



# Eaton SmartRack 5.5 kW self-cooling server rack

## Support edge computing with the highest capacity rack-mount cooling unit

As organizations deploy more edge computing and distributed IT, there is a greater demand for single-rack micro data centers (MDCs) that are quick and easy to deploy and update. The SmartRack® 5.5 kW self-cooling server rack enables end users to deploy standardized MDC solutions to support edge computing needs in enterprises, manufacturing, government, institutions and telecom as well as traditional network closet and server room installations.

This addition to Eaton's family of self-cooling racks has a 5.5 kW cooling unit pre-installed at the bottom of a 42U rack enclosure to provide the highest self-contained cooling capacity available in a rack-mount form factor. IT professionals can deploy the SmartRack 5.5 kW self-cooling server rack without an HVAC technician and manage cooling of mission-critical equipment locally or remotely. Full installation, startup and a variety of service contracts are available.

### Organize and secure network equipment

#### 42U enclosure with pre-installed 5.5 kW cooling unit

Designed for MDCs or similar single-rack installations, this solution simplifies deployment and offers right-sized cooling for network equipment.

- 42U rack enclosure provides up to 27U of rack space for mounting IT equipment. (Cooling unit occupies 12U at the bottom of the rack and requires 3U of clearance above it.)
- Locking doors help keep contents secure.

### Conveniently manage cooling unit

#### Local and remote management

A user-friendly 7-inch touchscreen LCD provides ease of commissioning, management and diagnostics. The pre-installed network management card allows the cooling unit to be remotely managed as a network device using Eaton's Distributed IT Performance Management (DITPM) software, a part of the Brightlayer Data Centers suite.

### Optimize MDC thermal management

#### Primary cooling for MDCs

Cooling helps prevent equipment shutdowns, malfunctions and other failures caused by overheating or fluctuating temperatures. The 5.5 kW (18,766 BTU) cooling unit has the highest capacity available in a rack-mount form factor.

#### Efficient operation

Closed-loop cooling delivers the most effective and efficient cooling for critical IT equipment.

- Variable-speed compressor adjusts the cooling capacity according to the heat load of the IT equipment to prevent on/off cycling and large temperature swings.
- Insulated panels and gasketed doors keep cold air inside to promote higher efficiency and help prevent dust and debris from entering.
- Choose from three water condensate drainage methods: evaporative water, pump drainage or gravity drainage.

#### Safety features

If a system failure causes the internal temperature to reach 104° F (40° C), the emergency ventilation system opens the top lids to release hot air and help protect IT equipment from overheating. If a water leak is detected, an alarm is generated and the cooling system is turned off to prevent condensate from entering the rack.



Powering Business Worldwide

## SRCOOL5KWRM42U feature focus

- 1 Insulated 42U rack enclosure**  
There is 27U available for mounting IT devices. Insulation helps keep cold air inside the enclosure. Removable 1U blanking panels help concentrate cold air near installed IT equipment.
- 2 Emergency ventilation assembly**  
If a system failure causes the internal temperature to reach 104° F (40° C), embedded thermal sensors trigger the lids to open and release the hot air.
- 3 Clear acrylic window**
- 4 7-inch touchscreen LCD**  
Display supports intuitive navigation, control, monitoring and diagnostics.
- 5 Locking doors**
- 6 5.5 kW cooling unit**  
Self-contained system does not require indoor-to-outdoor refrigerant piping, allowing easier deployment.
- 7 Equipment mounting rails and cable management**
- 8 Network management interface**  
Built-in network management card enables SNMP-based remote monitoring, control and alerts. The card also supports EnviroSense temperature and humidity sensors.
- 9 Power connection terminals**
- 10 AC hot air outlet**  
13 ft. flexible hot air exhaust duct and a duct adapter are included.
- 11 Casters and leveling feet**



Front view

Back view



Top entry for power cord  
(bottom entry not shown)

### Airflow overview

The 5.5 kW cooling unit at the bottom of the rack is a “one-box” self-contained cooling solution. It delivers precision cooling to help prevent equipment shutdowns, malfunctions and other failures caused by overheating or fluctuating temperatures.

- Closed-loop thermal management: Cold air is supplied to IT equipment through the top front plenum of the cooling unit. The cold air travels up from the cooling unit and horizontally across the IT equipment, removing heat and pushing it to the rear of the rack where it is absorbed by the return hot air plenum at the top rear of the cooling unit. The heat is stripped off and the air is cooled to restart the cycle.
- System heat removal: Room temperature air enters through the bottom front of the rack and flows through the rear condenser. This air removes the heat from the refrigerant and pushes it through the rear of the rack and into the hot air duct.

### Emergency ventilation

Emergency ventilation helps prevent IT equipment from overheating in case of a system failure due to a power outage or equipment malfunction.

- If a system failure causes the internal temperature to reach 104° F (40° C), embedded thermal sensors trigger the ventilation lids to open, allowing the release of hot air. The ventilation lids have an electromechanical fail-safe mechanism powered separately via a 120V wall adapter.
- An SNMP alert notifies the end user that the vents have opened.



# Gain peace of mind with remote management

## Remotely manage cooling, UPS systems and PDUs

Managing and maintaining edge infrastructure equipment across multiple sites is time consuming—and often stressful. When unexpected downtime occurs, skilled on-site resources may not be present and every minute counts.

Eaton's Distributed IT Performance Management (DITPM) software, a part of the Brightlayer Data Centers suite, enables remote monitoring and control of networked cooling units, UPS systems and PDUs to provide you with peace of mind.

## Distributed IT Performance Management (DITPM) software

Compatible with cooling units and select Eaton UPS systems and PDUs, DITPM software provides asset monitoring and management at the edge.

- Manage and optimize performance**  
 View real-time reports, trend charts and dashboards. Receive real-time alerts prioritized by severity and escalated when needed.
- Resolve issues and avoid disaster**  
 Remotely control assets, automate device response and diagnose equipment performance.
- Keep your data center cybersecure**  
 Push remote firmware updates to improve cybersecurity and reduce the need for in-person visits.
- Speed software onboarding**  
 Leverage tools and resources to quickly install, configure and use the software.

The image displays five screenshots of the Eaton DITPM software interface, illustrating various monitoring and management capabilities:

- Basic Information:** Shows device details such as Name, Alias, UID, Type, Manufacturer, Model, Life Cycle, Asset Tag, Solid Number, IP Address, Plant #, Admin Port, Energy Type, Output, Department, and Description.
- Calendar:** Displays a log of events with columns for Date, Category, Alarm, and Description.
- Alarm Panel:** Shows active and historical alarms with columns for Address, Ack, Severity, Alarm Source, Trigger/Attribute, Rules, and Details.
- Real-time Monitoring Data:** A table listing various data points like Compressor Status, Condenser Temperature, Discharge Pressure, Evaporator Temperature, Fan Speed, Fault Conditions, Finances - Software, Operating Mode, and Return Air Humidity.
- Run Graphs:** A dashboard with multiple gauges showing real-time values: Operating Mode (Cooling), Compressor Status (On), Fault Conditions (No Conditions), Return Air Temperature (78.00 °F), Return Air Humidity (47%), Condenser Temperature (69.20 °F), Evaporator Temperature (69.20 °F), and Discharge Pressure (199 psi).

For more information about DITPM, visit [Eaton.com/DITPM](https://Eaton.com/DITPM)

# The Eaton SmartRack family of self-cooling racks

In addition to the 5.5 kW self-cooling rack, Eaton offers a 3.5 kW top-of-rack air conditioning unit for single-rack installations in network closets and server rooms. The 3.5 kW unit is available pre-installed on top of a 25U or 33U rack cabinet that is insulated and sealed to keep cold air inside.

## Specifications for self-cooling racks



Catalog number	SRCOOL3KTP25U, SRCOOL3KTP33U	SRCOOL5KWRM42U
<b>Total cooling capacity</b>	<b>3.5 kW (12 kBTU/h)</b>	<b>5.5 kW (18.8 kBTU/h)</b>
Cooling unit mounting	Top-of-rack; sold pre-assembled on top of a 25U rack (SRCOOL3KTP25U) or a 33U rack (SRCOOL3KTP33U)	Bottom-of-rack; sold rack-mounted at the bottom of a 42U rack
Usable rack space for IT equipment	SRCOOL3KTP25U: 22U, SRCOOL3KTP33U: 30U	27U
Option to purchase cooling unit separately	Yes, SRCOOL3KTP	No, only available as part of full solution
Set point temperature range	64° to 99° F (18° to 37° C)	
Maximum rejected heat	4.3 kW	7.5 kW
Air circulation	350 CFM	470 CFM
Cooling type	Direct expansion (DX) in box	
Refrigerant type	R410A	
Unit height	SRCOOL3KTP25U: 64.1 in. (1628.3 mm) SRCOOL3KTP33U: 78.1 in. (1983.7 mm)	82.66 in. (2099.6 mm)*
Unit width	23.7 in. (602.8 mm)	23.6 in. (599.4 mm)
Unit depth	42.9 in. (1090.9 mm)	47.26 in. (1200 mm)
Unit weight	SRCOOL3KTP25U: 388 lb. (176 kg) SRCOOL3KTP33U: 438 lb. (198.7 kg)	552.26 lb. (250.5 kg)
Input power	Single-phase 208V, 60 Hz (Hardwire)	Single-phase 208V, 60 Hz (Hardwire; optional 12 ft. [3.7 m] input power cord with L6-30P plug is included†)
Input voltage range	Single-phase 208–240V	
Full load current (FLA)	13.6A	18A
Minimum circuit ampacity (MCA)	17A	22A
Maximum overcurrent protection (MOP)	20A	30A
LCD screen	7 in. (18 cm) touchscreen display	
SNMP network management	Yes, includes remote network management card	
Communication ports	RJ45 (SNMP)	
Flash upgradable	Yes (LCD, controller and network management interface are flash upgradable.)	
Emergency ventilation kit	Optional (SRCOOLTMVENT)	Included with standard unit
Hot air exhaust duct accessory	Optional (SRCOOLTPDUCT)	Included with standard unit
Standards and compliance	Tested to UL 60335; CSA, FCC Class B, NOM, RoHS	
Factory warranty	1 year (Parts only)	
Startup service	Optional (SU05NXXX-SRC5500)	
Preventive maintenance service	Optional (0005NXXX-SRC5500-1)	
Onsite service contract (1 year)	Optional (WFLN7NXXX-SRC5500)	

Due to continuous improvement programs, all specifications are subject to change without notice. \*Includes emergency ventilation assembly.

†Contact the Eaton pre-sales engineering team for a service part number to install the optional power cord.

Learn more about rack-mount cooling solutions  
at [TrippLite.Eaton.com](https://www.com.tripp-lite.com)



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