



Ethernet Cable Modules

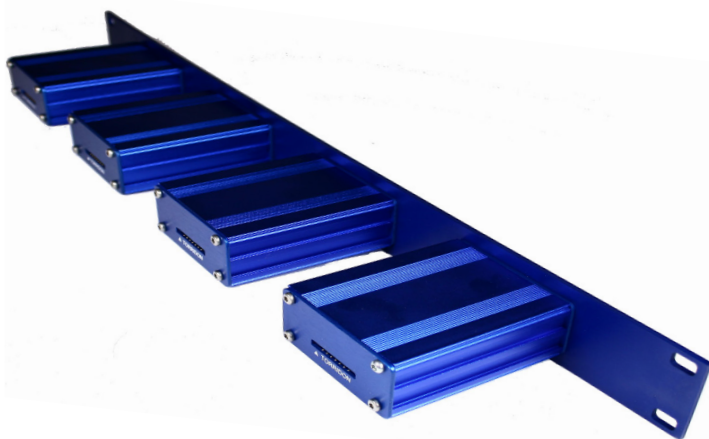
Automate hot-plug, dual redundancy and fault injection testing on Ethernet interfaces

Quarch
Data Sheet



Ethernet Cable Modules

Automate hot-plug, dual redundancy and fault injection testing for Ethernet interfaces



Highlights

- Supports 10/100/1000/10G BASE T connections
- Removes manual intervention, for fully automated testing
- Precise and consistent timing control over hot-swap scenarios
- Completely transparent at the protocol layer
- Create and test many different fault conditions
- Simple to control with your existing test automation system

Use Cases

System Qualification	Run repeated test cycles with bounds testing of all possible hot-swap scenarios
Regression Testing	Automated regression tests spot issues earlier during development
Failover Testing	Test dual redundancy, fault monitoring and performance during a failure





Hot Swap

Ethernet Data is switched with high speed RF switches, ensuring that our modules are almost totally transparent to the storage system. Host/Device connections will appear as if they are directly cabled.

Individual control over each pin allows us to create almost any possible hot-swap scenario. Precise timing ensures that every test can be exactly re-created.

Cable Modules can be combined with other Quarch Modules to automate removal of all major components of a system.

Features

Ethernet Cable Modules are based on the same feature set as our HS Drive Modules.

The Modules switch all signals in the cable and can also perform pin-bounce and high speed glitch.

They can be rack mounted (4 units in 1U) and have indicator LEDs to show the connection status of each pair.

The modules can be used as single units for easy bench testing, or installed within a rack, as part of an automated test solution.

Ethernet modules are very simple to control from Serial/USB and LAN connections.

Each Cable Module requires one slot on a Torridon Controller, so the QTL1317 (quad) module will require 4 ports. This could be 4 Interface Kits or 4 free ports on an Array Controller.

Cable Length Limits - QTL2022

10GBase-T Cat 6 UTP RJ45 Cables support a max length of 55m/180ft according to IEE802.3an.

QTL2022 provides good performance at up to around 38m of total cable length

The precise usable length will depend on your system, and should be evaluated before purchase.

Supplied Parts

Cable Module - The main unit

Torridon Cable - 40cm Torridon Double Ended Interface Cable. Connects the module to a controller

Also Required

Controller - You will require one slot on a Torridon Controller for each Cable Module

Downloads - Our website contains many useful downloads to help you get started: www.quarch.com

USB Drivers

Technical Manuals

Quick Start Guides

Example Scripts

TestMonkey GUI





Support

Quarch provides direct support to all customers, regardless of the sales channel you use to purchase our equipment. We are available over email, or by phone during UK office hours. Our regional partners are also trained to handle many of the most common questions you might have.

Our support is normally free, though there may be charges if you require on-site training or significant development work. Please contact us if there is anything we can do to help.

Please see our website for access to drivers, technical manuals, quick-start guides, example scripts and more

Email	Phone	Web
support@quarch.com	+44 1343 508 140	www.quarch.com/support

Ordering

Quarch have a network of specialist partners around the world. Please contact our partner in your region if you require a quote.

We recommend evaluating our products before purchase, so our partners will be happy to arrange a free evaluation unit.

Regional Contact Details

North America

SerialCables LLC
Colorado, California



Email sales@serialcables.com
Web www.serialcables.com
Phone +1 303-495-2320

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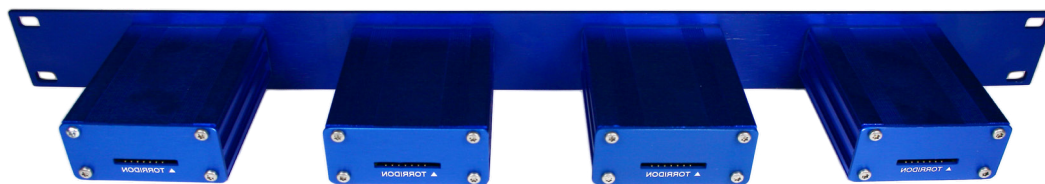


Products Versions

Product Code	Product Options
QTLXXXX	Product code, made up from options below
QTL1271	1GBASE-T Ethernet Cable Module
QTL1317	4x 1GBASE-T Ethernet Cable Module in Rack Mount Panel
QTL2022	RJ-45 Cable Module



Cable Module - Main Unit



Quad Mounting - 4x Cable Modules in 1U Rack Mount. Different modules can be combined within the same panel

**Required Controllers** - One port on a controller is required for each module

Product Code	Description	
QTL1260	Torridon Interface Kit Simple USB and Serial control options for bench testing	
QTL1461	4 Port Torridon Controller Control up to 4 modules via Serial/LAN/USB connection	
QTL1079	28 Port Torridon Controller Control up to 28 modules via Serial, LAN or USB connection	

Accessories

Product Code	Description
QTL1284	Cable Module Rack Mount Panel - Front Mounts 4 Cable modules (of any type) in a 1U rack panel
QTL1558	40cm Torridon Double Ended Interface Cable (Female to Female) Replacement cable, connects Cable Module to Controller
QTL1870	100cm Torridon Double Ended Interface Cable (Female to Female) Replacement cable, connects Cable Module to Controller
QTL1381	100cm Torridon Extension Cable (Male to Female) Extends an existing Double Ended Torridon cable





Technical Information

Connections	QTL1271	QTL1317	QTL2022
Host Side Connector	RJ-45	4x RJ-45	RJ-45
Device Side Connector	RJ-45	4x RJ-45	RJ-45
Max Speed	1000 Base T	1000 Base T	10G Base T ¹
Protocols	Ethernet		Ethernet, E1
Signals Switched	All		

¹ Cable length limits apply, see pg3 'Cable Length Limits' for details

External Connections	QTL1271	QTL1317	QTL2022
Power Supply	Via Torridon Controller		
Control Ports	Torridon Connector		

Physical Dimensions	QTL1271	QTL1317	QTL2022
Length	84mm	84mm	84mm
Width	63.5mm	482mm	63.5mm
Height	30mm	44mm	30mm

Features	QTL1271	QTL1317	QTL2022
Hot swap cable	√	√	√
LED Status Indicators	√	√	√
Pin Bounce Simulation	Simple/Custom. 10uS minimum period ¹		
Signal Glitch	Single/Cycle/PRBS. 50nS minimum length ¹		
Triggering	X	X	X
Supports Active Cables	X	X	X

¹ Ethernet switch slew rate limited by On Time: 40uS, Off Time: 100uS

Controllers	QTL1253	QTL1521	QTL2022
Serial Control	Supported on all Controllers		
USB Control	Supported on all Controllers		
REST Control	Supported on QTL1079 and QTL1461		
Telnet Control	Supported on QTL1079 and QTL1461		



