



Installation Guide for Thunder 3030S/1030S/930

A10 Thunder™ Series

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This guide describes how to physically install the following A10 Thunder Series models:

- Thunder 3030S
- Thunder 1030S
- Thunder 930

Also included are instructions for initial management access, so you can configure your device:

- [“Initial Configuration” on page 13](#) – Describes how to access the Command Line Interface (CLI) through the serial interface (MGMT port), and how to assign a management IP interface for management access over the network
- [“LOM Interface Configuration” on page 16](#) (Thunder 3030S/1030S only) – Describes how to access the Lights Out Management (LOM) interface for remote access to specific system-level commands

Essential Setup Information

- Default management IP address: **172.31.31.31 /24**
- Default admin login: **admin, a10**
- Default enable password:
blank (none)
- LOM access: [“LOM Interface Configuration” on page 16](#)

FIGURE 1 *Thunder 3030S - front panel*



FIGURE 2 Thunder 3030S - rear panel



FIGURE 3 Thunder 1030S - front panel



FIGURE 4 Thunder 1030S - rear panel



FIGURE 5 Thunder 930 - front panel



FIGURE 6 Thunder 930 - rear panel



Note: This guide applies only to models Thunder 3030S, Thunder 1030S, and Thunder 930.

Inspection

Inspect the box carefully *before* opening it. If the box is damaged, contact the shipper for instructions on filing a claim. Opening a damaged box before inspection by the shipper will void any potential shipping claims.

Caution: Do not attempt to install or operate damaged equipment. As with any electrical equipment, personal injury or damage to other equipment can result from commissioning damaged electrical equipment.

Regulations

Follow all applicable regulations for installation of electrical equipment.

Unpacking

Carefully unpack your ACOS device and included items from the box.

Check the Contents

Confirm that the following items are included with the ACOS device:

- Cables: one AC power, two Cat-5E Ethernet, one Serial to RJ-45 console
- Hardware: rack-mount kit (2 front brackets and bracket screws); tabletop-mount kit (4 rubber feet)
- Product documentation, CD (User Manuals, Release Notes, and so on)

Other Requirements

Other equipment needed for installation:

- Notebook or workstation PC (Windows, Linux, or Mac)
 - Must have compatible Ethernet connectivity
- Web browser (Chrome 5.0, Firefox 3.5-7.0 for Windows or Linux, IE 6-0-9.0 for Windows, Safari 3.0 for Mac)
- Terminal Emulation Software (PuTTY, HyperTerminal, or similar)

Installation

You can install the Thunder device on a tabletop or in a 19" equipment rack. Front-mount and center-mount installation are supported.

Tabletop

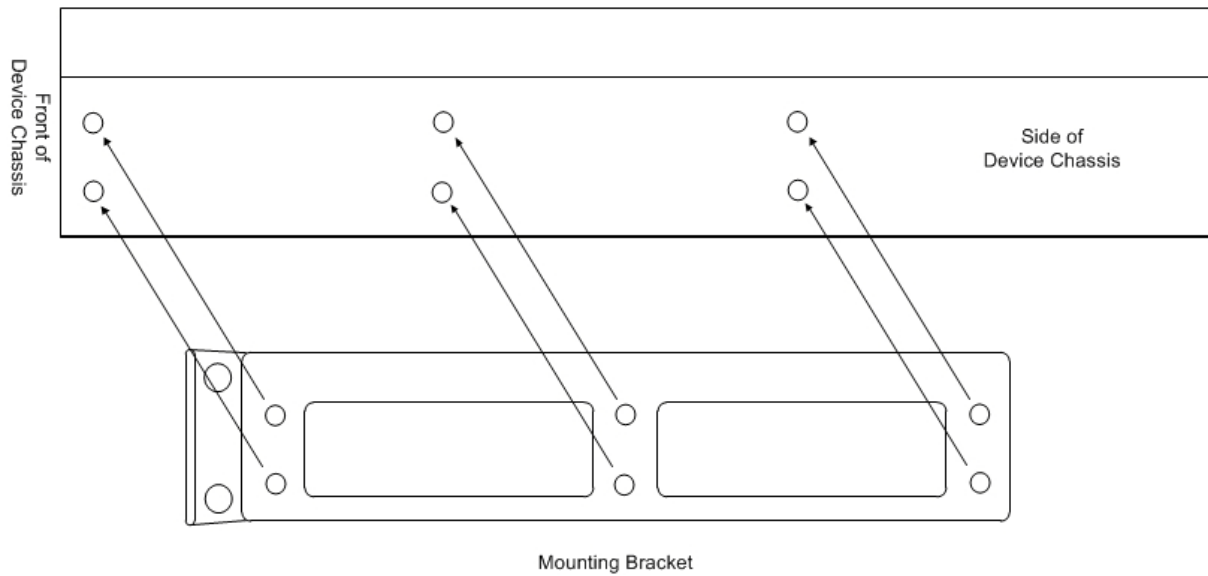
1. Carefully turn the chassis upside down and place it on a smooth, flat surface.
2. Attach the four rubber feet to the bottom of the chassis.
3. Carefully turn the chassis over and place it on the tabletop.
4. Go to [“Interface Connections” on page 11](#).

Rack Mounting—Front Mount

Note: Rack screws are not included in the bracket kit.

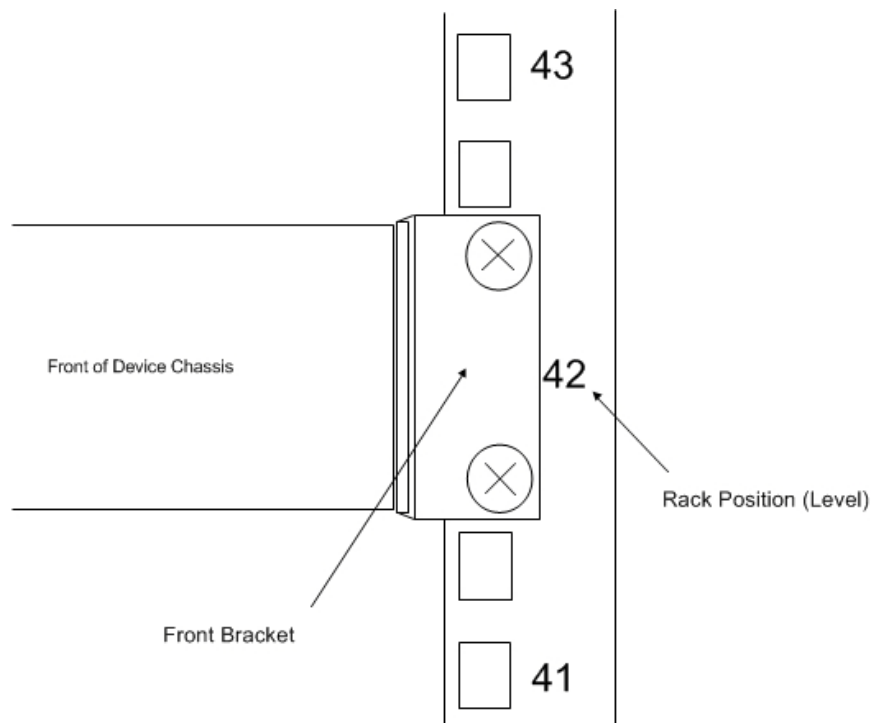
1. Align a bracket over the 6 black 4-mm flat-head screws that will be used to attach the bracket to the chassis. Make sure to use the correct bracket. Each bracket fits on only one of the chassis sides. (See [Figure 7 on page 8](#).)
2. Remove the screws.
3. Align the bracket over the screwholes and re-insert the screws. Make sure they are snug.
4. Repeat [step 1](#) through [step 3](#) to attach the other bracket.

FIGURE 7. Attaching the brackets to the device – front mount



5. Attach the Thunder device to the front of the rack as shown in [Figure 8](#). Make sure to fasten the brackets.

FIGURE 8. Attaching the device to the front of the rack



Caution: Disconnect AC power supply cord(s) before servicing.

Tighten the rack screws to secure the equipment to the rack after servicing.

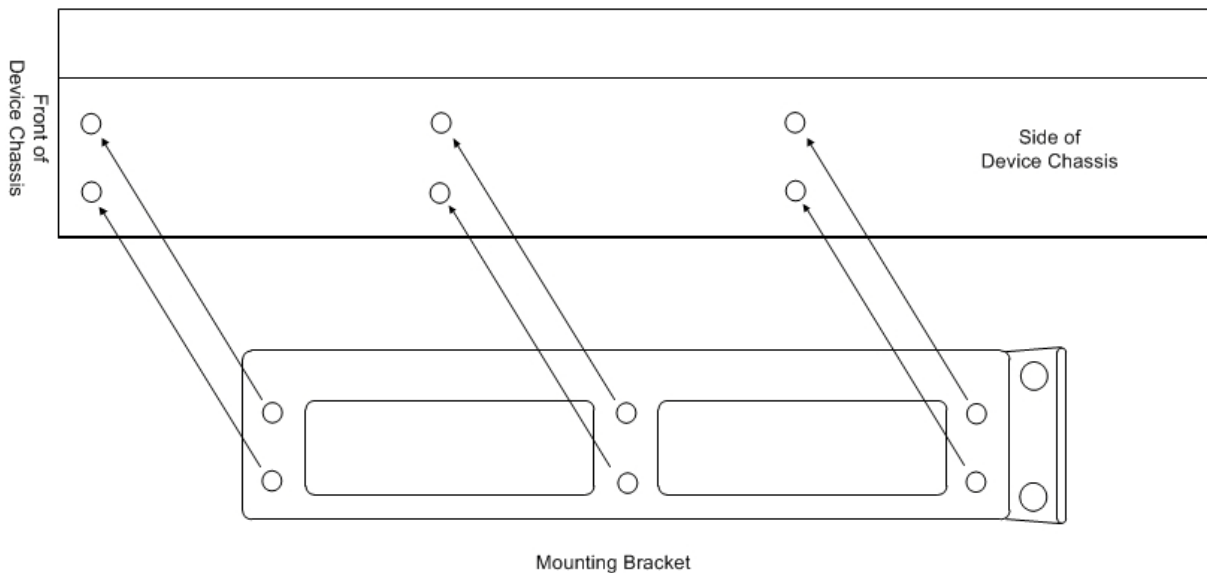
6. Check all screws to verify that they are snug.
7. Go to [“Interface Connections” on page 11.](#)

Rack Mounting—Center Mount

Note: Rack screws are not included in the bracket kit.

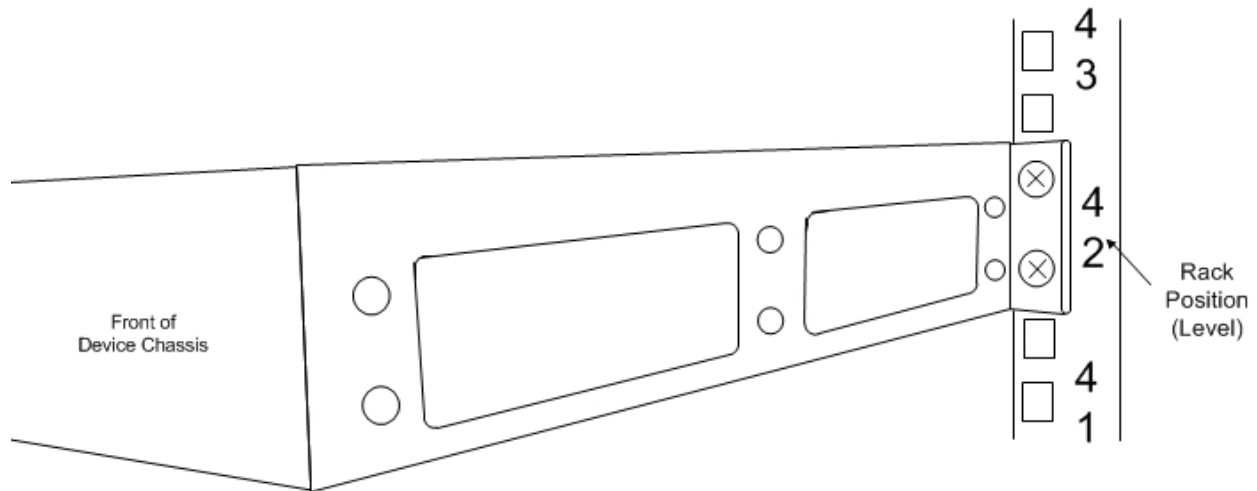
1. Align a bracket over the 6 black 4-mm flat-head screws that will be used to attach the bracket to the chassis. Make sure to use the correct bracket. Each bracket fits on only one of the chassis sides. (See [Figure 9.](#))
2. Remove the screws.
3. Align the bracket over the screwholes and re-insert the screws. Make sure they are snug.
4. Repeat [step 1](#) through [step 3](#) to attach the other bracket.

FIGURE 9. Attaching the brackets to the device – center mount



5. Attach the Thunder device to the center post in the rack as shown in [Figure 10](#). Make sure to fasten the brackets.

FIGURE 10. Attaching the device to the center post of the rack



Caution: Disconnect AC power supply cord(s) before servicing.

Tighten the rack screws to secure the equipment to the rack after servicing.

6. Check all screws to verify that they are snug.
7. Go to [“Interface Connections” on page 11](#).

Interface Connections

The Thunder models described in this guide have the following hardware interfaces.

Ethernet Data Interfaces (Thunder 3030S)

- 6 1-Gig Copper
- 2 1-Gig Fiber SFP
- 4 10-Gig Fiber SFP+

Ethernet Data Interfaces (Thunder 1030S/930)

- 6 1-Gig Copper
- 2 1-Gig Fiber SFP
- 2 10-Gig Fiber SFP+

Management Interfaces (Thunder 3030S/1030S/930)

- 1 serial console interface (Console)
- 1 Ethernet interface (Mgmt)

Interface Connection

1. Connect the serial cable to the serial console interface.
2. Connect Ethernet cables to the data interfaces you plan to use.
3. Optionally, connect an Ethernet cable to the Mgmt interface.

FIGURE 11 Front view (Ethernet and Console connectors, LEDs)



Front Panel Status LEDs

TABLE 1 Front panel LED status indications

LED	Color	Status	Description
Power	Green	On	Power is switched On
		Off	No power connected
HDD	Amber	On	Hard disk under access
		Off	No Data access
Status	Green	On	When system under access
		Off	No power access
Ethernet Ports (Cat-5)	L/A	Green	Off
		Green	On
		Flash	ACT - Activity
	SP	Off	Off
		Green	On
		Amber	On
Ethernet Ports (Fiber)	L/A	Green	Off
		Green	On
	ACT	Green	Off
		Flash	ACT - Activity

Power-on

The Thunder 3030S/1030S/930 automatically boots when the power plug is connected to an electrical outlet. If the unit does not boot automatically, it can be manually booted by quickly flipping the power switch.

Note: Power OFF – To perform a graceful shutdown, use the **shutdown** command in the CLI. You will be prompted to save your configuration information before the device powers down.

Force Power OFF – If the system stops working and requires a forced shutdown, press and hold the power switch four seconds. Keep in mind that this forced shutdown will cause a loss of configuration information that has not been manually saved.

Initial Configuration

The ACOS device (Thunder or AX device powered by ACOS) can be initially configured using the CLI, accessed through the console connection.

To display a list of commands for a level of the CLI, enter a question mark (?) and press Enter. You can display the list separately for each level.

For syntax help, enter a command or keyword followed by a “space”, then enter ? then press Enter. This works for commands with sub-commands also.

Note: If you are planning to configure the new device by loading the configuration from another device:

1. On the configured device, use the **copy** CLI command to save the startup-config to a remote server.
2. On the new device, copy the configured device’s startup-config from the remote server onto the new device.
3. Reboot the new device.
4. Modify parameters as needed (such as IP addresses).

Connection via Console (Serial Port)

1. Using the included serial cable, connect the device to a computer with terminal emulation software.
2. Power on the computer and the device. Press the ON direction of the lower rocker switch.
3. Set the terminal emulation software for 9600 baud and 8-N-1 (8 bits - no parity - 1 stop bit). Once you are connected, the login prompt will display on the terminal.

Login via CLI

1. Log into the device with the default username *admin* and the default password *a10*.

```
login as: admin
Welcome to ACOS
Using keyboard-interactive authentication.
Password:***
[type ? for help]
```

2. Enable the Privileged EXEC level by typing **enable** and pressing the Enter key. There is *no* default password to enter Privileged EXEC mode on new systems.

```
ACOS>en
Password:(just press Enter on a new system)
ACOS#
```

3. Enable the configuration mode by typing **config** and pressing Enter.

```
ACOS#config
ACOS(config)#
```

4. It is **strongly suggested** that a Privileged EXEC enable password be set up as follows:

```
ACOS(config)#enable-password newpassword
ACOS(config)#
```

How to Configure the MGMT Interface

Note: It is recommended to keep the management interface and the data interfaces in separate networks. Otherwise, some operations such as pinging may have unexpected results.

1. In the factory default configuration, the management interface has IP address 172.31.31.31/24.
2. You can use either a console connection or use another PC with an IP address in the same subnet (for example, 172.31.31.1/24), and connect the PC to the MGMT interface.
3. Configure the management interface IP address and default gateway.
 - **Note:** The MGMT interface is an out-of-band interface; therefore, it should not be on the same subnet as any of the data interfaces.
 - In the example below, the IP address for the MGMT interface is 192.168.2.228. None of the data interfaces should have an IP address of 192.168.2.x.

```
ACOS(config)#interface management
ACOS(config-if:mgmt)#ip address 192.168.2.228 /24
ACOS(config-if:mgmt)#ip default-gateway 192.168.2.1
```

4. Verify the interface IP address change:

```
ACOS(config-if:mgmt)#show interface management
GigabitEthernet 0 is up, line protocol is up.
Hardware is GigabitEthernet, Address is xxxx.yyyy.zzzz
Internet address is 192.168.2.228, Subnet mask is 255.255.255.0
...
```

5. Optionally, configure the ACOS device to use the management interface as the source interface for automated management traffic generated by the ACOS device:

```
ACOS(config-if:mgmt)#ip control-apps-use-mgmt-port
```

(For more information, see the “Enabling Use of the Management Interface as the Source for Automated Management Traffic” chapter in the *System Configuration and Administration Guide*.)

```
ACOS(config-if:mgmt)#exit
ACOS(config)#
```

Change the Admin Password

A10 Networks recommends that you change the admin password immediately for security.

```
ACOS(config)#admin admin password newpassword
ACOS(config)#
```

The ACOS device is now network accessible for configuration under the new IP address and admin password.

Note: By default, Telnet access is disabled on all interfaces, including the management interface. SSH, HTTP, HTTPS, and SNMP access are enabled by default on the management interface only, and disabled by default on all data interfaces.

Save the Configuration Changes – write memory

Configuration changes made so far must be saved to the system memory to take effect when the system reboots. Otherwise, a power interruption (for example) could cause the system to be unavailable from the Web interface, in which case the console configuration would need to be repeated. Saving the configuration changes prevents this inconvenience. To write the current configuration to system memory:

```
ACOS(config)#write mem
Building configuration...
[OK]
```

LOM Interface Configuration

Based on Intelligent Platform Management Interface (IPMI) technology, the LOM feature provides you with the convenience to configure or monitor an ACOS device remotely.

Notes

- LOM is supported on Thunder 3030S and Thunder 1030S.
- For more information in addition to this section, see the *Lights Out Management Reference Guide*.

Configure IP Connectivity

The default IP address of the LOM GUI is 0.0.0.0. In order to access the LOM GUI, you must first set the interface address through the CLI. After this value is configured, you can reconfigure the LOM interface address, through the LOM GUI or CLI.

To configure LOM interface settings:

1. Connect a PC to the LOM interface.
2. Configure the IP address of the PC to place it in the LOM interface's subnet.
3. In the CLI console, enter a valid user name and password.
 - Default user name: **admin**
 - Default password: **a10**
4. At the configuration level of the CLI, enter the following command to set the IP address of the LOM interface

```
ipmi ipsrc static
```

```
ipmi ip ipaddr subnet-mask default-gateway
```

To verify the configuration, use the PC connected in [step 2](#) to navigate to the LOM GUI.

Configure LOM Admins

To create the LOM admin account “admin”, use the following command at the configuration level of the CLI:

```
ipmi user add admin password
```

Note: The LOM interface has its own admin database and IP interface settings. User accounts created for the LOM interface are restricted to this subsystem and do not grant access to either the GUI or CLI.

Note: By default, all user accounts added through the CLI have administrator privilege.

For More Information

For feature information, see the following guides:

Basic Setup

- *System Configuration and Administration Guide*

Security Guides

- *Application Access Management and DDoS Mitigation Guide*
- *Web Application Firewall Guide*
- *Management Access Security Guide*

Application Delivery Guides

- *Application Delivery and Server Load Balancing Guide*
- *Global Server Load Balancing Guide*

References

- *LOM Reference*
- *GUI Reference*
- *CLI Reference*
- *aFlex Reference*
- *MIB Reference*
- *aXAPI Reference*

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