

USER GUIDE

INDUSTRIAL DATA COMMUNICATIONS

DLM4100

Compact Dial-Up Modem



It is essential that all instructions contained in the User Guide are followed precisely to ensure proper operation of equipment.

Operating Instructions

The DLM4100 is a compact dial-up modem designed and manufactured to operate in full industrial applications. It is powered with an input voltage range of +8V to +15VDC. A 120VAC to unregulated 12VDC wall transformer power supply has been provided (24VDC versions also available). The operating temperature range of this device is 0° to 70° C. The (ET) Extended Temperature model is rated at -40° to +85° C.

Any device connected to the modem must be set for a 10-bit word such as:

Data Bits	Stop Bits	Start Bits	Parity
8	1	1	None
7	1	1	Even/Odd
7	2	1	None

Connections

Cable connections are all made on one end of the unit. The DB-9 female (see pinout below) on the left is for the RS-232 data.

Note: RS-485 and RS-422 models are also available

The supplied wall transformer plugs into the barrel jack for supplying power to the unit. For alternate power methods, see barrel jack pinout below. The RJ-11 jack on the right is the telephone line connection. Only the center two lines are used.

DB-9 for the RS-232 data port. The port is setup as a DCE device and the pins are:

DB-9 Female	Description
Pin 1	Carrier Detect
Pin 2	Data Out of modem RS-232 port
Pin 3	Data Into modem RS-232 port
Pin 4	N/C
Pin 5	Ground
Pin 6	N/C
Pin 7	N/C
Pin 8	N/C
Pin 9	N/C

The 12 VDC power jack plug for input power.

12VDC (P-5 Barrel Jack)	Center Pin	+8 to 15VDC in
	Outer Ring	Ground

Indicators

There are four LED's displayed out the front panel for status and diagnostics they are as follows:

(P) Power	Red	On indicates that the board is receiving power
(C) Carrier	Amber	On indicates that a connection has been made to another DLM4100
(I) Data In	Yellow	On indicates that data is flowing into the serial port
(O) Data Out	Green	On indicates that data is flowing out to the serial port

Since the DLM4100 has been pre-configured at the factory for typical PLC to PC use, the only command strings required are for dialing and hanging up. The command instruction to be entered in either PC or PLC programmed for dial-up operation are listed below:

Dial String: ATDTx

Command Mode (escape sequence): +++

Hang up: ATH0

Note: Do not use any initialization string at all when commanding the modem to dial. Any command other than the ATDT followed by the number being dialed can change the pre-configuration of the DLM4100 and make it inoperative for PLC communications.

Specifications

Input Voltage	+8 to 15 VDC
Current Consumption	Max 260mA
Ring Voltage Detected	38 to 150 RMS
Ring Frequency Detected	15.3 to 68 Hz
Telephone Loop Current	20 to 100mA
Data Transmit Level	-12 to -9.0 dBm
DTMF Transmit Level	-2.5 dBm Avg. over 3 second interval
Operating Temperature Range	0° C to 70° C Standard Model -40° C to 85° C Extended Temperature Model
Enclosure Material	18 gauge steel
Enclosure Dimension	9.0" x 5.0" x 1.5" over mounting flanges
Weight	1.68 lb. .76 kg.

Note: The following pages are the AT Commands, Modem Registers, and Result codes for your reference. In pre-configured systems from Data-Linc Group these values should not be changed.

AT Commands

A- Answer Command – ATA forces the modem to immediately go off-hook and begin transmitting the answer tone sequence.

Bn- Select Communications Standard – ATBn selects the modulation scheme used for connections below 2400 bits per second.

n=0 Selects CCITT standards
n=1 Selects Bell standards

D- Dial Command – Below are the characters accepted in a dialing command.

0-9, #, * = Dialing Digits
L = Re-dial last number
P = Pulse dial
T = Tone dial
S=n = Dial stored number
W = Wait for dial tone
^ = Toggles state of calling tone
, = Pause for the duration of S8
@ = Wait for silence
! = Switch hook flash
; = Return to the command state

En- Command Echo – ATEn determines whether commands will be echoed back to the host.

n=0 Do not echo commands
n=1 Enable command echo

Hn – Switch Hook Control – ATHn opens and closes the modem's hook switch.

n=0 Switch hook relay opens
n=1 Switch hook relay closes

Ln- Speaker Volume – ATLn Sets the amplitude of the modem's audio output

n=0 Lowest speaker volume
n=1 Low speaker volume
n=2 Speaker remains on
n=3 Speaker off during dialing, on until carrier

Mn- Speaker Activity – ATMn determines when the modem's audio output is active.

n=0 Speaker off
n=1 Speaker on until carrier received
n=2 Speaker remains on
n=3 Speaker off during dialing, on until carrier

On- On Line – ATOn switches the modem from the command mode to the data mode.

- n=0 Return on-line with no retrain
- n=1 Initiate retrain returning on-line

Qn- Responses – ATQn determines if the modem will issue responses

- n=0 Send responses*
- n=1 No responses

SR?- Interrogate Register – ATSr? request the current value in register Sr.

SR=n- Set Register Value – ATsr=n sets the value of register Sr to n

Vn- Result Codes – ATVn sets the modem to issue numeric or full word result codes

- n=0 Numeric result codes
- n=1 English word result codes

Wn- Connect Message Rate – ATWn determines whether the data rate reported in the Connect response is the host data rate, the link data rate or whether both are provided along with the error control and data compression protocols negotiated.

- n=0 Send "Connect" at DTE rate
- n=1 Report line speed, DTE speed and Link protocol
- n=2 "Connect" reports Link speed

Xn- Result Code Set – ATXn selects which set of result codes the modem may send.

- n=0 Result codes 0 to 4
- n=1 Result codes 0 to 5 and 10
- n=2 Result codes 0 to 6 and 10
- n=3 Result codes 0 to 5, 7 and 10
- n=4 Full result codes*

Zn- Reset – ATZn executes a soft reset to the modem and resets the modem configuration

- n=0 Reset to user profile 0
- n=1 Reset to user profile 1

&Cn- DCD Operation – AT&Cn determines the operation of the DCD output.

- n=0 DCD is forced active
- n=1 DCD indicates a valid carrier

&Dn- DTR – AT&Dn determines how the modem will respond to changes to DTR

- n=0 DTR is ignored by the modem
- n=1 Enter command mode if DTR revoked
- n=2 Disconnect if DTR revoked
- n=3 Soft reset when DTR revoked

&Gn- Guard Tone – AT&Gn controls the guard tone produced by the modem

- n=0 Guard tone disabled
- n=1 Guard tone disabled
- n=2 1800 Hz guard tone

&Kn- Flow Control – AT&Kn selects the flow control method used by the modem

- n=0 Disabled
- n=3 RTS/CTS
- n=4 XON/XOFF
- n=5 Transparent XON/XOFF
- n=6 RTS/CTS and XON/XOFF

&Pn- Dial Pulse Make/break Ratio – AT&Pn determines the specific pulse dialing parameters used by the modem

- n=0 39/61% @ 10pps
- n=1 33/67% @ 10pps
- n=2 39/61% @ 20pps
- n=3 33/67% @ 20pps

&Qn- Line Connection – AT&Qn determines if error control or data buffering are active on the link

- n=0 Direct mode (no data buffering)
- n=5 Use Error Correction
- n=6 Normal Mode (speed buffering)

&Sn- DSR Operation – AT&Sn sets the operation of the DSR signal

- n=0 DSR always active
- n=1 DSR in accordance with V.25

&Tn- Test Modes – AT&Tn selects modem test modes

- n=0 Exit test mode
- n=1 Local analog loopback
- n=3 Initiate local digital loopback
- n=4 Respond to remote loop request
- n=5 Deny remote loop request
- n=6 Initiate a remote digital loopback
- n=7 Remote digital loopback with self-test
- n=8 Local analog loopback with self-test

&Vn- View Configuration Profiles – AT&Vn permits the user to check on the modem's current configuration

n=0 View active profile & user profile 0
n=1 View active profile & user profile 1

&Wn- Store Active Profile – AT&Wn stores the current modem configuration in NVRAM.

n=0 Store active profile as profile 0
n=1 Store active profile as profile 1

&Yn- Recall Stored Profile – AT&Yn sets the stored modem configuration to be used after a hard reset

n=0 Recall profile 0 on power-up
n=1 Recall profile 1 on power-up

&Zn=x- Store telephone number "x" in memory location "n"

%En- Line Quality Monitor/Auto Retrain – AT%En determines if the modem will monitor line quality during a connection and initiate a retrain if quality drops below acceptable levels.

n=0 Disabled
n=1 Enabled
n=2 Line quality, fall back, fall forward

%L- Read Received Signal Level – AT%L permits the user to read the magnitude of the receive signal in dBm

%Q- Read Line Signal Quality – AT%Q permits the user to read the EQM value of the received signal

\Bn- Transmit Break – AT\Bn selects the duration of the break signal sent

Break=n x 100 msec.

\Gn- Modem Port Flow Control –

n=0 No modem port flow control
n=1 XON/XOFF port flow control

\Kn- Break Control – AT\Kn determines how the modem will handle a break signal.

Break received from host with reliable link

- n=0 Enter on-line command mode; do not transmit break
- n=1 Purge buffers, immediately transmit break
- n=2 Same as n=0
- n=3 Immediately send break
- n=4 Same as n=0
- n=5 Send break in sequence with data

Break received from host with direct link

- n=0 Immediately transmit break, then enter on-line command mode
- n=1 Immediately send break
- n=2 Enter command mode, but do not transmit break
- n=3 Same as n=1
- n=4 Same as n=0
- n=5 Same as n=1

Break received from modem with normal link

- n=0 Purge buffers, immediately send break to the host
- n=1 Same as n=0
- n=2 Immediately send break to the host
- n=3 Same as n=2
- n=4 Send break in sequence with data
- n=5 Same as n=2

Host initiates break on reliable link

- n=0 Purge buffers and immediately transmit break
- n=1 Same as n=0
- n=2 Immediately transmit break
- n=3 Same as n=1
- n=4 Transmit break in sequence with data
- n=5 Same as n=4

\Nn- Error Control Selection -AT\Nn determines how the modem will handle error control negotiations

- n=0 Normal mode, no error correction
- n=1 Direct mode, no buffering, no error correction
- n=2 Reliable mode, error correction required
- n=3 V.42 Auto-reliable mode, accept either an error controlled or non-error controlled link
- n=4 V.42 Reliable mode, LAPM required
- n=5 MNP required

-Kn- MNP Extended Services – AT-Kn determines how the modem handles MNP10

- n=0 No LAPM to MNP10 conversion
- n=1 LAPM to MNP10 conversion
- n=2 LAPM to MNP10 conversion but no MNP extended service during V.42 LAPM answer mode detect

+MS- Select Modulation – AT+MS sets the modulation and available data rates in the format shown below

AT+MS= a, b, c, d, e, f <CR>

a=Modulation type

B103- Bell 103 (300 BPS)
B212- Bell 212 (1200 BPS)
V21- V.21(300 BPS)
V22- V.22 (1200 BPS)
V22B- V.22bis (1200 or 2400 BPS)
V23- V.23 (1200 Tx/ 75 RX or 75 Tx/ 1200 Rx)
V32- V.32 (4800 or 9600 BPS)
V32B- V.32bis (4800 to 14400 BPS)
V34- V.34bis (16800 to 33600 BPS)

b= Auto detection

0- Automatic Negotiation Disabled
1- Automatic Negotiation Enabled

c= Minimum receive Data Rate (300 to 33600 BPS)

d= Maximum receive Data Rate (300 to 33600 BPS)

e= Minimum transmit Data Rate (300 to 33600 BPS)

f= Maximum transmit Data Rate (300 to 33600 BPS)

Modem Registers

S0 Answer on nth Ring: S0 sets the modem to automatically answer on the nth ring. Setting S0 to 0 disables automatic answer.

Range: 0 to 255
Units: Rings
Default: 0

S1 Ring Count: S1 is a read-only register showing the number of rings detected. If a ring is not detected within 8 seconds, S1 reset to zero.

Range: 0 to 255
Units: Rings
Default: 0

S2 Escape Character: S2 determines the ASCII escape character. Values of 0-127 select valid ASCII escape characters; values from 128-255 disable the escape sequence.

Range: 0 to 255
Units: ASCII Character
Default: 43

S3 Carriage Return Character: S3 determines the ASCII character to serve as a carriage return to terminate commands and modem responses.

Range: 0 to 127
Units: ASCII Character
Default: 13 (carriage return)

S4 line Feed Character: S4 sets the ASCII character to act as a line feed character in modem responses.

Range: 0 to 127
Units: ASCII Character
Default 10 (line feed)

S5 Back Space Character: S5 defines the ASCII character used as a back space to edit the command line.

Range: 0 to 32
Units: ASCII Character
Default: 8 (back space)

S6 Dial Tone Wait Time: S6 determines how long the modem waits for dial tone before dialing begins. The dial tone wait time cannot be set to less than two seconds.

Range: 2 to 255
Units: Seconds
Default: 2

S7 Wait for Carrier after Dialing: S7 determines how long the modem waits for a valid carrier signal after dialing is completed.

Range: 1 to 255
Units: Seconds
Defaults: 50

S8 Comma Pause Time: S8 defines the duration of the pause initiated by a comma in the dialing string. The pause is generally used when waiting for a second dial tone.

Range: 1 to 255
Units: Seconds
Default: 50

S9 Reserved

S10 Carrier Off Disconnect Delay: S10 selects how long carrier must be lost before the modem disconnects. **Note:** if S10 is smaller than the value of S9, the modem will not automatically disconnect on loss of carrier.

Range: 1 to 255
Units: 0.1 Seconds
Default: 14

S11 Tone Dialing Speed: S10 sets the duration and spacing of the dialing tones. S11 does not affect the pulse dialing rate.

Range: 50 to 255
Units: 1 Millisecond
Default: 95

S12 Escape Code Guard Timer: S12 sets the escape sequence guard timer. If characters are received before or after the escape sequence, within the guard timer, the modem aborts the escape attempt and remains in data mode.

Range: 0 to 255
Units: 0.02 Seconds
Default: 50

S14 General Bit-Mapped Options: S14 reflects the state of several "AT" commands.

Bit 0,4,6 not used

Bit 1 0=Echo Disabled (ATE0)
1=Echo Active (ATE1)
Bit 2 0=Send result codes (ATQ0)
1=No result codes (ATQ1)
Bit 3 0=Numeric result codes (ATV0)
1=Full word result codes (ATV1)
Bit 5 0=Tone dialing selected (T)
1=Pulse dialing selected (P)
Bit 7 0=Answer
1=Originate

S16 Test Status: S16 shows the modem test status.

Bit 0 0=No local analog loopback
1=Local ALB active
Bit 2-7 not used

S21 General Bit-Mapped Options: S21 reflects the state of several “AT” commands.

- Bit 0-2 Not used
- Bit 3-4 0=DTR ignored (&D0)
 - 1=Enter command mode on DTR off (&D1)
 - 2=Disconnect on DTR off (&D2)
 - 3=Reset on DTR off (&D3)
- Bit 5 0=DCD always active (&C0)
 - 1=DCD on with carrier (&C1)
- Bit 6 0=DSR always active (&C0)
 - 1=DSR on when modem ready (&C1)
- Bit 7 0=No disconnect on space (ATY0)
 - 1=Disconnect on space (ATY1)

S22 General Bit-Mapped Options: S22 reflects the stat of several “AT” commands.

- Bit 0-1 0=Low speaker volume (ATL0)
 - 1=Low speaker volume (ATL1)
 - 2=Moderate speaker volume (ATL2)
 - 3=High speaker volume (ATL3)
- Bit 2-3 0=Speaker off (ATM0)
 - 1=Speaker off with carrier (ATM1)
 - 2=Speaker always on (ATM2)
 - 3=Speaker on during handshake (ATM3)
- Bit 4-6 0=Basic result codes (ATX0)
 - 4=Connect speed result codes (ATX1)
 - 5=No blind dial (ATX2)
 - 6=Busy detection (ATX3)
 - 7=Full result codes (ATX4)
- Bit 7 Not used

S23 General Bit-Mapped Options: S23 reflects the state of several “AT” commands.

- Bit 0 0=Remote DLB disabled (AT&T5)
 - 1=Remote DLB allowed (AT&T4)
- Bit 1-3 0=Host interface at 300 BPS
 - 1=Host interface at 600 BPS
 - 2=Host interface at 1200 BPS
 - 3=Host interface at 2400 BPS
 - 4=Host interface at 4800 BPS
 - 5=Host interface at 9600 BPS
 - 6=Host interface at 19200 BPS
 - 7=Host I/F at 38,400 BPS or higher
- Bit 4-5 0=Even parity in use
 - 1=Not in use
 - 2=Odd parity in use
 - 3=No parity in use
- Bit 6-7 0=No guard tone (AT&G0)
 - 1=No guard tone (AT&G1)
 - 2=1800 Hz guard tone (AT&G2)
 - 3=Not used

S24 Sleep Mode Timer: S24 sets the length of time in seconds that the modem must be idle before entering the low power, sleep mode. When S24 is set to 0, sleep mode is disabled.

Range: 0 to 255
Units: seconds
Default: 0

S27 Pulse Dialing Bit-Mapped Options: S27 reflects the state of several "AT" commands.

Bit 0 1 3
0 0 0=Normal mode (AT&Q0)
1 0 1=Error control enabled (AT&Q5)
0 1 1=Direct mode (AT&Q6)

Bit 2, 4- 5, 7 Not used
Bit 6 0=CCITT Protocols (ATB0)
1=Bell Protocols (ATB1)

S28 Pulse Dialing Bit-Mapped Options: S28 stores the modem's pulse dialing configuration.

Bit 0-2, 5-7 Not used
Bit 3-4 0=Make/Break ratio 39%/61%; 10 pulses per second (AT&P0)
1=Make/Break ratio 33%/67%; 10 pulses per second (AT&P1)
2=Make/Break ratio 39%/61%; 20 pulses per second (AT&P2)
3=Make/Break ratio 33%/67%; 20 pulses per second (AT&P3)

S29 Hook Flash Timer: S29 determines the length of time the modem closes its off-hook relay on receipt of the "I" dial modifier to simulate a switch hook flash.

Range: 0 to 255
Units: 10 Milliseconds
Default: 70

S30 Disconnect on Inactivity Timer: S30 sets the period the modem is idle before it disconnects. A 0 disables the inactivity timer.

Range: 0 to 255
Units: 10 Seconds
Default: 0

S31 General Bit-Mapped Options: S31 stores the status of various AT commands.

Bit 0 0=No single-line connect messages (ATV0)
1=Single-line connect messages
Bit 1 0=No auto mode detection (ATN0)
1=Auto mode detection active (ATN1)
Bit 2-3 0=Report host speed (ATW0)
1=Report all parameters (ATW1)
2=Report modem speed only (ATW2)
Bit 4-7 Not used

S32 XON Character: S32 determines the ASCII character to be sent as XON for in-band flow control.

Range: 0 to 255
Units: ASCII Character
Default: 11 (VT)

S33 XOFF Character: S33 determines the ASCII character to be recognized as XOFF for in-band flow control.

Range: 0 to 255
Units: ASCII Character
Default: 19 (DC3)

S36 LAPM Failure: S36 instructs the modem what to do if the error control negotiations fail.

Bit 0-2 0=Modem disconnects
1=Establish direct connection
3=Establish normal connection
4=Disconnect if MNP handshake fails
5=Establish direct connection if MNP handshake fails
7=Establish normal connection if MNP handshake fails
Bit 3-7 Not used

S38 Forced Disconnect Timer: S38 sets the delay between receipt of the command to disconnect and the actual opening of the switch hook. If S38 is set to 255 the modem disconnects only after its buffers are empty.

Range: 0 to 255
Units: 1 Second
Default: 20

S39 Flow Control Bit-Mapped Options: S39 shows the modem's flow control status, AT&K.

Bit 0-2 0=Flow control disabled
3=Hardware flow control, RTS/CTS
4=In-band flow control XON/XOFF
5=Transparent in-band flow control
6=Both hardware and in-band flow control
Bit 3-7 Not used

S40 MNP Bit-Mapped Option: S40 shows the status of the modem's MNP commands.

Bit 0-1 0=No LAPM to MNP10 conversion (AT-K0)
1=Enable LAPM to MNP10 conversion (AT-K1)
2=Enable LAPM to MNP10 conversion, except for LAPM answer mode (AT-K1)
Bit 2 Not used
Bit 3-5 0=AT\K0 break handling selected
1=AT\K1 break handling selected
2=AT\K2 break handling selected
3=AT\K3 break handling selected
4=AT\K4 break handling selected
5=AT/K5 break handling selected
Bit 6-7 0=MNP block size 64 characters
1=MNP block size 128 characters
2=MNP block size 192 characters
3=MNP block size 256 characters

S41 General Bit-Mapped Options: S41 stores the condition of various "AT" commands.

Bit 0-1 0=No data compression (AT%C0)
1=MNP5 data compression (AT&C1)
2=V.42bis data compression (AT&C2)
3=Either MNP5 or V.42bis data compression (AT&C3)

Bit 2 6
0 0=No fall back/forward (AT%E0)
1 0=Retrain enabled (AT%E1)
0 1=Fall back/forward enabled (AT%E2)

Bit 3-5,7 Not used

S46 Data Compression Control: S46 selects whether or not the modem will support data compression with error control.

S46=136 No data compression
S46= 138 Data compression selected
Default: 138

S48 V.42 Negotiations: S48 determines the modem's V.42 negotiation process.

S48=0 Proceed with LAPM
S48=7 Negotiate per V.42
S48=128 Assume LAPM failure
Default: 7

S86 Fall Failure Code: S86 shows why the last "NO CARRIER" response was issued.

S86=0 Normal disconnect
S86=4 Loss of carrier
S86=5 V.42 negotiation failure
S86=9 Modem handshake failure
S86=12 disconnect initiated by remote modem
S86=13 No response after 10 retries
S86=14 Protocol violation

S95 Extended Result Codes: S95 permits the user to customize the extended result codes.

Bit 0 Connect result code shows link speed
Bit 1 Add /ARQ to connect response
Bit 2 Add /VFC to carrier response
Bit 3 Enable protocol response
Bit 4 Not used
Bit 5 Enable compression result code
Bit 6 Not used
Bit 7 Not used

Result Code

Digits	Verbose	Description
0	OK	Successfully executed command line
1	CONNECT	300 BPS connection
2	RING	Ring signal detected
3	NO CARRIER	Carrier not detected/lost
4	ERROR	Error in command line
5	CONNECT 1200	1200 BPS connection
6	NO DIAL TONE	No dial tone detected
7	BUSY	Busy signal detected
8	NO ANSWER	5 second silence not detected
9	CONNECT 600	600 BPS connection
10	CONNECT 2400	2400 BPS connection
11	CONNECT 4800	4800 BPS connection
12	CONNECT 9600	9600 BPS connection
13	CONNECT 7200	7200 BPS connection
14	CONNECT 12000	12000 BPS connection
15	CONNECT 14400	14400 BPS connection
16	CONNECT 19200	19200 BPS connection
17	CONNECT 38400	38400 BPS connection
18	CONNECT 57600	57600 BPS connection
19	CONNECT 115200	115200 BPS connection
22	CONNECT 75TX/1200RX	V.23 originate connection
23	CONNECT 1200TX/75RX	V.23 answer connection
33	FAX	Fax connection
35	DATA	Data connection in Fax mode
40	+MRR: 300	300 BPS carrier received
44	+MRR: 1200/75	V.23 reverse channel carrier received
45	+MRR: 75/1200	V.23 forward channel carrier received
46	+MRR: 1200	1200 BPS carrier received
47	+MRR: 2400	2400 BPS carrier received
48	+MRR: 4800	4800 BPS carrier received
49	+MRR: 7200	7200 BPS carrier received
50	+MRR: 9600	9600 BPS carrier received
51	+MRR: 12000	12000 BPS carrier received
52	+MRR: 14400	14400 BPS carrier received
53	+MRR: 16800	16800 BPS carrier received
54	+MRR: 19200	19200 BPS carrier received
55	+MRR: 21600	21600 BPS carrier received
56	+MRR: 24000	24000 BPS carrier received
57	+MRR: 26400	26400 BPS carrier received

58	+MRR: 28800	28800 BPS carrier received
59	CONNECT 16800	16800 BPS connection
61	CONNECT 216000	21600 BPS connection
62	CONNECT 24000	24000 BPS connection
63	CONNECT 26400	26400 BPS connection
64	CONNECT 28800	28800 BPS connection
66	+DR: ALT	MNP5 data compression
67	+DR: V42B	V.42bis data compression
69	+DR: NONE	No data compression
70	+ER: NONE	No error correction
77	+ER: LAPM	LAPM error correction
78	+MRR: 31200	31200 BPS connection
79	+MMR: 33600	33600 BPS connection
80	+ER: ALT	MNP error correction
81	+ER: ALT CELLULAR	MNP10 error correction
84	CONNECT 33600	33600 BPS connection
91	CONNECT 31200	31200 BPS connection
134	+MCR: B103	Bell 103 connection
135	+MCR: B212	Bell 212A connection
136	+MCR: V21	V.21 connection
137	+MCR: V22	V.22 connection
138	+MCR: V22B	V.22bis connection
139	+MCR: V23	V.23 connection
140	+MCR: V32	V.32 connection
141	+MCR: V32B	V.32bis connection
142	+MCR: V34	V.34 connection
+F4	+FCERROR	Fax carrier error

Technical Support

Data-Linc Group maintains a fully trained staff of service personnel who are capable of providing complete product assistance. They can provide you with technical and application troubleshooting, spare parts and warranty assistance. Our technical staff is based in Redmond, Washington USA and may be reached at (425) 882-2206 or email support@data-linc.com.

Product Warranty

Data-Linc Group warrants equipment of its own manufacture to be free from defects in material and workmanship for one year from date of shipment to original user. Data-Linc Group will replace or repair, at our option, any part found to be defective. The buyer must return any part claimed defective to Data-Linc Group, transportation prepaid.

Return Material Authorization

If a part needs to be sent to the factory for repair, contact Data-Linc Group's corporate office and request a Return Material Authorization (RMA) number. The RMA number identifies the part and the owner and must be included with the part when shipped to the factory.

Contact Information

Corporate Office

Data-Linc Group

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