

# SMART DRAM for Hyperscale Networking

## Applications

- **High-performance switches** (core, distribution, access)
- **Routers** for internal and external traffic management
- **Firewalls** for network security
- **Load balancers** to distribute traffic evenly

## Problem Statement

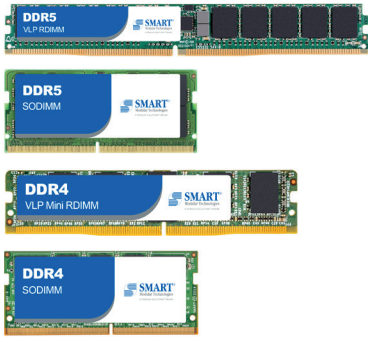
Modern enterprises increasingly rely on hyperscale networking infrastructure to connect vast numbers of servers and deliver carrier-grade throughput and bandwidth. As big data and cloud computing demands surge, organizations require networking equipment that can scale reliably and maintain high performance over long operational lifespans. However, traditional memory solutions often fall short in meeting the density, reliability, and longevity required for hyperscale network switching, routing equipment, and network interface cards (NICs). This gap can lead to bottlenecks, increased maintenance costs, and challenges in supporting long equipment life cycles (5–15 years).

## Solution Overview

SMART Modular Technologies addresses these challenges with its DRAM Module solutions tailored for hyperscale networking:

- **High Density in Compact Form Factors:** Offers the highest memory densities in small and Very-Low Profile modules, such as ECC SODIMMs and VLP ECC UDIMMs, optimized for network and telecom applications.
- **Zefr™ Enhanced Reliability:** Advanced screening to eliminate over 90% of memory failures, delivering industry-leading reliability and uptime for mission-critical hyperscale applications.
- **Long Product Lifecycles:** Provides long-term product support to align with the extended lifespans of hyperscale networking equipment (5–15 years).
- **Broad Application Support:** Solutions are designed for use in NICs, network switches, and routers, supporting both DDR4 and DDR5 technologies with a range of module types (VLP RDIMM, VLP/ULP Mini-DIMM, ECC/non-ECC UDIMM and SODIMM) and capacities up to 64GB1.

These features enable enterprises to build scalable, robust, and future-proof networking infrastructure that meets the evolving demands of big data and cloud computing.



Products shown represent a sampling of SMART DIMMs for industrial applications

## Product Summary Overview

DRAM Hyperscale Networking Applications			
Technology	Module Type	Speeds	Densities
DDR5	VLP RDIMM	DDR5-4800/5600	Up to 64GB
	VLP ECC UDIMM		Up to 64GB
	ECC and non-ECC UDIMM		Up to 64GB
	ECC and non-ECC SODIMM		Up to 64GB
DDR4	VLP RDIMM	DDR4-2666/2933/3200	Up to 64GB
	VLP or ULP Mini-DIMM		Up to 32GB
	ECC and non-ECC SODIMM		Up to 32GB

Individual part nos. can be found on [www.smartm.com](http://www.smartm.com)



For more information, please visit: [www.smartm.com](http://www.smartm.com)

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

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