![SMART Modular Technologies - A Penguin Solutions Brand]

VLP and ULP Memory for Blades
Reliable, Trusted, Proven

What are Blades?

Blade servers are stripped-down server computers with a modular design optimized to minimize space and power. Blade servers fit inside a blade enclosure that hold multiple blade servers. Together, blades and the blade enclosure form a blade system. Blade servers are for variety of applications including networking, storage and computing. ATCA (Advanced Telecommunications Computing Architecture) standard blades and storage blades (pictured below) are for highly reliable embedded computing and storage applications and require a maximum amount of high density VLP or ULP modules.
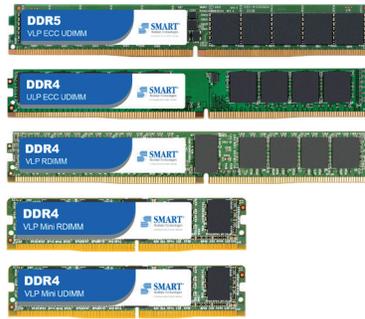
Application Examples

Storage Blade

Networking Blades

Why VLP (Very Low Profile) and ULP (Ultra Low Profile) Memory for Blades

- VLP and ULP memory modules allow vertical placement of DIMM sockets in blade applications to save space

- VLP and ULP memory modules help maximize system density and performance

- VLP and ULP memory modules help maximize air flow and cooling in densely packed blade systems and blade enclosures

DDR5 Module Type	Densities Supported	Module Height (mm)
VLP RDIMM	16GB to 48GB	18.75
VLP ECC UDIMM	32GB to 64GB	18.75

DDR4 Module Type	Densities Supported	Module Height (mm)
VLP RDIMM	8GB to 64GB	18.75
ULP ECC UDIMM	8GB to 32GB	17.78
VLP Mini-RDIMM	8GB to 16GB	18.75
ULP Mini-RDIMM	16GB to 32GB	17.78
VLP Mini-UDIMM	4GB	18.75

Support for Extreme Operating Conditions

Industrial Temperature

Anti-Sulfur Resistor

Conformal Coating

Underfill

For more information, please visit: www.smartm.com