



# Model 2070-9 Series Modem



## FEATURES

- \* Standard "AT" Command Set
- \* Private Wire & Dialup Modem on a single Card
- \* Low Power Consumption
- \* Front Edge Mounted Status Indicators
- \* Auto Dial — Auto Answer—Auto Speed Detect
- \* Highly Flexible Configuration Options
- \* Wide Operating Temperature Range -37 to +74oC
- \* Configuration options stored in NVRAM— no jumpers

## Description

The GDI Smart Modem 2070-9 series modems are a combination of two modems on a single card that plugs directly into the Model 2070 modem slot. One modem is the functional equivalent of a GDI 400 Series modem while the other is a versatile, AT command set compatible dial- up modem. Models are available to operate on 1200, 9600, or 19200 baud for the FSK section and up to 56.7 Kbaud for the dialup section as well as a dialup modem only

The GDI 2070-9B series modem provides a high performance, temperature tested, alternative to external modems in many "Field Master" applications.

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# Model 2070-9 Series Modem

## Specifications

### FSK Modem Section

#### Data Rate and Format

2070-9A: 0-1200 baud  
2070-9B: 0-9600 baud  
S070-9E: 0-19200 baud  
Serial Asynchronous, by bit

#### Modulation Type and Frequencies

2070-9A: 1200Hz/Mark, 2200Hz/Space  
2070-9B: 11200Hz/Mark, 17600Hz/Space  
2070-9E: 19200Hz/Mark, 38400Hz/Space  
Phase Coherent FSK

#### Line Interface

2070-9A: Voice Grade leased line (3002) or private wire (600 ohm)  
2070-9B/2070-9E: Dry Private Wire (600 ohm)

#### Receiver Characteristics

Dynamic Range +3dBm to -48 dBm  
Carrier Detect Threshold -42+3dBm  
Carrier Detect Hysteresis ~3dB  
Demodulation Distortion <10%  
(1200bps, -40 dBm, 1:1 data pattern)  
Receiver Frequency  
Tolerance +25Hz (for -40dBm)

#### Serial Interface

Meets EIA RS-232C and CCITT V.24

#### Indicators

Transmit Data (XMT), Receive Data (RCV)  
Clear to Send (CTS), and Receiver Carrier (CAR)

#### Timing (Switch Selectable)

RTS/CTS 6 or 12 + 2 mS  
CAR Delay 4 or 8 + 2 mS  
(Soft) Carrier Turnoff 5 or 10 + 2 mS  
Receiver Squelch 3 or 6 + 2 mS

#### Mode Options (Switch Selectable)

2 wire Half Duplex or 4 wire Full Duplex

### Smart Modem Section

#### Compatibilities

CCITT V.34, CCITT V.32 bis, CCITT V.32  
CCITT V.22 bis, CCITT V.22, Bell 212A  
Bell 103  
Automatically adapts to calling or called modem

### Transmit and Receive Frequencies

Data Carrier 1800 +/- 0.5 Hz  
Calling Tone 1300 +/- 10 Hz  
Answer Tone 2100 +/- 15 Hz  
Receive Frequency +/- 14 Hz  
Transmit Level Fixed at -11 +/- 2 dBm

### Line Requirement & Interface

Public Switched Telephone Network  
Meets FCC Part 68 requirements  
2-Wire Full Duplex (TIP and RING)

### Modes of Operation

Asynchronous  
Full or Half Duplex  
Automatic and manual Call Originate  
Automatic and manual Call Answer

### Modulation

Quadrature Amplitude Modulation FSK and DPSK

### NVRAM

Allows storage of two user profiles and four 36-digit dial strings. Eliminates switches and jumpers.

### Receiver Performance

Signal to Noise Ratio -26 dB  
Dynamic Range -12 dBm to -42 dBm  
Ring Detect Sensitivity 38 VRMS

### Indicators

SD, RD, OH, CD, AA and HS  
Mounted on front edge of PCB

### Ordering Information

2070-9A—56.7 Kbps Dialup modem w/ 1200bps FSK option

2070-9B—56.7 Kbps Dialup modem w/ 9600bps FSK option

2070-9D—56.7 Kbps Dialup Modem Only

2070-9E—56.7 Kbps Dialup modem w/ 19200bps FSK option

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