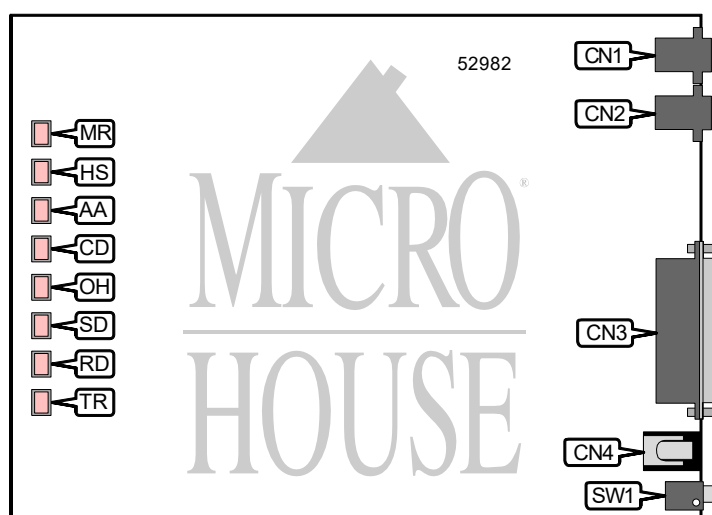


# SIMA TECHNOLOGY CO., LTD.

## V.34S

<b>Card Type</b>	Modem (synchronous/asynchronous)
<b>Chip Set</b>	Unidentified
<b>I/O Options</b>	None
<b>Maximum Data Rate</b>	33.6Kbps
<b>Maximum Fax Rate</b>	14.4Kbps
<b>Data Bus</b>	Serial
<b>Fax Class</b>	Class I & II
<b>Data Modulation Protocol</b>	Bell 103A/212A ITU-T V.21, V.22, V.22bis, V.23, V.32, V.32bis, V.34 Rockwell V.FC
<b>Fax Modulation Protocol</b>	ITU-T V.17, V.21CH2, V.27ter, V.29
<b>Error Correction/Compression</b>	MNP5, V.42, V.42bis



CONNECTIONS			
Function	Label	Function	Label
Line out	CN1	DC power	CN4
Line in	CN2	Power switch	SW1
RS-232/422	CN3		

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DIAGNOSTIC LED(S)			
LED	Color	Status	Condition
MR	Red	On	Power is on
MR	Red	Blinking	Modem is in test mode
MR	Red	Off	Power is off
HS	Red	On	Modem is operating at 4800bps or faster
HS	Red	Off	Modem is operating at slower than 4800bps
AA	Red	On	Auto-answer enabled
AA	Red	Off	Auto-answer disabled
AA	Red	Blinking	Phone is ringing
CD	Red	On	Carrier signal detected
CD	Red	Off	Carrier signal not detected
OH	Red	On	Modem is off-hook
OH	Red	Off	Modem is on-hook
SD	Red	On	Modem is transmitting data
SD	Red	Off	Modem is not transmitting data
RD	Red	On	Modem is receiving data
RD	Red	Off	Modem is not receiving data
TR	Red	On	DTR signal is high
TR	Red	Off	DTR signal is low

SUPPORTED STANDARD COMMANDS	
<b>Basic AT Commands</b>	
+++ , 'comma' , A/	
A, B, D, E, H, L, M, N, O, P, Q, T, V, W, X, Y, Z	
&C, &D, &F, &G, &K, &M, &P, &Q, &R, &S, &T, &V, &W, &X, &Y, &Z	
<b>Extended AT Commands</b>	
\A, \B, \G, \K, \L, \N, \W	
%C, %F, %L, %Q, %T	
<b>Special AT Commands</b>	
#CID, :E, *H, -K, )M, @M, -Q	
<b>S-Registers</b>	
S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S12, S14, S16, S18, S21, S22, S23, S24, S25, S27	
S29, S30, S31, S32, S33, S36, S38, S39, S40, S46, S48, S86, S91, S92, S95, S201	
Note: See MHI documentation for complete information.	

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## Proprietary AT Command Set

AUTO-RETRAIN - AUTO-FALLBACK/FALL-FORWARD	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] %E <i>n</i> [cmds]
<b>Description:</b>	Controls auto-retrain, auto-fall-back/fall-forward, and the line quality monitor.
Command	Function
í %E0	Line quality monitor and auto-retrain disabled.
%E1	Line quality monitor and auto-retrain enabled.
%E2	Line quality monitor and auto-fallback/fall-forward enabled.
%E3	Line quality monitor, auto-retrain, and fast hangup enabled.

AUTOSYNC		
<b>Format</b>	AT [cmds] S19= <i>n</i> [cmds]	
<b>Default:</b>	0	
<b>Range:</b>	0 - 31	
<b>Unit:</b>	Bit-mapped	
<b>Description:</b>	Sets options for Hayes AutoSync functions.	
Bit	Value	Function
0	0	Not used.
1	í 0	BSC enabled.
	1	HDLC enabled.
2	í 0	HDLC address detection disabled.
	1	HDLC address detection enabled.
3	í 0	NRZI bit encoding enabled.
	1	NRZ bit encoding enabled.
4	í 0	Mark idle enabled.
	1	Flag or sync idle enabled.

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BIT-MAPPED REGISTER S28		
<b>Format</b>	AT [cmds] S28= <i>n</i> [cmds]	
<b>Default:</b>	0	
<b>Range:</b>	0 - 154	
<b>Description:</b>	Controls V.23 split speed mode, pulse dialing ratio, and MNP10 cellular link negotiation speed.	
Bit	Value	Function
0	0	Not used
1	í 0	75bps transmit, 1200bps receive enabled
	1	1200bps transmit, 75bps receive enabled
2	0	Not used
4, 3	í 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	í 00	MNP10 link will be negotiated at highest possible speed.
	01	MNP10 link will be negotiated at 1200bps.
	10	MNP10 link will be negotiated at 4800bps.

BIT-MAPPED REGISTER S41		
<b>Format</b>	AT [cmds] S41= <i>n</i> [cmds]	
<b>Default:</b>	131	
<b>Range:</b>	0 - 219	
<b>Description:</b>	Controls compression type, auto-retrain and fall-back/fall-forward, flow control, and MNP mode.	
<b>Note:</b>	Be aware that bit 6 is out of order.	
Bit	Value	Function
1, 0	00	Data compression disabled.
	01	MNP5 enabled.
	10	V.42bis enabled.
	í 11	MNP5 and V.42bis enabled.
6, 2	í 00	Auto-retrain disabled.
	01	Auto-retrain enabled.
	10	Fall-back/fall-forward enabled.
3	í 0	Flow control disabled.
	1	Flow control enabled.
4	í 0	Stream mode for MNP.
	1	Block mode for MNP.
5	0	Not used.
7	0	Fall-back to V.22bis and V.22 disabled.
	í 1	Fall-back to V.22bis and V.22 enabled.

COUNTRY CODE	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] *NC <i>nn</i> [cmds]
<b>Description:</b>	Sets the country code for the modem.

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DISPLAY CONFIGURATION AND STATISTICS	
<b>Type:</b>	Immediate
<b>Format:</b>	AT [cmds] \S [cmds]
<b>Description:</b>	Displays the settings of all commands and statistics about the current connection.

DISPLAY DELAYED NUMBERS	
<b>Type:</b>	Immediate
<b>Format:</b>	AT [cmds] *Dn [cmds]
<b>Description:</b>	Displays all numbers on the delayed list.

DISPLAY FORBIDDEN NUMBERS	
<b>Type:</b>	Immediate
<b>Format:</b>	AT [cmds] *Bn [cmds]
<b>Description:</b>	Displays all numbers on the forbidden list.

HDLC ADDRESS	
<b>Type:</b>	Register
<b>Format:</b>	AT [cmds] S20=n [cmds]
<b>Default:</b>	0
<b>Range:</b>	0-255
<b>Unit:</b>	1 ASCII character
<b>Description:</b>	Sets the HDLC address and BSC character.

LINE SPEED	
<b>Type:</b>	Configuration
<b>Format</b>	AT [cmds] Fn [cmds]
<b>Description:</b>	Sets the desired line connection speed.
Command	Function
í F0	Auto-detect connect speed.
F1	Connect at 300bps with V.21 or Bell 103.
F3	Connect at 1200/75bps with V.23.
F4	Connect at 1200bps with V.22 or Bell 212A.
F5	Connect at 2400bps with V.22bis.
F6	Connect at 4800bps with V.32 or V.32bis.
F7	Connect at 7200bps with V.32.
F8	Connect at 9600bps with V.32 or V.32bis.
F9	Connect at 12Kbps with V.32bis.
F10	Connect at 14.4Kbps with V.32bis.
F13	Connect at 14.4Kbps with V.FC.
F14	Connect at 16.8Kbps with V.FC.
F15	Connect at 19.2Kbps with V.FC.
F16	Connect at 21.6Kbps with V.FC.
F17	Connect at 24.4Kbps with V.FC.
F18	Connect at 26.4Kbps with V.FC.
F19	Connect at 28.8Kbps with V.FC.

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LINE SPEED	
<b>Type:</b>	Register
<b>Format</b>	AT [cmds] S37= <i>n</i> [cmds]
<b>Description:</b>	Sets the desired line connection speed.
Command	Function
í S37=0	Auto-detect connect speed.
S37=1	Connect at 75bps.
S37=2	Connect at 110bps.
S37=3	Connect at 300bps.
S37=4	Connect at 600bps.
S37=5	Connect at 1200bps with V.22.
S37=6	Connect at 2400bps with V.22bis.
S37=7	Connect at 1200/75bps with V.23.
S37=8	Connect at 4800bps with V.32 or V.32bis.
S37=9	Connect at 9600bps with V.32 or V.32bis.
S37=10	Connect at 12Kbps with V.32bis.
S37=11	Connect at 14.4Kbps with V.32bis.
S37=12	Connect at 7200bps with V.32bis.
S37=15	Connect at 14.4Kbps with V.FC.
S37=16	Connect at 16.8Kbps with V.FC.
S37=17	Connect at 19.2Kbps with V.FC.
S37=18	Connect at 21.6Kbps with V.FC.
S37=19	Connect at 24.4Kbps with V.FC.
S37=20	Connect at 26.4Kbps with V.FC.
S37=21	Connect at 28.8Kbps with V.FC.

MODULATION SELECTION	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] +MS= <i>x,y,z,a,b,c</i> [cmds]
<b>Description:</b>	Sets options for active protocol; the transfer rates specified by <i>z</i> , <i>a</i> , <i>b</i> , and <i>c</i> must be valid for the protocol selected.
<b>Note:</b>	The <i>z</i> and <i>a</i> parameters specify the minimum and maximum originate mode connect speeds, respectively; the <i>b</i> and <i>c</i> parameters specify the minimum and maximum answer mode connect speeds, respectively.
Command	Function
<i>x</i> =0	Use V.21 modulation.
<i>x</i> =1	Use V.22 modulation.
<i>x</i> =2	Use V.22bis modulation.
<i>x</i> =3	Use V.23 modulation.
<i>x</i> =9	Use V.32 modulation.
<i>x</i> =10	Use V.32bis modulation.
í <i>x</i> =11	Use V.34 modulation.
<i>x</i> =64	Use Bell 103 modulation.
<i>x</i> =69	Use Bell 212A modulation.
<i>x</i> =74	Use V.FC modulation.

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MODULATION SELECTION (CON'T)	
Command	Function
y=0	Automode disabled.
í y=1	Auto-detect highest speed enabled without V.8 (except V.34 which always uses V.8).
y=2	Auto-detect highest speed enabled with V.8.
z, a, b, c=300	Set minimum or maximum connection speed at 300bps.
z, a, b, c=1200	Set minimum or maximum connection speed at 1200bps.
z, a, b, c=2400	Set minimum or maximum connection speed at 2400bps.
z, a, b, c=4800	Set minimum or maximum connection speed at 4800bps.
z, a, b, c=7200	Set minimum or maximum connection speed at 7200bps.
z, a, b, c=9600	Set minimum or maximum connection speed at 9600bps.
z, a, b, c=12000	Set minimum or maximum connection speed at 12Kbps.
z, a, b, c=14400	Set minimum or maximum connection speed at 14.4Kbps.
z, a, b, c=16800	Set minimum or maximum connection speed at 16.8Kbps.
z, a, b, c=19200	Set minimum or maximum connection speed at 19.2Kbps.
z, a, b, c=21600	Set minimum or maximum connection speed at 21.6Kbps.
z, a, b, c=24000	Set minimum or maximum connection speed at 24Kbps.
z, a, b, c=26400	Set minimum or maximum connection speed at 26.4Kbps.
z, a, b, c=28800	Set minimum or maximum connection speed at 28.8Kbps.

PULSE DIALING MODE	
<b>Type:</b>	Configuration
<b>Format:</b>	AT [cmds] *Zn [cmds]
<b>Description:</b>	Sets the number of pulses per digit dialed while in pulse mode.
Command	Function
í *Z0	Number of pulses generated is equal to the dialed digit value (0 digit generates 10 pulses).
*Z1	Number of pulses generated is equal to the dialed digit value plus one (0 digit generates 1 pulse).

REPORT INFORMATION	
<b>Type:</b>	Immediate
<b>Format:</b>	AT [cmds] ln [cmds]
<b>Description:</b>	Displays requested information about the modem.
Command	Function
I0	Reports product identification code.
I1	Reports ROM checksum.
I2	Tests and reports ROM checksum.
I3	Reports firmware version and interface type.
I4	Reports OEM response.
I5	Reports country code.
I6	Reports data pump model and version.