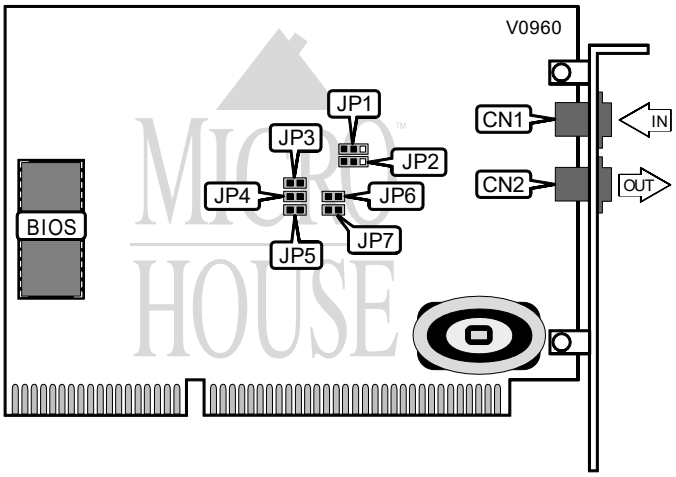
MULTITECH SYSTEMS, INC.
MT2834ZPX/MT2834ZPXI

Modem Type	Data (synchronous/asynchronous)/Fax
Maximum Data Rate	28.8Kbps
Maximum Fax Rate	14.4Kbps
Data Bus	16-bit ISA
Fax Class	Class I & II
Data Modulation Protocol	Bell 103A/212A ITU-T V.21, V.22, V.22bis, V.23, V.32, V.32bis, V.34 AT&T V.32terbo
Fax Modulation Protocol	ITU-T V.17, V.21CH2, V.27ter, V.29
Error Correction/Compression	MNP2-5, V.42, V.42bis



CONNECTIONS			
Purpos	Location	Purpos	Location
Line-in	CN1	Line-out	CN2

INTERRUPT SELECTION					
IRQ	JP3	JP4	JP5	JP6	JP7
í 3	Closed	Open	Open	Open	Open
2/9	Open	Open	Open	Open	Closed
4	Open	Closed	Open	Open	Open
5	Open	Open	Closed	Open	Open
7	Open	Open	Open	Closed	Open

Continued on next page . . .

...continued from previous page

ADDRESS SELECTION		
Addre s	JP1	JP2
í COM2:	Pins 1 & 2 closed	Pins 2 & 3 closed
COM1:	Pins 2 & 3 closed	Pins 2 & 3 closed
COM3:	Pins 2 & 3 closed	Pins 1 & 2 closed
COM4:	Pins 1 & 2 closed	Pins 1 & 2 closed

Proprietary Command Set

AUTO-RELIABLE TIME BUFFER CONFIGURATION	
Type:	Configuration
Format:	AT [cmds] $A*n* [cmds]
Example:	AT **$A1** &W<CR>
Description:	Controls the handling of incoming data during auto-reliable time period.
Command	**Function**
í $A0	Data is discarded.
$A1	Data is buffered.

BIT MODE	
Type:	Configuration
Format:	AT [cmds] $EB*n* [cmds]
Example:	AT **$EB1** E1<CR>
Description:	Selects 10- or 11-bit mode.
Command	**Function**
í $EB0	Sets 10-bit mode.
$EB1	Sets 11-bit mode.

COMMAND ESCAPE TYPE	
Type:	Configuration
Format:	AT [cmds] %E*n* [cmds]
Example:	AT **%E3** &W<CR>
Description:	Sets type and response of command escape sequence.
Command	**Function**
%E0	Command escape disabled.
í %E1	TIES escape (+++AT...)
%E2	<BREAK>AT method.
%E3	Both TIES and BREAK methods.
%E4	Escape disabled; no OK response to +++.
%E5	Escape disabled; OK response to +++.

Continued on next page . . .

...continued from previous page

COMMAND SET	
Type:	Configuration
Format:	AT &Q*n*
Example:	AT **&Q1**<CR>
Description:	Selects standard Hayes or custom command sets.
Command	**Function**
í &Q0	Multi-Tech custom command set enabled.
&Q1	Standard Hayes command set enabled.

COMPRESSION	
Type:	Configuration
Format:	AT &E*n*
Example:	AT **&E15** #L0<CR>
Description:	Selects data compression.
Command	**Function**
&E14	Data compression disabled.
í &E15	Data compression enabled.

COMPRESSION MODE	
Type:	Configuration
Format:	AT #L*n*
Example:	AT **#L2** DT555-1212<CR>
Description:	Selects active compression protocols.
Command	**Function**
í #L0	V.42 negotiation enabled.
#L1	MNP negotiation enabled.
#L2	LAP-M negotiation enabled.
#L3	LAP-M enabled, no negotiation.

CTS SIGNAL	
Type:	Configuration
Format:	AT [cmds] &RF*n* [cmds]
Example:	AT **&RF0**<CR>
Description:	Selects the function of the CTS signal.
Command	**Function**
&RF0	CTS is set to RTS.
í &RF1	CTS is independent of RTS.

DIAL STORED PHONE NUMBER	
Type:	Immediate
Format:	AT [cmds] Nn_1 [Nn_2, Nn_3...]
Example:	ATM0 **N1N3N5**<CR>
Description:	Dials stored phone number(s). If the first number is busy, the modem will proceed to the next number in the list.

Continued on next page . . .

...continued from previous page

DSR SIGNAL	
Type:	Configuration
Format:	AT [cmds] &SF*n* [cmds]
Example:	AT **&SF0**<CR>
Description:	Selects the function of the DSR signal.
Command	**Function**
í &SF0	DSR is set to CD.
&SF1	DSR is independent of CD.

DTR DIALING	
Type:	Configuration
Format:	AT [cmds] $D*n* [cmds]
Example:	AT **$D1** DT555-1212<CR>
Description:	Turns DTR dialing on and off.
Command	**Function**
í $D0	DTR dialing disabled.
$D1	DTR dialing enabled.

DTR TIMEOUT	
Type:	Register
Format:	AT [cmds] S24=*n* [cmds]
Example:	AT**S24=40**<CR>
Default:	20
Range:	0-255
Unit:	50 ms
Description:	Sets the time to drop the DTR signal to hangup.

ERROR CORRECTION DISABLE ON CONNECT	
Type:	Configuration
Format:	AT [cmds] $F*n* [cmds]
Example:	AT **$F1** DT555-1212<CR>
Description:	Selects whether error correction can be disabled by a <CR> while handshaking.
Command	**Function**
$F0	Error correction handshake interrupt disabled.
í $F1	Error correction handshake interrupt enabled.

ESCAPE SEQUENCE BUFFER SIZE	
Type:	Register
Format:	AT [cmds] S34=*n* [cmds]
Example:	AT**S34=30**<CR>
Default:	10
Range:	0-60
Unit:	1 byte
Description:	Sets the size of the buffer used to store commands during an escape sequence.

Continued on next page . . .

...continued from previous page

ESCAPE SEQUENCE - OUT OF BAND	
Type:	Immediate
Format:	<BREAK> AT [cmds]<CR>
Example:	**<BREAK> AT** #F1**<CR>**
Description:	Puts the modem in Command Mode.
Notes:	Do not precede this command with AT. <BREAK> refers to the hardware modem break signal.

ESCAPE SEQUENCE TIMEOUT	
Type:	Register
Format:	AT [cmds] S32=*n* [cmds]
Example:	AT**S32=30**<CR>
Default:	20
Range:	0-255
Unit:	1 second
Description:	Sets the maximum amount of time the modem will wait for a <CR> while executing an escape sequence.

FACTORY DEFAULTS	
Type:	Immediate/Configuration
Format:	AT &F[*n*]
Example:	AT **&F8**<CR>
Description:	Loads factory defaults, or sets write protect on NVRAM.
Command	**Function**
&F	Reloads defaults by setting. (Immediate, see below.)
í &F8	Sets &F to read factory defaults from ROM, and disables NVRAM write protect.
&F9	Sets &F to read defaults from NVRAM, and enables write-protect.

FAILED PASSWORD ATTEMPTS	
Type:	Register
Format:	AT [cmds] S26?
Example:	AT**S26?**<CR>
Default:	Read-only
Range:	0-255
Unit:	1 attempt
Description:	This register stores the number of failed password attempts.

Continued on next page . . .

...continued from previous page

FALLBACK MODE	
Type:	Configuration
Format:	AT [cmds] #F*n* [cmds]
Example:	AT **#F1** O<CR>
Description:	Sets direction of fallback.
Command	**Function**
#F0	Fallback disabled.
#F1	Fallback from 28.8Kbps to 2400bps as line quality degrades.
í #F2	Fallback from 2400bps to 28.8Kbps as line quality improves.

FLOW CONTROL NORMAL MODE	
Type:	Configuration
Format:	AT [cmds] &E*n* [cmds]
Example:	AT **&E11** O<CR>
Description:	Selects normal flow control.
Command	**Function**
í &E10	Normal mode disabled.
&E11	Normal mode enabled.

FLOW CONTROL TYPE	
Type:	Configuration
Format:	AT [cmds] &E*n* [cmds]
Example:	AT **&E4** &W<CR>
Description:	Sets type of flow control used by modem.
Command	**Function**
&E3	Flow control disabled.
í &E4	CTS/RTS flow control enabled.
&E5	XON/XOFF flow control enabled.

HANDSHAKE ATTEMPTS	
Type:	Configuration
Format:	AT [cmds] #A*n* [cmds]
Example:	AT **#A1** #L3<CR>
Description:	Configures the initial handshake phase.
Command	**Function**
#A0	Attempts in order: 28.8Kbps, 24Kbps, 21.6Kbps, 19.2Kbps, 16.8Kbps, 14.4Kbps, 12Kbps, 9600bps, 4800bps, 2400bps, 1200bps, 300bps.
#A1	Attempts only 28.8Kbps.
#A2	Attempts in order: 28.8Kbps, 24Kbps, 21.6Kbps, 19.2Kbps, 16.8Kbps, 14.4Kbps, 12Kbps, 9600bps, 4800bps.
#A3	Attempts in order: 2400bps, 1200bps, 300bps.

Continued on next page . . .

...continued from previous page

HELP SCREENS	
Type:	Immediate
Format:	AT $H*n*
Example:	AT **$H1**<CR>
Description:	Shows modem help screens.
Command	**Function**
$H1	Shows help screen 1.
$H2	Shows help screen 2.
$H3	Shows help screen 3.

LIST CONFIGURATION	
Type:	Immediate
Format:	AT L*n*
Example:	AT **L9** O<CR>
Description:	Lists modem configuration.
Command	**Function**
L5	Lists all settings.
L6	Lists the values of all S-registers.
L7	Lists extended parameters.
L8	Lists current diagnostics.
L9	Displays signal strength.
L10	Displays signal-to-noise ratio.
L11	Displays noise strength.

LOCAL SERIAL PORT SPEED	
Type:	Configuration
Format:	AT [cmds] $SB*nnn* [cmds]
Example:	AT $MB9600 **$SB19200**<CR>
Description:	Sets serial port speed.
Command	**Function**
$SB300	Sets 300baud speed.
$SB1200	Sets 1200baud speed.
$SB2400	Sets 2400baud speed.
$SB4800	Sets 4800baud speed.
$SB9600	Sets 9600baud speed.
$SB19200	Sets 19.2Kbaud speed.
$SB38400	Sets 38.4Kbaud speed.
$SB57600	Sets 57.6Kbaud speed.
$SB115200	Sets 115.2Kbaud speed.

Continued on next page . . .

...continued from previous page

LOCK SERIAL PORT	
Type:	Configuration
Format:	AT [cmds] $BA*n* [cmds]
Example:	AT $SB57600 **$BA0**<CR>
Description:	Sets operation of serial port speed.
Command	**Function**
í $BA0	Serial speed locked at rate set by $SB.
$BA1	Serial speed follows connect speed, ignoring $SB.

LOGIN PASSWORD	
Type:	Configuration
Format:	AT [cmds] #I*xxxx*
Example:	AT **#IMicroHouse**<CR>
Description:	Sets the login password to *xxxx*. The password must be between 6 and 10 characters, case sensitive. It defaults to MULTI-TECH.

MAXIMUM BLOCK SIZE FOR TRANSMISSION	
Type:	Configuration
Format:	AT [cmds] &BS*n* [cmds]
Example:	AT **&BS1** &MB28800<CR>
Description:	Sets the maximum transmittable block size.
Command	**Function**
&BS0	Maximum block size is 64 characters.
í &BS1	Maximum block size is 128 characters for LAP-M, and 256 characters for MNP.

PACING	
Type:	Configuration
Format:	AT [cmds] &E*n* [cmds]
Example:	AT **&E9**<CR>
Description:	Selects pacing.
Command	**Function**
í &E8	Enables pacing.
&E9	Disables pacing.

PACING - ENQ/ACK	
Type:	Configuration
Format:	AT [cmds] &E*n* [cmds]
Example:	AT **&E13**<CR>
Description:	Selects ENQ/ACK pacing.
Command	**Function**
&E12	Disables ENQ/ACK pacing.
í &E13	Enables ENQ/ACK pacing.

Continued on next page . . .

...continued from previous page

REDIAL	
Type:	Immediate
Format:	ATA:
Example:	AT**A:**<CR>
Description:	Redials the last number dialed until it is no longer busy.

REMOTE CONNECT SPEED	
Type:	Configuration
Format:	AT $MB*nnn*
Example:	AT **$MB9600** $SB19200<CR>
Description:	Sets maximum remote connect speed.
Command	**Function**
$MB75	Sets V.23 (1200bps/75bps bi-directional).
$MB300	Sets 300bps connect.
$MB1200	Sets 1200bps connect.
$MB2400	Sets 2400bps connect.
$MB4800	Sets 4800bps connect.
$MB9600	Sets 9600bps connect.
$MB14400	Sets 14.4Kbps connect.
$MB19200	Sets 19.2Kbps connect.
$MB28800	Sets 28.8Kbps connect.

RETRANSMIT FAIL ACTION	
Type:	Configuration
Format:	AT [cmds] $R*n* [cmds]
Example:	AT **$R1**<CR>
Description:	Sets whether the modem gives up on a bad connection.
Command	**Function**
í $R0	Hang up after 12 failed retransmissions.
$R1	Do not hang up after 12 failed retransmissions.

SETUP INACTIVITY TIMER	
Type:	Register
Format:	AT [cmds] S29=*n* [cmds]
Example:	AT**S29=5**<CR>
Default:	20
Range:	1-255
Unit:	1 minute
Description:	Sets the maximum amount of time between commands until the setup password must be re-entered.

Continued on next page . . .

...continued from previous page

STORE PHONE NUMBER IN NVRAM	
Type:	Configuration
Format:	AT [cmds] D<#>N*n* [dialstring]
Example:	AT**D555-1212N1**<CR>
Description:	Stores a phone number in the modem's memory.

TIME UNTIL HANG UP ON LOW DTR	
Type:	Register
Format:	AT [cmds] S36=*n* [cmds]
Example:	AT**S36=5**<CR>
Default:	0
Range:	0-255
Unit:	1 second
Description:	Sets the maximum amount of time the modem will wait to hang up after the DTR signal goes low.

TIME UNTIL PICK UP ON HIGH DTR	
Type:	Register
Format:	AT [cmds] S37=*n* [cmds]
Example:	AT**S37=5**<CR>
Default:	0
Range:	0-255
Unit:	1 second
Description:	Sets the maximum amount of time the modem will wait to pick up after the DTR signal goes high.

TRELLIS MODULATION	
Type:	Configuration
Format:	AT [cmds] #T*n* [cmds]
Example:	AT **#T1**<CR>
Description:	Controls Trellis Coded Modulation.
Command	**Function**
#T0	Disables TCM.
í #T1	Enables TCM.

V.32terbo CONTROL	
Type:	Configuration
Format:	AT [cmds] #V*n* [cmds]
Example:	AT **#V1** DT555-1212<CR>
Description:	Controls the V.32terbo protocol in answer mode.
Command	**Function**
í #V0	V.32terbo enabled.
#V1	V.32terbo disabled.

Continued on next page . . .

...continued from previous page

V.42 MODE	
Type:	Configuration
Format:	AT [cmds] &E*n* [cmds]
Example:	AT **&E0** <CR>
Description:	Configures the operation of V.42 mode.
Command	**Function**
&E0	Error correction disabled.
í &E1	V.42 set to auto-reliable.
&E2	V.42 set to reliable.

XOFF SEND	
Type:	Configuration
Format:	AT [cmds] #X*n* [cmds]
Example:	AT **#X1**<CR>
Description:	Selects how XOFF signal is sent.
Command	**Function**
í #X0	Single XOFF character sent until ready.
#X1	Multiple XOFF characters sent until ready.

XON/XOFF PASS-THROUGH	
Type:	Configuration
Format:	AT [cmds] &E*n* [cmds]
Example:	AT **&E7** O<CR>
Description:	Selects whether XON/XOFF signals are sent to remote modem.
Command	**Function**
í &E6	XON/XOFF signals trapped by local modem.
&E7	XON/XOFF passed through local modem.