

### Welcome!

We greatly appreciate your purchase of your TNP520 Series Tilt 'N Plug. We are sure you will find it reliable and simple to use. Superior performance for the right price, backed by solid technical and customer support is what ALTINEX has to offer.

We are committed to providing Signal Management Solutions<sup>®</sup> to our customers for the most demanding audiovisual installations at competitive pricing and we welcome you to join the ranks of our many satisfied customers throughout the world.

### 1. Precautions and Safety Warnings

Please read this manual carefully before using your Tilt 'N Plug. Interconnect Box. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your Tilt 'N Plug, and to prevent fire and shock hazards. Please read them carefully and heed all warnings.

#### 1.1 General

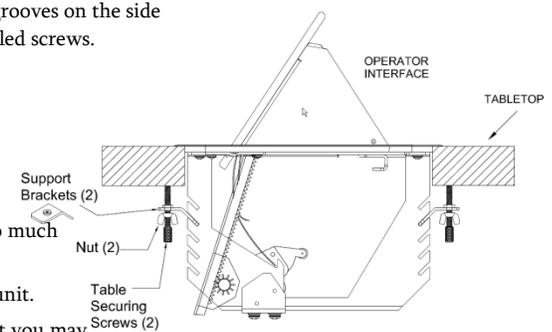
- Unauthorized personnel shall not open the unit as there are high-voltage components inside. Qualified ALTINEX service personnel or their authorized representatives must perform all service.

#### 1.2 Installation Precautions

- For best results, place the Tilt 'N Plug in a dry area away from dust.
- To prevent fire or shock, do not expose this unit to water or moisture. Do not place the unit 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 carefully; dropping or jarring can damage the bezel.
- Never place fingers inside the opening on either side of the unit. This action could cause injury due to sharp edges inside.
- Do not place heavy objects on top of the Tilt 'N Plug. Do not use excessive force to push down on the top of the unit.

### 2. Installation Procedures

- Step 1. Cut an opening into the table's surface. Refer to the ALTINEX website at [www.altinex.com](http://www.altinex.com) for table cutout requirements.  
Note: The table can be 2.50 in (64 mm) or less in thickness. Always confirm dimensions before cutting to insure that specifications have not changed.
- Step 2. Insert the TNP520/TNP528 into the table cutout.
- Step 3. Place the support brackets under the table and place them between the support mount grooves on the side of the unit. Attach brackets to the groove at and secure them to the table using the knurled screws. Tighten provided wing nuts to secure screws on place.
- Step 4. To lower the unit, push on the top cover until it locks into place.
- Step 5. Secure all cables to the underside of the table using the cable clamps and screws included with the TNP. Pass the power cord from the bottom of the housing and attach it to the table separate from the signal cables.  
Leave enough slack in the service loop to allow for easy opening and closing, but not too much as to cause excess drooping of the service loop.
- Step 6. Connect the appropriate cables with the correct input connectors on the bottom of the unit.
- Step 7. Once you have applied power and connected the proper cables on the bottom of the unit you may raise the unit. To raise the unit into position, push down on the front of the top cover; the latching mechanism will then release, allowing the pneumatic spring to raise it into position.  
NOTE: It may be necessary to adjust the service loop of the cables for optimal performance.



- Disconnect the power cord to turn off the power. This supplies power to the socket on the pop-up panel. The power outlet should be installed near the equipment and be easily accessible.
- We recommend using wall outlets with a Ground Fault Circuit Interrupter (GFCI) for maximum protection.
- Install all cables according to the instructions found herein. Do not force or pull any cable that is attached to the Tilt 'N Plug.

#### 1.3 Cleaning

- Surfaces should be cleaned with a dry cloth. Never use strong detergents or solvents such as alcohol or thinner. Do not use a wet cloth or water to clean the unit.

#### 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 A digital device, pursuant to Part 15 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 his expense.
- Any changes or modifications to the unit not expressly approved by ALTINEX, Inc. could void the user's authority to operate the equipment.

### 3. Limited Warranty/Return Policies

Please see the ALTINEX website at [www.altinex.com](http://www.altinex.com) for details on warranty and return policies.

### 4. Technical Specifications

Specifications are subject to change. See [www.altinex.com](http://www.altinex.com) for up-to-date information.

Features/Description	TNP
<b>TNP520*</b>	
Pass-Through AC Power	9-10 ft (2.7-3.0 m)
110 VAC, 60 Hz, 5 A	NEMA F-M
Agency Approval	
UL/C-UL Listed	File E254082
<b>TNP528*</b>	
Audio, Video, Communication	6 ft (2 m)
Computer Video	15-pin HD F-M (2)
Computer Audio	3.5mm F-M (2)
HDMI	HDMI F-M (2)
Network	CAT-6 (RJ-45) F-M (2)
USB	Type A F-M (1)
Pass-Through AC Power	9-10 ft (2.7-3.0 m)
110 VAC, 60 Hz, 5 A	NEMA F-M
Agency Approval	
UL/C-UL Listed	File E254082
<b>TNP520/ 528 Models*</b>	
Accessories Included	
Hardware	-Mounting screws/brackets -Cable clamps/screws -Fastener Tool

Table 1. TNP520/528 General

Mechanical	TNP520 / 528**
Max. Table Thickness	2.50 in (64 mm)
Height, opened	5.50 in (140 mm)
Width	7.86 in (220 mm)
Depth	6.53 in (166 mm)
Finish	TNP520,TNP528: Matte Black TNP520S,TNP528S: Brushed Aluminum
Weight (approx.)	TNP520(S) 2.85 lb. (1.29 kg) TNP528(S) 4.61 lb. (2.09 kg)
Shipping Weight	5.51 lb. (2.50 kg)
T° Operating	10°C-35°C
T° Maximum	40°C
Humidity	90% non-condensing

Table 2. TNP520/528 Mechanical

Electrical (Single outlet panel)	TNP520 / 528 **
Power Rating (pass-through AC power)	120VAC, 60Hz, 12A total current

Table 3. TNP520/528 Electrical \*\*

\* Includes models ending in S (brushed aluminum).  
Models ending in C are customizable.

\*\* Dimensions and ratings include models ending in C and S.

### 5. About Your Tilt 'N Plug Interconnect Box

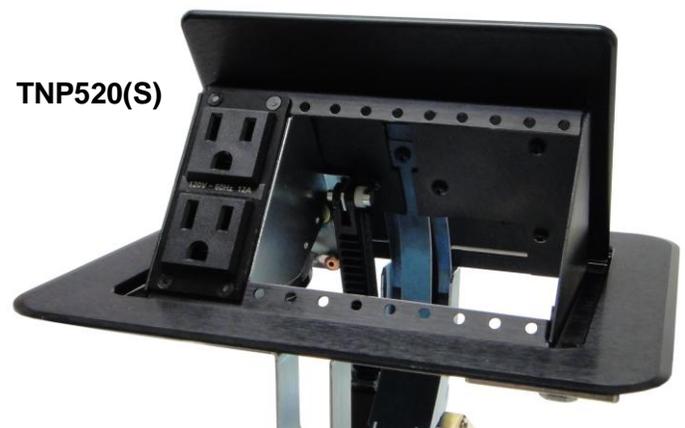
- New leaf-spring replaces gas shock
- Pop-up dampening for smooth operation
- Simple, drop-in installation
- Standard high-quality matte black or brushed aluminum finish  
 TNP520, TNP528: Matte Black  
 TNP520S, TNP528S: Brushed Aluminum
- Custom finishes available (contact ALTINEX for options and pricing)

The TNP520 and TNP528 are compact interconnect solutions designed for mounting into tables, podiums, or other furniture as part of a presentation system. Inputs are accessed by pushing down on the top cover allowing the units to "tilt" open. The inputs are hidden by pressing down on the top cover until the latching mechanism engages. In the closed positions, the top covers lie flush with the tabletop. Signals are passed through the sectional plates to the underside of the table via cables with mating connectors on the opposite end. For example, an RJ-45 F input connector is terminated in an RJ-45 M connector at the end of a 6 ft (2 m) cable.

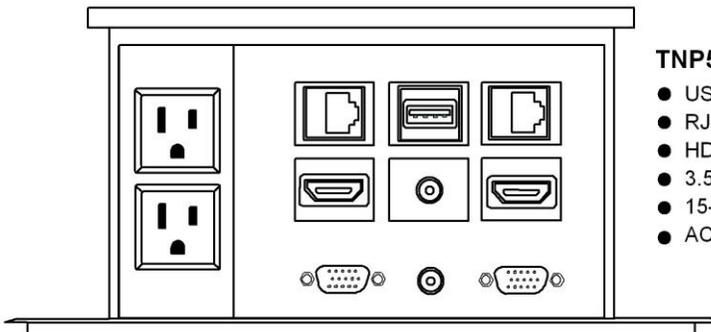
The TNP520 is empty with AC power only, but provides slots for 4 single-slot sectional plates that can be configured with various multimedia inputs. See our website for all input plate options. The TNP528 is a "package" that covers the basic needs of many users and ships complete with 2 standard U.S. power receptacles, 2 computer video (15-pin HD) plus 2 audio (3.5 mm), 2 standard HDMI, 2 network (RJ-45), and 1 USB (Type A) input connectors. All audiovisual connectors have 6 ft. (2 m) cables that feed through to the bottom of the unit.



TNP528(S)



TNP520(S)

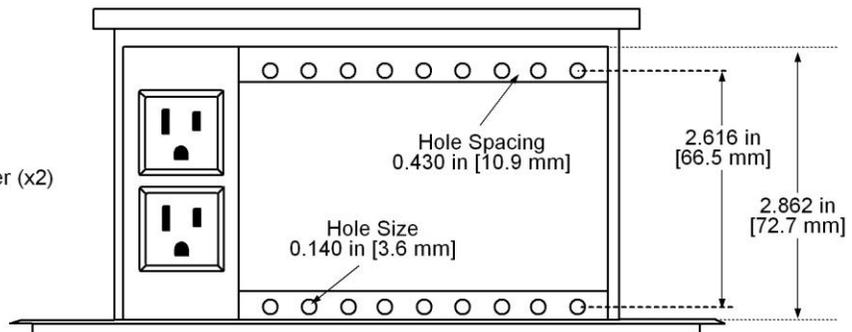


#### TNP528

- USB F (x1)
- RJ-45 F Network (x2)
- HDMI F (x2)
- 3.5 mm F PC Audio (x2)
- 15-pin HD F VGA (x2)
- AC Power (x2)

#### TNP520

- AC Power (x2)



## 6. Application Diagrams

Diagram 1: Application Diagram

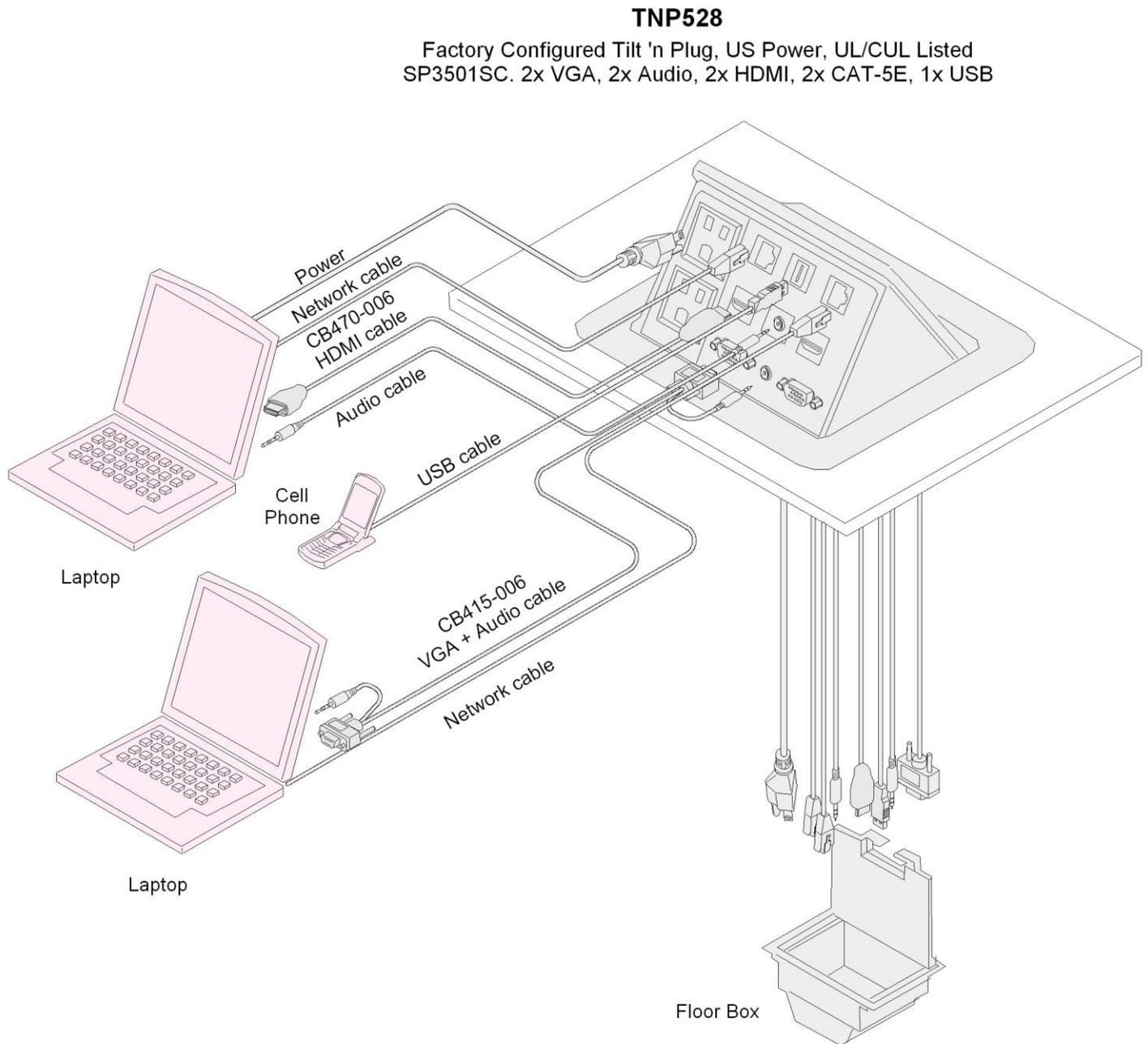


Diagram 2: Bezel Dimensions

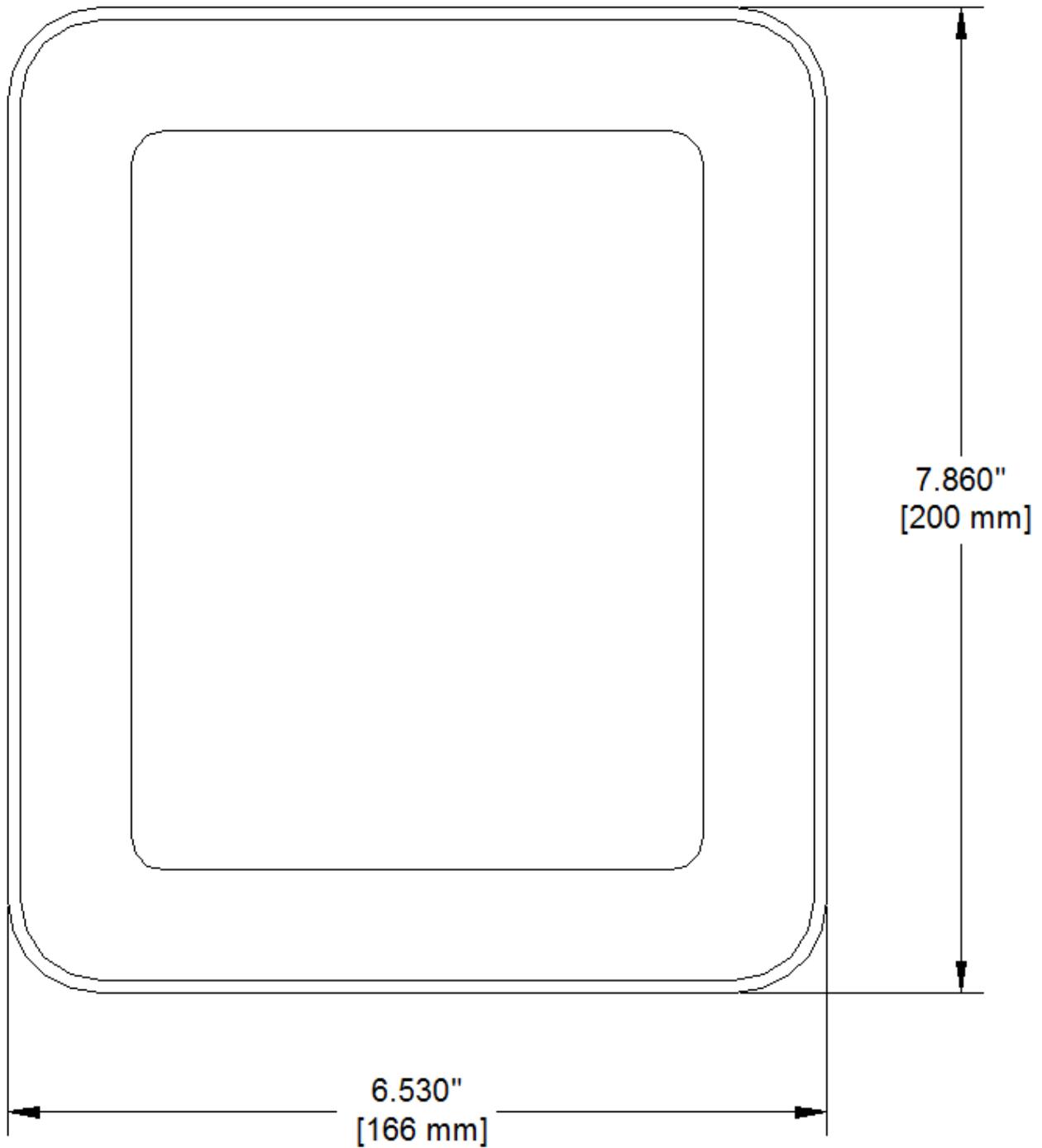


Diagram 3: Unit Dimensions

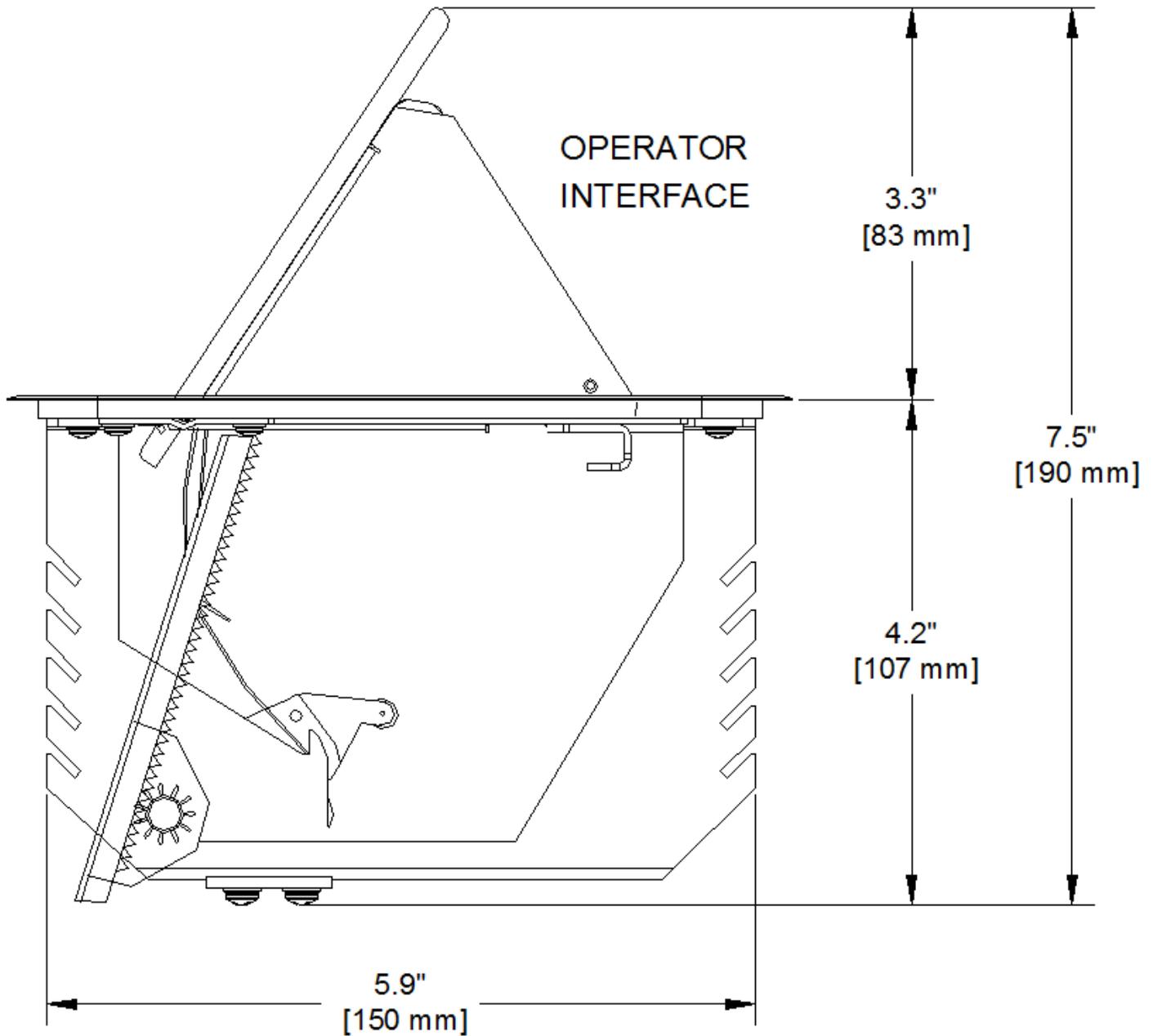
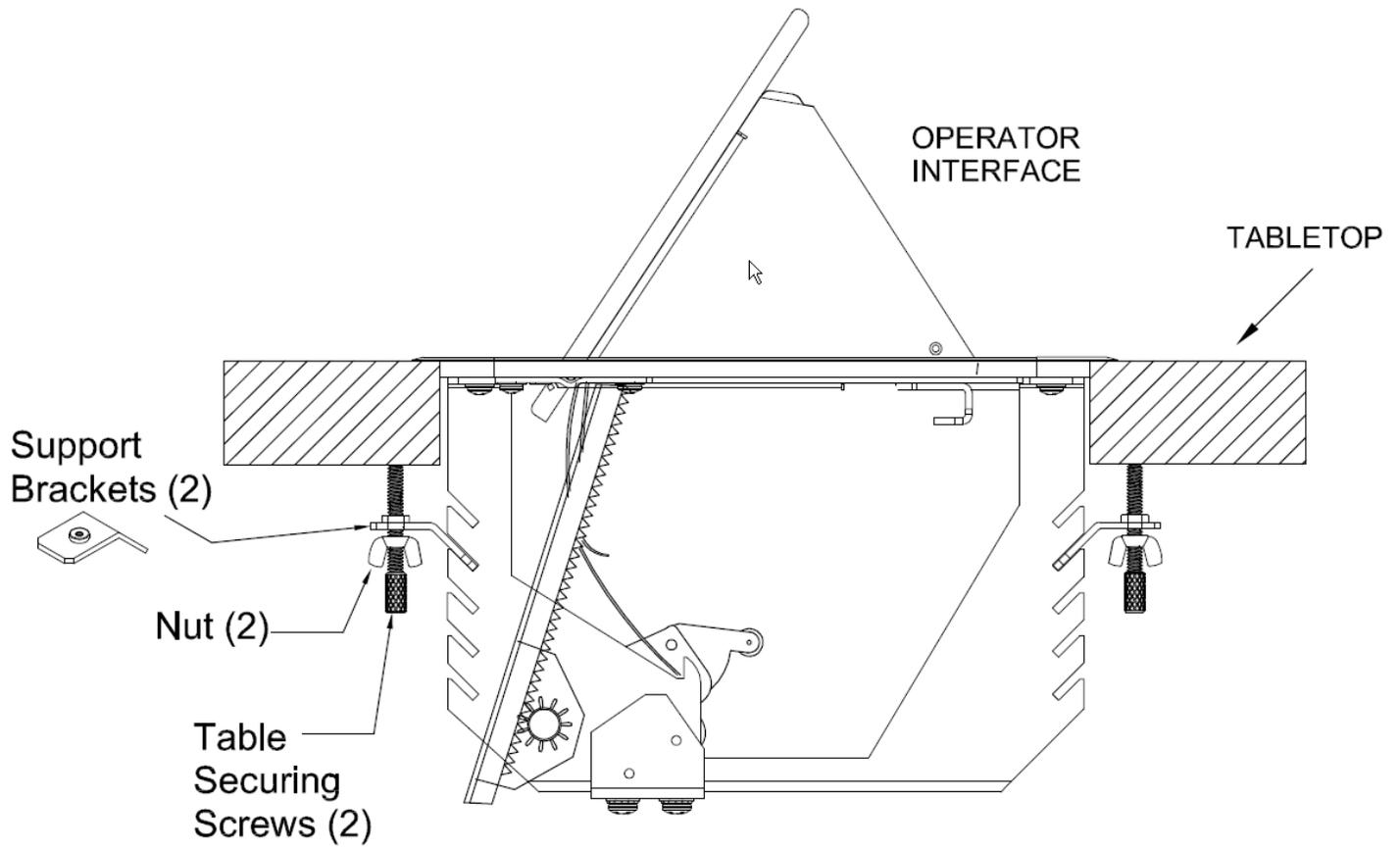


Diagram 4: Mounting



### 7. Operation

#### 7.1 Opening and Closing the Tilt 'N Plug

The Tilt 'N Plug will open easily when the top is pressed down and then released.

When the Tilt 'N Plug is not in use, simply press the top down until it is level with the surface of the table and then release. The unit will remain hidden until needed again.

### 8. Troubleshooting Guide

The Tilt 'N Plug supplied was carefully tested and no problems were detected. However, we would like to offer the following suggestions:

Switcher	
Symptom	Resolution
Signal quality is poor.	<ol style="list-style-type: none"> <li>1. Please make sure that the highest quality video and network cables are used.</li> <li>2. The TNP is a passive unit and does not alter signals in any way. If there is suspected problem with the signal quality, check the quality of the cables coming into and the TNP and connecting to the output of the TNP. If they are of low quality or improperly assembled, this will affect the overall quality of the signal.</li> </ol>
Damaged power cord	<ol style="list-style-type: none"> <li>1. Make sure that no cable or power cord is damaged or pinched.</li> <li>2. If there has been damage, do not use the Tilt 'N Plug. Please call the ALTINEX Customer Service Department at (714) 990-2300 to have the unit repaired.</li> </ol>
Unit raises too slowly	<ol style="list-style-type: none"> <li>1. If the unit does not rise into position correctly, check the service loops for the signal and power cords on the bottom of the unit. If the service loop is too small the cables will counteract the spring trying to raise the unit into position.</li> </ol>
Unit tilts up too fast	<ol style="list-style-type: none"> <li>1. If the unit rises into position too fast, check the service loops for the signal and power cords on the bottom of the unit. If the service loop is too large and the cables are putting upward pressure on the unit, the unit will tilt up too fast.</li> </ol>
Unit does not close all the way	<ol style="list-style-type: none"> <li>1. If the unit does not close flush with the bezel, check the service loops for the signal and power cords on the bottom of the unit. If the service loop is putting upward pressure in the unit, the unit will not be able to seat all the way down.</li> </ol>

#### 7.2 Power/Signal Connections

Connect external devices to the appropriate connector on the Tilt 'N Plug. Remember, the devices plugged into the AC power connectors should not draw more than 12A AC.