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NETELLIGENT 56K ISA FAX MODEM

Card Type	Modem/Fax card
Chip Set	Unidentified
I/O Options	Line in, phone out
Maximum Modem Rate	56Kbps
Maximum Fax Rate	14.4Kbps
Data Modulation Protocol	Bell 103A/212A
	ITU-T V34, V.32bis, V.32, V.22bis, V.23, V.22, V.21
Fax Modulation Protocol	ITU-T V.17, V.27ter, V.29, V.21, EIA T-30
Error Correction/Compression	MNP5, MNP10, V.42, V.42bis
Fax Class	Class I
Data Bus	16-bit ISA
Card Size	Half-length
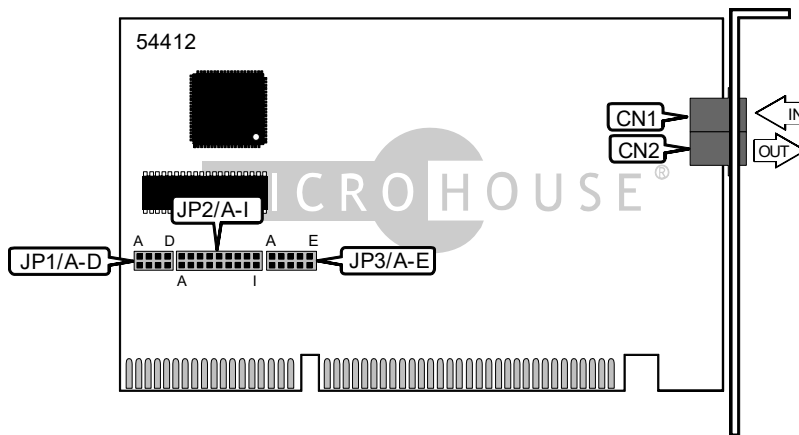
CONNECTIONS			
Function	**Label**	**Function**	**Label**
Line out	CN1	Phone in	CN2

PLUG & PLAY					
Setting	**JP3/A**	**JP3/B**	**JP3/C**	**JP3/D**	**JP3/E**
Plug and play mode enabled	Open	Open	Closed	Closed	Closed
Plug and play mode disabled/legacy mode enabled	Closed	Closed	Open	Open	Open
Note: When in plug & play mode, jumpers must be removed from JP1 and JP2.					

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

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INTERRUPT									
Setting	JP2/A	JP2/B	JP2/C	JP2/D	JP2/E	JP2/F	JP2/G	JP2/H	JP2/I
IRQ3	Closed	Open	Open	Open	Open	Open	Open	Open	Open
IRQ4	Open	Closed	Open	Open	Open	Open	Open	Open	Open
IRQ5	Open	Open	Closed	Open	Open	Open	Open	Open	Open
IRQ7	Open	Open	Open	Closed	Open	Open	Open	Open	Open
IRQ9	Open	Open	Open	Open	Closed	Open	Open	Open	Open
IRQ10	Open	Open	Open	Open	Open	Closed	Open	Open	Open
IRQ11	Open	Open	Open	Open	Open	Open	Closed	Open	Open
IRQ12	Open	Open	Open	Open	Open	Open	Open	Closed	Open
IRQ15	Open	Open	Open	Open	Open	Open	Open	Open	Closed

SUPPORTED COMMAND SET
Basic AT Commands
AT, '+++', A/
A, E, H, O, Q, R, V, W, Y, Z
&C, &P, &V, &W, &Y
\K, \N
Extended AT Commands
%C, %E, %L
S Registers
S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S16, S18, S21, S22, S23, S24, S25
S26, S27, S28, S29, S30, S31, S32, S33, S36, S38, S39, S40, S41, S46, S48, S82, S91, S92, S95
Special Commands
+MS
Note: See MHI Help File for full command documentation.

Proprietary AT Command Set

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

Command	Function
I0	Reports four digit product code
I1	Reports ROM checksum
I2	Reports results of RAM self test
I3	Reports firmware revision level
I4	Reports OEM-defined identifier string
I5	Reports country code
I6	Reports modem data pump model

SPEAKER VOLUME	
Type:	Configuration
Format:	AT [cmds] L*n* [cmds]
Description:	Controls speaker volume

Command	Function
L0	Low volume setting
í L1	Low volume setting
L2	Medium volume setting
L3	Highest volume setting

SPEAKER MODE	
Type:	Configuration
Format:	AT [cmds] M*n* [cmds]
Description:	Selects various speaker options

Command	Function
M0	Speaker disabled
í M1	Speaker enabled until carrier signal detected
M2	Speaker enabled

AUTO-MODE DETECTION	
Type:	Configuration
Format:	AT [cmds] N*n* [cmds]
Description:	Selects various options for the automatic detection and negotiation of protocols during the handshake process if the modem is communicating with a remote modem of dissimilar speed.

Command	Function
N0	Handshake begins at line speed designated by the S37 register.
N1	Handshake at any speed supported by both modems.

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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 tone detection disabled; result codes 0 - 5 enabled.
X1	Busy tone detection disabled; result codes 0 - 6 enabled.
X2	Busy tone detection disabled,; result codes 0 - 8 enabled
X3	Busy tone detection enabled; result codes 0-8 enabled
X4	Busy tone detection enabled; sends all messages.

DATA TERMINAL READY (DTR)				
Type:	Configuration			
Format:	AT [cmds] &D*n* [cmds]			
Description:	Selects modem response to DTR			
Note: The action each variant of &D causes depends on the setting of &Q				
&Q Setting	&D0	&D1	&D2	&D3
&Q0, &Q5, &Q6	NONE	Command 2	Command 3	Command 4
&Q1, &Q4	Command 1	Command 2	Command 3	Command 4
&Q2, &Q3	Command 3	Command 3	Command 3	Command 3
Command	**Function**			
Command 0	Modem does not respond to DTR			
Command 1	Modem goes to command mode after DTR goes is off			
Command 2	Modem goes to command mode and disconnects (hangs up) after DTR goes off; Auto-Answer is disabled.			
Command 3	Modem is initialized after DTR goes off			

FACTORY DEFAULT PROFILE	
Type:	Configuration
Format:	AT [cmds] &F [cmds]
Description:	Sets values in active profile to values found in the default profile
Command	**Function**
&F0	Sets values to factory configuration 0
&F1	Sets values to factory configuration 1

FLOW CONTROL	
Type:	Configuration
Format:	AT [cmds] &K*n* [cmds]
Description:	Enables flow control options
Command	**Function**
&K0	Flow control disabled
í &K3	RTS/CTS flow control enabled
&K4	XON/XOFF flow control enabled
&K5	Transparent XON/XOFF flow control enabled
&K6	Unidirectional XON/XOFF flow control enabled

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COMMUNICATIONS MODE	
Type:	Configuration
Format:	AT [cmds] &Q*n* [cmds]
Description:	Selects communications mode options

Command	Mode
&Q0	Asynchronous mode, serial port speed follows connect speed.
í &Q5	Error correction mode
&Q6	Buffered asynchronous mode

RECEIVE DATA	
Type:	Configuration
Format:	AT [cmds] &R*n* [cmds]
Description:	Selects RTS options

Command	Function
&R0	Not supported
í &R1	CTS will drop if required by flow control

DATA SET READY (DSR)	
Type:	Configuration
Format:	AT [cmds] &S*n* [cmds]
Description:	Selects DSR options

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

TEST MODES	
Type:	Immediate
Format:	AT [cmds] &T*n*
Description:	Selects test options

Command	Function
&T0	End current test
&T1	Begin local analog loopback test
&T4	Grant remote digital loopback request
í &T5	Deny remote digital loopback request
&T6	Request remote digital loopback
&T7	Request remote digital loopback and self-test
&T8	Begin local analog loopback and self-test

STORE TELEPHONE NUMBER	
Type:	Configuration
Format:	AT [cmds] &Z*n*=(phone #)
Description:	Writes selected telephone numbers into the non-volatile memory at location *n*
Note: Telephone numbers can include up to 34 characters.	

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EXTENDED AT COMMANDS

BREAK TYPE			
Type:	Configuration		
Format:	AT [cmds] \K*n* [cmds]		
Description:	Configures action of break signal		
Command	**Break from DTE during NORMAL or MNP mode**	**Break received from remote modem during NORMAL mode**	**Break from DTE during DIRECT mode**
\K0	Online command mode enabled, send no break to remote modem	Buffers cleared, break sent to DTE	Send break to remote modem, online command mode enabled
\K1	Break sent to remote modem and buffered cleared	Buffers cleared, break sent to DTE	Send break to remote modem, online command mode enabled
\K2	Online command mode enabled, send no break to remote modem	Break sent immediately to DTE	Send break to remote modem
\K3	Send break to remote modem immediately	Break sent immediately to DTE	Send break to remote modem, online command mode enabled
\K4	Online command mode enabled, send no break to remote modem	Break sent with received data to the DTE	Send break to remote modem
\K5	Send break with transmitted data	Break sent with received data to the DTE	Send break to remote modem

CONNECT MODE	
Type:	Configuration
Format:	AT [cmds] \N*n* [cmds]
Description:	Controls the type of connection the modem will operate in
Command	**Function**
\N0	Normal mode enabled
\N1	Direct mode enabled
\N2	Reliable mode enabled
\N3	Auto-reliable mode enabled
\N4	LAPM reliable mode enabled
\N5	MNP reliable mode enabled

CONNECT MESSAGES	
Type:	Configuration
Format:	AT [cmds] \V*n* [cmds]
Description:	Selects the operating mode the modem uses while connected
Command	**Function**
\V0	Connect messages are controlled by command settings X, W, and S95
\V1	Connect messages are displayed in single line format

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LINE SIGNAL QUALITY

Type:	Immediate
Format:	AT [cmds] %Q [cmds]
Range:	0-255
Unit:	-1 dBm
Description:	Returns a value which indicates line signal quality
Note: Values 0-7 indicate no retrain. 8-255 retrain performed if enabled by %E1	

S(STATUS) -REGISTERS

AUTOSYNC	
Type:	Register
Format	AT [cmds] S19=n [cmds]
Range:	0-255
Unit:	1 second
Description:	Sets Auto-Sync options

AUTOSYNC HDLC	
Type:	Register
Format	AT [cmds] S20=n [cmds]
Range:	0-255
Unit:	1 second
Description:	Sets Auto-Sync HDLC addresses

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	Speed of last connection
S37=1	300bps
S37=2	300bps
S37=3	300bps
S37=4	Reserved
S37=5	V.22 1200bps
S37=6	V.22bis 2400bps
S37=7	V.23
S37=8	V.32/V.32bis 4800bps
S37=9	V.32/V.32bis 9600bps
S37=10	V.32bis 12.0Kbps
S37=11	V.32bis 14.4Kbps
S37=12	V.32bis 7200bps

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CONNECTION FAILURE CODES	
Type:	Register
Format	AT [cmds] S86? [cmds]

Description:	Reports codes which correspond to the possible causes of a connection failure
Value	**Meaning**
0	Normal hang up
4	Carrier signal lost
5	No error-control detected for remote modem during feature negotiation
9	No common protocol found
12	No failure - remote modem disconnected normally
13	Remote modem failed to respond after 10 re-transmissions same message
14	Violation of negotiated protocol caused failure

MISCELLANEOUS TECHNICAL NOTES
Information on register S202 currently unavailable