

Intelligent Asset Tags and Sensors



Intelligent Asset Management automates IT asset tracking to help you better understand exactly what you have and where it's located.

Asset Management Tag (AMT)

- ▶ Unique electronic ID chip
- ▶ Unique scannable ID bar code
- ▶ Industrial adhesive patch to attach tag to IT device
- ▶ Magnetic connector to attach to the AMS

Asset Management Sensor (AMS)

- ▶ 42U, 45U, 48U and 54U rack options
- ▶ Magnetic connector for AMT, one per 1U space
- ▶ Multicolored LEDs, one per 1U space
- ▶ Magnetically mounts to existing racks
- ▶ Connects to Raritan PX® intelligent rack PDU, PX inline meters and EMX environment / rack controller (PX firmware v2.2 or higher; EMX firmware v2.0 or higher)

Accurate Asset Management Get a handle on your data center IT assets

Even modest-size data centers have an enormous number of IT assets, from servers to storage to networking equipment.

Tracking these assets is often accomplished using Excel® spreadsheets and Visio® diagrams, or by developing a home-grown system, which can be very labor intensive. However, if you miss a few moves, adds or changes, it can become a challenge to know what you have and where it's located. And while RFID tags have also been used to track assets, RFID readers are unreliable if they are closely packed in a metallic environment such as a rack. They can be expensive, too, especially when tagging hundreds of devices.

Raritan's dcTrack® (DCIM) software is designed to track assets, determine capacity in a number of areas and manage changes. Combined with Raritan's unique Asset Management Tags (AMT) and Asset Management Sensors (AMS), which provide robust readings since they do not rely on radio frequencies but on hardwired connections, dcTrack allows data center operators to have an accurate, automated, real-time inventory of all IT assets and their location, down to the 1U level.

Why intelligent real-time asset management?

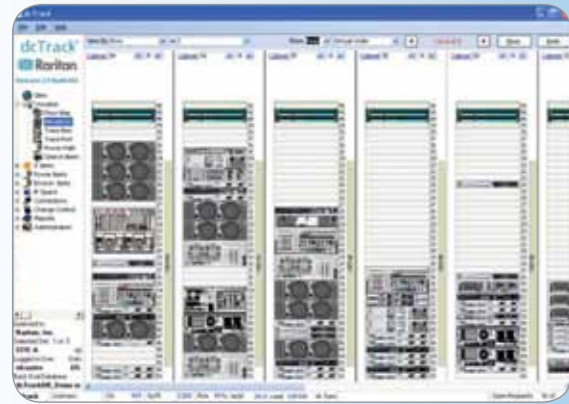
- ▶ Upward of 25% of IT assets go missing
- ▶ Do you know what you have and where it's located?
- ▶ Can you detect asset moves, adds, changes?
- ▶ Is your asset database (Configuration Management Database) accurate?
- ▶ How long does it take to do a physical inventory?
- ▶ Can you pass audits?

Raritan's AMT/AMS/dcTrack asset management solution helps you manage the physical components of your computers and computer networks, from acquisition to deployment to provisioning to redeployment to disposal. With this solution you can:

- ▶ Minimize the hours needed to track IT assets, saving time and money
- ▶ Quickly conduct physical inventories with accuracy and pass audits
- ▶ Efficiently consolidate or virtualize data centers
- ▶ Improve the IT department's alignment with business and management objectives
- ▶ Optimize IT strategic and tactical decision making by tracking changes in real time

Know exactly what you have and where you have it, down to 1U

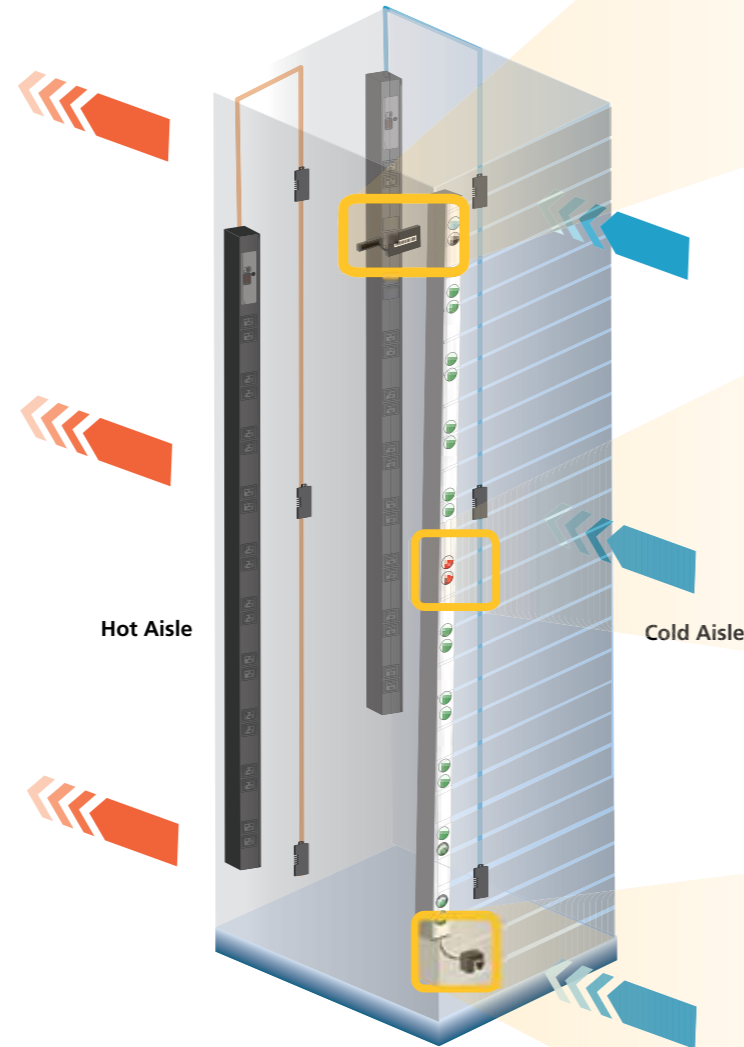
AMT and AMS is compatible with Raritan dcTrack and third-party asset tools



dcTrack can visualize a group of cabinet elevations. Cabinets can be grouped by data center row or logical groupings. With another click, the elevation views can be changed to graphical views of front or rear, or descriptive views.



Users in dcTrack can view asset details and add and edit server and network devices. From a single screen, dcTrack can support stand-alone servers, blade servers and virtual servers. Users can assign network and power ports to each device.



Asset Management Tag (AMT)

AMT asset tag with unique ID chip and bar code with adhesive patch for IT devices



Asset Management Sensor (AMS)

Customizable RGB color LED for each 1U space



AMS Gateway: Raritan EMX or PX iPDU

AMS sensor showing port for connection to Raritan's PX or EMX SNMP gateways

How does it work?

Asset Management Tag (AMT)

The asset tag is based on a 1-wire unique ID chip that has a 64-bit value. The ID chip is molded in a round plastic carrier together with a metal ring and a gold contact to provide an electrical connection to the asset tag reader, the AMS.

The metal ring allows the AMT to connect to the asset tag reader via magnetic force. Associated with the unique ID is the IT assets' record, where a variety of asset information can be stored, including serial number, repair records, maintenance agreement terms, lease terms, etc.

Asset Management Sensor (AMS)

The AMS segments are modular and have a magnetic backing to allow easy installation on metal rack rails. The AMS reader provides a round, magnetic connector at each 1U position to provide a connection for asset tags (AMTs).

A port is available on one end to provide a connection to Raritan's SNMP gateways. The AMS senses the AMT's unique ID as well as the connected asset's rack location, in 1U increments, and provides that information to Raritan's dcTrack or third-party asset management tools. The sensor can be installed in front of the rack on the left- or right-hand side.

AMS Gateway: Raritan EMX or PX iPDU

The AMS provides a communication interface to Raritan's EMX environment/rack controller (firmware v2.0 or higher) or PX iPDU (firmware v2.2 or higher). These act as the AMS SNMP gateway, connected via standard UTP cable and RJ-45 interconnects. The AMS is powered by the EMX or PX, so no extra power supply is needed.

The SNMP interface can be used by any third-party asset management system. It offers the following features:

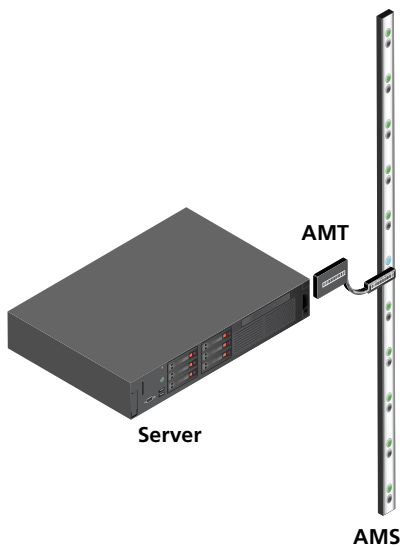
- ▶ Reading all asset tag IDs per rack and their physical locations within a rack
- ▶ SNMP alert in case of an asset tag ID change event (asset tag removed and/or added, ID changed)
- ▶ Setting an RGB color LED indicator for each 1U slot

This can be used to implement a custom-color indicator, controlled-change management process, e.g., a red blinking LED indicates a server maintenance request.

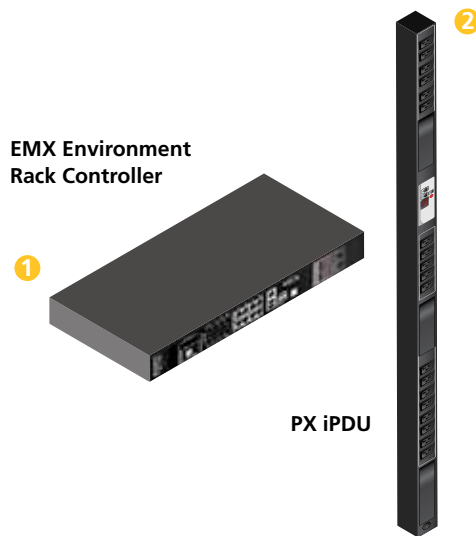
Options to meet various cabinet and rack heights

Model	Description
AMS-42	Asset Management Sensor kit for 42U height rack. 1 connector and 1 RGB LED per U space.
AMS-45	Asset Management Sensor kit for 45U height rack. 1 connector and 1 RGB LED per U space.
AMS-48	Asset Management Sensor kit for 48U height rack. 1 connector and 1 RGB LED per U space.
AMS-54	Asset Management Sensor kit for 54U height rack. 1 connector and 1 RGB LED per U space.
AMT-100	100-pack of intelligent Asset Management Tags for AMS-nn with electronic ID and bar code.

Physical Assets



Network Connection

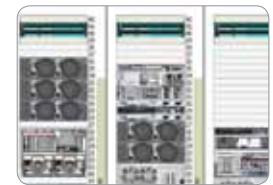


- 1 Connect AMS to EMX Environment/Rack Controller
- or -
- 2 Connect AMS directly to PX iPDU

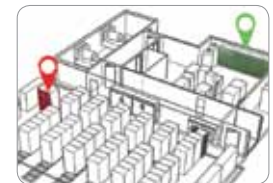
End-User Interface



EMX and PX GUI



dcTrack Cabinet Elevation



Third-Party Asset Management System

Call +31 (0)10 284 4040 or visit www.raritan.eu/AMS

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Raritan provides secure IT infrastructure management solutions that increase data center efficiency and productivity by delivering integrated in-band and out-of-band server access, control and power management. Raritan's KVM, serial console and intelligent PDU products are in use at over 50,000 locations worldwide. Raritan's OEM division provides embedded hardware and firmware for server and client management, including KVM over IP, IPMI, intelligent power management and other industry standards-based management applications.

Based in Somerset, NJ, Raritan has 38 offices worldwide, serving 76 countries. For more information, please visit www.raritan.eu