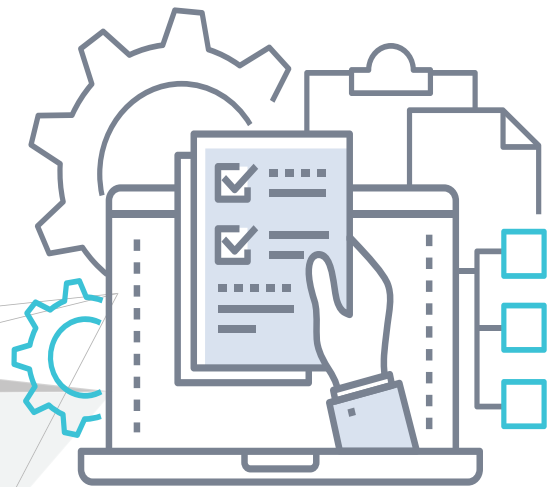


# Site Preparation Guide for Gen 10 Recovery Series Appliances

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# Contents

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<b>Introduction</b> .....	<b>4</b>
<b>Space and Clearance Requirements</b> .....	<b>4</b>
<b>Load Bearing (Weight) Requirements</b> .....	<b>6</b>
<b>Power Requirements</b> .....	<b>8</b>
<b>Cooling and Environmental Conditions</b> .....	<b>9</b>
<b>Configuration Requirements</b> .....	<b>11</b>
Configuring the System .....	11

# Introduction

This document describes the preparations that should be considered before installing a Gen 10 Recovery Series appliance or any of the rotational archiving solutions. Proper preparation of the site will help ensure consistent and stable operation of the Unitrends solution.

Consider these site preparation requirements before installation:

- "Space and Clearance Requirements"
- "Load Bearing (Weight) Requirements" on page 6
- "Power Requirements" on page 8
- "Cooling and Environmental Conditions" on page 9
- "Configuration Requirements" on page 11

## Space and Clearance Requirements

The following space requirements should be considered before installing the Unitrends hardware:

- The appliance rack-mounted chassis fits into a standard 19" rack or cabinet and is up to 26.99" deep. Rack-mounted chassis are 1-unit (1U) or 2-unit (2U) in height, and come with rails if required for racking. Attach the rails to accommodate the specific rack or cabinet used with the appliance.
- Unitrends recommends the use of cable guides to organize the power, network, and other cables.
- Each appliance requires proper airflow to cool the system's components. At least 5" of space should be maintained behind the rack at all times to ensure adequate ventilation.
- The rack or cabinet should be positioned so that there is adequate space in front of and behind the rack/cabinet to allow the front and rear doors (if applicable) to open. Allow 25" clearance for front doors and 30" for rear doors.

Rails included with each rack-mounted appliance and archive solution are described on the following table.

### Rails by appliance model

Appliance Model	Chassis Type	Rail SKU	Rail Description
10002	Micro	NA	No rails
10004	1U Short	770-BBHI	2/4 post Static Ready Rails
10006	1U Short	770-BBHI	2/4 post Static Ready Rails
10008	1U Short	770-BBHI	2/4 post Static Ready Rails

Appliance Model	Chassis Type	Rail SKU	Rail Description
10010	1U Short	770-BBHI	2/4 post Static Ready Rails
10012	1U Short	770-BBHI	2/4 post Static Ready Rails
10016	1U	770-BCJI	A11 Drop in/Stab-in Combo
10020	1U	770-BCJI	A11 Drop in/stab-in Combo
10024	1U	770-BCJI	A11 Drop in/stab-in Combo
10032	2U	770-BECC	Sliding Ready Rails II for 2U
10040	2U	770-BECC	Sliding Ready Rails II for 2U
10060	2U	770-BECC	Sliding Ready Rails II for 2U
10080	2U	770-BECC	Sliding Ready Rails II for 2U
10100	2U	770-BECC	Sliding Ready Rails II for 2U
10120	2U	770-BECC	Sliding Ready Rails II for 2U
<b>Archive Solutions</b>			
Recovery-Archive	1U, full rack	Supermicro SC813MTQ-350CB	Supermicro MCP-290-00056-0N
QNAP TL-R400S	1U, full rack	<i>N/A, no rails required</i>	<i>N/A, no rails required</i>

# Load Bearing (Weight) Requirements

To prevent tipping, make certain that the rack is secure before installing the chassis. Unitrends strongly recommends the use of two people when placing the rack-mounted chassis into the rack or cabinet.

The following table provides load bearing requirements for each appliance and the rotational archiving solutions:

**Note:** If the appliance protrudes the rack about 1/2" to 1", the front rail may need adjusting. The front rail must be properly aligned (fourth hole from the front) to ensure a secure fit.

Appliance Model	Dimensions (W x D x H)	Weight	Shipping Weight
10002	7.17" x 7.00" x 1.42" 182.00mm x 178.00mm x 36.00mm	2.06 lbs 0.94 kg	5 lbs 2.27 kg
10004	18.97" x 22.16" x 1.68" 482.00mm x 563.00mm x 42.80mm	27.51 lbs 12.48 kg	40 lbs 18.10 kg
10006	18.97" x 22.16" x 1.68" 482.00mm x 563.00mm x 42.80mm	27.51 lbs 12.48 kg	40 lbs 18.14 kg
10008	18.97" x 22.16" x 1.68" 482.00mm x 563.00mm x 42.80mm	27.51 lbs 12.48 kg	40 lbs 18.10 kg
10010	18.97" x 22.16" x 1.68" 482.00mm x 563.00mm x 42.80mm	27.51 lbs 12.48 kg	40 lbs 18.10 kg
10012	18.97" x 22.16" x 1.68" 482.00mm x 563.00mm x 42.80mm	27.51 lbs 12.48 kg	40 lbs 18.10 kg
10016	17.08" x 23.45" x 1.68" 434.00mm x 595.63mm x 42.8mm	41.05 lbs 18.62 kg	56 lbs 25.40 kg
10020	17.08" x 23.45" x 1.68" 434.00mm x 595.63mm x 42.8mm	41.05 lbs 18.62 kg	56 lbs 25.40 kg
10024	17.08" x 23.45" x 1.68" 434.00mm x 595.63mm x 42.8mm	41.05 lbs 18.62 kg	56 lbs 25.40 kg

Appliance Model	Dimensions (W x D x H)	Weight	Shipping Weight
10032	18.97" x 26.99" x 3.41"	63.53 lbs	79 lbs
	482.00mm x 685.78mm x 86.8mm	28.82 kg	35.83 kg
10040	18.97" x 26.99" x 3.41"	63.53 lbs	79 lbs
	482.00mm x 685.78mm x 86.8mm	28.82 kg	35.83 kg
10060	18.97" x 26.99" x 3.41"	63.53 lbs	79 lbs
	482.00mm x 685.78mm x 86.8mm	28.82 kg	35.83 kg
10080	18.97" x 26.99" x 3.41"	63.53 lbs	79 lbs
	482.00mm x 685.78mm x 86.8mm	28.82 kg	35.83 kg
10100	18.97" x 26.99" x 3.41"	63.53 lbs	79 lbs
	482.00mm x 685.78mm x 86.8mm	28.82 kg	35.83 kg
10120	18.97" x 26.99" x 3.41"	63.53 lbs	79 lbs
	482.00mm x 685.78mm x 86.8mm	28.82 kg	35.83 kg
<b>Archive Solutions</b>			
Recovery-Archive	19.8" x 17.2" x 1.7"	21.6 lbs	31 lbs
QNAP TL-R400S	11.5" x 16.85" x 1.6"	8.77 lbs	11.86 lbs

# Power Requirements

The specifications listed in this section assume that appliances are fully configured. There should be sufficient power capacity to service each appliance.

The proper power protection must be provided for each on-site appliance. Uninterruptible power supplies (UPS) must be adequately sized to support the appliance. Additionally, UPS must supply enough current to the appliance while it is charging.

The following table provides power requirements for each appliance and the rotational archiving solutions:

Appliance Model	Power Supply	Input Voltage Range (Auto Sensing)	Input Freq Range	Input Current Range	BTUs/hr
10002	AC Power Adapter, 130W	100-240VAC	50-60HZ	6.7-2.5A	444
10004	Single Wired, 250W - Bronze	100-240VAC	50-60HZ	6.5-3.5A	1871
10006	Single Wired, 250W - Bronze	100-240VAC	50-60HZ	6.5-3.5A	1871
10008	Single Wired, 250W - Bronze	100-240VAC	50-60HZ	6.5-3.5A	1871
10010	Single Wired, 250W - Bronze	100-240VAC	50-60HZ	6.5-3.5A	1871
10012	Single Wired, 250W - Bronze	100-240VAC	50-60HZ	6.5-3.5A	1871
10016	Single Wired, 800W - Platinum	100-240VAC	50-60HZ	13.3-6.7A	2730
10020	Single Wired, 800W - Platinum	100-240VAC	50-60HZ	13.3-6.7A	2730
10024	Single Wired, 800W - Platinum	100-240VAC	50-60HZ	13.3-6.7A	2730
10032	Dual Hot Plug (1+1), 1100W -Titanium	100-240VAC	50-60HZ	12.0-6.3A	4125



Appliance Model	Power Supply	Input Voltage Range (Auto Sensing)	Input Freq Range	Input Current Range	BTUs/hr
10040	Dual Hot Plug (1+1), 1100W -Titanium	100-240VAC	50-60HZ	12.0-6.3A	4125
10060	Dual Hot Plug (1+1), 1100W -Titanium	100-240VAC	50-60HZ	12.0-6.3A	4125
10080	Dual Hot Plug (1+1), 1100W -Titanium	100-240VAC	50-60HZ	12.0-6.3A	4125
10100	Dual Hot Plug (1+1), 1100W -Titanium	100-240VAC	50-60HZ	12.0-6.3A	4125
10120	Dual Hot Plug (1+1), 1100W -Titanium	100-240VAC	50-60HZ	12.0-6.3A	4125
<b>Archive Solutions</b>					
Recovery-Archive	350W	100-240VAC	50-60HZ	4.2-1.8A	1435
QNAP TL-R400S	100W	100-240VAC	50-60HZ		

## Cooling and Environmental Conditions

Unitrends appliances have been designed to operate within the environmental conditions listed below. Conditions that exceed recommended temperatures may result in severe damage caused by heat buildup. Proper air circulation will help prevent hot spots and ensure optimal performance. Unitrends recommends the use of a temperature alarm system for appliances that operate in an unattended environment.

**Note:** Installing the appliance in direct sunlight may cause it to overheat.

The Unitrends environmental specifications for rack-mounted appliances and the Recovery-Archive include:

Chassis Specs for Rack-mounted Models	Description
Non-operating environment	<ul style="list-style-type: none"> <li>• -40° C to 60° C (-40° F to 140° F)</li> <li>• 5% to 95% Relative Humidity with 27° C (80.6° F) Maximum Dew Point</li> <li>• Max temp gradient: 20° C in an hour* (36° F in an hour) and 5° C in 15 minutes (9° F in 15 minutes), 5° C in an hour* (9° F in an hour) for tape hardware</li> <li>• Max altitude: 12,000 meter (39,370 feet)</li> </ul>
Operating environment	<p data-bbox="456 600 1455 648"><b>Note:</b> These requirement represent shared ASHRAE (A2, A3, A4) requirements.</p> <ul style="list-style-type: none"> <li>• 10° C to 35° C (50° F to 95° F)</li> <li>• 10% to 80% Relative Humidity with 29° C (84.2° F) Maximum Dew Point</li> <li>• Max temp gradient: 20° C in an hour* (36° F in an hour) and 5° C in 15 minutes (9° F in 15 minutes), 5° C in an hour* (9° F in an hour) for tape hardware</li> <li>• Max altitude: 3,048 meters (10,000 feet)</li> </ul>
Cooling clearance	12" clearance recommended for ventilation

The Unitrends environmental specifications for the QNAP TL-R400S archive solution include:

Chassis Specs for the QNAP TL-R400S Archive	Description
Non-operating environment	<ul style="list-style-type: none"><li>-20° C to 70° C (-4° F to 158° F)</li></ul>
Operating environment	<ul style="list-style-type: none"><li>0° C to 40° C (32° F to 104° F)</li><li>5% to 95% Relative Humidity non-condensing, wet bulb: 27° C (80.6° F)</li></ul>
Cooling clearance	12" clearance recommended for ventilation

## Configuration Requirements

- **IT Personnel Considerations:** An administrator with network and client system access is expected to be available to assist with the implementation. This person will be responsible for installing and configuring agent software and will help with the planning and implementation of the overall Unitrends data protection solution. Additionally, someone responsible for administering and managing the appliances should be available during the installation process.
- **Network Considerations:** Ethernet network configurations must be capable of supporting the added demands of a Unitrends appliance. Ethernet switch ports must be available prior to installation.
- **On-premise to Off-premise Connections:** If hot backup copy will be implemented, adequate bandwidth for transferring data between the on-premise system and the off-premise system is critical. Generally, a T1 line can transfer between 400MB to 500MB of data per hour without secure shell compression. OpenVPN is recommended for connection between the two systems. Additionally, firewall access (if applicable) must be granted in order to allow the two appliances to communicate on designated ports.

## Configuring the System

Configure the system as described in the *Quick Start Guide for Recovery Series and MAXS Appliances*, available at <https://www.unitrends.com/docs/user-guides/quick-start-guide>.

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