



RIO is a modular serial solution for applications that require long distance, fault tolerant cabling and/or optional fibre optic connectivity. With RIO the normal serial cable length constrictions are lifted by Perle's flexible solution. Combine this with the fail-safe, WAN and fibre options and you have a truly powerful product.

### Hot Swap Modularity

RIO consists of a host card that provides serial ports by connecting 8 or 16 port Remote Terminal Adapters (RTA's). These adapters can be added or removed to a live system and self configure to ensure ease of set-up and management.

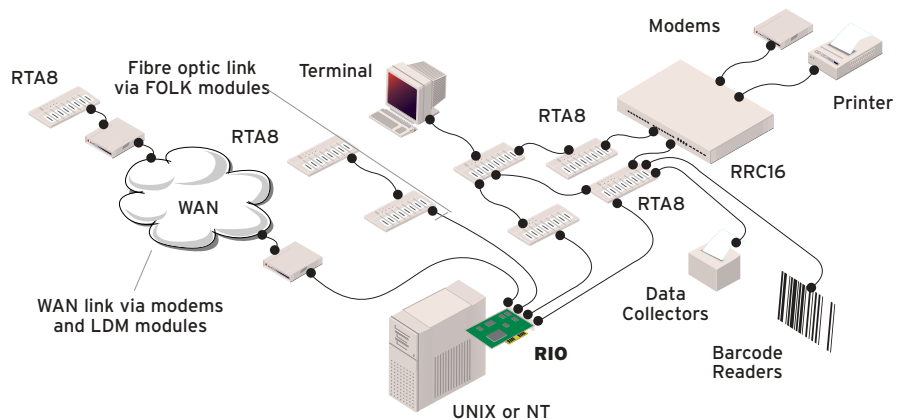
### High Density Serial Solution

#### Features and Benefits:

- Provides up to 128 ports per card
- Universal 3.3/5v PCI and ISA solutions
- Hot swappable adapters
- Can be spread across large premises
- Supports fibre optic connectivity
- Fault tolerant cabling
- Support for dual host systems
- Lifetime warranty for security and peace of mind

#### Applications:

- Data Acquisition
- Retail EPOS
- Terminal/Printer support
- Highway Toll booths operations
- Airport baggage carousel management
- Remote Access Solutions
- Console Management



### Where Distance Counts

The RTA's are connected using high-speed links capable of distances up to 75m. In addition the serial ports can be distributed even further by daisy chaining the RTA's.

For greater distances of up to 1km between RTA's, use Perle's Fibre Optic Link Kits (FOLK) which also provide greater protection against unwanted intrusion or line interference.

For multi-site solutions, connect RTA's over lease lines via the Long Distance Modules (LDM's) to provide permanent remote serial connections.

### Fault Tolerant Connectivity

When a solution demands minimum downtime, the RIO can be cabled in such a way that in the event of a link failure the remaining RTA's will find the next shortest communication path back to the host card. With some operating systems it is also possible to connect RIO to dual hosts so that in the event of a server failure control of the RTA's switches over to the backup server.

### Class Leading Support and Warranty

The Perle RIO is backed by the best service and support in the industry including Perle's unique lifetime warranty.



## Topology

RIO supports an open topology, allowing multiple port modules to be physically connected to a single host card in any configuration you choose, i.e. daisy-chain (linear), ring, cascade and star systems, or any combination of these. With 1 channel connected to the RIO host adapter, 3 more port modules can be connected to the first port module and so on, to create your optimum system.

## Technical Specifications

### Host Cards

- ISA
- Universal 3.3/5v PCI

### RIO Remote Concentrator

#### RRC16/RJX

- Processor: Plus 4 Quad UARTs
- Power Source: Internal PSU
- Power Consumption: 10W
- Fitting: Floor/Stack/48 cm Rack
- Dimensions: 230 x 430 x 45 mm (L x W x H)

#### RRC16/RJX-DX

- As RRC16/RJX
- Includes DB25 Cable Set

### RTA8

- RS422 variants available
- Processor: Plus 2 Quad UARTs
- Power Source: External PSU
- Power Consumption: 10W
- Fitting: Floor/Wall
- Dimensions: 245 x 127 x 34 mm (L x W x H)

### Expandability

- Maximum 128 ports per host card using any RRC16 and RTA8 variant in any combination.
- Maximum 4 host cards per system, giving 512 ports.

## Performance

- Four 10 Mbps data Channels
- Line speeds up to 115.2 Kbps

## Operating System

- UnixWare 2
- UnixWare 7
- OpenServer 5
- AIX
- UNIX SVR4
- Solaris 2.6.7
- LynxOS
- Interactive UNIX 4.1.x
- Caldera Open Unix 8
- Windows®2000
- Windows®NT 4.0
- Linux

Visit the Perle Web site for an up-to-date card and driver support availability.

## Dual Host Failsafe

For high availability UNIX systems, RIO will support the connection of a dual host card/server. The port module sub-system can be managed entirely by one server/host card, or shared between the two. In the event that one server or host card crashes, the peer system can take control of all port modules. This requires third party Watchdog software.

## Fibre Optic Link Kit (FOLK)

Connects port modules up to 1 Km from a host card or other port module. Converts data to and from light for transmission across fibre optic cable. Up to four FOLKs supported per host card or port module, unless an LDM is also connected, in which case only one FOLK is supported.

## Long Distance Module (LDM)

Connects port modules up to 1 Km using shielded twisted pair cable, or longer distance via leased line, from the host card or another port module. Two LDMs supported per host card, one per port module.

## Approvals

- FCC A, IEC950, EN60950, CE, CTick

## Environmental

- Operating Temperature: 0° to 50°C
- Storage Temperature: -30° to 70°C
- Operating Humidity: 5 to 95% RH (non-condensing)
- Storage Humidity: 5 to 95% RH (non-condensing)

## Packaging

- Driver software and materials on CD-ROM
- Quick Start guide

## Warranty

- Limited lifetime warranty

## Free Software

- Perle provides free software upgrades to registered users via Perle's Web site.  
[www.perle.com/downloads](http://www.perle.com/downloads)

Visit the Perle Web site for up-to-date support and availability information.  
[www.perle.com/products](http://www.perle.com/products)

## Ordering Information

For Product Codes and Model Descriptions, please visit Perle's Web site at [www.perle.com/products](http://www.perle.com/products) and select Product Family Multi-Port Serial Cards

Perle products available from:



**Perle Systems Europe Limited**  
3 Wintersells Road  
Byfleet, Surrey  
KT14 7LF, United Kingdom  
[www.perle.com](http://www.perle.com)

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