ACER, INC. FM336PVS

Card Type Modem/Fax (asynchronous)

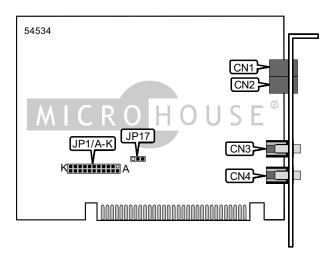
Chip Set Unidentified
I/O Options None
Maximum Modem Rate 33.6Kbps
Maximum Fax Rate 14.4Kbps
Data Modulation Protocol Bell 103A/212A

ITU-T V.21, V.22, V.23, V.22bis, V.32, V.32bis, V.34

Fax Modulation Protocol ITU-T V.17, V.21CH2, V.27ter, V.29

Error Correction/Compression ITU-T V.42, V.42bis, MNP5

Fax Class I Data Bus Class I 8-bit ISA



	CONNE	ECTIONS	
Function Label Function Label			
Line out	CN1	Microphone in	CN3
Line in	CN2	Speaker out	CN4

USER CONFIGURABLE SETTINGS		
Setting	Label	Position
Factory configured - do not alter	JP17	Unidentified

	SERIAL PORT ADDRESS	
Setting	JP1/A	JP1/B
COM1 (3F8h)	On	On
COM2 (2F8h)	On	Off
COM3 (3E8h)	Off	On
í COM4 (2E8h)	Off	Off

	INTERRUPT SELECTION				
IRQ	JP1/C	JP1/D	JP1/E	JP1/F	JP1/G
í 3	Closed	Open	Open	Open	Open
4	Open	Closed	Open	Open	Open
5	Open	Open	Closed	Open	Open
7	Open	Open	Open	Closed	Open
9	Open	Open	Open	Open	Closed
10	Open	Open	Open	Open	Open
11	Open	Open	Open	Open	Open
12	Open	Open	Open	Open	Open
15	Open	Open	Open	Open	Open

	INTERRU	JPT SELECTION CON	NTINUED	
IRQ	JP1/H	JP1/I	JP1/J	JP1/K
í 3	Open	Open	Open	Open
4	Open	Open	Open	Open
5	Open	Open	Open	Open
7	Open	Open	Open	Open
9	Open	Open	Open	Open
10	Closed	Open	Open	Open
11	Open	Closed	Open	Open
12	Open	Open	Closed	Open
15	Open	Open	Open	Closed

SUPPORTED COMMAND SET
Basic AT Commands
AT, '+++', A/
A, B, E, H, M, O, P, Q, S, T, V, X, Y, Z
&C, &M, &P, &Q, &R, &W, &Y, &Z
Extended AT Commands
\A, \G, \K, \N, \V,
%C, %E, %L, %Q, %7, %8
S Registers
S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S16, S18, S21, S24, S25, S29, S30, S31,
S32, S33, S38, S91, S92, S201
Special Commands
+MS?, +H, "V, -K, _SEC, #CLS, #MFR, #MDL, #REV, #VBQ, #VCI
#VSD, #VRX, #VSK
Note: See MHI Help File for full command documentation.

Proprietary AT Command Set

	AUTO-MODE DETECTION
Type:	Configuration
Format:	AT [cmds] Nn [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	Auto-mode detection disabled
N1	Auto-mode detection enabled

	CONFIGURATION PROFILES
Type:	Immediate
Format:	AT [cmds] &V [cmds]
Description:	Displays active and stored configuration profiles
Command	Function
&V1	Display last connection status

	DATA SET READY (DSR)
Type:	Configuration
Format:	AT [cmds] &Sn [cmds]
Description:	Selects DSR options
Command	Function
&S0	DSR forced high
&S1	DSR high only while modem is connected

		DATA TERMINAL REA	DY (DTR)	
Type:	Configuration	Configuration		
Format:	AT [cmds] &D/	n [cmds]		
Description:	Selects moder	n response to DTR		
Note: The action each	ch variant of &D	causes depends on the	setting of &Q	
&Q Sett	ing	&D0	&D1	&D2
&Q0, &Q5	, &Q6	NONE	Command 3	Command 3
&Q1, &Q4		Command 1	Command 3	Command 3
&Q2, &	&Q2, &Q3 Command 2 Command 2 Command 2			Command 2
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 initia	alized after DTR goes of	ff	

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	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.
Command	Function
DP	Pulse dialing enabled
DS=n	Dial stored telephone number <i>n</i>
DT	Tone dialing enabled/Pulse dialing disabled
DW	Dialing resumed following dial tone detection
D,	Dialing paused for amount of time specified in S8 register
D*	Dials the star digit on tone dialing mode
D#	Dials the gate digit on tone dialing mode
D!	Flash function initiated. Modem commanded to go off-hook for specified time before returning on-hook.
D;	Modem returned to idle state after dialing. The semicolon can only be placed at the end of the dial command.

	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	Restore factory configuration 0
&F1	Restore factory configuration 1

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

GUARD TONE		
Type:	Configuration	
Format:	AT [cmds] &Gn [cmds]	
Description:	Commands the modem to transmit a guard tone in V.22/V.22bis	
Note: Used primarily for international data transmission		
Command	Function	
&G0	Guard tone disabled	
&G1	Guard tone disabled	
&G2	1800Hz guard tone enabled	

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MNP10 - FALLBACK	
Type:	Configuration
Format:	AT [cmds] -Qn [cmds]
Note:	This command is included only for compatibility and performs no function.

	MNP10 - LINK NEGOTIATION
Type:	Configuration
Format:	AT [cmds] *Hn [cmds]
Note:	Included only for compatibility and performs no function

	MNP10 - POWER LEVEL ADJUST
Type:	Configuration
Format:	AT [cmds])Mn [cmds]
Note:	This command is included only for compatibility and performs no function.

	PLUG AND PLAY SERIAL NUMBER
Type:	Configuration
Format:	AT [cmds] %7 [cmds]
Description:	Sets and stores plug and play serial number.

	PLUG AND PLAY VENDOR ID AND PRODUCT NUMBER
Type:	Configuration
Format:	AT [cmds] %8 [cmds]
Description:	Sets and stores plug and play vendor ID and product number.

	REPORT INFORMATION
Type:	Immediate
Format:	AT [cmds] In [cmds]
Description:	Displays information requested
Command	Function
10	Reports product code
l1	Reports ROM checksum (normally "255")
12	Reports "OK"
13	Reports firmware revision (VX.XXX)
14	Reports OEM defined identifier string
15	Reports country code parameter
16	Reports modem data pump model and internal code revision
17	Reports "255"

SPEAKER VOLUME	
Type:	Configuration
Format:	AT [cmds] Ln [cmds]
Description:	Controls speaker volume
Command	Function
LO	Low volume setting
L1	Low volume setting
L2	Medium volume setting
L3	Highest volume setting

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	TEST MODES
Type:	Immediate
Format:	AT [cmds] &Tn
Description:	Selects test options
Command	Function
&T0	End current test
&T1	Begin local analog loopback test

&T2	Returns ERROR
&T3	Begin local digital loopback
&T4	Grant remote digital loopback request
&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

	TONE GENERATOR LENGTH
Format	AT [cmds] #VBT=n [cmds]
Default:	10
Range:	0 - 40
Unit:	0.1 second
Description:	Sets the length of DTMF tones that are generated.
Command	Function
#VBT0	Disables the tone generation capability
#VBT1	Sets tone duration time to .1 second

TRANSMISSION LEVEL - CELLULAR	
Type:	Configuration
Format:	AT [cmds] @Mn [cmds]
Range:	11-31
Unit:	-1dBm
Note:	This command is included only for compatibility and performs no function.

	V.32 - COMPROMISE EQUALIZER
Type:	Configuration
Format:	AT [cmds] :En [cmds]
Note:	This command is included only for compatibility and performs no function.

V.32 OR V.34 MODULATION	
Type:	Configuration
Format:	AT [cmds] "Vn [cmds]
Description:	Controls modulation for V.32 or V.34
Command	Function
"V.32"	V.32 or V.32bis modulation
"V.34"*	V.34 modulation

	VOICE - DISPLAY COMPRESSION TYPE
Type:	Immediate
Format:	AT [cmds] #VCI? [cmds]
Description:	Displays the type of compression currently in use.

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	VOICE - LOCAL SERIAL PORT SPEED
Type:	Configuration
Format:	AT [cmds] #BDR=n [cmds]
Description:	Sets the speed of the local serial port when in voice mode.
Command	Function
#BDR=0	Autobank selected
#BDR=1	Set speed to 2400bps
#BDR=2	Set speed to 4800bps
#BDR=4	Set speed to 9600bps

#BDR=6	Set speed to 14.4Kbps
#BDR=8	Set speed to 19.2Kbps
#BDR=12	Set speed to 28.8Kbps
#BDR=16	Set speed to 38.4Kbps
#BDR=24	Set speed to 57.6Kbps

	VOICE BUFFER SPACE
Type:	Configuration
Format:	AT [cmds] #VSK=n [cmds]
Default:	255
Range:	0 - 255
Unit:	1 byte
Description:	Sets the amount of data the modem can send into the buffer after the XOFF signal is sent.

	VOICE DEVICE
Type:	Configuration
Format:	AT [cmds] #VLS=n [cmds]
Description:	Selects the I/O device for the DSP chip.
Note:	This modem may not support all options listed below. The #VLS? Command will
	display the available options.
	• •
Command	Function
Command í #VLS=0	Function Telephone line and handset used for voice I/O.
í #VLS=0	Telephone line and handset used for voice I/O.
í #VLS=0 #VLS=1	Telephone line and handset used for voice I/O. Telephone handset used for voice I/O.

	VOICE RECEIVE
Type:	Configuration
Format:	AT [cmds] #VRX=n [cmds]
Description:	Commands the modem to begin receiving voice data.

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	VOICE RE-RING DETECT TIME
Type:	Configuration
Format:	AT [cmds] #VRA=n [cmds]
Default:	70
Range:	0-255
Unit:	10 mS
Description:	Sets the maximum time the modem will wait for the remote station to ring again before it assumes that it has gone off-hook.
Command	Function
#VRA=0	Ringback goes away timer disabled

	VOICE RING DETECT TIME
Type:	Configuration
Format:	AT [cmds] #VRN=n [cmds]
Default:	Unidentified
Range:	Unidentified
Unit:	Unidentified
Description:	Sets the maximum time the modem will wait for the remote station to ring before it
-	assumes that it went off-hook before it rang.
Command	Function
#VRN=0	Disables voice ring detect time

	VOICE SAMPLE QUALITY
Type:	Configuration
Format:	AT [cmds] #VBS=n [cmds]
Description:	Selects the number of bits per sample that the modem records.
Note:	This modem may not support all options listed below. The #VBS? Command will display the available options.
Command	Function
#VBS=2	Modem records 2 bits per sample in ADPCM encoding.
#VBS=3	Modem records 3 bits per sample in ADPCM encoding.
î #VBS=4	Modem records 4 bits per sample in ADPCM encoding.

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S(status) -REGISTERS

	BIT-MAPPED REGISTER S14		
Format:		AT [cmds] S14=n [cmds]	
Range:		0-174	
Unit:		Bit-mapped	
Descript	ion:	Controls echo, result codes and display, dial mode, and answer/originate mode.	
Bit	Value	Function	
0	0	Not used	
1	0	Command echo disabled	
	1	Command echo enabled	
2	0	Result codes enabled	
	1	Result codes disabled	

3	0	Display result codes in numeric format
	1	Display result codes in verbose format
5	0	Tone dial enabled
	1	Pulse dial enabled
6	0	Not used
7	0	Answer mode enabled
	1	Originate mode enabled

	BIT-MAPPED REGISTER S19		
Format		AT [cmds] S19=n [cmds]	
Default:		0, 0, 0, 0	
Range:		0-253	
Unit:		Bit-mapped	
Descript	ion:	Selects communications protocol, address detection, NRZ mode, and idle indicator.	
Bit	Value	Function	
1	0	Selects BSC format	
	1	Selects HDLC format	
2	0	Address detection disabled	
	1	Address detection enabled	
3	0	NRZI coding enabled	
	1	NRZ coding enabled	
4	0	Mark idle	
	1	Flag or sync idle	

	AUTOSYNC	
Type:	Register	
Format	AT [cmds] S20=n [cmds]	
Default:	0	
Range:	0-255	
Unit:	ASCII	
Description:	Selects the AutoSync HDLC address or BSC sync character	

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	BIT-MAPPED REGISTER S22		
Format		AT [cmds] S22=n [cmds]	
Range:		0-255	
Unit:		Bit-mapped	
Description:		Controls speaker volume and controls, limits results codes, and pulse dial make/break ratio.	
Bit	Value	Function	
1, 0	00	Off volume	
	01	Low level volume	
	10	Medium level volume	
	11	High level volume	
3, 2	00	Speaker off	
	01	Speaker off on carrier	
	10	Speaker always on	
	11	Speaker on during handshake	

6 - 4	000	Basic result codes only enabled
	100	Basic and connection speed result codes enabled
	101	Basic and connection speed result codes and dialtone detection enabled
	110	All result codes except dialtone detection enabled
	111	All result codes enabled

		BIT-MAPPED REGISTER S23
Format		AT [cmds] S23=n [cmds]
Range:		0-189
Unit:		Bit-mapped
Descript	ion:	Grants/denies remote digital loopback, controls DTE rate and parity, and sets guard
		tone.
Bit	Value	Function
0	0	Remote digital loopback denied
	1	Remote digital loopback allowed
3 - 1	000	Sets serial port speed to 0-300bps
	001	Sets serial port speed to 1200bps
	010	Sets serial port speed to 2400bps
	011	Sets serial port speed to 4800bps
	100	Sets serial port speed to 9600bps
	101	Sets serial port speed to 19200bps
	110	Sets serial port speed to 38400bps
5, 4	00	Parity even
	01	Space Parity
	10	Parity odd
	11	Mark or No Parity
7, 6	00	Guard tone disabled
	01	Guard tone disabled
	10	Guard tone 1800Hz enabled

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	BIT-MAPPED REGISTER S27		
Format		AT [cmds] S27=n [cmds]	
Range:		0-111	
Unit:		Bit-mapped	
Descript	ion:	Selects ITU-T/Bell modes.	
Bit	Value	Function	
1	0	Not used	
2	0	Not used	
3	0	Not used	
4	0	Not used	
5	0	Not used	
6	0	ITU/T mode	
	1	Bell mode	

	BIT-MAPPED REGISTER S28
Format	AT [cmds] S28= <i>n</i> [cmds]
Range:	0-31

Unit:		Bit-mapped
Description:		Controls pulse dialing and MNP link speed.
Bit	Value	Function
0	0	Not used
1	0	Not used
2	0	Not used
4, 3	00	39ms make/61ms break at 10pps
	01	33ms make/67ms break at 10pps
	10	39ms make/61ms break at 20pps
	11	33ms make/67ms break at 20pps
5	0	Not used
7, 6	00	Highest speed
	01	1200bps
	10	4800bps

	ERROR CORRECTION NEGOTIATION
Type:	Register
Format	AT [cmds] S36=n [cmds]
Description:	Selects the action of the modem if it fails to connect with the error-correction protocol set in &Q.
Command	Function
S36=0	Hang up
S36=1	Attempt a direct connection
S36=3	Attempt a buffered connection
S36=4	Attempt a connection at MNP2-4; if that fails, hang up.
S36=5	Attempt a connection at MNP2-4; if that fails, attempt a direct connection.
S36=7	Attempt a connection at MNP2-4; if that fails, attempt a buffered connection.

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	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	Auto-detect mode
S37=1-3	300bps
S37=5	V.22 1200bps
S37=6	V.22bis 2400bps
S37=7	V.23
S37=8	V.32bis or V.32 4800bps
S37=9	V.32bis or V.32 9600bps
S37=10	V.32bis 12000bps
S37=11	V.32bis 14400bps
S37=12	V.32bis 7200bps
S37=15	V.FC 14400
S37=16	V.FC 16800
S37=17	V.FC 19200

S37=18	V.FC 21600
S37=19	V.FC 24000
S37=20	V.FC 24600
S37=21	V.FC 28800

	FLOW CONTROL
Type:	Register
Format	AT [cmds] S39? [cmds]
Description:	Displays the current flow control
Value	Meaning
0	Flow control disabled
3	RTS/CTS flow control enabled (&K3, Default)
4	XON/XOFF flow control enabled (&K4)
5	Transparent XON/XOFF flow control enabled (&K5)
6	Both methods (&K6)

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BIT-MAPPED REGISTER S40		
Format		AT [cmds] S40=n [cmds]
Range:		0-255
Unit: E		Bit-mapped
Descript	ion:	Controls power level and break handling; selects MNP extended services, link
		negotiation, and block size.
Bit	Value	Function
0, 1	00	MNP Extended Services disabled
	01	MNP Extended Services enabled
	10	MNP Extended Services enabled
2	0	Power level adjustment enabled
	1	Power level adjustment disabled
4	0	Not used
5, 3	000	AT\K0
	001	AT\K1
	010	AT\K2
	011	AT\K3
	100	AT\K4
	101	AT\K5
7, 6	00	MNP block size is 64 characters
	01	MNP block size is 128 characters
	10	MNP block size is 192 characters
	11	MNP block size is 256 characters

		BIT-MAPPED REGISTER S41
Format		AT [cmds] S41= <i>n</i> [cmds]
Range:		0-31
Unit:		Bit-mapped
Descripti	ion:	Selects compression, auto-retrain, flow control, MNP mode, and fallback mode.
Bit	Value	Function
1, 0	00	Data compression disabled
	01	MNP5 enabled
	10	V.42bis enabled
	11	MNP5 and V.42bis enabled
6, 2	00	Auto-retrain disabled
	01	Auto-retrain enabled
	10	Fallback/Fall forward enabled
3	0	Flow control disabled
	1	Flow control enabled
4	0	Stream mode for MNP
	1	Block mode for MNP
5	0	Not used
6	0	Not used
7	0	Fallback disabled
	1	Fallback enabled

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	ERROR CORRECTION/COMPRESSION
Type:	Register
Format:	AT [cmds] S46= <i>n</i> [cmds]
Description:	Selects active error correction and compression protocols
Command	Function
S46=136	LAP-M only, no compression
S46=138	LAP-M with V.42bis data compression

	FEATURE NEGOTIATION OPTIONS
Type:	Register
Format:	AT [cmds] S48= <i>n</i> [cmds]
Description:	Selects active error correction and compression protocols
Command	Function
Command S48=0	Function Detection negotiation disabled, XID negotiation disabled

	BREAK OPTIONS
Type:	Register
Format	AT [cmds] S82= <i>n</i> [cmds]
Note:	This register for compatibility purposes only and performs no function.

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

	CELLULAR TRANSMIT LEVEL		
Type:		Register	
Format		AT [cmds] S201= <i>n</i> [cmds]	
Range:		0-255	
Unit:		Bit-mapped	
Description:		Works in combination with the @Mn and :En commands to support cellular	
-		connection.	
Bit	Value	Function	
0 - 4	@Mn	Initial power level setting	
5	:En	Compromise equalizer enable command	