

Site Preparation Guide for Recovery-Series Appliances Release 9.0

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Introduction

This document describes the preparations that should be considered before installing a 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" on page 7
- "Load Bearing (Weight) Requirements" on page 9
- "Power Requirements" on page 10
- "Amperage Requirements" on page 11
- "Cooling and Environmental Conditions" on page 12
- "Configuration Requirements" on page 12

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 36.4" deep. Rack-mounted chassis are 1-unit (1U), 2-unit (2U), 3-unit (3U), or 4-unit (4U) in height, and come with universal 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, archive solution, and external storage shelves are described here:

Model	Chassis Type	Chassis Number	Standard Rail Set	Min to Max Depth of Rail Set Extension
Appliances				
Recovery-201	Desktop	Thermaltake Element Q	N/A	N/A
Recovery-602	1U Short Rack	Supermicro 512L-200B	N/A	N/A
Recovery-603	1U Short Rack	Supermicro 512L-200B	N/A	N/A



Model	Chassis Type	Chassis Number	Standard Rail Set	Min to Max Depth of Rail Set Extension
Recovery-604	1U Short Rack	Supermicro 512L-200B	N/A	N/A
Recovery-713S	1U Full Rack	Supermicro 813MTQ-350CB	CSE-PT52	26" Min / 33.05" Max
Recovery-714S	1U Full Rack	Supermicro 815TQ--563UB	CSE-PT51L	26" Min / 33.05" Max
Recovery-814S	1U Full Rack	Supermicro 815TQ--563UB	CSE-PT51L	26" Min / 33.05" Max
Recovery-823S	2U	Supermicro 826BE16-R920LPB	MCP-290-00053-0N	26.5" Min / 36.4" Max
Recovery-824S	2U	Supermicro 826BE16-R920LPB	MCP-290-00053-0N	26.5" Min / 36.4" Max
Recovery-933S	3U	Supermicro 836BE16-R920B	MCP-290-00053-0N	26.5" Min / 36.4" Max
Recovery-936S	3U	Supermicro 836BE16-R920B	MCP-290-00053-0N	26.5" Min / 36.4" Max
Recovery-943S	4U	Supermicro 847E16-R1400LPB	MCP-290-00057-0N	26.5" Min / 36.4" Max
Recovery-944S	4U	Supermicro 847BE2C-R1K28LPB	MCP-290-00057-0N	26.5" Min / 36.4" Max
Recovery-946S	4U	Supermicro 847BE2C-R1K28LPB	MCP-290-00057-0N	26.5" Min / 36.4" Max
Archive Solution				
Recovery-Archive	1U	Supermicro CSE-813MTQ-280CB	Supermicro CSE-PT52	26" Min / 33.05" Max



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 the load bearing requirements for each rack-mounted appliance, archive solution, and external storage shelves.

Model	Format	Weight	Shipping Weight
Appliances			
Recovery-201	Desktop: 13"D x 8.66"W x 5.12"T	14 lbs	16 lbs
Recovery-602	Rackmount: 14"D x 16.8"W x 1.7"T	14 lbs	18 lbs
Recovery-603	Rackmount: 14"D x 16.8"W x 1.7"T	14 lbs	18 lbs
Recovery-604	Rackmount: 14"D x 16.8"W x 1.7"T	14 lbs	18 lbs
Recovery-713S	Rackmount: 19.8"D x 17.2"W x 1.7"T	29 lbs	35 lbs
Recovery-714S	Rackmount: 25.6"D x 17.2"W x 1.7"T	38 lbs	44 lbs
Recovery-814S	Rackmount: 25.6"D x 17.2"W x 1.7"T	38 lbs	44 lbs
Recovery-823S	Rackmount: 25.5"D x 17.2"W x 3.5"T	65 lbs	72 lbs
Recovery-824S	Rackmount: 25.5"D x 17.2"W x 3.5"T	69 lbs	76 lbs
Recovery-933S	Rackmount: 25.5"D x 17.2"W x 5.2"T	90 lbs	97 lbs
Recovery-936S	Rackmount: 25.5"D x 17.2"W x 5.2"T	93 lbs	100 lbs
Recovery-943S	Rackmount: 27.5"D x 17.2"W x 7"T	160 lbs	171 lbs
Recovery-944S	Rackmount: 27.5"D x 17.2"W x 7"T	160 lbs	171 lbs
Recovery-946S	Rackmount: 27.5"D x 17.2"W x 7"T	160 lbs	171 lbs
Archive Solution			
Recovery-Archive	1U Rackmount: 21.5"D x 17.5"W x 1.75"T	26 lbs	33 lbs

Tip



If the appliance protrudes from the rack about ½" to 1", the front rail may need adjusting. The front rail must be properly adjusted (fourth hole from the front) to ensure a secure fit.

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 the power requirements for each rack-mounted appliance, archive solution, and external storage shelves.

Model	Power Supply	Input Voltage Range	Input Freq. Range	Max. Operating Current	Max AC Input *	BTUs **
Appliances						
Recovery-201	220W	100 - 240VAC	50-60HZ	4A @ 230VAC 6A @ 115VAC	220 Watts	90
Recovery-602	200W	100 - 240VAC	50-60HZ	3A @ 100VAC 1.5A @ 230VAC	200 Watts	140
Recovery-603	200W	100 - 240VAC	50-60HZ	3A @ 100VAC 1.5A @ 230VAC	200 Watts	140
Recovery-604	200W	100 - 240VAC	50-60HZ	3A @ 100VAC 1.5A @ 230VAC	200 Watts	140
Recovery-713S	350W	100 - 240VAC	50-60HZ	12A @ 115VAC 6A @ 230VAC	350 Watts	172
Recovery-714S	563W	100 - 240VAC	50-60HZ	8.5A @ 115VAC 4A @ 230VAC	563 Watts	177
Recovery-814S	563W	100 - 240VAC	50-60HZ	8.5A @ 115VAC 4A @ 230VAC	563 Watts	177
Recovery-823S	740W	100 - 240VAC	50-60HZ	10A @ 115VAC 4A @ 230VAC	740 Watts	440
Recovery-824S	740W	100 - 240VAC	50-60HZ	10A @ 115VAC 4A @ 230VAC	740 Watts	464
Recovery-933S	920W	100 - 240VAC	50-60HZ	11A @ 115VAC 4.5A @ 230VAC	920 Watts	863
Recovery-936S	920W	100 - 240VAC	50-60HZ	11A @ 115VAC 4.5A @ 230VAC	920 Watts	1122
Recovery-943S	1400W	100 - 240VAC	50-60HZ	13.5A @ 115VAC 9.5A @ 230VAC	1400 Watts	1849



Model	Power Supply	Input Voltage Range	Input Freq. Range	Max. Operating Current	Max AC Input *	BTUs **
Recovery-944S	1280W	100 - 240VAC	50-60HZ	12A @ 115VAC 8A @ 230VAC	1280 Watts	1658
Recovery-946S	1280W	100 - 240VAC	50-60HZ	12A @ 115VAC 8A @ 230VAC	1280 Watts	1910
Archive Solution						
Recovery-Archive	1 X 280W	100 - 240VAC	50-60HZ	5A @ 115VAC 3A @ 230VAC	300 Watts	120

* The maximum AC power consumed while under load.

** The amount of heat, in BTUs, that the system generates while operating.

Amperage Requirements

The amperage requirements for each rack-mounted appliance, archive solution, and external storage shelves are described in the following table:

Model	Power On	Idle	Load
Appliances			
Recovery-201	.61	.24	.65
Recovery-602	1.01	.71	1.03
Recovery-603	1.01	.71	1.03
Recovery-604	1.01	.71	1.03
Recovery-713S	1.58	.80	1.58
Recovery-714S	1.60	.80	1.60
Recovery-814S	1.60	.80	1.60
Recovery-823S	2.10	1.68	2.18
Recovery-824S	2.90	1.99	2.94
Recovery-933S	3.11	2.17	3.16
Recovery-936S	3.16	2.19	3.22
Recovery-943S	8.62	3.66	4.42
Recovery-944S	7.58	4.10	5.03
Recovery-946S	9.79	4.78	6.13
Archive Solution			
Recovery-Archive	.90	.34	.81



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.

Tip



Installing equipment in direct sunlight may cause the appliance to overheat.

The Unitrends environmental specifications for rack-mounted appliances include:

Chassis Specs for Rack-mounted Models	Description
Non-operating environment	<ul style="list-style-type: none"> -40° C to 60° C (-40° F to 140° F) 5% to 90% non-condensing humidity Maximum humidity gradient 10% per hour
Operating environment	<ul style="list-style-type: none"> 5° C to 35° C (41° F to 95° F) 8% to 90% non-condensing humidity Maximum humidity gradient 10% per hour
Cooling clearance	12" clearance recommended for ventilation
Storage altitude	-16m to 10,600m (-50 ft to 35,000 ft)
Operating altitude	-16m to 3,048m (-50 ft to 10,000 ft)

Tip



To estimate the amount of heat a cooling system must dissipate, first calculate the heat generated by the appliance by converting the appliance's power requirement from Watts to BTU/hour (power requirement in Watts multiplied by 3.412).

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 vaulting or replication 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 *Recovery-Series Appliance Quick Start Guide* at <http://www.unitrends.com/docs/user-guides/-recovery-series-appliance-quick-start-guide>.



