delimiters between which the property can be parsed. The middle column list the base command associated with the property or n/a if the property is information only.

| | | |
|---|---|---|
| 1,2 | [CSP] | Fixed IP Address |
| 2,3 | n/a | TCP state, 1=connected |
| 3,4 | n/a | Sleep status, 0=awake |
| 4,5 | [DHCP] | DHCP/Fixed IP, 0=Fixed |
| 5,6 | [VER] | Firmware version |
| 6,7 | [VDRV] | BIOS version |
| 7,8 | [INX] | Switch mode, 0=matrix |
| 8,9 | n/a | Input 1, 1=signal present |
| 9,10 | n/a | Input 2, 1=signal present |
| 10,11 | n/a | Input 3, 1=signal present |
| 11,12 | n/a | Input 4, 1=signal present |
| 12,13 | n/a | Input 5, 1=signal present |
| 13,14 | n/a | Input 6, 1=signal present |
| 14,15 | n/a | Input on Output 1 |
| 15,16 | n/a | Input on Output 2 |
| 16,17 | [BLANK] | Out 1 Blanking, 1=enabled |
| 17,18 | [BLANK] | Out 2 Blanking, 1=enabled |
| 18,19 | [USB] | USB stick status |
| 19,20 | n/a | TV1 physical address |
| 20,21 | n/a | TV2 physical address |
| 21,22 | [WKINP] | Wake on input |
| 22,23 | [WKKEY] | Wake on key |
| 23,24 | [TRKNO] | Track No |
| 24,25 | [VC] | Video conference mode |
| 25,26 | [STBM] | STBM |
| 26,27 | [SSDM] | SSDM |
| 27,28 | [AUTO] | Auto Switch |
| 28,29 | n/a | Digital audio 1 - multiplier |
| 29,30 | n/a | Digital audio 1 - frequency |
| 30,31 | n/a | Digital audio 2 – multiplier |
| 31,32 | n/a | Digital audio 2 – frequency |
| 32,33 | [HPDTYPE] | HPD Type |

**22. [TRx]**

This command forces the switcher to play a track from the USB stick. This information is not saved, but the track continues to play until another track play option is received.

Tracks refer to mpeg files on the USB stick with up to 8 tracks supported. Track 1 is the first mpeg file listed alphanumerically on the USB stick.

Command format: [TRx]

Send [TR3] to play track number 3 on the USB stick by sending the command [TR3]. [30.40.7]

**23. [TRKNOx]**

This command sets the default track number for power up, standby, or lost signal.

Tracks refer to mpeg files on the USB stick with up to 8 tracks supported. Track 1 is the first mpeg file listed alphanumerically on the USB stick.

Command format: [TRKNOx]

x    =    Track (x # from 1 to 8, default is Track 1)

Send [TRKNO1] to set the default track to Track 1.

**24. [UFAx]**

This command sets the level of unsolicited feedback from the switcher. Unsolicited feedback provides basic information when signals are connected or disconnect, when inputs are selected, etc. The feedback can be directed to a TCP (port 23) connection or broadcast via UDP (port 30304).

Command format: [UFAx]

x    =    Level
          0=OFF (no feedback)
          1=TCP port 23
          2=UDP port 30304
          3=TCP and UDP

Send the command [UFA3] to direct unsolicited feedback to both TCP and UDP sockets.

**25. [VCx]**

This command enables and disables video conference (VC) mode. In VC mode, Input 5 overrides the internal media player as the de-select option. If there are no local inputs begin presented, the VC video on Input 5 is displayed. VC mode also enable the shutdown time for determining when the switcher goes into standby/sleep mode. See the [SSDM] command for timeout details.

Command format: [VCx]

x    =    VC mode state (x = 1 or 0)
          0 = VC mode disabled (switcher is 5x2)
          1 = VC mode enabled (switcher is 4x2 plus VC)

Send the command [VC1] to enable the video conferencing option on the switcher.

**26. [VDRV]**

This command display the internal BIOS version used in the switcher.

Command format: [VDRV]

Send the command [VDRV] and the switcher responds with feedback similar to the following:

[30.40.7]

**27. [VER]**

This command display the switcher application firmware version.

Command format: [VER]

Send the command [VER] and the switcher responds with feedback similar to the following:

[UT260-052 690-0407-005]

**28.  [WKINPx]**

This command sets the wake on input value which defines the input connections that force the switcher to wake up when it is in sleep mode. The switcher can be instructed to wake on any one input, all inputs, or no inputs. If no inputs, the switcher can only be made to wake up by a control command or an input key selection; see the [WKKEY] command.

Command format: [WKINPx]

x    =    Input number (x # from 0 to 5, or 9)
          0 = do not wake on any input connection
          1 = wake on HDMI signal applied to Input 1
          2 = wake on HDMI signal applied to Input 2
          3 = wake on HDMI signal applied to Input 3
          4 = wake on HDMI signal applied to Input 4
          5 = wake on HDMI signal applied to Input 5
          9= wake on HDMI signal applied to any Input

Send [WKINP9] to force the switcher to wake up when a signal is connected to any input.

### 29. [WKKEYx]

This command sets the wake on key value which defines the input select keys (Show Me buttons) that force the switcher to wake up when it is in standby/sleep mode. The switcher can be instructed to wake on any one input select pair, all input selects, or no input selects. If none, the switcher can only be made to wake up by a control command or an input signal connection; see the [WKINP] command.

The input select wakes the switcher based on the input selected. The input selected can be to either Output 1 or Output 2. For example, if Input 1 is selected, either key Input 1 to Output 1 or Input 1 to Output 2 wakes the switcher.

Command format: [WKKEYx]

x   =   Input select number (x # from 0 to 5, or 9)
        0 = do not wake on any input connection
        1 = wake on Input 1 select
        2 = wake on Input 2 select
        3 = wake on Input 3 select
        4 = wake on Input 4 select
        5 = wake on Input 5 select
        9= wake on HDMI signal applied to any Input

Send [WKKEY1] to force the switcher to wake up when the input select key for Input 1 only is pressed. Input select keys for other inputs are ignore.

### 30. [WKUP]

This command forces the switcher to wake up from sleep regardless of whether there are input signal is present or not. Once the wake up command is received, the switcher begins the wake up process. TVs are turned on, inputs are initialized, etc. The entire process takes several seconds before the first video is displayed.

Command format: [WKUP]

Send the command [WKUP] to wake the switcher so it is ready for a collaborative presentation. If the switcher is already awake, an [ER] response is generated.

### 31. ?Altinex

This command is used to discover the IP address of switchers on the network that had their IPs assigned automatically by the network.

This command must be sent in one contiguous block. If you type the characters individually, the command will not be recognized.

Command format: ?Altinex

### 7.5.5 Summary of Commands

| # | Command | Description |
|---|---------|-------------|
| 1. | [AUTOx] | Auto-switch input |
| 2. | [BLANKxy] | Enable TMDS blanking |
| 3. | [CECx] | Verification of CEC enabled |
| 4. | [CRC] | Display current network settings |
| 5. | [CRC+] | Display network settings after restart |
| 6. | [CSPx.x.x.x] | Set new IP address |
| 7. | [CSBx.x.x.x] | Set new SUBNET MASK address |
| 8. | [CSGx.x.x.x] | Set new GATEWAY address |
| 9. | [DHCPx] | Enable/disable DHCP |
| 10. | [FRST] | Reset all defaults |
| 11. | [HPDTYPE] | Hot plug pulse |
| 12. | [IxOy] | Switch to input to output (matrix mode) |
| 13. | [INn] | Switch to input; mirror mode |
| 14. | [INM] | Set mirror mode |
| 15. | [INX] | Set matrix mode |
| 16. | [PRG] | Enter update mode |
| 17. | [SLEEP] | Put the switcher to sleep, turn off TVs |
| 18. | [SSDMx] | Shutdown delay with In6 and VC mode |
| 19. | [STBMx] | Shutdown delay, no inputs |
| 20. | [STATUS] | Display readable switcher status |
| 21. | [STP] | Display parseable switcher status |
| 22. | [TRx] | Play track number (x: 1~8) |
| 23. | [TRKNOx] | Set track number for standby/lost signal |
| 24. | [UFAx] | Unsolicited feedback |
| 25. | [VCx] | Video conference mode |
| 26. | [VDRV] | Display BIOS version |
| 27. | [VER] | Firmware version |
| 28. | [WKINPx] | Set wake-up on input |
| 29. | [WKKEYx] | Set wake-up input select button |
| 30. | [WKUP] | Wake up the switcher |

UDP Only Command port 30304

| # | Command | Description |
|---|---------|-------------|
| 31. | ?Altinex | Discover switchers on the network |

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**7.6 UDP Control**

The switcher can also be controlled using UDP protocol on port 30304. Use caution to direct commands to a specific switcher if there are multiple switchers on the same network.

See 7.2 Network Discover for details on determining the IP address of a switcher on the network.

The commands in the previous section for TCP apply here with the following modifications.

[CSPmac,addr]   Set new IP address; requires restart or power reset.

[CSBmac,addr]   Set new SUBNET address; requires restart or power reset.

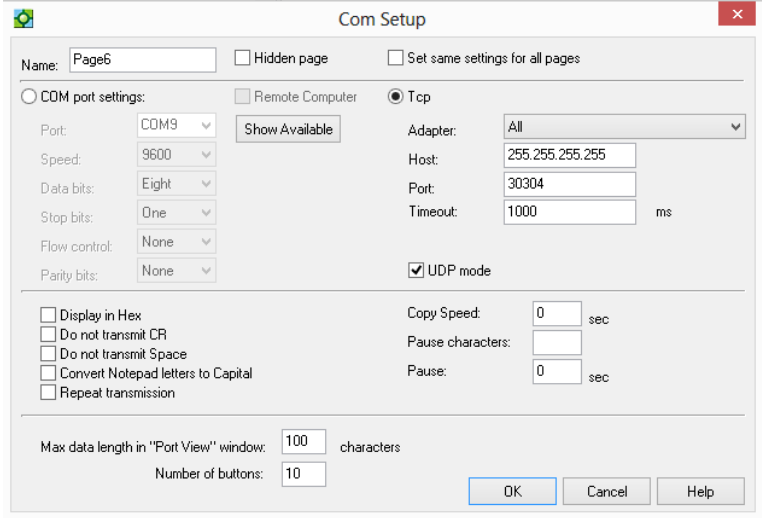[CSGmac,addr]   Set new GATEWAY address; requires restart or power reset.

Each of these commands requires the MAC address prior to the new address. A good command produces feedback similar to the following:

[00:1E:C0:E6:D5:BE > 192.168.10.84]

If the command is formatted improperly or the MAC address is incorrect, an [ER] response is produced.

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## 8. Troubleshooting Guide

We have carefully tested and have found no problems in the supplied UT260-052. However, we would like to offer suggestions for the following:

| Switcher | |
| --- | --- |
| Symptom | Resolution |
| LEDs on Switcher Are OFF | Make sure the unit is plugged into a working AC outlet and the DC plug is inserted all the way into the switcher.<br>  Use only the power adapter provided. |
| No Display | Check the source and make sure there is a signal present.<br>  Make sure the monitor has power and is turned on.<br>Check TVs for CEC compatibility.<br>  The switcher tells the TVs to turn on and select the appropriate inputs, but if the TV is not CEC compatible the TV must be turned on manually.<br>Enable the CEC option on the TVs.<br>  Make sure the CEC option is enabled on the TV, or the TVs will not turn on automatically.<br>  Some TVs ship with this feature disabled. View the<br>Sleep Mode: While in sleep mode, switcher will continually send OFF and STANDBY commands to TV. To wake up the unit, Wake Up on signal present must be enabled on one or all the inputs |
| Poor Output Image | The source resolution may not be compatible with the projector or other display device. Try other resolutions from the source.<br>The source and display may not be compatible. Connect the source directly to the input of the projector or other display device. If the image is poor the devices may be incompatible. |
| Don't know the IP address | **UDP Broadcast**<br>1.  Download AVSNAP from http://avsnap.com/ and go into communication mode.<br>2.  Send a UDP broadcast to 255.255.255.255 port 30304.<br><br><br><br>**Figure 1:** AVSNAP Com Setup<br>Using the following data string: **?Altinex**<br>      *UDP commands must be sent from the notepad within AVSNAP to the terminal.<br>3.  The switcher responds with the following data in a UDP packet to the host IP:<br>      The data string contains the hardware/software version, MAC address, TCP port number, IP address, subnet mask, and gateway. |
| System Failure | Please call the Altinex Customer Service Department at (714) 990-2300 to have the unit repaired. |