

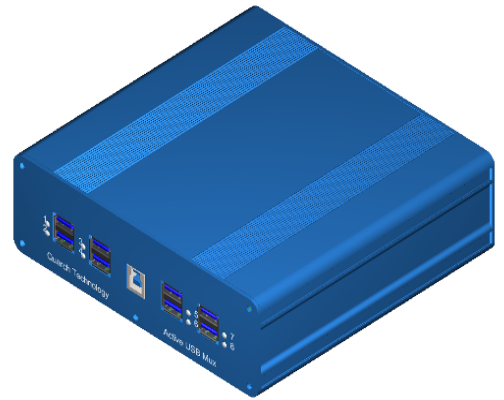
# USB 3.0 Physical Layer Switch



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Automatically and remotely configure paths  
between 1 Host and 8 Device ports

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## Reduce Time to Market

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

## Reduce Capital Costs

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Faster and more detailed testing with Torridon means fewer test systems are required in the lab. Less engineering time is required to run the tests

## Reduce Human Error

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

## Increase Product Reliability

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Test a larger number of device configurations to find problems earlier in the development cycle.

### **Torridon Multiplexer Modules:**

Automated solution for running test cases on multiple Initiators and Targets, Reconfigure data paths automatically during a test.

### **Complete Automation:**

Any test that requires reconfiguration of USB 1.1/2.0/3.0 data paths can now be fully automated.

### **Simple Integration:**

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

### **Who Can Benefit?**

Hardware designers  
System Integrators  
Hardware Qualification Labs  
Silicon Manufacturers  
Firmware/Driver Designers

# Torridon USB 3.0 Physical Layer Switch

## Interface Specification

### Power

- ▶ 12v PSU, or supplied from Torridon Interface Kit or Array Controller

### Comms

- ▶ Native USB and LAN interfaces
- ▶ Serial control, via an Interface Kit or Array Controller

## Ports

### Connections

- ▶ 1 USB-B host connection
- ▶ 8 USB-A device connections

### Speeds

- ▶ Low Speed, Full Speed., High Speed, Super Speed

### Ports

- ▶ 1 Host Port
- ▶ 8 Device Ports

## Switching

### Switching Method

- ▶ USB 3.0 compliant re-driver and passive RF switches

### Control

- ▶ Each path may be configured by a simple terminal command

## Timing Specification

### Timers

- ▶ 6 Independent timers for multi stage hot-swap

### Timing resolution

- ▶ 1mS

### Pin-bounce resolution

- ▶ 10uS

### Pin-bounce modes

- ▶ Constant Frequency
- ▶ User defined 100 bit pattern

### Manual Mode

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

## Glitching

### Timing

- ▶ Glitch any combination of signals with pulses down to 50nS

### Sequences

- ▶ Run glitches in sequences and PRBS patterns

## Fault Injection

### USB Errors

- ▶ Create Data / Power Failures
- ▶ Fault individual pins
- ▶ Fault all pins
- ▶ Create intermittent disruptions

## Physical Dimensions

- ▶ Length 164.5 mm
- ▶ Width 169.8 mm
- ▶ Height 53.5 mm

## Ordering Information

QTL1443 - 8 port USB 3.0 Physical Layer Switch

### Single units

- ▶ Ideal for bench testing, debugging and evaluation

### Multiple units

- ▶ Run from a Torridon Array Controller for synchronized testing of many cables

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