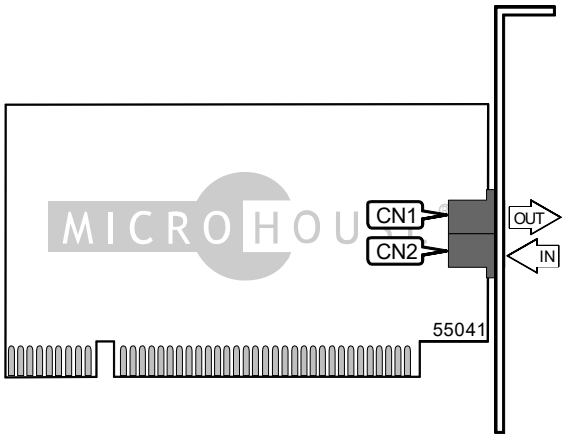
ACTIONTEC ELECTRONICS, INC.
DESKVOICE ADVANTAGE

Card Type	Modem, Fax
Chip Set	Unidentified
Maximum Modem Rate	56Kbps
Maximum Fax Rate	14.4Kbps
Data Modulation Protocol	Unidentified
Fax Modulation Protocol	Unidentified
Error Correction/Compression	Unidentified
Fax Class	Unidentified
Data Bus	16-bit ISA
Card Size	Half-length, half-height card



CONNECTIONS			
Function	**Label**	**Function**	**Label**
Line out	CN1	Line in	CN2

SUPPORTED COMMAND SET
Basic AT Commands
AT, '+++', A/
A, C, E, H, M, P, Q, T, W, Z
&C, &G, &V, &Z
Extended AT Commands
\A, \B, \J, \K, \T, \X
S Registers
S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S91, S92
Note: See MHI Help File for full command documentation.

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Proprietary AT Command Set

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	Auto-mode detection disabled
í N1	In originate mode, handshake begins at line speed designated by the S37 register. Modem can shift to a slower speed if necessary. In answer mode, handshake attempted with the following protocols in order - V.FC, V.32bis, V.32, V.22bis, V.22 or Bell 212, V.21, and Bell 103

AUXILIARY RELAY	
Type:	Configuration
Format:	AT [cmds] &J*n* [cmds]
Description:	Selects the auxiliary relay option
Command	**Mode**
í &J0	Auxiliary relay never closed

COMMUNICATION PROTOCOLS	
Type:	Configuration
Format:	AT [cmds] B*n* [cmds]
Description:	Selects the communication protocol for data calls
Note: The B command allows the simultaneous selection of more than one suffix, enabling multiple protocols.	
Command	**Protocol**
B0	ITU-T V.22 at 1200bps
B1	Bell 212A at 1200bps
B2	Unselect V.23 reverse channel
B3	Unselect V.23 reverse channel
B15	V.21 at 300bps
B16	Bell 103J at 300bps

COMMUNICATIONS MODE	
Type:	Configuration
Format:	AT [cmds] &M*n* [cmds]
Description:	Selects communications mode
Command	**Mode**
í &M0	Asynchronous mode

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COMMUNICATIONS MODE	
Type:	Configuration
Format:	AT [cmds] &Q*n* [cmds]
Description:	Selects communications mode options
Command	**Mode**
í &Q0	Asynchronous mode, serial port speed follows connect speed.
&Q5	Buffered error correction mode
&Q6	Buffered asynchronous mode
&Q7	Reserved
&Q8	MNP error control mode
&Q9	V.42 or MNP error control mode

DATA SET READY (DSR)	
Type:	Configuration
Format:	AT [cmds] &S*n* [cmds]
Description:	Selects DSR options
Command	**Function**
&S0	DSR forced high
í &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**
í &D0	Modem does not respond to DTR
&D1	Modem goes to command mode after DTR goes is off
&D2	Modem goes to command mode and disconnects (hangs up) after DTR goes off; Auto-Answer is disabled.
&D3	Modem is initialized after DTR goes off

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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**
DL	Re-dial last number
DP	Pulse dialing enabled
DS=n	Dial stored telephone number *n*
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^	Disable data calling tone transmission
D!	Flash function initiated. Modem commanded to go off-hook for specified time before returning on-hook.
D@	Wait for Quite Answer function enabled. Modem waits until a “quiet answer,” a ring-back signal followed by silence up to the time specified in S7, is received prior to executing the rest of the dial string.
D$	Wait for prompt tone detection function enabled. Waits for prompt tone for amount of time specified by the S7 command.
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**
í &F0	Recall factory setting as active configuration

FLOW CONTROL	
Type:	Configuration
Format:	AT [cmds] &K*n* [cmds]
Description:	Enables flow control options
Command	**Function**
&K0	Flow control disabled
&K1	Reserved
&K2	Reserved
í &K3	RTS/CTS flow control enabled
&K4	XON/XOFF flow control enabled

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ON-LINE	
Type:	Immediate
Format:	AT [cmds] O*n* [cmds]
Description:	Controls on-line command (data transmission) state options.
Note: The O command must be placed at the end of the command string.	
Command	**Function**
O0	On-line command mode with no retraining enabled
O1	On-line command mode with retraining enabled
O3	Issue rate renegotiation before returning to online data mode

PULSE DIALING RATIO	
Type:	Configuration
Format:	AT [cmds] &P*n* [cmds]
Description:	Selects pulse dial make/break ratio
Command	**Function**
í &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 modem firmware revision number and speed
I1	Reports ROM checksum
I2	Tests and reports ROM checksum
I3	Reports the default speed and the controller firmware version
I4	Reports data pump firmware version
I5	Reports the board ID: software version, hardware version, and country ID
I6	Reports OK
I7	Reports OK
I8	Reports OK
I9	Reports country code
I11	Reports diagnostic information for the last connection

RESTORE PROFILE ON POWER-UP	
Type:	Configuration
Format:	AT [cmds] &Y*n* [cmds]
Description:	Restores a selected profile into the active profile on power-up (hard reset)
Command	**Function**
&Y0	Selects profile 0 on power-up

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RTS/CTS	
Type:	Configuration
Format:	AT [cmds] &R*n* [cmds]
Description:	Selects RTS/CTS options
Command	**Function**
í &R0	CTS follows RTS in data mode; RTS is ignored in command mode.

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 enabled.
X1	Busy and dial tone detection disabled; result codes 0 - 5 & 10 enabled.
X2	Busy tone detection disabled, dial tone detection enabled; result codes 0 - 6 & 10 enabled.
X3	Busy tone detection enabled, dial tone detection disabled; result codes 0 - 5, 7 & 10 enabled.
⇨ X4	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.
X5	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.
X6	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.
X7	Busy and dial tone detection enabled; result codes 0 - 7 & 10 enabled.

SPEAKER VOLUME	
Type:	Configuration
Format:	AT [cmds] L*n* [cmds]
Description:	Controls speaker volume
Command	**Function**
L0	Lowest volume setting
L1	Low volume setting
í L2	Medium volume setting
L3	Highest volume setting

STORE ACTIVE PROFILE	
Type:	Configuration
Format:	AT [cmds] &W*n* [cmds]
Description:	Writes the values for the active profile into the non-volatile RAM
Command	**Function**
&W0	Writes the active profile to stored profile 0

Extended Result Codes

BLACKLIST	
Type:	Configuration
Format:	AT [cmds] %B [cmds]
Description:	View numbers in blacklist

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COMPRESSION	
Type:	Configuration
Format:	AT [cmds] %C*n* [cmds]
Description:	Selects data compression
Command	**Function**
%C0	Data compression disabled
%C1	V.42bis and MNP5 enabled

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	V.42 reliable mode enabled
\N5	Auto-reliable mode enabled
\N7	Auto-reliable mode enabled

DATA CALLING TONE	
Type:	Configuration
Format:	AT [cmds] -C*n* [cmds]
Description:	Controls the data calling tone
Command	**Function**
-C0	Disable data calling tone
-C1	Enable data calling tone

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DATA CALLING TONE	
Type:	Configuration
Format:	AT [cmds] -V90=*n* [cmds]
Description:	Controls the data calling tone
Command	**Function**
-V90 = 0	V.90 disabled
-V90 = 1	Auto Rate
-V90 = 2	28000bps
-V90 = 3	29333bps
-V90 = 4	30666bps
-V90 = 5	32000bps
-V90 = 6	33333bps
-V90 = 7	34666bps
-V90 = 8	36000bps
-V90 = 9	37333bps
-V90 = 10	38666bps
-V90 = 11	40000bps
-V90 = 12	41333bps
-V90 = 13	42666bps
-V90 = 14	44000bps
-V90 = 15	45333bps
-V90 = 16	46666bps
-V90 = 17	48000bps
-V90 = 18	49333bps
-V90 = 19	50666bps
-V90 = 20	52000bps
-V90 = 21	53333bps

EXTENDED RESULT CODES	
Type:	Configuration
Format:	AT [cmds] \V*n* [cmds]
Description:	Selects extended result codes
Command	**Function**
\V0	Extended result codes disabled
\V1	Extended result codes enabled
\V2	Extended result codes enabled

FLOW CONTROL	
Type:	Configuration
Format:	AT [cmds] \G*n* [cmds]
Description:	Selects modem port flow control
Note: Command performs no function; included for compatibility only	

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FLOW CONTROL TYPE	
Type:	Configuration
Format:	AT [cmds] \Q*n* [cmds]
Description:	Sets type of flow control used by modem
Command	**Function**
\Q0	Flow control disabled
\Q1	Bidirectional XON/XOFF flow control enabled
\Q2	CTS flow control by DCE enabled
\Q3	Bidirectional RTS/CTS flow control enabled

RING INDICATOR	
Type:	Configuration
Format:	AT [cmds] \R*n* [cmds]
Description:	Controls the ring indicator signal
Command	**Function**
\R0	Ring indicator signal is off after the telephone call is answered

S(status) -REGISTERS

56K DIAL LINE RATE	
Type:	Register
Format	AT [cmds] S38=*n* [cmds]
Description:	Sets the maximum allowable data exchange rate attempted during handshake process.
Command	**Function**
í S38=0	K56flex disabled
S38=1	K56flex autorate
S38=2	32000bps
S38=3	34000bps
S38=4	36000bps
S38=5	38000bps
S38=6	40000bps
S38=7	42000bps
S38=8	44000bps
S38=9	46000bps
S38=10	48000bps
S38=11	50000bps
S38=12	52000bps
S38=13	54000bps
S38=14	56000bps

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BIT-MAPPED REGISTER S14		
Format:	AT [cmds] S14=*n* [cmds]	
Default:	8	
Range:	0-174	
Unit:	Bit-mapped	
Description:	Controls echo, result codes and display and dial mode	
Bit	**Value**	**Function**
3	0	Display result codes in numeric format
	í 1	Display result codes in verbose format
6	í 0	10 PPS
	1	20 PPS

BIT-MAPPED REGISTER S21		
Format	AT [cmds] S21=*n* [cmds]	
Default:	48	
Range:	Unidnetified	
Unit:	Bit-mapped	
Description:	Indicates the status of command options	
Bit	**Value**	**Function**
4, 3	0	&D0 selected
	1	&D1 selected
	2	&D2 selected
	3	&D3 selected
5	0	&C0 selected
	1	&C1 selected

BIT-MAPPED REGISTER S22		
Format	AT [cmds] S22=*n* [cmds]	
Default:	Unidentified	
Range:	0-255	
Unit:	Bit-mapped	
Description:	Indicates the status of command options	
Bit	**Value**	**Function**
6 - 4	0	X0 selected
	4	X1 selected
	5	X2 selected
	6	X3 selected
	7	X4 selected
7	0	33/67ms at 10pps (Europe)
	1	39/61ms at 10pps (North America)

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BIT-MAPPED REGISTER S28	
Format	AT [cmds] S28=*n* [cmds]
Default:	unidentified
Range:	0-31
Unit:	Bit-mapped
Description:	Controls V.23 split speed, transmit/receive speed, half duplex; and pulse dialing.
Value	**Function**
0	Disable
1-255	Enable

BIT-MAPPED REGISTER S40	
Format	AT [cmds] S40=*n* [cmds]
Default:	0
Range:	0-2
Unit:	Bit-mapped
Description:	Controls ETC startup autorating
Command	**Function**
í S40=0	Startup with normal autorating
S40=1	Startup with initial rate of 4800 or below
S40=2	Startup with initial rate of 9600 or below

DATA CALLING TONE	
Type:	Register
Format	AT [cmds] S35*n* [cmds]
Description:	Controls the data calling tone
Command	**Function**
S36=0	Disabled
S36=1	Enabled

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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**
í S37=0	Speed of last connection
S37=1	Reserved
S37=2	1200/75bps
S37=3	300bps
S37=4	Reserved
S37=5	1200bps
S37=6	2400bps
S37=7	4800bps
S37=8	7200bps
S37=9	9600bps
S37=10	12000bps
S37=11	14400bps
S37=12	16800bps
S37=13	19200bps
S37=14	21600bps
S37=15	24000bps
S37=16	26400bps
S37=17	28800bps
S37=18	31200bps
S37=19	33600bps

FEATURE NEGOTIATION OPTIONS	
Type:	Register
Format:	AT [cmds] S48=*n* [cmds]
Description:	Selects active error correction and compression protocols
Command	**Function**
í S48=7	Detection negotiation and XID negotiation enabled
S48=128	Detection negotiation and XID negotiation disabled, fall-back to options set in S36

LOCAL PHONE STATUS	
Type:	Register
Format:	AT [cmds] S90=*n* [cmds]
Description:	Sets the status of the local phone
Command	**Function**
í S90=7	Local phone on-hook
S90=128	Local phone off-hook

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NEGOTIATION FALLBACK	
Type:	Register
Format	AT [cmds] S36=*n* [cmds]
Description:	Controls the negotiation fallback
Command	**Function**
S36=0, 2	Hang up
S36=1, 3	Attempt a direct connection
S36=4, 6	Attempt a connection at MNP2-4; if that fails, hang up.
S36=5, 7	Attempt a connection at MNP2-4; if that fails, attempt a direct connection.

SLEEP MODE	
Type:	Register
Format	AT [cmds] S89=*n* [cmds]
Default:	10
Range:	0, 5-255
Description:	Controls the sleep mode timer

SYNTHETIC RING FREQUENCY	
Type:	Register
Format:	AT [cmds] S33=*n* [cmds]
Default:	0
Range:	0-5
Unit:	Unidentified
Description:	Specifies a synthetic ring frequency

SYNTHETIC RING VOLUME	
Type:	Register
Format:	AT [cmds] S32=*n* [cmds]
Default:	16
Range:	Unidentified
Unit:	dB
Description:	Specifies a synthetic ring volume with implied minus sign