

Raidon Technology Unveils PC05M-42 Dual M.2 NVMe PCIe Expansion Adapter

PCIe Gen3 x4 host interface, JBOD / independent mode, hot-swap is supported when the system BIOS/OS supports NVMe hot-plug (BIOS/OS dependent), and screwless, tool-free SSD installation and removal

[Raidon Technology, Inc.](#) unveils the [PC05M-42 Dual M.2 NVMe PCIe expansion adapter](#).



The PC05M-42 is a PCIe Gen3 x4 dual-M.2 NVMe expansion adapter built for serviceable, predictable storage growth. An onboard PCIe switch enables **2 independent NVMe SSDs** to operate from a single PCIe slot - **no motherboard PCIe bifurcation required** - with a **dedicated PCIe Gen3 x2 link to each SSD** for consistent behavior under concurrent workloads.

For fast deployment and minimal downtime, the card **uses tool-free, removable SSD trays** for quick installation and field replacement. A built-in 40mm active cooling fan helps reduce thermal throttling during sustained operation, and broad M.2 support (2230/2242/2260/2280) keeps sourcing flexible.

Performance note:

Total throughput is ultimately limited by the upstream **PCIe Gen3 x4** host link (the 2 SSDs share the x4 uplink under simultaneous load).

Hot-plug / Hot-swap Note: NVMe hot-plug/hot-swap is platform dependent and requires support across PCIe hot-plug topology, BIOS/firmware, and OS configuration. Where supported, the PC05M-42's tray-based access can reduce service time - but hot-swap should not be assumed on all desktop or server platforms.

Key Features:

Dedicated Dual-Channel PCIe Performance



M.2 NVMe SSD 2230/2242/2260/2280



M.2 NVMe SSD x2



- **PCIe Gen3 x4 host interface**
- **x2 + x2 lane allocation** to 2 NVMe SSDs
- Consistent throughput under concurrent multi-drive access

Dual M.2 NVMe SSD Support



Supports two NVMe SSDs in a single PCIe slot

- Supports **2 NVMe SSDs** in a single PCIe slot
- Ideal for capacity expansion, data separation, and JBOD / Independent Mode

Wide M.2 Form-Factor Compatibility

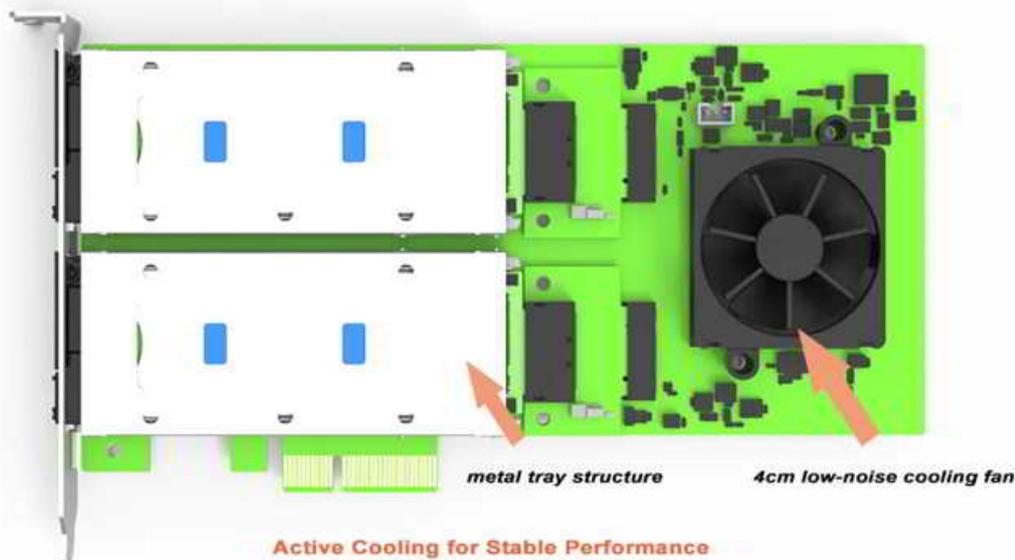


- Supports **2230 / 2242 / 2260 / 2280** M.2 NVMe SSDs
- Flexible SSD sourcing and upgrade planning

Tool-Free, Service-Optimized Design

- Screwless, tool-free SSD installation and removal
- Designed to reduce maintenance time and simplify field replacement
- Hot-swap is supported when the system BIOS/OS supports NVMe **hot-plug** (BIOS/OS dependent)

Active Cooling for Stable Performance



- Built-in 40 mm (4 cm) cooling fan
- Helps prevent NVMe thermal throttling during long or heavy workloads
- Supports stable operation in continuous-duty scenarios

Applications:

- **High-Performance Workstations:** Dual NVMe boosts speed and efficiency for demanding

creative workloads

- **Enterprise and Server Systems:** Expands storage with easy serviceability for data-intensive applications
- **Industrial and Embedded Computing:** Active cooling ensures stable operation in compact or harsh environments



Frequently Asked Questions:

Q1: What is the difference between PC05M-42 and PC04M-41?

A: PC05M-42 supports 2 NVMe SSDs via an onboard PCIe switch (x2 + x2). PC04M-41 supports one NVMe SSD (x4)

Q2: Does each SSD have its own bandwidth?

A: Yes. Each SSD is allocated a PCIe Gen3 x2 link, but both share the upstream Gen3 x4 host link under simultaneous load.

Q3: Do I need tools to install or remove SSDs?

A: No - tool-free trays are designed for fast installation and replacement.

Q4: Can I hot-swap SSDs without shutting down?

A: Only if your platform explicitly supports NVMe hot-plug/hot-swap (BIOS/OS + PCIe topology).

Q5: What systems is PC05M-42 suitable for?

A: Desktops, workstations, servers, and industrial systems that need service-friendly dual-NVMe expansion.



Specs:

Model No	PC05M-42
Host Interfaces	PCIe 3.0 x4
Supported Drives	2 x M.2 NVMe SSD (2230/2242/2260/2280)
Certification	CE/FCC
RAID Mode	JBOD - Independent Mode
Bracket / Mounting	full-height bracket
Dimension	120 mm (H) x 139 mm (L)
Operating System Support	Windows 7 or above, macOS 10.10 or above, Linux
Included Accessories	<ul style="list-style-type: none"> * PC05M-42x 1 * Quick Installation Guide x1 * Standard Bracket x1 * Screws and Tray unlock key

