

Fling on Ampere eMAG 8180-based Servers

1. Info

The Ampere Computing™ eMAG 8180 64-bit, custom designed, multicore processor targets today's cloud workloads and future data center requirements by providing a large number of high-performance cores, high-memory bandwidth and capacity, general purpose high-bandwidth I/O and a high level of integration - all within an efficient power envelope.

The eMAG 8180 has 32 x Skylark cores and supports up to 512GiB RAM.

See the official eMAG 8180 info at <https://amperecomputing.com/emag/>, including purchasing options.

Here are some eMAG-based choices:

- [Lenovo HR330A](#) (product brief)
- [Lenovo HR350A](#) (product brief)
- [Avantek Ampere eMAG 64-bit Arm Workstation](#) (online store link)
- [Avantek Ampere EMAG 64-bit 2U Server](#) (online store link)
- [Packet's eMAG-based offerings](#) (Public Cloud link)

All of these have connectivity options expected from a server, such as a BMC, RS-232 serial console, USB, SATA, PCIe and m.2 Key M.

2. Required and supported hardware

Minimally, you need:

- An Ampere eMAG-based system
- 1 x USB drive for installer ISO
- 1 x USB, SATA or NVMe drive for actual ESXi installation
- 1 x USB or PCIe NIC

The following hardware is supported:

- USB, SATA, and NVMe storage
- USB and PCIe networking
- VGA video and USB keyboards
- Serial console

3. Preparation

This document does not cover server unpacking, assembly or configuration as UEFI firmware updates. Please use official documentation.

Note that with a server, there are usually more than one way to do things.

For example, for console access:

- VGA + USB keyboard
- RS-232 port
- BMC web interface for VGA + USB keyboard
- BMC serial port redirection via IPMI

Or for booting:

- ESXi installer on USB key
- ISO via virtual media redirection

This guide goes for the simplest approach: a VGA screen + keyboard for access, a USB drive for the installer, and no BMC, serial console or IPMI interactions. Caveat emptor!

4. Install ESXi-Arm

- Connect a screen to the VGA port.
- Connect a USB keyboard.
- Connect the USB drive with ESXi installer.
- Power on system
- When prompted, choose to boot from USB drive
- Follow the generic installation steps.