CARDINAL TECHNOLOGIES, INC

14400BPS V.32BIS DIGITAL

Card Type	Modem
Chip Set	Unidentified
I/O Options	Line in, line out
Maximum Modem Rate	14.4Kbps
Maximum Fax Rate	14.4Kbps
Data Modulation Protocol	Bell 103/212A
	ITU-T V.21, V.22, V.22bis, V.32, V.32bis
Fax Modulation Protocol	ITU-T V.17, V.21 CH 2, V.27ter, V.29
Error Correction/Compression	MNP5, V.42, V.42bis
Fax Class	Class I & II
Data Bus	8-bit ISA
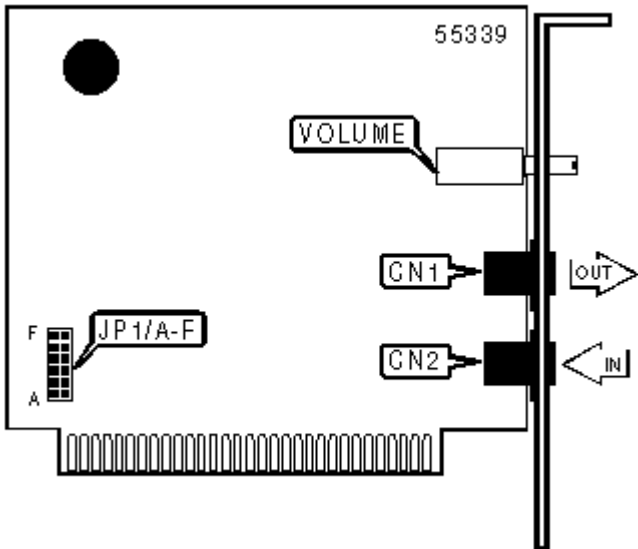
CONNECTIONS			
Function	Label	Function	Label
Line out (RJ-11)	CN1	Line in (RJ-11)	CN2

SERIAL PORT ADDRESS		
Setting	JP1/A	JP1/B
COM1 (3F8h)	Closed	Closed
» COM2 (2F8h)	Open	Closed
COM3 (3E8h)	Closed	Open
COM4 (2E8h)	Open	Open

INTERRUPT				
Setting	JP1/C	JP1/D	JP1/E	JP1/F

IRQ2	Open	Open	Open	Closed
» IRQ3	Open	Closed	Open	Open
IRQ4	Closed	Open	Open	Open
IRQ5	Open	Open	Closed	Open

SUPPORTED COMMAND SET

Basic AT Commands

AT, ■+++■, A/

A, B, E, H, O, Q, M, V

&C, &F, &V

Extended AT Commands

\N

S Registers

S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S18, S14, S16, S18

Special Commands

Note: Please see MHI Help file for full command documentation.

Proprietary AT Command Set

DATA SET READY (DSR)

Type:	Configuration
Format:	AT [cmds] &S*n* [cmds]
Description:	Selects DSR options

Command	Function
■ &S0	DSR forced high
&S1	DSR high only while modem is handshaking or connected

DATA TERMINAL READY (DTR)

Type:	Configuration
Format:	AT [cmds] &D*n* [cmds]
Description:	Selects modem response to DTR

Command	Function
&D0	DTR ignored
&D1	DTR toggle causes online command mode
■ &D2	DTR toggle causes modem to go on-hook
&D3	Modem reset on DTR toggle

DIAL

Type:	Immediate
Format:	AT [cmds] D<#> [cmds]
Description:	Dials telephone number according to any modifiers included in the string
Note:	Any combination of modifiers can be used to produce the desired dial functions in sequence.

Modifier	Function
DP	Pulse dialing enabled
DR	Answer mode enabled, originate mode disabled following handshake initiation
DT	Tone dialing enabled
DW	Dialing resumed following dial tone detection
D,	Dialing paused for amount of time specified in S8 register
D!	Modem commanded to go off-hook for .5 seconds before returning on-hook
D@	Wait for quiet answer
D;	Modem returned to command state after dialing

EXTENDED RESULT CODES

Type:	Configuration
Format:	AT [cmds] W*n* [cmds]

Description:	Enables selection of additional result codes

Command	Function
W0	Enables CONNECT result codes to report DTE to DCE speed
W1	Enables CONNECT result codes to report error correction

FLOW CONTROL

Type:	Configuration
Format:	AT [cmds] &K*n* [cmds]
Description:	Enables flow control options

Command	Function
&K0	Flow control disabled
■ &K3	RTS/CTS flow control enabled
&K4	XON/XOFF flow control enabled
&K5	Transparent XON/XOFF flow control enabled

PULSE DIALING RATIO

Type:	Configuration
Format:	AT [cmds] &P*n* [cmds]
Description:	Selects pulse dial make/break ratio

Command	Function
■ &P0	39/61ms at 10pps (North America)
&P1	33/67ms at 10pps (Europe)
&P2	39/61ms at 20pps

REPORT INFORMATION

Type:	Immediate
Format:	AT [cmds] I*n* [cmds]
Description:	Displays information requested

Command	Function
I0	Reports product code
I1	Reports ROM checksum
I2	Tests and reports ROM checksum
I3	Reports modem capabilities

SELECT CALL PROGRESS RESULT CODES

Type:	Configuration
Format:	AT [cmds] X*n* [cmds]
Description:	Enables selection of tone detection and associated result code format options

Command	Function
X0	Busy and dial tone detection disabled; result codes 0 - 4, 8 enabled.
X1	Busy and dial tone detection disabled; result codes 0 - 5, 8 & 10 - 15 enabled.
X2	Busy tone detection disabled, dial tone detection enabled; result codes 0 - 6, 8 & 10 - 15 enabled.
X3	Busy tone detection enabled, dial tone detection disabled; result codes 0 - 8, & 10 - 15 enabled.
■ X4	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.
X5	Busy and dial tone detection enabled; result codes 0 - 4, 6 - 8 enabled.

SOFT RESET

Type:	Immediate
Format:	AT [cmds] Z*n* [cmds]
Description:	Restores modem profiles previously saved in non-volatile RAM using the &W command.

Command	Function
Z0	Restore setting

EXTENDED AT COMMAND SET

COMPRESSION

Type:	Configuration

Format:	AT [cmds] %C*n* [cmds]

Description:	Selects data compression

Command	Function
%C0	Data compression disabled
%C1	MNP5 enabled

S(status) REGISTERS

DCE LINE SPEED

Type:	Register

Format	AT [cmds] S37=*n* [cmds]

Description:	Sets the maximum allowable data exchange rate attempted during handshake process.

Command	Function
S37=0	Current DTE rate
S37=1	V.21 at 300bps
S37=2	Bell 103 at 300bps
S37=5	V.22 at 1200bps
S37=6	V.22bis at 2400bps
S37=8	V.32 at 4800bps
S37=9	V.32 at 9600bps
S37=10	V.32bis at 12.0Kbps
S37=11	V.32bis at 14.4Kbps
S27=12	V.32bis at 7200bps