

# Torridon 12G HS Drive Control Modules



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Hot-Swap automation for 12Gb/s SAS drives

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Data Sheet

## Reduce Time to Market

Cut time to market by 20% for new products by automating manual test procedures

## Reduce Capital Costs

Faster and more detailed testing with Torridon means fewer test systems are required in the lab

## Reduce Human Error

Removing human intervention during tests increases consistency and results in far fewer mistakes. Test scripting provides logging and 100% repeatability

## Increase Product Reliability

Advanced techniques, such as bounds testing and fault injection provide a higher level of confidence and reduced field returns

### **Torridon Drive Control Modules:**

The industry's first automated solution for hot-swap testing. Drive Modules vastly increase the speed of testing and introduce a level of repeatability and precision that is impossible during manual tests.

### **Complete Automation:**

Any test that requires manual intervention to pull or plug a drive can now be fully automated.

### **Simple Integration:**

The Torridon System works with your existing automated test setup and integrate with minimal effort. A simple command set allows for easy scripting. Quarch provides full support as standard while you get started

### **Who Can Benefit?**

Enclosure Manufacturers  
RAID Developers  
Storage System Integrators  
Drive Qualification Labs  
Silicon Manufacturers  
Software/Driver Designers

# Torridon SAS 12G HS Drive Control Modules

## Interface Specification

### Power

- ▶ Supplied from Torridon Interface Card or Array Controller

### Comms

- ▶ USB/Serial with Interface Kit
- ▶ Telnet/USB/Serial with an Array Controller

## Drive Compatibility

### Sizes

- ▶ 2.5" form factor (also compatible with 3.5" drives)

### Drive Connections

- ▶ SFF-8680 and compatible

### Speed

- ▶ Up to 12Gb/s

## Switching

### Switches

- ▶ High Speed FETs
- ▶ High Current, Low insertion loss

### Switched Pins

- ▶ All precharge, power and high speed SAS data pins. Vendor specific pins on request

## Timing Specification

### Timers

- ▶ 6 Independent timers for multi stage hot-swap

### Timing resolution

- ▶ 1mS

### Pin-bounce resolution

- ▶ 10uS

### Pin-bounce modes

- ▶ Simple duty-cycle
- ▶ User defined 100 bit pattern

### Manual Mode

- ▶ Full manual connection control for fault injection and bugged hardware generation

## Line Glitching

### Timing

- ▶ Glitch any line down to 50nS

### Sequences

- ▶ Run glitches in sequences and PRBS patterns

## Physical Dimensions

### QTL1689

- ▶ 69.1mm x 15mm
- ▶ Drive offset by 14mm

## Support and Utilities

Phone and email support direct to the engineers as standard

'TestMonkey' GUI for rapid test prototyping, script generation and bench testing

## Ordering Information

QTL1689

### Single units

- ▶ Ideal for bench testing, debugging and evaluation
- ▶ Order with Torridon Interface Kit QTL1260

### Multiple units

- ▶ Use with Torridon Array Controller (QTL1079, QTL1461) for synchronized testing of disk arrays

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