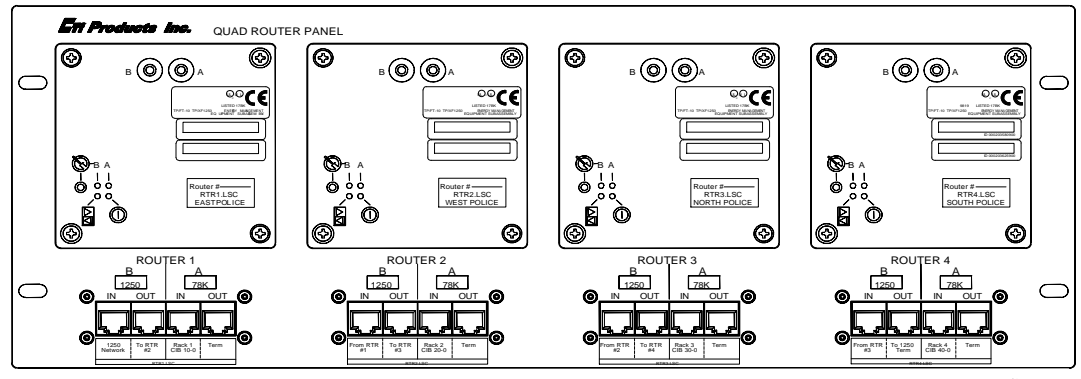


# Routers for MCN™ Monitoring and Control Systems



**Quad Router Panel with 4 Routers Installed**

### Introduction

Routers are used with CTI's MCN Remote Comparator Display system for the following purposes:

- To increase the number of I/O Modules (CIBs, AIBs, IOBs, etc.) past 16.
- To establish a high-speed (1.25 Mb) backbone network.
- To provide access to a high-speed network from a standard speed (78 Kb) HIB module for dial-up applications.
- To connect local I/O modules to a high-speed backbone.

### Mounting

A Quad Router Mount is available for mounting on an EIA 19" rack. It will accept up to 4 routers. It requires 4 RU of space (7"). An MCN power supply is required for operation.

### System Operation

The system diagram on the next page shows how routers are used to extend the number of I/O modules past 16. There are two standard speed (78 Kb) networks segments shown, each with 16 CIB modules.

Each of these segments is connected to the 78 Kb side of a router module. The high-speed (1.25 Mb) sides of the routers are connected together to form a high-speed backbone network.

The lower router is a HIB router, which allows a dial-up HIB module to be used.

Although not shown in the system diagram, PCs with high-speed PCLTA interface cards can be connected directly to the 1.25 Mb channel.

The traffic from the CIB modules is passed through the router modules and onto the high-speed backbone.

The routers filter the network traffic so that the CIB traffic from one 78 Kb segment is not repeated to the other 78 Kb segment. Traffic from the User Interface (PCLTA or HIB) is passed to the appropriate 78 Kb segment.

### Dial-Up HIB Applications

Speed conversion is required when a HIB module is used in dial-up applications that have a high-speed backbone. For these applications, order one router module for each dial-up HIB module.

The HIB Router will convert from the 1.25 Mb high-speed network to the standard 78 Kb network for the HIB. It also provides filtering so that the HIB will see only a portion of the network traffic at any one time.

### Custom System Configuration

The configuration for the routers will be different for each customer's system. Parameters such as filtering and addressing must be set for each of these systems.

HIB routers are pre-configured for standard addressing. the MCNRCD Comparator Display software on the PC will automatically set up the filtering on the HIB routers, depending on which screens are loaded.

For all non-HIB routers, the Custom Configuration option must be ordered. CTI Products' engineers will work with the customer to define the network. We will then custom configure the routers before shipment. We will provide the appropriate files to the customer to allow re-configuration if a router needs to be replaced in the field.

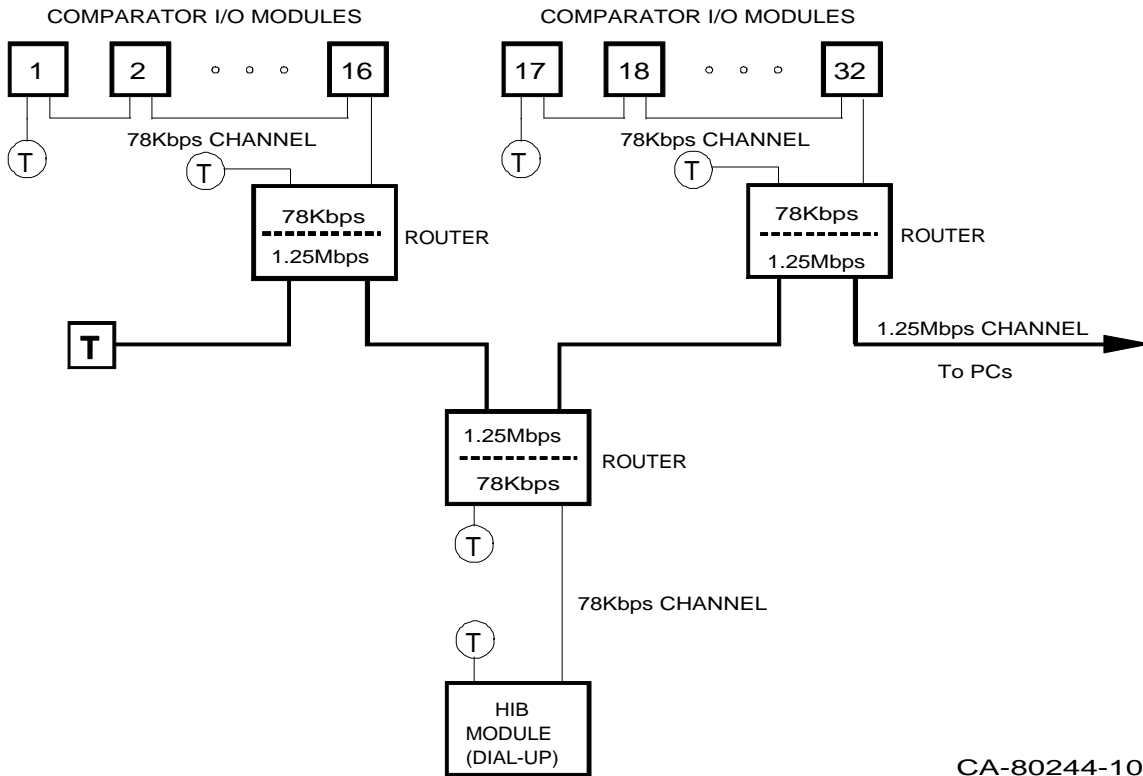
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CA-80244-105

**MCN Remote Comparator Display System with Routers**

**Part Numbers**

90-11401	MCN Router 78K / 1250K
90-11518	MCN Router 1250K / 1250K
S1-60819	MCN Quad Router Mount and Manifold
81-10398	Power Supply MCN 120VAC US/CAN
81-10728	Power Supply MCN 230VAC Europe
S2-60825	Custom System Configuration & Test (Required for each Router Module)

**General Specifications**

Size	7.0" x 19.0" (178 x 483 mm)
Power Required per Router	16-30VAC or DC, 2VA
Temperature	-40 +85 °C
Humidity	10- 95% non-condensing
MCN Network Data Rates	78Kbps, 1250Kbps
Network Connector (Quad Rack)	RJ-45, Standard MCN type
Max. network segment	4000 ft. without repeaters (78K) 1500 ft. (1250K)
Max. standard 78Kb modules per segment	16 per network segment (Larger, multi-segment systems can be custom-configured.)
Network Cabling	CAT5 (4 Pair UTP)
Safety Approvals (Router)	UL 916, cUL c22.2 Number 205,
Emissions Compliance (EMI)	FCC part 15, Class A IC (DOC), Class A (Canada) EN55022, Class A
Susceptibility Compliance (EMC)	IEC 801-2, 3, 4 EN50082-1