

M.2 testing

Automated hot-swap and fault-injection



Getting a hot-swap or injection fixture into a native M.2 slot, with its small footprint, is no longer a problem. With Quarch's range of native M.2 M-Key products, you can **fit a breaker module or power injection fixture into any standard 80mm M.2 slot** with sufficient vertical space above it.

- Quarch M.2 modules can be manually controlled for bench testing, or easily integrated into your existing test automation system as part of a fully automated test solution.
- Individual control over each pin allows you to create almost any possible hot-swap or fault scenario.
- Precise timing ensures that every test can be exactly re-created.

M.2 M-Key Vertical Card Module

The M.2 M-Key Vertical Card Module fits an 80mm M.2 slot and provides full physical layer control over the interface, allowing you to:

- Hot-swap the attached device
- Individually switch every signal
- Perform glitch and fault of data, power and sideband signals
- Actively drive WAKE, DEV_SLEEP, PERST, CLK_REQ and PEDET
- Measure host voltage.

This [M.2 card module](#) holds the drive vertically, making it easy to use in boards with little surrounding space. A support bracket that supports M.2 devices up to 110mm in length is included with each module.

Controlled from the TestMonkey GUI or any standard scripting language, the module is simple to integrate into your test plan.

Ways to use your vertical card modules

- **System qualification:** Run repeated test cycles with bounds testing of all possible hot-swap and lane width scenarios.
- **Regression testing:** Spot issues earlier in development—saving time and money—with automated regression tests.
- **Failover testing:** Test dual redundancy, fault monitoring and performance during a failure.
- **Fault injection:** Simulate a large number of fault scenarios.

Tech tip: Native M.2 slots on mobile devices often have additional power management features. Combined with a [Programmable Power Module](#), our M.2 power injection fixture allows you to perform a range of tests, including:

- Full range voltage margining
- Power ramp, glitch and brown-out
- Accurate power profiling
- Sleep state power measurement.

The [M.2 M-Key Vertical Power Injection Fixture](#) (Part Number: **QTL2015**) supports all M-Key M.2 devices.

The [PCIe Slot to M.2 Power Injection Fixture](#) (Part Number **QTL1965**) is for x4 PCIe slots, adapting the slot for 4-lane M.2 devices—ideal for test systems that don't have a native M.2 slot.

Find out what users say about Quarch tools

Find out why [test labs, drive reviewers and test equipment manufacturers use Quarch tools](#).

Technical specifications

- [M.2 M-Key Vertical Card Module](#)
- [M.2 M-Key Vertical Power Injection Fixture](#)
- [PCIe Slot to M.2 Power Injection Fixture](#).

Arrange a free evaluation or a quote

Depending on your requirements, we can normally supply you with free evaluation kit for a short period of time. To apply, or to arrange a quote, email sales@quarch.com or contact one of our skilled [regional resellers](#).

Need more information?

- [Get in touch](#) with us for answers to your questions
- Find out about [support available from our website](#)
- Download more information from the list below.

Downloads

[Datasheet - PCIe Slot and Drive Modules](#)

[Datasheet - Power Injection Fixtures](#)

[NVMe Plugfest testing](#)

[USB testing](#)