Card Type Chipset Maximum Data Rate Maximum Fax Rate Data Modulation

**Correction/Compression** 

**Fax Modulation** 

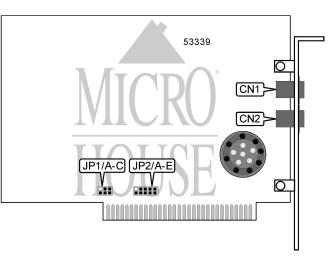
Error

Fax Class Data Bus

**Card Size** 

Modem (asynchronous) U.S. Robotics 33.6Kbps 14.4Kbps Bell 103A, 212A ITU-T V.21, V.22, V.22bis, V.23, V.32, V.32bis, V.34 Unidentified MNP5, V.42, V.42bis

Class I & II 8-bit ISA Full height, half length



	CONNE	CTIONS	
Function	Label	Function	Label
Telephone line	CN1	Telephone line	CN2

	SERIAL PORT ADD	DRESS SELECTION	
Setting	JP1/A	JP1/B	JP1/C
3F8h (COM1:)	Closed	Closed	Closed
2F8h (COM2:)	Open	Closed	Closed
3E8h (COM3:)	Closed	Open	Closed
2E8h (COM4:)	Open	Open	Closed
í Plug-N-Play	Open	Open	Open

		INTERRUPT	SELECTION		
Setting	JP2/A	JP2/B	JP2/C	JP2/D	JP2/E
2	Closed	Open	Open	Open	Open
3	Open	Closed	Open	Open	Open
4	Open	Open	Closed	Open	Open
5	Open	Open	Open	Closed	Open
7	Open	Open	Open	Open	Closed
í Plug-N-Play	Open	Open	Open	Open	Open

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SUPPORTED STANDARD COMMANDS
Basic AT Commands
+++, 'comma', A/
A, B, C, D, E, F, H, L, M, O, P, T, V, X
&C, &D, &G, &P, &R, &S, &T, &W, &Z
S-Registers
S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S18, S25, S38
Note: See MHI help file for complete information.

# **Proprietary AT Command Set**

		BIT-MAPPED REGISTER S13
Format		AT [cmds] S13= <i>n</i> [cmds]
Default:		0
Range:		0 - 159
Descripti	on:	Controls DTR reset, non-error-correcting mode buffer, BS/DEL switch, DTR dialing,
		reset dialing, and escape sequence reaction.
Bit	Value	Function
0	í 0	DTR normal.
	1	Reset on low DTR.
1	íΟ	Non-error-correcting mode transmit buffer set to 1.5KB.
	1	Non-error-correcting mode transmit buffer set to 128 bytes.
2	íΟ	Backspace and delete keys normal.
	1	Backspace and delete keys reversed.
3	í O	DTR dialing disabled.
	1	DTR dialing enabled.
4	íΟ	Reset dialing disabled.
	1	Reset dialing enabled.
6, 5	00	Not used.
7	í O	Modem reacts normally to escape sequence.
	1	Modem disconnects and returns to command state upon receiving an escape
		sequence.

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		BIT-MAPPED REGISTER S27	
Format:		AT [cmds] S27= <i>n</i> [cmds]	
Default: 0			
Range: 0 - 191			
<b>Description:</b> Controls V.21, V.32 encoding and modulation, V.42 answer tone, V.32 fallback,			
	V.32bis mode, and 9600 result codes.		
Bit	Value	Function	
0	í O	V.21 disabled.	
	1	V.21 enabled.	
1	Í 0	V.32 trellis coding disabled.	
	1	V.32 trellis coding enabled.	
2	í O	V.32 modulation enabled.	
	1	V.32 modulation disabled.	
3	í O	2100Hz answer tone enabled.	
	1	2100Hz answer tone disabled.	
4	í O	V.32 fallback disabled.	
	1	V.32 fallback enabled.	
5	í O	V.32bis enabled.	
	1	V.32bis disabled.	
6	0	Not used.	
7	í O	Actual result codes displayed.	
	1	Force 9600 result codes.	

	BREAK LENGTH
Туре:	Register
Format:	AT [cmds] S21= <i>n</i> [cmds]
Default:	10
Range:	Unidentified
Unit:	10 ms
Description:	Sets the length of error control mode breaks sent from DCE to DTE.

	BREAK TYPE
Туре:	Configuration
Format:	AT [cmds] &Y <i>n</i> [cmds]
Description:	Configures action of break signal.
Command	Function
Command &Y0	Function Break empties buffer.

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	COMMUNICATIONS MODE
Туре:	Configuration
Format:	AT [cmds] &M <i>n</i> [cmds]
Description:	Selects communications mode.
Command	Mode
í &M0	Mode Modem operates in asynchronous mode.

	COMPRESSION MODE
Туре:	Configuration
Format:	AT [cmds] &K <i>n</i> [cmds]
Description:	Selects the type of data compression that will be used.
Command	Function
&K0	Data compression disabled.
í &K1	Auto-detect compression mode.
&K2	Data compression enabled.
&K3	MNP5 data compression only enabled.

	CONNECTION SPEED LOWER LIMIT
Туре:	Configuration
Format:	AT [cmds] &U <i>n</i> [cmds]
Description:	Sets slowest allowed connection speed if &N is set to 1 or higher.
Command	Function
&U0	No minimum connect speed.
&U1	Set minimum connect speed to 300bps.
&U2	Set minimum connect speed to 1200bps.
&U3	Set minimum connect speed to 2400bps.
&U4	Set minimum connect speed to 4800bps.
&U5	Set minimum connect speed to 7200bps.
&U6	Set minimum connect speed to 9600bps.
&U7	Set minimum connect speed to 12Kbps.
&U8	Set minimum connect speed to 14.4Kbps.
&U9	Set minimum connect speed to 16.8Kbps.
&U10	Set minimum connect speed to 19.2Kbps.
&U11	Set minimum connect speed to 21.6Kbps.
&U12	Set minimum connect speed to 24Kbps.
&U13	Set minimum connect speed to 26.4Kbps.
&U14	Set minimum connect speed to 28.8Kbps.
&U15	Set minimum connect speed to 31.2Kbps.
&U16	Set minimum connect speed to 33.6Kbps.

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	CONNECTION SPEED UPPER LIMIT
Туре:	Configuration
Format:	AT [cmds] &N <i>n</i> [cmds]
Description:	Sets required connection speed if &U is set to 0; otherwise, sets fastest allowed connection speed.
Command	Function
&N0	No maximum connect speed.
&N1	Set maximum connect speed to 300bps.
&N2	Set maximum connect speed to 1200bps.
&N3	Set maximum connect speed to 2400bps.
&N4	Set maximum connect speed to 4800bps.
&N5	Set maximum connect speed to 7200bps.
&N6	Set maximum connect speed to 9600bps.
&N7	Set maximum connect speed to 12Kbps.
&N8	Set maximum connect speed to 14.4Kbps.
&N9	Set maximum connect speed to 16.8Kbps.
&N10	Set maximum connect speed to 19.2Kbps.
&N11	Set maximum connect speed to 21.6Kbps.
&N12	Set maximum connect speed to 24Kbps.
&N13	Set maximum connect speed to 26.4Kbps.
&N14	Set maximum connect speed to 28.8Kbps.
&N15	Set maximum connect speed to 31.2Kbps.
&N16	Set maximum connect speed to 33.6Kbps.

	DISPLAY INFORMATION
Туре:	Immediate
Format:	AT [cmds] I <i>n</i> [cmds]
Description:	Displays information requested about the modem.
Command	Function
10	Displays product code.
1	Displays ROM checksum result.
12	Displays RAM checksum result.
13	Displays firmware version.
14	Displays current command settings.
15	Displays current NVRAM settings.
16	Displays link diagnostics.
17	Displays configuration.
19	Displays Plug-N-Play information.
l11	Displays call statistics.

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		ERROR CORRECTION/COMPRESSION
Format:		AT [cmds] S15= <i>n</i> [cmds]
Default:		0
Range:		0 - 255
Descripti	ion:	Selects which classes of error correction and compression may be used.
Bit	Value	Function
0	í O	MNP and V.42 enabled during V.22 operation.
	1	MNP and V.42 disabled during V.22 operation.
1	íΟ	MNP and V.42 enabled during V.22bis operation.
	1	MNP and V.42 disabled during V.22bis operation.
2	íΟ	MNP and V.42 enabled during V.32 and V.32bis operation.
	1	MNP and V.42 disabled during V.32 and V.32bis operation.
3	í O	MNP enabled.
	1	MNP disabled.
4	í O	MNP 4 enabled.
	1	MNP 4 disabled.
5	í O	MNP 3 enabled.
	1	MNP 3 disabled.
6	í O	MNP normal.
	1	MNP adjusted for non compliant modems.
7	íΟ	V.42 enabled.
	1	V.42 disabled.

	EXTENDED RESULT CODES
Туре:	Configuration
Format:	AT [cmds] &A <i>n</i> [cmds]
Description:	Selects extended result codes.
Command	Function
&A0	Extended result codes disabled.
&A1	ARQ result codes enabled.
&A2	V.32 result code enabled.
&A3	Error control and compression result codes enabled.

	FACTORY DEFAULTS
Туре:	Immediate
Format:	AT [cmds] &F <i>n</i> [cmds]
Description:	Resets the modem to the specified factory profile.
Command	Function
	i diction
&F0	Modem resets to factory generic profile.
&F0 &F1	

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	FLOW CONTROL CHARACTER - XON
Type:	Register
Format:	AT [cmds] S22= <i>n</i> [cmds]
Default:	17
Range:	11 - 127
Unit:	ASCII
Description:	Sets the character used to represent XON.

	FLOW CONTROL CHARACTER - XOFF
Туре:	Register
Format:	AT [cmds] S23= <i>n</i> [cmds]
Default:	19
Range:	11 - 127
Unit:	ASCII
Description:	Sets the character used to represent XOFF.

	FLOW CONTROL TYPE
Туре:	Configuration
Format:	AT [cmds] &H <i>n</i> [cmds]
Description:	Sets type of flow control used by modem.
Command	Function
&H0	Flow control disabled.
&H1	CTS/RTS flow control enabled.
&H2	XON/XOFF flow control enabled.
&H3	CTS/RTS and XON/XOFF flow control enabled.

	HELP - AMPERSAND
Type:	Immediate
Format:	AT [cmds] &\$
Description:	Displays help on the AT& commands.

	HELP - DIAL
Type:	Immediate
Format:	AT [cmds] D\$
Description:	Displays help on dial modifiers.

	HELP - GENERAL
Type:	Immediate
Format:	AT [cmds] \$
Description:	Displays help on the basic (no prefix) AT commands.

	HELP - S-REGISTERS
Туре:	Immediate
Format:	AT [cmds] S\$
Description:	Displays help on the S-registers.

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	INACTIVITY TIMER
Туре:	Register
Format:	AT [cmds] S19= <i>n</i> [cmds]
Default:	0
Range:	0-255
Unit:	1 minute
Description:	Sets the length of time that the modem does not receive information before it disconnects; S19=0 will disable this function.

	LOCK SERIAL PORT
Type:	Configuration
Format:	AT [cmds] &B <i>n</i> [cmds]
Description:	Sets operation of serial port speed.
Command	Function
Command &B0	Function Serial speed follows connect speed.

	PROFILE ON POWER-UP
Type:	Configuration
Format:	AT [cmds] Y <i>n</i> [cmds]
Description:	Selects the profile that the modem will reset to on power-up.
Command	Function
í YO	Modem resets to user profile 0 on power-up.
Y1	Modem resets to user profile 1 on power-up.
Y2	Modem resets to factory generic profile on power-up.
Y3	Modem resets to factory hardware flow control profile on power-up.
Y4	Modem resets to factory software flow control profile on power-up.

	RESET MODEM
Туре:	Immediate
Format:	AT [cmds] Z <i>n</i> [cmds]
Description:	Resets the modem to the specified profile.
Command	Function
Z0	Modem resets to profile set with the Y command.
Z1	Modem resets to user profile 0.
Z2	Modem resets to user profile 1.
Z3	Modem resets to factory generic profile.
Z4	Modem resets to factory hardware flow control profile.
Z5	Modem resets to factory software flow control profile.

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	RESULT CODES
Type:	Configuration
Format:	AT [cmds] Q <i>n</i> [cmds]
Description:	Enables modem to send result codes to the DTE.
Command	Function
Command í Q0	Function           Result codes enabled.

	TONE DIALING TEST
Type:	Register
Format:	AT [cmds] S16= <i>n</i> [cmds]
Description:	Begins a tone dialing test.
Command	Function
í S16=0	Tone dialing test disabled.
S16=2	Tone dialing test enabled.

	V.21 ANSWER MODE FALLBACK TIMER
Туре:	Register
Format:	AT [cmds] S29= <i>n</i> [cmds]
Default:	20
Range:	Unidentified
Unit:	.1 second
Description:	The function of this register is unidentified.

	V.32 HANDSHAKE TIME
Type:	Register
Format:	AT [cmds] S28= <i>n</i> [cmds]
Default:	8
Range:	0 - 255
Unit:	.1 second
Description:	Sets length of V.32 handshake. Setting S28 to 255 disables all connections except 9600bps V.32 mode.

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V.34	4 AND V.FC OPTIONS	
	AT [cmds] S32= <i>n</i> [cmds]	
	2	
	0 - 31	
	Controls various V.34 and V.FC options.	
Value		Function
í O (	Call indicate during V.34 operation disabled	I.
1	Call indicate during V.34 operation enabled	
		V.8 during V.34 operation disabled.
		V.8 during V.34 operation enabled.
	í O	V.FC modulation enabled.
	1	V.FC modulation disabled.
		V.34 modulation enabled.
	1	V.34 modulation disabled.
	í O	33.6Kbps V.34 modulation enabled
	1	33.6Kbps V.34 modulation disabled

		V.34 OPTIONS
Format:		AT [cmds] S33= <i>n</i> [cmds]
Default:		0
Range:		0 - 191
Descripti	ion:	Controls V.34 baud rate and shaping.
Bit	Value	Function
0	íΟ	2400 baud rate enabled.
	1	2400 baud rate disabled.
1	íΟ	2743 baud rate enabled.
	1	2743 baud rate disabled.
2	íΟ	2800 baud rate enabled.
	1	2800 baud rate disabled.
3	íΟ	3000 baud rate enabled.
	1	3000 baud rate disabled.
4	íΟ	3200 baud rate enabled.
	1	3200 baud rate disabled.
5	íΟ	3429 baud rate enabled.
	1	3429 baud rate disabled.
6	0	Not used.
7	íΟ	Shaping enabled.
	1	Shaping disabled.

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		V.34 OPTIONS
Format:		AT [cmds] S34= <i>n</i> [cmds]
Default:		0
Range:		0 - 255
Descript	ion:	Controls V.34 mapping, non-linear coding, transmit level deviation, pre-emphasis, and pre-coding.
Bit	Value	Function
0	í O	8S-2D map enabled.
	1	8S-2D map disabled.
1	í O	16S-4D map enabled.
	1	16S-4D map disabled.
2	í O	32S-2D map enabled.
	1	32S-2D map disabled.
3	í O	64S-4D map enabled.
	1	64S-4D map disabled.
4	í O	Non-linear coding enabled.
	1	Non-linear coding disabled.
5	í O	Transmit level deviation enabled.
	1	Transmit level deviation disabled.
6	í O	Pre-emphasis enabled.
	1	Pre-emphasis disabled.
7	íΟ	Pre-coding enabled.
	1	Pre-coding disabled.

	XON/XOFF PASS-THROUGH
Туре:	Configuration
Format:	AT [cmds] &I <i>n</i> [cmds]
Description:	Selects whether XON/XOFF signals are sent to remote modem.
Command	Function
Command &I0	Function Software flow control disabled.