

# D56 Modem

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October 21, 2003

8500073

FCC REGULATIONS REQUIRE THAT THE FOLLOWING  
INFORMATION BE PROVIDED TO THE CUSTOMER:

1. This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, the FCC registration number, Facility Interface Code (FIC) and Service Order Code (SOC). This information must be provided to the telephone company.

FCC Registration No: US:5FWM503BDSERIES  
FIC: 02LS2  
SOC: 9.0Y  
USCC Jack: RJ11C

2. A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.
3. The REN is used to determine the number of devices that may be connected to a telephone line. Excessive REN's on a telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total REN's, contact the local telephone company. The REN for this product is part of the FCC registration number that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (eg., 03 is a REN of 0.3).
4. If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also you will be advised of your right to file a complaint with the FCC if you believe it is necessary.
5. The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of this equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications in order to maintain uninterrupted service.

6. If trouble is experienced with this equipment or for repair or warranty information, please contact Data Comm for Business in the USA at 800-432-2638. If this equipment is causing harm to the network, the telephone company may request you to remove the equipment from the network until the problem is resolved.
7. No repairs are to be made by you. Repairs are to be made only by Data Comm for Business or its licensees. Unauthorized repairs void registration and warranty.
8. This equipment cannot be used on public coin service provided by the telephone company. Connection to Party Line Service is subject to state tariffs. (Contact the state public utility commission, public service commission or corporation commission for information.)
9. Parties responsible for equipment requiring AC power should consider using a surge arrester. Telephone companies report that electrical surges, typically lightning transients, are very destructive to customer terminal equipment connected to AC power sources.

FEDERAL COMMUNICATIONS COMMISSION  
RADIO FREQUENCY INTERFERENCE STATEMENT:

This equipment has been tested and found to comply with the limits for a Class A computing device, Pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual may cause unacceptable interference to radio and TV reception. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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## **1. DESCRIPTION**

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### 1.0 Description

The DCB D56 modem is a 56 Kbps (V.90) dial-up modem. The modem can be powered by an external AC wall mount power supply, or by an optional internal 24, or 48 volt DC supply. A rack front is available for the metal case, so it can be easily rack mounted with one, two or three modems per 1U rack height.

Applications for the D56 modem include those industrial applications where rack mounting is required, a metal enclosure is required, or where the power source available is DC, rather than an AC wall outlet.

### 1.1 Features

- Metal enclosure
- Stand alone or rack mounting
- Two-wire dial-up modem
- DB-25 serial asynchronous interface
- LED's for Power, TxD, RxD, DTR, DCD
- Ideal for remote data collection applications, SCADA, back-up links, and remote controls.
- 120 VAC wall mount supply included
- Available with options for external 24 or 48 VDC power



Front and Rear Views

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## **2. SPECIFICATIONS**

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### 2.1 Specifications

#### 2.1.1 General

56K model – D56

For special power options, add the suffix 24 or 48 for 24 or 48 volt DC power

#### 2.1.2 Front Panel Indicators

Power, TxD, RxD, DTR, DCD

#### 2.1.3 Controls

AT command set included on disk

#### 2.1.4 Physical/Electrical

Power requirements: 9 VDC, 500 ma

Supports 9 to 18 VDC external power on 2.5mm x 5.5 mm power connector

Options available for 24 or 48 VDC external power

Rack mount bezel available for 1, 2 or 3 units per 1U rack height

Size: 5.75" x 1.45" x .55"

Weight: one pound

Temperature: -40 to +70 C

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## **3. INSTALLATION**

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### 3.1 Unpacking

The following is included with each D56 Modem:

- Modem and external 120 VAC power supply
- Cable for connection to phone line
- Manual
- Information regarding warranty, maintenance contracts and repair

#### **NOTE**

Please refer to the Command Reference file on the enclosed disk for proper commands to configure the modem for your application. This modem is country specific. Refer to the +GCI command in the Command Reference for the correct setting for your location. The default is United States.

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## **4 FRONT PANEL INDICATORS**

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### 4.1 Indicators

| <u>Indicator</u> | <u>Condition</u> | <u>Meaning</u>                             |
|------------------|------------------|--|
| Power            | ON               | Power is supplied to the modem             |
| TxD              | Flickering       | Modem is sending data to the far end       |
| RxD              | Flickering       | Modem is receiving data from the far end   |
| DTR              | ON               | DTR is asserted by the attached DTE device |
| DCD              | ON               | Modem carrier is asserted                  |



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## 5. INTERFACE SIGNALS

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### 5.1 DTE Port Interface

| <u>Pin</u> | <u>Signal</u>       | <u>In/Out</u> |
|------------|---------------------|---------------|
| 1          | Frame Ground        |               |
| 2          | Transmit Data       | IN            |
| 3          | Receive Data        | OUT           |
| 4          | Request to Send     | IN            |
| 5          | Clear to Send       | OUT           |
| 6          | Data Set Ready      | OUT           |
| 7          | Signal Ground       |               |
| 8          | Data Carrier Detect | OUT           |
| 20         | Data Terminal Ready | IN            |

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## **6. TROUBLESHOOTING**

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### 7.1 General Approach

When troubleshooting problems, a rational plan can save you many hours of frustration. The following is a brief outline of standard troubleshooting procedures.

1. Gather the facts to determine the exact nature of the problem.
2. Draw a picture of the system showing the equipment at both the host and remote ends and the phone lines or in-house wiring. Use this as a reference to note your observations, test steps and test results. A picture keeps you focused and often saves duplicate effort.
3. Record the front panel indications before changing anything. This is an important part of fact gathering
4. If you change anything, change only one thing at a time.
5. Use the built-in test functions, especially the loopback tests. Record your results.

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## 7. WARRANTY

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DCB modems are warranted to be free of defects in materials and workmanship for two years. Data Comm for Business, Inc. will repair or replace any equipment proven to be defective within the warranty period. All warranty work is F.O.B. Dewey, IL. This warranty is exclusive of abuse, misuse, accidental damage, acts of God or consequential damages, etc. DCB liability shall not exceed the original purchase price.

All equipment returned for repair must be accompanied by a Returned Material Authorization (RMA) number. To receive an RMA number, call (217) 897-6600 between the hours of 8 AM and 5 PM central time. Equipment must be shipped prepaid to DCB and will be returned at DCB's expense.

Ship returned items to:

Data Comm for Business  
2949 CR 1000E  
Dewey, IL 61840

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PO Box 6329  
Champaign, IL 61826-6329

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