

## RS-530/RS-232 Fiber Optic MicroModems

**M62xxD**  
**M82xxD**

### Product Features

- Handshaking standard on all models
- Multi-Mode or Single-Mode versions available
- Small Compact Design for limited space installations
- Mean Time Between Failure greater than fourteen (14) years
- Fully Transparent Operation with independent data, clock and control lines
- Installation as Modem Links (DCE-DCE) or Interface Extenders (DCE-DTE)
- Optional Use of Host Power with M82xxD Series MicroModems
- Electrical Isolation eliminates ground potential rise and provides dielectric isolation
- Standalone or 19" rack mounting with redundant power applications
- Extruded Aluminum Housings for better protection and extended product life
- Standards Conversion for RS-232, RS-422, RS-423, RS-530, V.35, RS-449, MIL-188-114A (Balanced), MIL-188-114A (Unbalanced)
- Compatible with the VERSITRON FOM II series modems



### Product Description

VERSITRON's M62xxD and M82xxD MicroModem Series provide fully transparent fiber optic transmission for data, clock and control signals. MicroModems provide synchronous or asynchronous, continuously variable, data transmission from 1 bps to 5 Mbps. Mode of operation is either full duplex or simplex. Small enough to install directly to data terminal and communications equipment, these modems offer versatile solutions and complete transparency for data communications. M82xxD modems provide handshaking control signals associated with RS-232, RS-423 and MIL-STD-188-114A (Unbalanced). M62xxD modems provide handshaking control signals associated with RS-530, RS-422, and MIL-STD-188-114A (Balanced). RS-449 or V.35 standards are also supported with the use of M62xxD modems and specific adapters. Basic operation involves multiplexing the control signals along with the clock and data signals and transmitting the combined signal to the remote unit. At the remote end the combined signal is de-multiplexed and applied to the electrical interface. The electrical interface will be a DB25F (DCE) if connecting to a terminal (DTE) interface. It will be a DB25M (DTE) if connecting to a modem (DCE) interface. LC connectors are standard for the fiber interface.

### Product Models

| Model  | Function                            | Connector | Fiber Cable | Wavelength | Link Budget | Max Distance |
|--------|-------------------------------------|-----------|-------------|------------|-------------|--------------|
| M6213D | RS-530 Fiber Optic MicroModem - DCE | LC        | MM          | 1310nm     | 11 ± 1 dB   | 2 km         |
| M6223D | RS-530 Fiber Optic MicroModem - DTE | LC        | MM          | 1310nm     | 11 ± 1 dB   | 2 km         |
| M6215D | RS-530 Fiber Optic MicroModem - DCE | LC        | SM          | 1310nm     | 19 ± 1 dB   | 20 km        |
| M6225D | RS-530 Fiber Optic MicroModem - DTE | LC        | SM          | 1310nm     | 19 ± 1 dB   | 20 km        |
| M8213D | RS-232 Fiber Optic MicroModem - DCE | LC        | MM          | 1310nm     | 11 ± 1 dB   | 2 km         |
| M8223D | RS-232 Fiber Optic MicroModem - DTE | LC        | MM          | 1310nm     | 11 ± 1 dB   | 2 km         |
| M8215D | RS-232 Fiber Optic MicroModem - DCE | LC        | SM          | 1310nm     | 19 ± 1 dB   | 20 km        |
| M8225D | RS-232 Fiber Optic MicroModem - DTE | LC        | SM          | 1310nm     | 19 ± 1 dB   | 20 km        |

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**Technical Specifications General**

|                       |  |
|-----------------------|--|
| Dimensions            | 1.0 x 2.4 x 4.5 in. / 2.54 x 6.1 x 11.43 cm. (H x W x L) |
| Weight                | .425 lbs / 0.2 kg  |
| Operating Temperature | -30° to 70°C   |
| Storage Temperature   | -40° to 85°C   |
| Relative Humidity     | Up to 95% non-condensing                                 |
| Altitude              | Up to 10,000 ft  |

**Technical Specifications Electrical Interface**

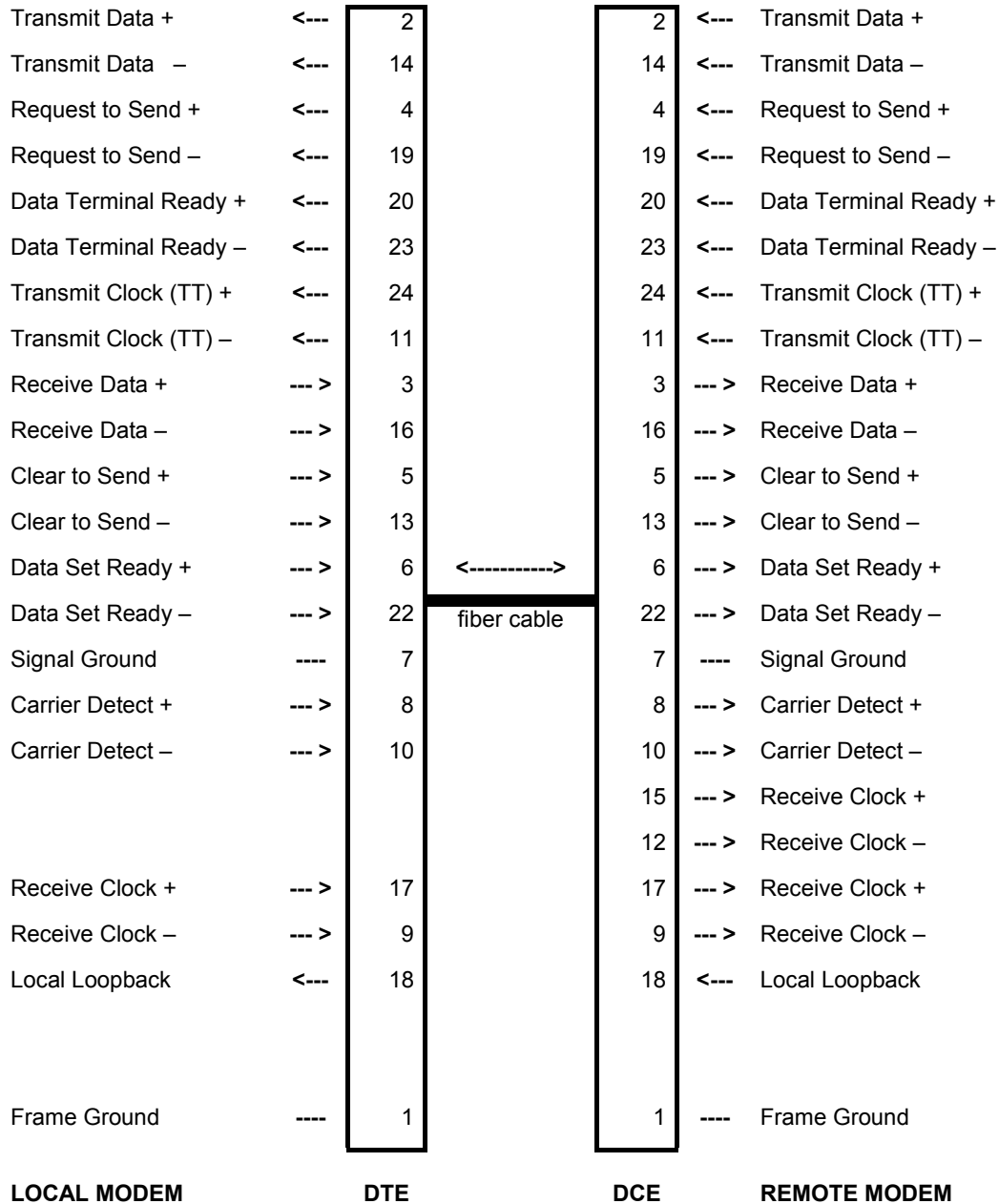
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| Power Requirements       | +5 to +15VDC @300mA (M82xxD models may use host power on Pin 9)  |
| Protocol                 | Synchronous or Asynchronous (auto-sensing)   |
| Date Rate                | M62xxD: Continuously Variable from 1 bps to 5 Mbps Terminal Timing; 1 bps to 1 Mbps Source Timing<br>M82xxD: Continuously Variable from 1 bps to 128 Kbps Terminal Timing; 1 bps to 100 Kbps Source Timing |
| Operation                | Full Duplex or Simplex   |
| Error Rate               | Better than 10 <sup>-9</sup>   |
| Connector                | DCE – Female DB25 for M6213D, M6215D, M8213D, M8215D<br>DTE – Male DB25 for M6223D, M6225D, M8223D, M8225D   |
| M62xxD Digital Interface | RS-530, RS-422, RS-449 or V.35 with adapter, MIL-188-114A (Balanced)   |
| M82xxD Digital Interface | RS-232, RS-423, MIL-188-114A (Unbalanced)  |

**Accessories**

| Model # | Description   |
|---------|---|
| MRR-16  | 16-slot rack mount chassis - 19.0 x 3.5 x 4.5 in. / 11.4 x 6.1 x 2.54 cm. (W x H x D) |
| M0004   | 100-240V/1A 47-63Hz to 12VDC power supply   |
| M0001   | Power jumper 6" cable. (One per MicroModem required for chassis installations).       |
| PSAC08  | 110VAC to 12VDC power adapter (USA style).  |
| PSAC09  | 220VAC to 12VDC power adapter (European style).                                       |
| M0011   | RS-530 DCE to RS-449 DCE (female) adapter.  |
| M0012   | RS-530 DTE to RS-449 DTE (male) adapter.  |
| M0013   | RS-530 DCE to V.35 DCE (female) adapter.  |
| M0014   | RS-530 DTE to V.35 DTE (male) adapter.  |
| M0021   | DB25 gender changer, male-to-male.  |
| M0022   | DB25 gender changer, female-to-female.  |

**RS-530/RS-232 Fiber Optic MicroModems**

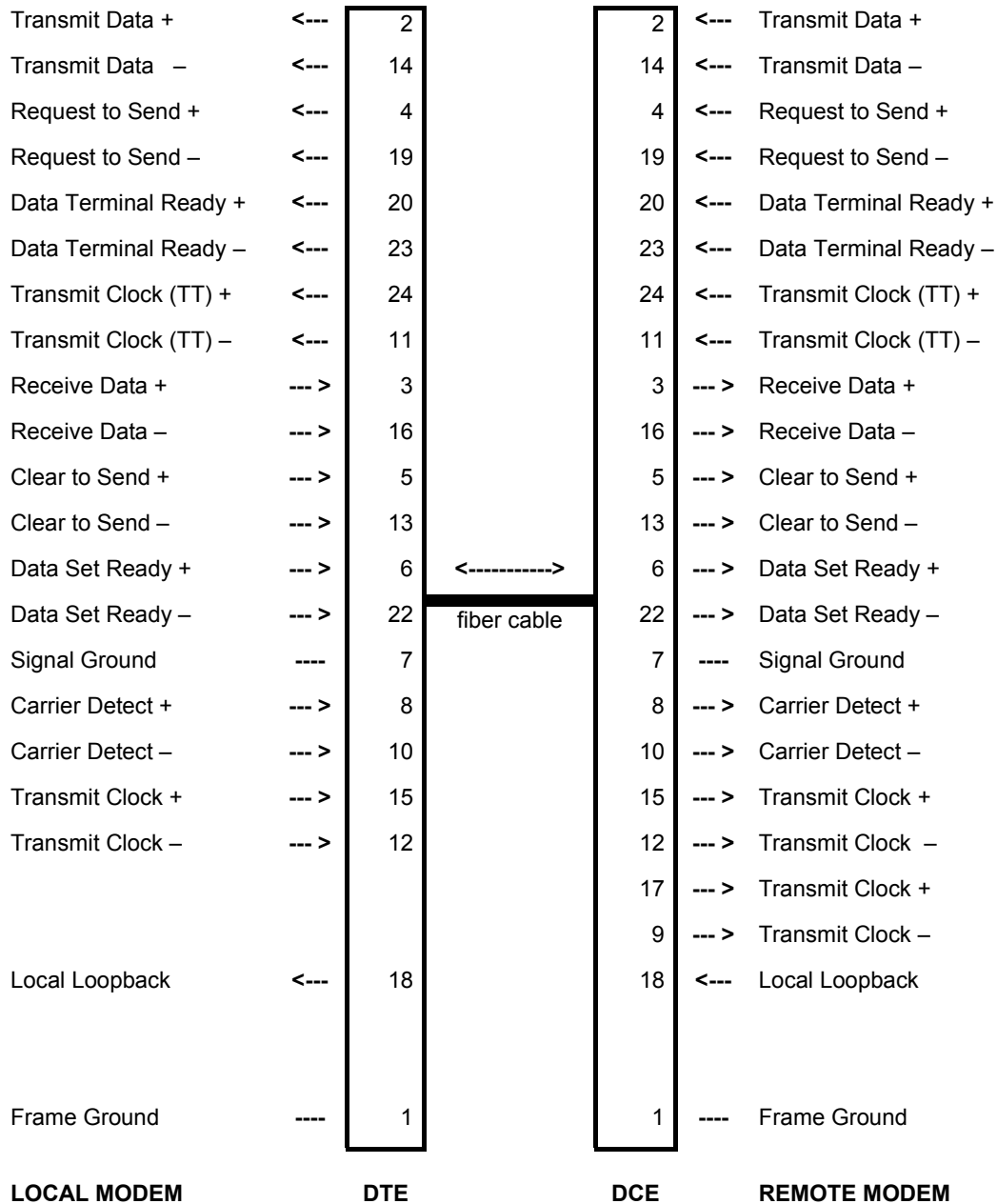
**M62xxD  
M82xxD**



*M62xxD Interface Extender Configuration (Terminal Timing)*

**RS-530/RS-232 Fiber Optic MicroModems**

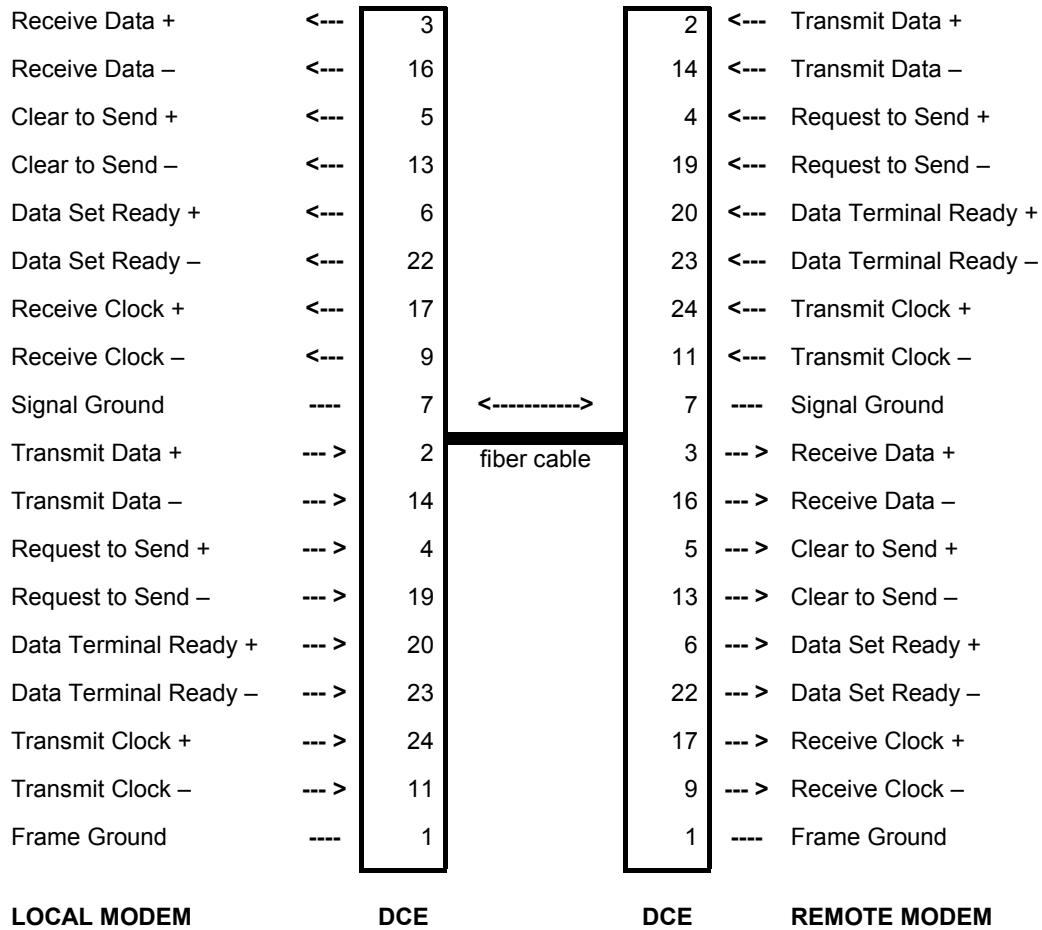
**M62xxD  
M82xxD**



*M62xxD Interface Extender Configuration (Source Timing; S1-5 = ON)*

**RS-530/RS-232 Fiber Optic MicroModems**

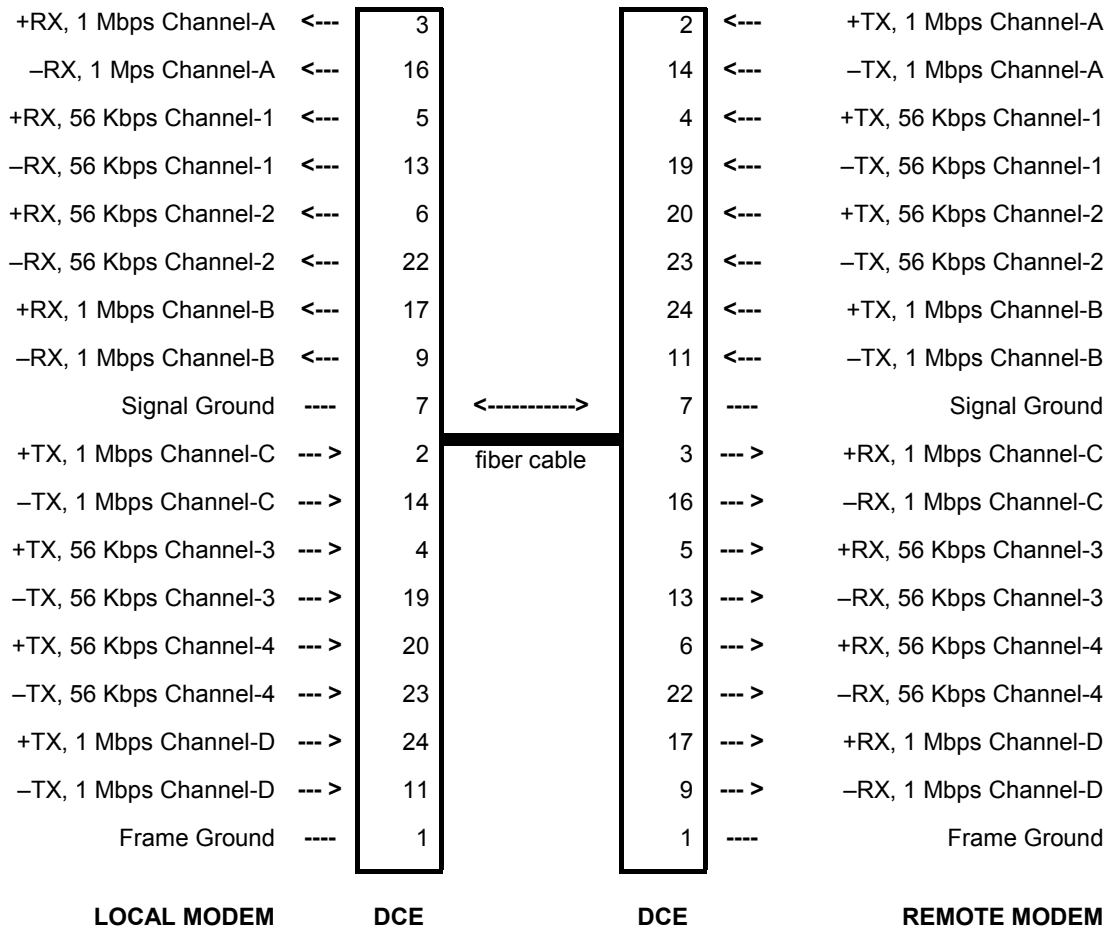
**M62xxD  
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*M62xxD Modem Link Configuration*

**RS-530/RS-232 Fiber Optic MicroModems**

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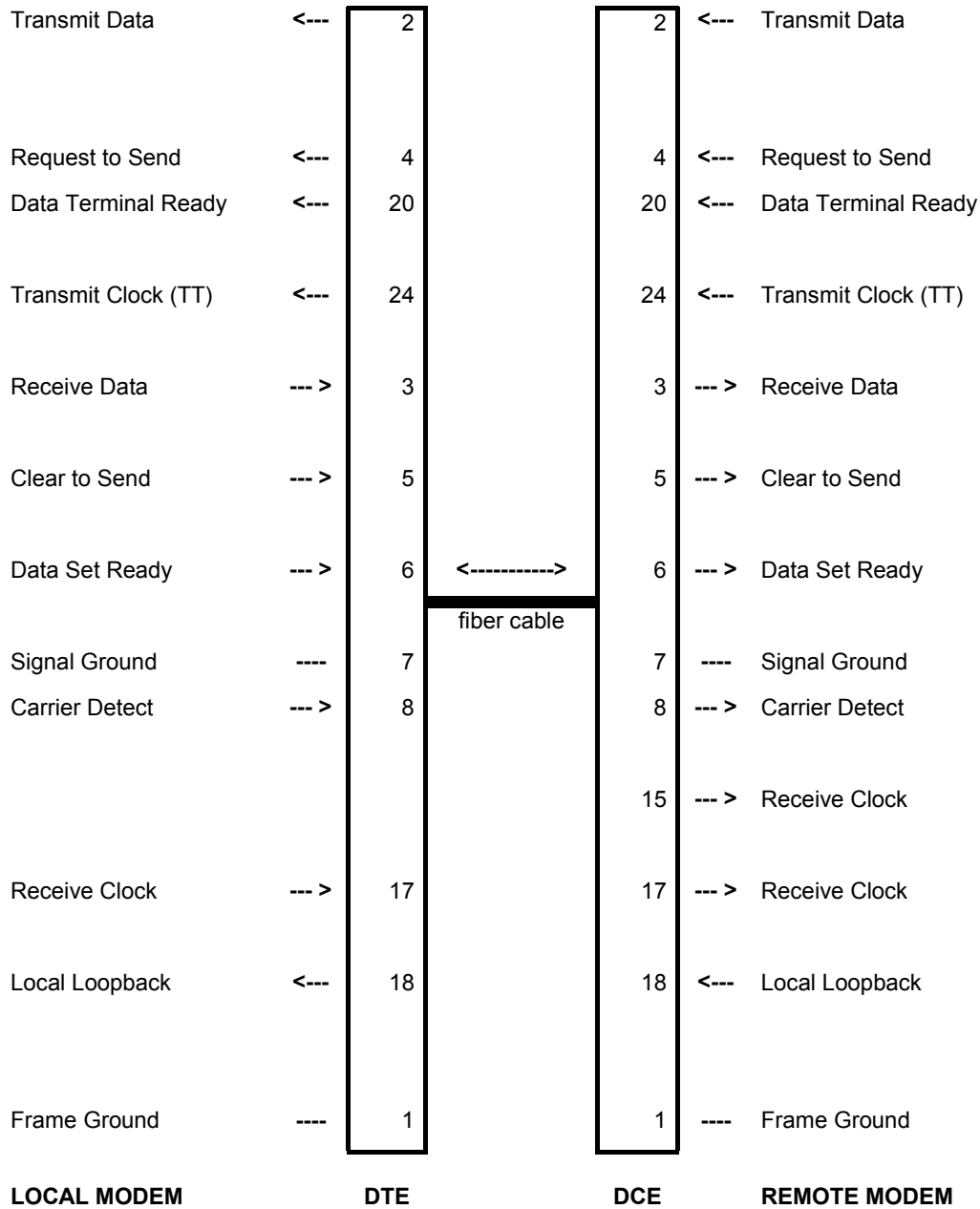


*M62xxD Multiplexer Configuration*



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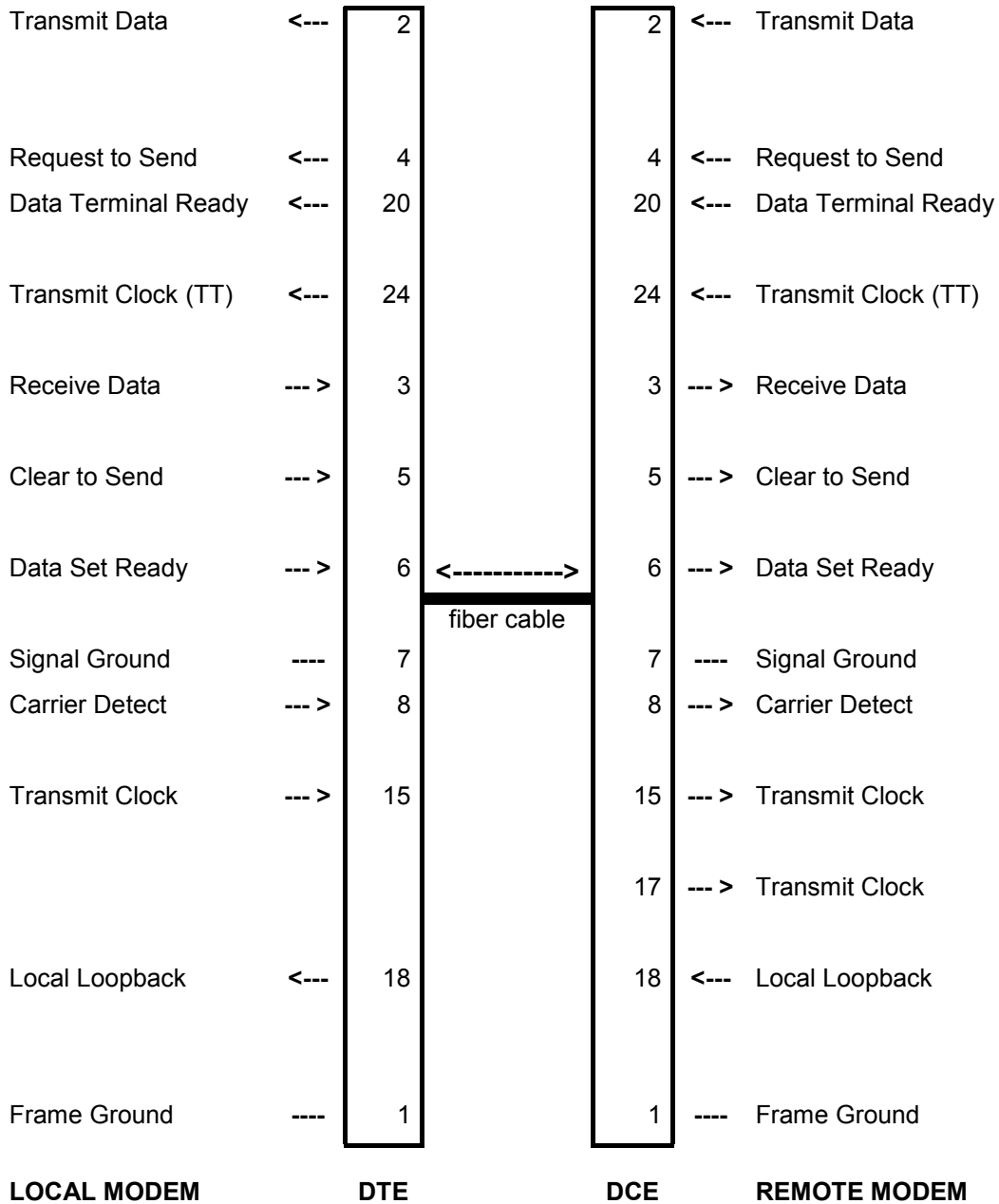
**M62xxD  
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*M82xxD Interface Extender Configuration (Terminal Timing)*

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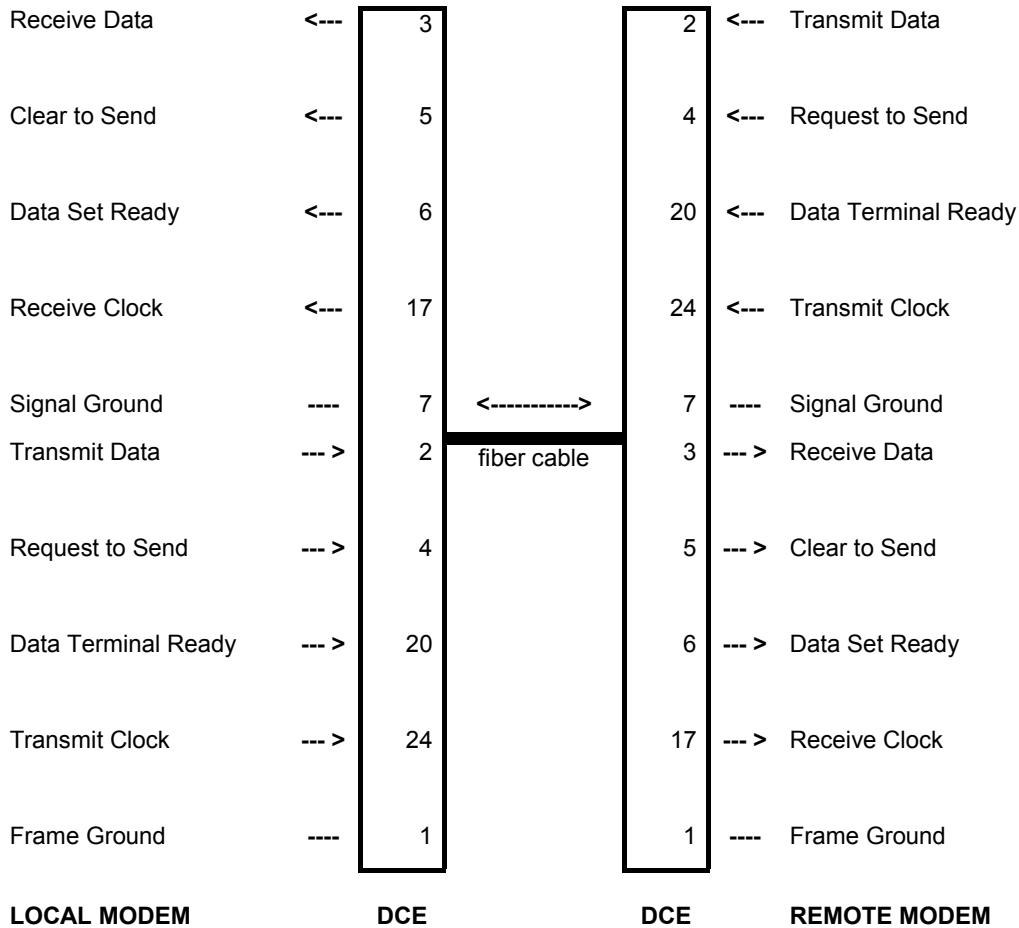


*M82xxD Interface Extender Configuration (Source Timing; S1-5 = ON; DTE ONLY)*



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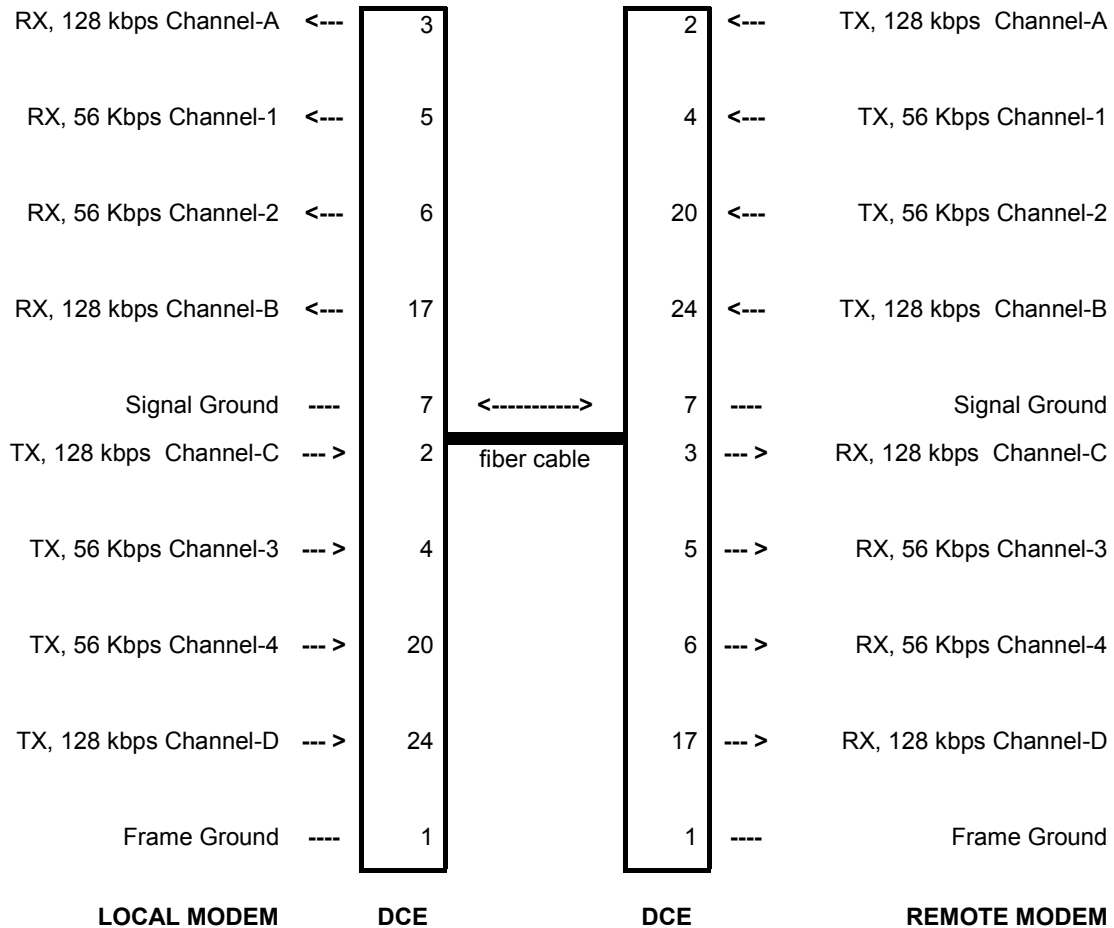
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*M82xxD Modem Link Configuration*

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*M82xxD Multiplexer Configuration*

