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# How to Change a TLX Matrix Switch's IP Address

Rev. B, March 2017



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Thinklogical, LLC<sup>®</sup>  
100 Washington Street  
Milford, Connecticut 06460 U.S.A.  
Telephone: 1-203-647-8700  
Fax: 1-203-783-9949  
[www.thinklogical.com](http://www.thinklogical.com)

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**100 Washington Street**  
**Milford, Connecticut 06460 U.S.A.**  
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**Subject:** How to Change a TLX Matrix Switch's IP Address  
**Revision:** B, March 2017



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## PREFACE

### About Thinklogical



**TOP WORK PLACES**  
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We, the Thinklogical team, are committed to understanding and exceeding our customers' requirements, the first time and every time.

Thinklogical, LLC is the leading manufacturer and provider of fiber optic and CATx KVM, video, audio, and peripheral extension and switching solutions used in video-rich, big-data computing environments.

Thinklogical offers the only fiber-optic KVM matrix switches in the world that are accredited to the Common Criteria EAL4, TEMPEST SDIP 24 Level B, and NATO NIAPC Evaluation Scheme: GREEN and the U.S. DoD DISA JITC UCR 2013 APL information assurance standards. And Thinklogical Velocity products are the first system with both KVM and video matrix switching capabilities to be placed on the Unified Capabilities Approved Product List (UC APL) under the Video Distribution System (VDS) category.

Governments, entertainment, scientific and industrial customers worldwide rely on Thinklogical's products and solutions for security, high performance, continuous operation and ease of integration. Thinklogical products are designed and manufactured in the USA and are certified to the ISO 9001-2008 standard.

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## Introduction

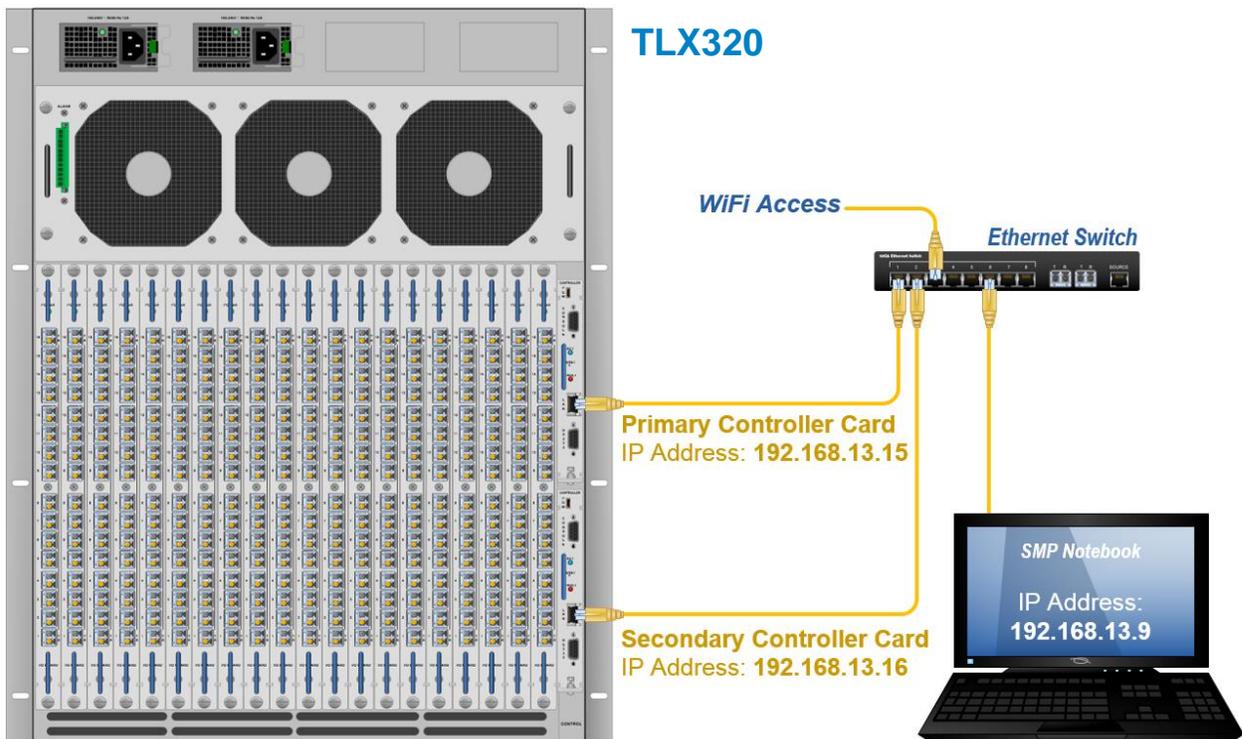
Thinklogical's TLX48, TLX80, TLX160, TLX320 and VX640 modular, non-blocking 10G Matrix Switches® are connected to a network for complete, end-to-end routing of video and peripheral signals over multi-mode or single-mode fiber optic cables.



Each of Thinklogical's TLX Matrix Switches includes at least one Controller Card (a secondary, back-up Controller Card is recommended) that has an Ethernet port to connect it to a local network. **By default, the Thinklogical family of TLX Matrix Switches uses three static IP addresses; two for the primary controller and one for the secondary controller. A fourth IP address is used for the user's external control server.**

### THE CONTROLLER CARDS

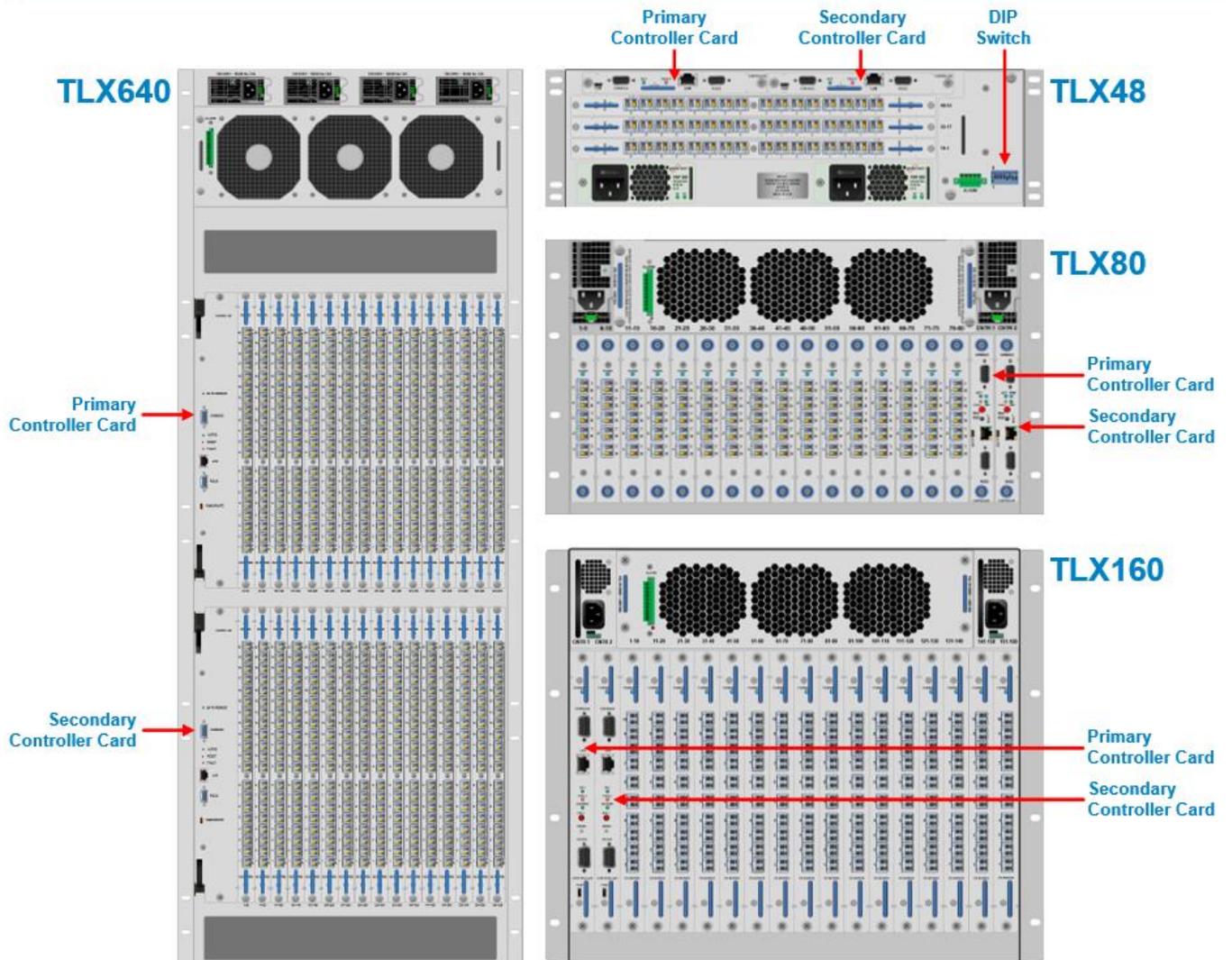
The hot-swappable Controller Cards connect the Matrix Switch to an External CPU. The RS-232 serial port may be used for third party controller integration (such as Crestron, AMX or home-spun interfaces).



The Controller Cards can be accessed from the Rear Panel (TLX320 shown above).

A Backup Controller Card ensures uninterrupted functionality if the Primary Controller Card should fail or need to be replaced. (The Primary Controller Card should always be in the upper controller slot on the TLX320 and TLX640 and in the left slot on the TLX48, TLX80 and TLX160.) The Backup card must have a LAN connection that allows it to communicate with the Primary Controller. Both controller cards must have the same CPU Module/Processor.

## thinklogical® 10G KVM Matrix Switches



TLX640 and TLX48 Controller Card Locations

## Manually Configuring A TLX Matrix Switch

### The Default Addresses

The **Primary Controller** uses default address **192.168.13.15** and alternate address **192.168.13.115**. The **Secondary Controller** uses default address **192.168.13.16**. The user's External Control Server address is **192.168.13.9**. This auto configuration allows a controller to work in either slot. If this auto configuration is changed, each controller will only work in its respective slot.

*To manually configure a Matrix Switch with one controller, one IP address is required.*

*To manually configure a Matrix Switch with redundant controllers, four IP addresses are required; two for the primary controller, one for the secondary controller, and one for the external control server.*

During a failed condition, when the secondary controller has taken control of the system from the primary controller, the secondary controller will use the primary controller's IP address so that all external control servers will be unaffected by the failure. During this condition, the failed primary controller can still be reached using its alternate IP address.

### Configuring the Network

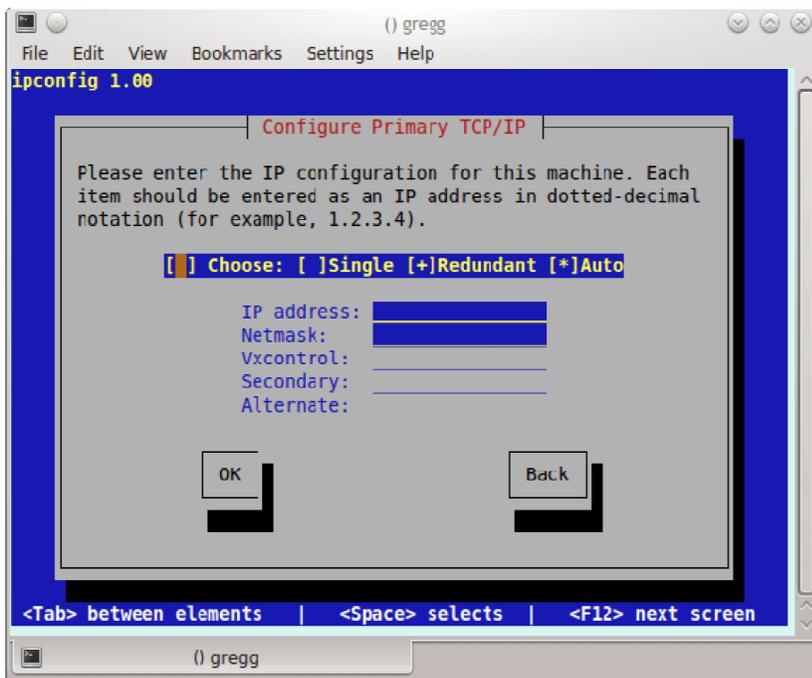
The easiest way to manually configure the network on your Matrix Switch is to run the "ipconfig" utility. You will need to login as root user and give the command: **# ipconfig** (The # represents the command prompt for the root user. You do not need to type it.) The **ipconfig** utility will ask you if you would like to set up networking. Use the space bar to select the "Yes" button. Use the tab key to move between items and the space bar to select.

### The Primary Controller

Three options are available on the Primary Controller. Use the space bar to toggle between **Single**, **Redundant** and **Auto**.

### The Single Option, Primary Controller

Select the **Single** mode to configure a Matrix Switch with one controller. (The [ ] **Choose** bracket will display what is selected from the [ ] **Single**, [ + ] **Redundant** or [ \* ] **Auto** brackets.)



#### IP address

IP address of the primary controller.

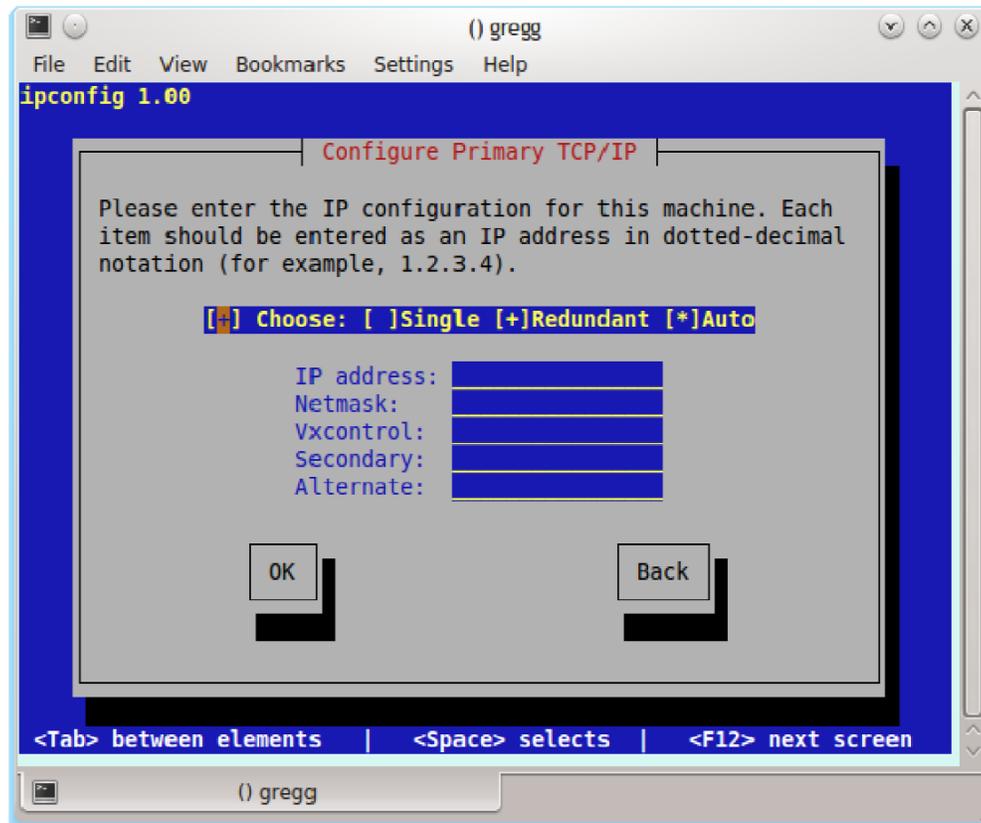
#### Netmask

Network mask of the primary controller.

Use the space bar to press "OK." Reboot the Matrix Switch to have the changes take effect.

## The Redundant Option, Primary Controller

Select the **[ + ] Redundant** mode to configure a Matrix Switch with a primary and secondary controller.



### **IP address**

IP address of the primary controller.

### **Netmask**

Network mask of the primary controller.

### **Vxcontrol**

IP address of the external control server.

### **Secondary**

IP address of the secondary controller.

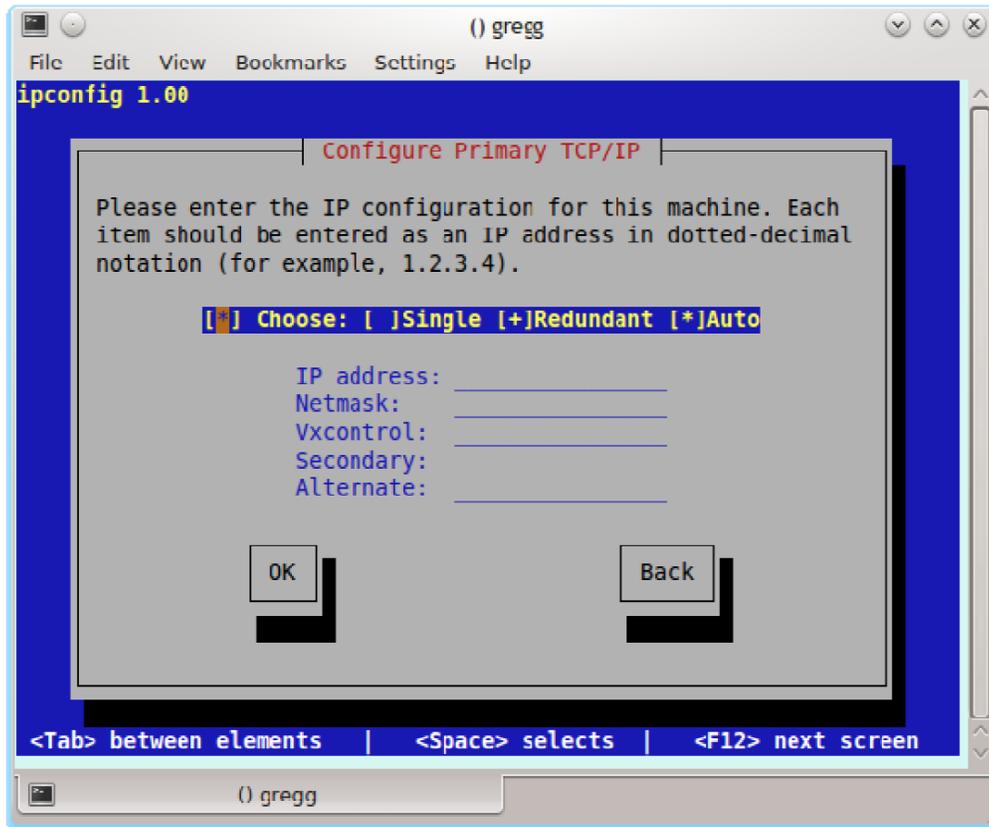
### **Alternate**

IP address used to reach the primary controller during a failed condition when the secondary controller has taken control of the system from the primary controller.

Use the space bar to press "OK." Reboot the Matrix Switch to have the changes take effect.

### The Auto Option, Primary Controller

Select the [ \* ] **Auto** mode to configure IP addresses of the Matrix Switch **based on the DIP switch settings** located on the chassis. See pg. 7-8 for DIP Switch locations and pg. 9 for DIP Switch settings.



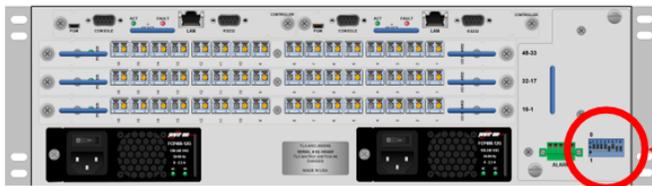
Use the space bar to press “OK.” Reboot the Matrix Switch to have the changes take effect.

## DIP Switch Locations

In Auto mode, the Matrix Switch's addresses are controlled by a DIP switch located on the chassis. The location varies by model. See below for the locations of each DIP Switch.

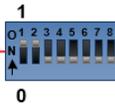
On the **TLX48**, the DIP switch is located on the rear panel. On the **TLX320**, **TLX160** and **TLX80** the front cover must be removed. On the **TLX640** the front door must be removed. (See next page.)

### 8-Position DIP Switch locations on TLX Matrix Switches



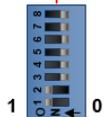
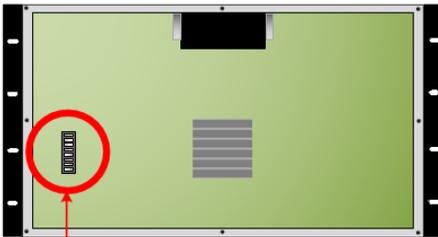
#### TLX48

Switch 1 is on the left.  
The ON ↑ position = 1



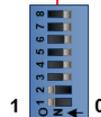
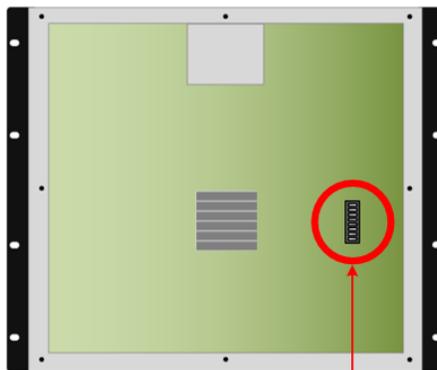
8-Position DIP Switch located on the TLX80, TLX160 and TLX320 backplane (shown with front cover removed).

#### TLX80

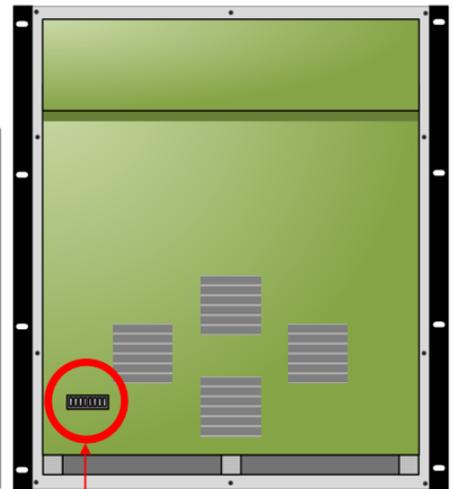


Switch 1 is at the bottom. The ON ← position = 1

#### TLX160



#### TLX320



Switch 1 is on the right.  
The ON ↓ position = 1

# TLX640 MATRIX SWITCH

## Setting the DIP Switch

Complete Steps 1-5 to change the TLX640 DIP Switch settings.

**STEP 1:** Turn both front door latches one quarter turn clockwise (arrow pointing up) to release the door.

**STEP 2:** Holding the door steady with one hand, pull down the upper spring-loaded hinge release and pull the upper portion of the door outward until the latch clears the mounting hole. The door can now be removed and set aside.\*

**STEP 3:** There are two thumb screws holding the front panel to the chassis. Loosen the thumb screws, remove the front panel and set it aside. The DIP Switch will now be exposed.

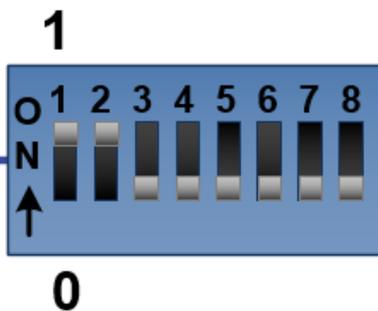
**STEP 4:** Using the chart on the right, set the 8 DIP switches to the desired settings and reinstall the front panel that was removed in Step 3.

**STEP 5:** When reinstalling the door, insert the lower hinge first, then, while pulling down the upper hinge spring-release, guide the door into place and allow the upper hinge to insert itself into the mounting hole. Turn the door latches (see Step 1) one quarter turn counter-clockwise to secure the door closed.

\*The TLX640 Front Door contains air-flow baffles that are integral to the router's cooling system. Do not leave the front door off the chassis for an extended length of time if the unit is running.

## DIP Switch Settings

								Primary Controller IP Addresses	Back-up Controller IP Address
8	7	6	5	4	3	2	1		
0	0	0	0	0	0	0	0	192.168.13.15 & 192.168.13.115	192.168.13.16
0	0	0	0	0	0	0	1	192.168.13.17 & 192.168.13.117	192.168.13.18
0	0	0	0	0	0	1	0	192.168.13.19 & 192.168.13.119	192.168.13.20
0	0	0	0	0	0	1	1	192.168.13.21 & 192.168.13.121	192.168.13.22
0	0	0	0	0	1	0	0	192.168.13.23 & 192.168.13.123	192.168.13.24
0	0	0	0	0	1	0	1	192.168.13.25 & 192.168.13.125	192.168.13.26
0	0	0	0	0	1	1	0	192.168.13.27 & 192.168.13.127	192.168.13.28
0	0	0	0	0	1	1	1	192.168.13.29 & 192.168.13.129	192.168.13.30
0	0	0	0	1	0	0	0	192.168.13.31 & 192.168.13.131	192.168.13.32
0	0	0	0	1	0	0	1	192.168.13.33 & 192.168.13.133	192.168.13.34
0	0	0	0	1	0	1	0	192.168.13.35 & 192.168.13.135	192.168.13.36
0	0	0	0	1	0	1	1	192.168.13.37 & 192.168.13.137	192.168.13.38
0	0	0	0	1	1	0	0	192.168.13.39 & 192.168.13.139	192.168.13.40
0	0	0	0	1	1	0	1	192.168.13.41 & 192.168.13.141	192.168.13.42
0	0	0	0	1	1	1	0	192.168.13.43 & 192.168.13.143	192.168.13.44
0	0	0	0	1	1	1	1	192.168.13.45 & 192.168.13.145	192.168.13.46



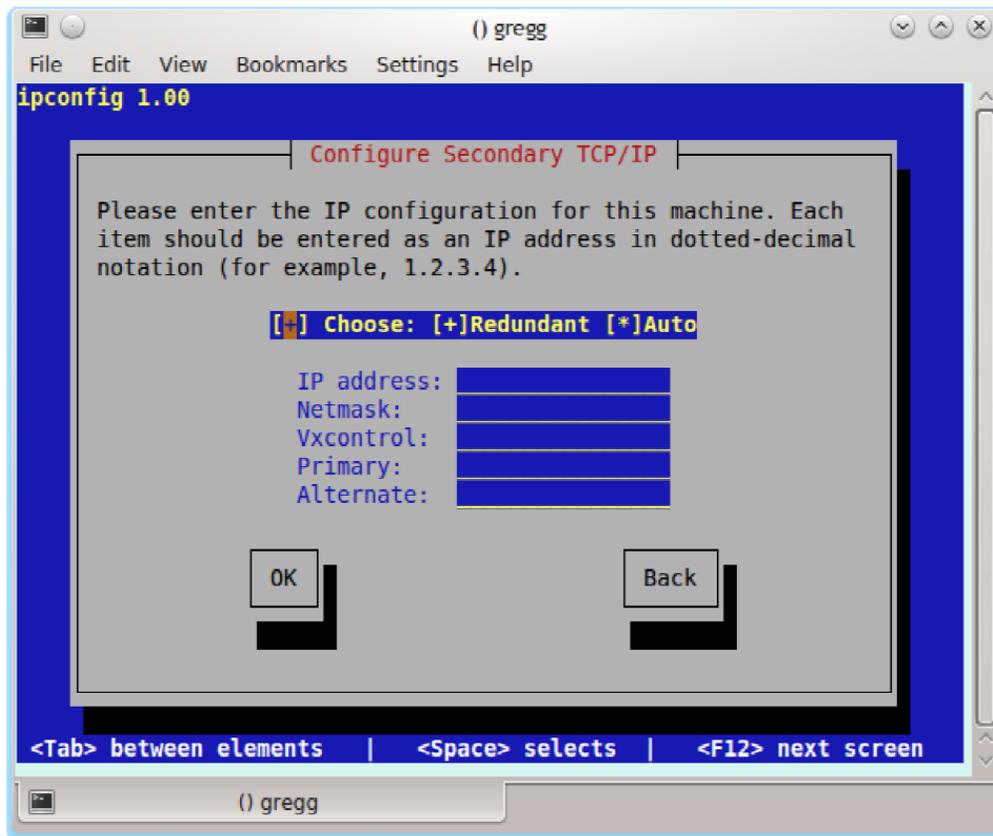
**Switch 1 is on the left.  
The ON ↑ position = 1**

## The Secondary Controller Card

On the secondary controller, two options are available. Use the space bar to toggle between *Redundant*, and *Auto*.

### The Redundant Option, Secondary Controller

Select the **[+] Redundant** mode to configure a Matrix Switch with a primary and secondary controller.



#### **IP address**

IP address of the secondary controller.

#### **Netmask**

Network mask of the secondary controller.

#### **Vxcontrol**

IP address of the external control server.

#### **Primary**

IP address of the primary controller.

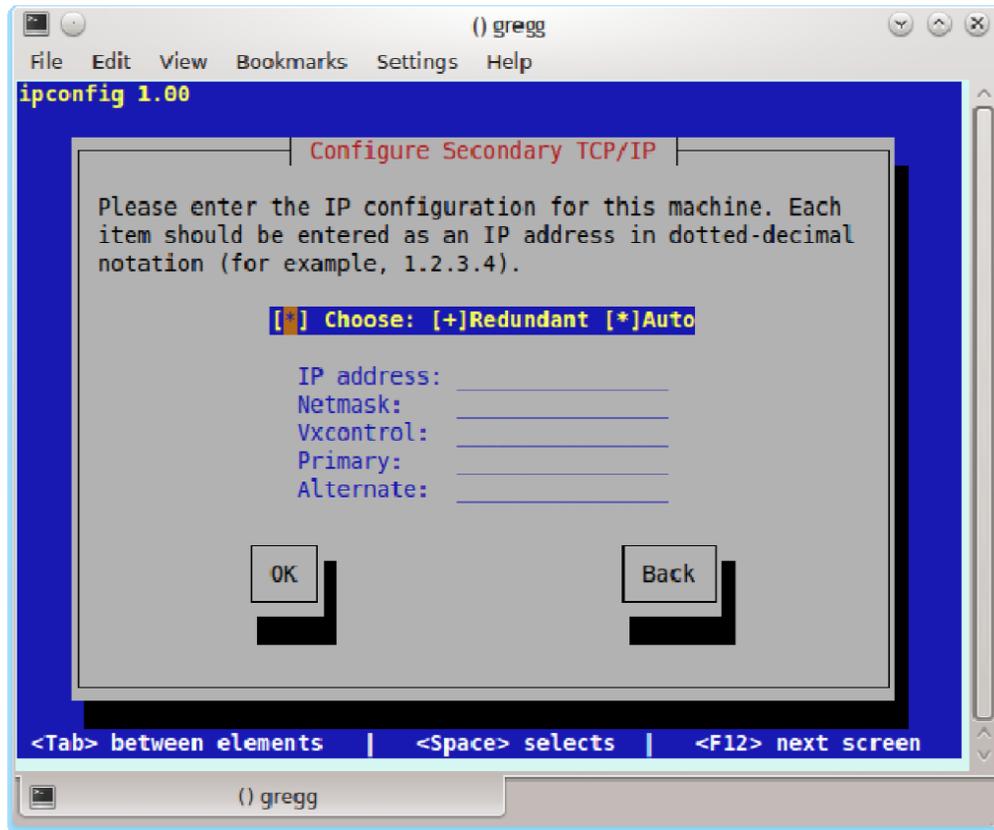
#### **Alternate**

IP address used to reach the primary controller during a failed condition when the secondary controller has take control of the system from the primary controller.

Use the space bar to press "OK." Reboot the Matrix Switch to have the changes take effect.

### The Auto Option, Secondary Controller

Select the [ \* ] **Auto** mode to configure the IP addresses of a Matrix Switch based on the DIP switch located on the Matrix Switch.



Use the space bar to press “OK.” Reboot the Matrix Switch to have the changes take effect.

## **Thinklogical Support**

### **Customer Support**

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*We believe that the first line of support comes from the design engineers that developed each particular product.*

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**support@thinklogical.com** – Product support, technical issues or questions, product repairs and request for Return Authorization.

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<b>International Sales (Asia Pacific, Central &amp; Latin America):</b>	<b>1-203-647-8734</b>

Please contact our expert sales staff in **Milford, CT, USA**. We are here Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. We'll provide a representative's direct dial phone number when you call.

If leaving a voice message, please provide a preferred time to call back so we may reach you at your convenience.

Our switchboard attendant will direct your call during regular business hours. We have an automated attendant answering our main telephone switchboard after regular business hours and holidays. Please leave voice messages for individuals at any time.

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**Note: Thinklogical, LLC® products carry a one year warranty, with longer term available at time of purchase on most products. Please refer to your product invoice for your products Warranty Terms & Conditions.**

Defect remedy shall be the repair or replacement of the product, provided that the defective product is returned to the authorized dealer within a year from the date of delivery.

If you wish to return your device, contact the Thinklogical, LLC® authorized dealer where you purchased the device, or if you purchased directly, call Thinklogical, LLC® at **1-800-291-3211 (USA)**.

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If you need to return your Thinklogical® product to us for any reason, please get a **Return Merchandise Authorization Number (RMA#)** from Thinklogical's **Product Support Department (1-203-647-8700)** before sending the unit in.

In the event you must return a product to Thinklogical® directly, please contact **Customer Support** at **1-800-291-3211** or **1-203-647-8700**. Customer Support will ask you to describe the problem and will issue you a **Return Merchandise Authorization** number (RMA#). Pack the device in its original box, if possible, and return it with the RMA# printed on the outside of the box.



**Note: DO NOT return a product to Thinklogical® without a *Return Merchandise Authorization*.**

### Our Addresses

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