

# CMN-16 Module

# CMN-C6A



## Async Short Range Dual Modem Card



### FEATURES

- Two independent modems per card
- Compatible with SRM-6A
- Asynchronous transmission up to 19.2 kbps
- Transmission range up to 20 km (12.5 miles)
- Transformer isolated
- DCE/DTE switch for each modem

### DESCRIPTION

- CMN-C6A consists of two short range modems on a single card, suitable for mounting in the CMN-16 rack. The modems are compatible with SRM-6A, SRM-5A and SRM-3A short range modems, providing a compact central site solution. CMN-6A is used for local data distribution, connecting full duplex asynchronous computers to terminals.
- The modems ensure integrity of data transmission, using unconditioned 4-wire dedicated lines, at data rates up to 19.2 kbps. Each modem operates over distances up to 20 km (12.5 miles), depending on wire gauge and data rate (see *Table 1*).
- Data is transmitted and received over a balanced line, ensuring excellent immunity to circuit noise. The low transmit signal level minimizes cross-talk onto adjacent circuits within the same cable.
- Each modem features a switch selectable DTE/DCE option. This allows it to operate as a DTE – for connection to another DCE, such as a multiplexer port – without requiring a crossover cable.
- The modems are coupled to the dedicated lines through isolation transformers which, in conjunction with other circuitry protect against AC or DC overvoltages. Since these transformers are rated over 1500V RMS, the CMN-C6A cards are suitable for connection to local circuits provided by most national telephone administrations (P.T.T.s).

### SPECIFICATIONS

- **Data Rates**  
Up to 19.2 kbps
- **Transmission Line**  
4-wire unconditioned dedicated line (two twisted pairs)
- **Transmission Mode**  
Asynchronous, full duplex, 4-wire operation
- **Transmission Controls**  
**DCD** continuously ON  
**CTS** (Circuit 106) turns on immediately after the terminal raises RTS (Circuit 105)
- **Transmission Level**  
0 dBm
- **Transmission Range**  
See *Table 1*
- **Indicators**

|                |              |
|----------------|--------------|
| PWR            | Power        |
| Modems A and B |              |
| XMT            | Transmit     |
| Data           |              |
| RCV            | Receive Data |
- **Terminal Interface**  
EIA RS-232-C/ITU V.24, via two RJ-45 sockets, one for each modem
- **Line Interface**  
Two RJ-45 sockets, one for each modem (see *Table 2*)
- **Power**  
0.30W, derived from the CMN-16 power supply
- **Physical**

|         |                 |
|---------|-----------------|
| Length: | 177 mm / 7.0 in |
| Width:  | 67 mm / 2.64 in |
| Height: | 15 mm / 0.59 in |
| Weight: | 85g / 3.0 oz    |
- **Environment**

|              |                              |
|--------------|------------------------------|
| Temperature: | 0-50°C / 32-122°F            |
| Humidity:    | Up to 90%,<br>non-condensing |

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#### INSTALLATION

- For each modem, observe the following polarity:
  - +XMT on the CMN-C6A connected to +RCV on the remote SRM-6A
  - XMT on the CMN-C6A connected to -RCV on the remote SRM-6A.
 For the second pair of wires, reverse this procedure.
- Set the DCE/DTE switch of the modem to the required position (factory set to DCE) (see Figure 1 and Figure 2).

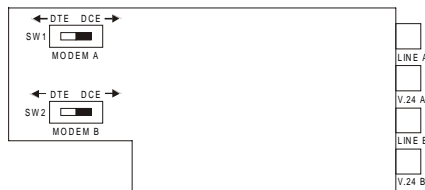


Figure 1. Strapping Diagram

- Remove the blank panel (if supplied), insert the card into the slot through the rear of CMN-16 rack and secure it with the screws provided.
- Connect the RS-232/V.24 cables to the RJ-45 sockets marked V.24 (see Figure 3 and Table 2).
- Connect the line cables to the RJ-45 sockets marked LINE (see Figure 3 and Table 2).

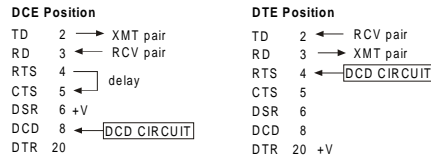


Figure 2. DCE/DTE Switch Configuration

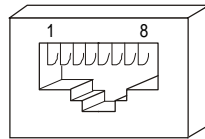


Figure 3. RJ-45 Socket

#### LINE Connections

|   |      |           |
|---|------|-----------|
| 2 | GND  | Ground    |
| 3 | RCV- | Receive-  |
| 4 | XMT- | Transmit- |
| 5 | XMT+ | Transmit+ |
| 6 | RCV+ | Receive+  |

Table 1. Approximate Range

| Data Rate | 19 AWG (0.9 mm) | 22 AWG (0.6 mm) | 24 AWG (0.5 mm) | 26 AWG (0.4 mm) |
|-----------|-----------------|-----------------|-----------------|-----------------|
| kbps      | km              | mile            | km              | miles           |
|           | s               |                 | s               |                 |
| 19.2      | 4.5             | 2.5             | 1.5             | 2               |
| 9.6       | 10.5            | 6.5             | 4               | 5               |
| 4.8       | 12.5            | 7.5             | 8.5             | 5               |
| 2.4       | 16              | 10              | 10.5            | 6.5             |
| 1.2       | 17.5            | 11              | 12              | 7.5             |

Table 2. DTE/Line Connections (RJ-45)

| Pin No.                       | Name     | Description         |
|-------------------------------|----------|---------------------|
| <b>DTE (V.24) Connections</b> |          |                     |
| 1                             | CH.GND   | Chassis Ground      |
| 2                             | RTS      | Request To Send     |
| 3                             | RD       | Receive Data        |
| 4                             | DCD      | Data Carrier Detect |
| 5                             | TD       | Transmit Data       |
| 6                             | DTR      | Data Terminal Ready |
| 7                             | SIG. GND | Signal Ground       |
| 8                             | CTS      | Clear To Send       |

#### ORDERING

##### CMN-C6A

Async Short Range Dual Modem Card for CMN-16 Rack



data communications

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