

# RSD-1

## Digital Sharing Device



Up to four modems  
share digital services  
in a multipoint  
environment

- Operates with any combination of up to four DTEs or DCEs
- Synchronous or asynchronous up to 19.2 kbps
- RTS/DCD or data contention
- Individual subchannel disable switch
- DCE/DTE switch for main channel and each subchannel

The RSD-1 Digital Sharing Device enables up to 4 modems or terminals to share a master modem, a multiplexer or a computer port in a multipoint environment. RSD-1 is compatible with asynchronous or synchronous equipment at data rates of up to 19.2 kbps.

Three clock modes are supported: internal, external from the main channel, and external from subchannel 1.

A built-in buffer overcomes possible phase differences between the RSD-1 main channel transmit clock and the clocks of modems connected to the subchannels.

A DCE/DTE switch for main channel and each subchannel allows the channel interface to be set as DCE or DTE.

The main channel broadcasts to all subchannels in parallel. Subchannels contend to transmit to the main channel by activating RTS/DCD or by data transitions (jumper-selectable). If the RTS/DCD is active or data transitions occur on a subchannel, the transmit data and control signals are connected to the main channel. When RTS/DCD drops or data transitions stop, the control circuitry is switched to monitor other subchannels. A subchannel is disconnected immediately after it drops RTS/DCD or transmits 15 idle bits.



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Automatic circuitry can disable a subchannel if it stays active for longer than a preset time, blocking all other subchannels (streaming). The automatic disable resets itself as soon as the subchannel RTS/DCD drops, or 15 idle bits are transmitted (Data Contention). Individual subchannel indicators on the front panel indicate if a subchannel was disabled by automatic circuitry. A subchannel can be manually disabled using individual subchannel switches.

## Specifications

### Number of Subchannels

Four

### Channel Configuration

Lowest priority: Subchannel 1  
Highest priority: Subchannel 4

### Subchannel Selection

RTS/DCD or data contention  
(jumper-selectable)

### Subchannel Deselection

RTS/DCD off or 15 bits of idle data (by jumper)

### Subchannel Disabling

Manual: By front panel switches  
Automatic: If a subchannel stays connected for more than a preset time period (1.7, 13.5 or 108 sec)

### Transmit Clock Source

Internal  
External derived from main channel  
External derived from subchannel 1

### Data Rates

Asynchronous: Up to 19.2 kbps  
Synchronous:  
External clock: Up to 19.2 kbps  
Internal clock: 1.2, 2.4, 4.8, 7.2, 9.6, 14.4, 19.2 kbps

### Input and Output Interfaces

RS-232/V.24, DCE or DTE

### Connectors

Five D-type 25-pin, female connectors

### Controls

Disable push button switch per subchannel

### Indicators

POWER: Power is on  
DATA: Data is broadcasting from the main channel to subchannels  
ACTIVITY: Individual LEDs indicate which subchannel has gained access to the main channel  
DISABLE: Individual LEDs indicate if a subchannel has been disabled automatically

### Power

115/230 VAC ( $\pm 10\%$ ), selectable  
47 to 63 Hz, 10 VA  
- 48 VDC ( $\pm 10\%$ )

### Physical

Height: 45 mm (1.75 in) (1U)  
Width: 432 mm (17.0 in)  
Depth: 208 mm (8.2 in)  
Weight: 1.75 kg (3.9 lb)

### Environment

Temperature: 0° to 50°C (32° to 122°F)  
Humidity: Up to 90%, non-condensing

## Ordering

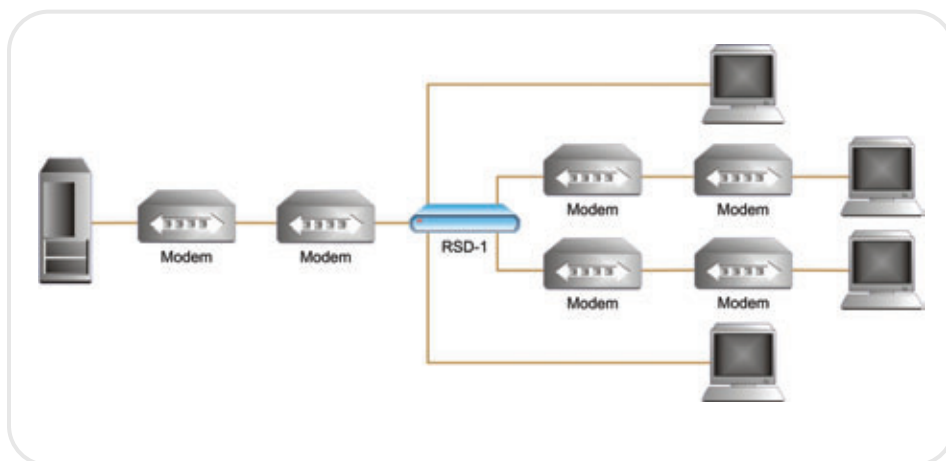
### RSD-1/\*/&

#### Legend

- \* Power supply type:
  - 48** -48 VDC  
(default is 115/230 VAC selectable)
- & Subchannel buffers:
  - B** With buffers  
(default is without buffers)

### SUPPLIED ACCESSORIES

AC power cord, DC adapter plug (with DC power supply only)



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