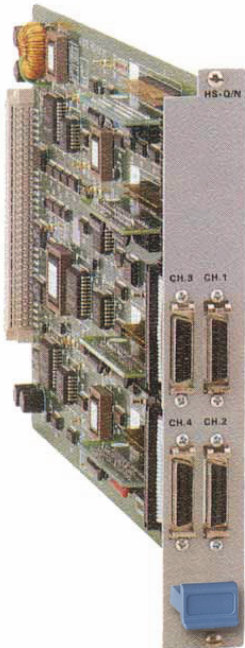


# HS-Q/N

## 4-Channel High-Speed Data Module



- Programmable data rates up to 1,984 kbps in any multiple of 64 or 56 kbps
- Channels can be directed to any main link
- User-selectable V.35 or V.11/RS-422 interface for each channel
- DCE, EXT-DCE or DTE clock modes
- For any I/O slot of Megaplex-2100/2104

The HS-Q/N module features four high-speed synchronous data channels. Each channel is independently set by the user to either V.35 or V.11/RS-422 interface (electrical). The V.11/RS-422 selection provides RS-530, V.36/RS-449, or X.21 interface (physical) operation, via adaptor cables.

Each channel operates at data rates of  $n \times 56$  or  $n \times 64$  kbps (where  $n = 1$  to 24 for T1 link, and 1 to 31 for E1 link). The total capacity of each pair of channels (ch1&2 and ch3&4) is 1536 kbps for T1 links and 1984 kbps for E1 links.

In dual-link applications, each pair of HS-Q/N channels can be independently connected to either of two main links. This enables routing the channels of a single HS-Q/N module to different remote sites.

Four high-speed  
synchronous data  
channels



## HS-Q/N

### 4-Channel High-Speed Data Module

Each channel can be independently configured to operate in either DCE, External-DCE or DTE timing modes. External-DCE mode is for tail-end applications. Interface DCE/DTE type is jumper set, per channel.

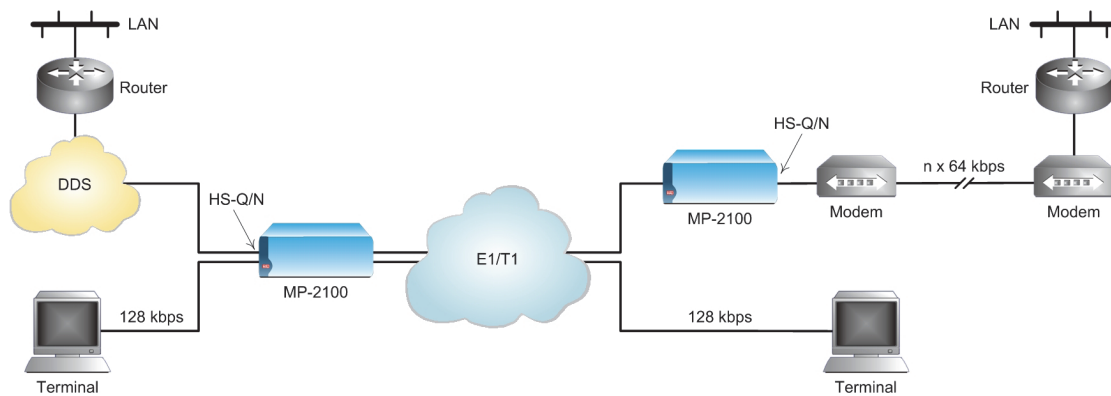
A comprehensive self-test initiated upon power-on and extensive diagnostics reduce downtime to a minimum. The internal BERT recognizes several different patterns.

To facilitate diagnostics, remote loopbacks on remote units can be activated by transmitting an FT1 inband loop code. This feature activates the loopback directly from the local site.

Each HS-Q/N channel terminates in a separate 26-pin SCSI connector. Different adaptor cables are offered by RAD to convert from the SCSI connector to a standard V.35, V.36/RS-449, RS-530 or X.21 interface.

Cables are ordered separately per channel (each channel can be independently converted to a different interface).

Channel data rates and all other operating parameters of HS-Q/N are user-selectable through the Megaplex management system.



High Speed n x 64 kbps Connection over a TDM Network

## Specifications

### Number of Data Channels

4

### Connectors

26-pin SCSI, female (one for each channel)

### Data Rate per Channel

Synchronous,  $n \times 56$  or  $n \times 64$  kbps, where: for T1:  $n=1$  to 24, for E1:  $n=1$  to 31

### Interface (Electrical)

User-selectable for each channel: V.35 or V.11/RS-422

### Interface (Physical)

V.35, V.36/RS-449, RS-530, or X.21 (via conversion cables)

### Clock Modes

DCE: HS-Q/N channel provides both RX and TX clocks to the user DTE  
 External DCE (DTE1, used for tail-end applications): HS-Q/N channel provides RX clock to the user while receiving TX clock from the user  
 DTE (DTE2): HS-Q/N channel receives both RX and TX clocks from the user DCE

### Control Signals

CTS follows RTS or is constantly ON, soft-selectable

DCD constantly ON, unless in RED ALARM (one DCD signal for all four channels)

*Note: RTS is not available with V.11/RS-422 interface.*

### Diagnostics (per channel)

Local loopback  
 Remote loopback  
 Interruptive test  
 Uninterruptive monitor  
 Internal BERT (different patterns available)

### Configuration

Programmable via the Megaplex management system








### Power Consumption

3W

### Environment

Operating temperature:  $-10^{\circ}\text{C}$  to  $55^{\circ}\text{C}$  ( $0^{\circ}\text{F}$  to  $131^{\circ}\text{F}$ )  
 Storage temperature:  $-20^{\circ}\text{C}$  to  $70^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $158^{\circ}\text{F}$ )  
 Humidity: up to 95%, non-condensing

Megaplex High-Speed Modules

	HS-2	HS-Q/N	HS-6N/ HS-12N	HS-U/HS-U-6/ HS-U-12	HS-703	HS-S	HSF-1/HSF-2
<b>Feature</b>							
Interface	V.24/RS-232, V.35, X.21 or V.11/RS-422	V.24/RS-232, V.35, X.21 or V.11/RS-422	V.24/RS-232, V.35, X.21 or V.11/RS-422	ISDN "U"	G.703	ISDN "S"	IEEE C37.94 Fiber optic
Number of Channels	2	4	6/12	4/6/12	4	4	1/2
Number of Connectors	2	4	2/4	4	4	4	1/2
Data Rate	$n \times 64$ kbps $n \times 56$ kbps	$n \times 64$ kbps $n \times 56$ kbps	$n \times 64$ kbps	128 kbps	64 kbps	128 kbps	up to 10x64 kbps
Supported by MP-4100	-	-	✓	HS-U-6 HS-U-12	✓	✓	HSF-2

**HS-Q/N****4-Channel High-Speed Data Module****Ordering**

MP-2100M-HS-Q/N

**OPTIONAL ACCESSORIES****CBL-SCS26/\*/#**

Adapter cable for converting the HS-Q/N module 26-pin SCSI connectors to a specified user equipment connector (a separate cable is required for each channel). Each cable is 2m (6 ft) in length.

*Legend*

## \* Interface:

**V35** V.35 interface, 34-pin**V36** V.36/RS-449 interface, 37-pin**530** RS-530 interface, 25-pin**X21** X.21 interface, 15-pin

## # Connector:

**F** female**M** male**International Headquarters**

24 Raoul Wallenberg Street  
Tel Aviv 69719, Israel  
Tel. 972-3-6458181  
Fax 972-3-6498250, 6474436  
E-mail [market@rad.com](mailto:market@rad.com)



12 avenue des prés  
78059 St Quentin en Yvelines

Tel: 33 (0)1 77 55 03 00

Fax: 33 (0)1 30 44 11 95

E-mail: [sales@cbnetworks.fr](mailto:sales@cbnetworks.fr)**data communications**

The Access Company