



SMART DRAM for Defense

Features & Benefits

- **Zefr High Reliability Option:** Eliminates over 90% of memory reliability failures through rigorous screening.
- **100% High and Low Temperature Testing:** Ensures modules meet stringent performance standards.
- **Anti-Sulfur Passive Components:** Protects against environmental degradation.
- **Conformal Coating:** Provides additional protection against moisture and environmental factors.
- **Underfill:** Protects against shock and vibration.

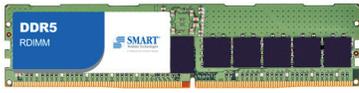
Problem Statement

In defense and industrial applications, electronic systems often face severe environmental challenges, including extreme temperatures, moisture, and exposure to harmful substances. Traditional memory modules may fail under these conditions, leading to system downtime and reliability issues. Specifically, the problems addressed by SMART's SODIMMs and Very Low Profile (VLP) modules include:

- **Temperature Extremes:** Systems deployed in defense and industrial settings are exposed to temperatures ranging from -40°C to $+85^{\circ}\text{C}$, which can cause standard memory modules to malfunction.
- **Environmental Hazards:** Moisture and sulfur exposure can compromise module integrity, leading to premature failure.
- **Space Constraints:** Many defense and industrial systems have limited space, requiring compact memory solutions without sacrificing performance.

Solution Overview

- **Industrial Temperature Range:** Our modules are tested to operate between -40°C and $+85^{\circ}\text{C}$, ensuring consistent performance in extreme conditions.
- **Environmental Protection:** Features like anti-sulfur components, conformal coating and underfill to protect against moisture, vibration and environmental hazards.
- **Compact Design:** SODIMMs and VLP DIMMs provide high-density memory solutions for systems with limited space, ideal for applications such as industrial control, embedded systems, and networking hardware.



Products shown represent a sampling of SMART DIMMs for industrial applications

Product Summary Overview

DRAM for Defense Applications			
Technology	Module Type	Speeds	Densities
DDR5	VLP RDIMM	DDR5-4800/5600	Up to 48GB
	VLP ECC UDIMM		Up to 64GB
	ECC and non-ECC SODIMM		Up to 64GB
DDR4	ZDIMM	DDR4-2666/3200	32GB - 128GB
	VLP RDIMM		Up to 48GB
	VLP or ULP Mini-RDIMM		Up to 64GB
	ECC and non-ECC SODIMM		Up to 64GB
	ZDIMM	DDR4-3200	16GB - 64GB

Individual part nos. can be found on www.smartm.com

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

**Product images are for promotional purposes only. Labels may not be representative of the actual product.*

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