

SATELLINE-3AS/SATELLINE-M3 radi

CmdRef	Category	Command
	Addressing	SL#A?
	Addressing	SL#A=xxxx, yyyy, zzzz,vvvv
	Addressing	SL#I?
	Addressing	SL#I=xxxx
	Addressing	SL#P?
	Addressing	SL#P=xxxx;yyyy
	Addressing	SL#Q?
	Addressing	SL#Q=x
	Addressing	SL#R?
	Addressing	SL#R=xxxx
	Addressing	SL#S?
	Addressing	SL#S=xxxx;yyyy
	Addressing	SL#T?
	Addressing	SL#T=xxxx
	Addressing	SL#W?
	Addressing	SL#W=x
	Addressing	SLAxx
	Addressing	SLHnn
	Addressing	SLLnn
	Addressing	SLRxx
	Addressing	SLTxx
	AT command	AT+CGMI
	AT command	ATO00
	ChannelList	SL!P?
	ChannelList	SL!P=n
	ChannelList	SL\$A=1
	ChannelList	SL\$D?
	ChannelList	SL\$D=n
	ChannelList	SL\$E=1
	ChannelList	SL\$F?
	ChannelList	SL\$F=n
	ChannelList	SL\$R?
	ChannelList	SL\$R=n
	ChannelList	SL\$S=1

	DataPort	SL%B?
	DataPort	SL%B=a,b,c,d
	FCS	SLIB?
	FCS	SLIB=n
	FCS	SLIC?
	FCS	SLICO
	FCS	SLIF?nn
	FCS	SLIF=nnn.nnnnn
	FCS	SLII?
	FCS	SLII=xxxx
	FCS	SLIL?
	FCS	SLIL=n
	FCS	SLIM?
	FCS	SLIM=x
	FCS	SLIN?nn
	FCS	SLIO?
	FCS	SLIO= n
	FCS	SLIR?
	FCS	SLIR=n
	FCS	SLIS?
	FCS	SLIS=n
	FCS	SLIT?
	FCS	SLIT=n
	FCS	SLIX?
	Memory	SL**>
	Memory	SL*R>
	Memory	SLSOS
	ModemInfo	SLIH?
	ModemInfo	SLIV?
	ModemInfo	SL%1?
	ModemInfo	SL%C?
	ModemInfo	SL%C="text string"

	ModemInfo	SL%D?
	ModemInfo	SL%H?
	ModemInfo	SL%M?
	ModemInfo	SL%M=1
	ModemInfo	SL%S?
	ModemInfo	SL%V?
	OperationMode	+++SL@G=0
	OperationMode	SL%P=1
	OperationMode	SL@G=1
	OperationMode	SL++?
	OperationMode	SL+++
	OperationMode	SL++O
	OperationMode	SL+R=
	OperationMode	SL+S=1
	RadioFreq	SL!D?
	RadioFreq	SL!U?
	RadioFreq	SL!W?
	RadioFreq	SL!Y?
	RadioFreq	SL&+=nnnn
	RadioFreq	SL&-=nnnn
	RadioFreq	SL&C?
	RadioFreq	SL&C=nnn.nnnnn
	RadioFreq	SL&D?
	RadioFreq	SL&D=x
	RadioFreq	SL&F?
	RadioFreq	SL&F=nnn.nnnnn
	RadioFreq	SL&FR?
	RadioFreq	SL&FR=nnn.nnnnn
	RadioFreq	SL&FT?
	RadioFreq	SL&FT=nnn.nnnnn
	RadioFreq	SL&N?
	RadioFreq	SL&W?
	RadioFreq	SL&W=xxxx
	RadioProperty	SL%F?

	RadioProperty	SL%F=x
	RadioProperty	SL@D?
	RadioProperty	SL@D=n
	RadioProperty	SL@F?
	RadioProperty	SL@M?
	RadioProperty	SL@M=x
	RadioProperty	SL@P?
	RadioProperty	SL@P=nnnn
	RadioProperty	SL@R?
	RadioProperty	SL@S?
	RadioProperty	SL@S=x
	RadioProperty	SL@T?
	RadioProperty	SL@T=-nnn
	Reset	SL@X=n
	Test	SL!Z=x
	Test	SL+C?
	Test	SL+P=xxxx
	Test	SL+T?

	Test	$SL+T=x$
	Test	$SL+W=xxx,n$

io modems - SL COMMANDS LIST (applies to firmware versions 3.4

Description
Show all addresses (RX1, RX2, TX1, TX2)
Set RX/TX addresses (RX1, RX2, TX1, TX2)
Get primary addresses (TX1, RX1)
Set all addresses (RX1, RX2, TX1, TX2) to value xxxx [0000....ffff]
Get primary transmit address (TX1) and primary receive address (RX1)
Set primary transmit address (TX1) to value xxxx and primary receive address (RX1) to value yyyy [0000....ffff]
Get TX address mode
Set TX address ON/OFF. Values of x are: "0" = TX address OFF "1" = TX address ON
Get primary receive address (RX1)
Set receive addresses (RX1, RX2) to value xxxx [0000....ffff]
Get secondary transmit address (TX2) and secondary receive address (RX2)
Set secondary transmit address (TX2) to value xxxx and secondary receive address (RX2) to value yyyy [0000....ffff]
Get primary transmit address (TX1)
Set transmit addresses (TX1, TX2) to value xxxx [0000....ffff]
Get RX address mode
Set RX address ON/OFF. Values of x are: "0" = RX address OFF "1" = RX address ON
Set all addresses (RX1, RX2, TX1, TX2) to value xx [2 binary bytes] NOT RECOMMENDED for new systems
Set active frequency nn [0...99] channels above center frequency Frequency = Center frequency + nn*Channel spacing For conventional reasons, only 2 digit inputs are valid NOT RECOMMENDED for new systems
Set active frequency nn [0...99] channels below center frequency Frequency = Center frequency – nn*Channel spacing For conventional reasons, only 2 digit inputs are valid NOT RECOMMENDED for new systems
Set receive addresses (RX1, RX2) to value xx [2 binary bytes] NOT RECOMMENDED for new systems
Set transmit addresses (TX1, TX2) to value xx [2 binary bytes] NOT RECOMMENDED for new systems
Request Manufacturer ID
Exit AT command mode
Get channel number
Set frequency to channel list frequency number n [0...number of channels in list]
Go to channel list default channel
Get channel list default channel number
Set channel list default channel, n is channel number
Search free channel Modem searches for next traffic-free channel. Listening time of traffic is about 2 seconds Modem shows next free channel by activating command again
Get active channel number
Set modem to channel number n in channel list
Get listening time (seconds) of Search free channel function
Set listening time (seconds) of Search free channel function
Set channel scanning mode
When activated, modem scans channels one by one and saves RSSI readings to memory

Get serial data parameters
Set serial data port parameters. a= "38400", "19200", "9600", "4800", "2400" or "1200" (defines baud rate) b= "8" (defines character length) c= "N", "O" or "E" (defines parity) d= "1" or "2" (defines number of stop bits)
Get beacon interval (ms)
Set beacon interval, n is decimal number (ms)
Get number of channels in FCS list
Clear number of channels in FCS list
Get frequency of FCS list channel nn (MHz)
Add new frequency to FCS list (MHz)
Note: Use SL!CO to clear list before creating an updated frequency list!
Get FCS Net ID
Set FCS Net ID [0000...ffff]
Get channel hop threshold (dBm) i.e. RSSI trigger level for TX modem to change TX frequency Command is irrelevant in version 3.34 or later - adaptive channel hop scheme has replaced setting's function
Set channel hop threshold (dBm) i.e. RSSI trigger level for TX modem to change TX frequency [-80...-118] Command is irrelevant in version 3.34 or later - adaptive channel hop scheme has replaced setting's function
Get FCS (Free Channel Scanning) mode
Set FCS mode. Values of x are: "O" if FCS is turned OFF "M" for master (=transmitter) "S" for slave (=receiver). "E" for master with repeater in the system "R" for repeater "H" for slave with repeater in the system
Show last measured noise on channel nn (dBm) Note: This command applies only to FCS Master modem
Get beacon disable timeout (seconds)
Set beacon disable timeout in seconds. If it is zero then beacon is never disabled. If timeout is less than beacon timeout, modem will not send additional beacons.
Get RX listen timeout (ms)
Set RX listen timeout (ms)
Get beacon time (ms) i.e. time beacon is sent after channel change
Set beacon time (ms) i.e. time beacon is sent after channel change
Get frequency RSSI measure time for TX modem (ms)
Set frequency RSSI measure time for TX modem (ms)
Get current transmit frequency
Save current settings as permanent settings
Restore settings to their factory set values
Save current settings as permanent settings
Get radio HW info
Get modem "type"
Reserved for various use
Get product number (or other customer info)
Sets p/n (or other customer info) if it is empty (command works only once) P/n must be stored to eeprom with command SL**> (Save settings) Otherwise it will be lost when power is turned off

Get Modem Type
Get logic hardware version
Get EpicPro Status (reserved for internal use)
Set EpicPro Status (reserved for internal use)
Get Serial Number
Get firmware revision information
Switch to UHF mode
Note the special format of this command. Only available SL command in GSM mode.
Activate Programming menu (baud rate remains)
Switch to GSM mode
Get status of reception control
Disable reception
Enable reception
Reserved for internal use
Activate sleep mode
Get lower limit of frequency band 1
Get upper limit of frequency band 1
Get lower limit of frequency band 2
Get upper limit of frequency band 2
Set active frequency nnnn channels above center frequency Frequency = Center frequency + nnnn*Channel spacing Value of nnnn is [0...number of channels/2] <u>For conventional reasons, only 2 or 4 digit inputs are valid</u>
Set active frequency nnnn channels below center frequency Frequency = Center frequency – nnnn*Channel spacing Value of nnnn is [0...number of channels/2] <u>For conventional reasons, only 2 or 4 digit inputs are valid</u>
Get center/reference frequency
Set center/reference frequency
Get operational mode of radio.
Set operational mode of radio. Values of x are: "S" = Single channel: Rx and Tx frequencies are identical. "D" = Dual channel: Rx frequency = Tx Frequency - (lower limit of frequency band1 - lower limit of frequency band 2) "R" = Reverse dual channel: Tx frequency = Rx Frequency - (lower limit of frequency band1 - lower limit of frequency band 2) Command applies only if lower limits of frequency band 1 & 2 match Dual channel operation NOT RECOMMENDED for new systems - firmware variants with separate Rx/Tx frequencies provide better applicability
Get active frequency
Set active frequency to nnn.nnnnn MHz
Get Rx frequency
Set Rx frequency to nnn.nnnnn MHz
Get Tx frequency
Set Tx frequency to nnn.nnnnn MHz
Get active channel calculated from center frequency (= (active frequency – center frequency)/channel spacing)
Get channel spacing/channel width
Set channel spacing. Value of xxxx is: "1250" for 12,5 kHz "2000" for 20 kHz "2500" for 25 kHz Command is supported only by hardware variants with adjustable channel spacing <u>Before using this command, make sure that active frequency matches new channel spacing</u>
Get status of Error correction (FEC)

<p>Set Error correction (FEC). Value of x is: "1" Set FEC ON "0" Set FEC OFF</p>
<p>Get Tx delay (ms)</p>
<p>Set Tx delay (ms), n is [0...65535]</p>
<p>Get noise level of radio channel</p>
<p>Get repeater function</p>
<p>Set repeater function. Values of x are: "0" = Repeater function OFF "R" = Repeater function ON</p>
<p>Get transmitter output power</p>
<p>Set RF output power (mW) For example "SL@P=100" sets 100 mW transmitter output power. Output power is rounded if given value does not match preset power levels. Apart from other compilations, VAR2 accepts also "SL@P=#n" format commands, where n [1...7] is the number of the memory location that stores the value for the wanted power level</p>
<p>Get RSSI (Received Signal Strength Indication) of last received message (dBm)</p>
<p>Get radio compatibility mode</p>
<p>Set radio compatibility mode. Value of x is: 0 = Satel 3AS 1 = Option 1 (PacCrest 4-FSK) 2 = Option 2 (PacCrest GMSK) 3 = Option 3 (TrimTalk GMSK)</p>
<p>Get current signal threshold (dBm)</p>
<p>Set minimum power level of signal to be received (=Signal Threshold level) Value of nnn is decimal value [80...118] in dBm</p>
<p>Reset command. Values of n are: "1" Reset BT (applies only to 3AS-OEM11) "9" Reset modem</p>
<p>Set LEDs for test purposes (3AS-OEM11 specific). Value of x: "O" = normal mode "G" = TX/RX LED outputs are forced green "R" = TX/RX LED outputs are forced red</p>
<p>Get modem temperature in Celcius degrees</p>
<p>Get measured signal strength from remote modem i.e. SL "ping" Value of xxxx [0000...ffff] defines address of remote modem</p>
<p>Get status of Transmitter tests</p>

Activate/Stop transmitter test. Value of x is:

"0" = Stop any transmitter test

"1" = Transmit Carrier test

"2" = Transmit Deviation test

Set transmitter output power level xxx [000...255] in memory location n [1...7]

0 sets the maximum power and 255 sets the minimum power

	* = command supported NA = command is Not Av
2)	
Response	3AS(d)
"xxxx,yyyy,zzzz,vvvv"	*
"OK" or "ERROR"	*
"xxxx;yyyy"	*
"OK" or "ERROR"	*
"xxxx;yyyy"	*
"OK" or "ERROR"	*
"0" = TX address OFF "1" = TX address ON	*
"OK" or "ERROR"	*
"yyyy"	*
"OK" or "ERROR"	*
"xxxx;yyyy"	*
"OK" or "ERROR"	*
"xxxx"	*
"OK" or "ERROR"	*
"0" = RX address OFF "1" = RX address ON	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
UHF mode: "+CGMI: "Satel"" GSM mode: "+CGMI: "Motorola""	NA
"OK" or "ERROR"	NA
decimal number	NA
"OK" or "ERROR"	NA
"OK" or "ERROR"	NA
decimal number	NA
"OK" or "ERROR"	NA
"OK" followed by "channel n is free" Value of n is channel number of next free channel on channel list	NA
decimal number	NA
"OK" or "ERROR"	NA
decimal number	NA
"OK" or "ERROR"	NA
"OK" followed by channel/RSSI info For example: "OKCH 6 -122 dBm, CH 22 -121 dBm, CH 10003 -122 dBm, "	NA

baud rate, character length, parity, number of stop bits (for example "38400, 8, N, 1")	*
"OK" or "ERROR"	*
decimal number	*
"OK" or "ERROR"	*
decimal number	*
"OK" or "ERROR"	*
Decimal number in MHz, for example "451.00000"	*
"OK" or "ERROR"	*
"xxxx" [0000...ffff]	*
"OK" or "ERROR"	*
decimal number in dBm	*
"OK" or "ERROR"	*
"O" if FCS is OFF "M" for master (=transmitter) without repeater in system "S" for slave (=receiver) without repeater in system "E" for master with repeater in the system "R" for repeater "H" for slave with repeater in the system	*
"OK" or "ERROR"	*
For example "-112 dBm"	*
decimal number	*
"OK" or "ERROR"	*
decimal number	*
"OK" or "ERROR"	*
decimal number	*
"OK" or "ERROR"	*
decimal number	*
"OK" or "ERROR"	*
For example "451.00000 MHz"	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
Depends on the model/revision	*
Depends on the model/revision	*
Depends on the setup	NA
Depends on setup	*
"OK" or error message	*

Depends on model, for example "SATELLINE-3AS"	*
Hardware info	NA
"1"	NA
"OK" or "ERROR"	NA
Serial number of radio modem	*
For example "3.39"	*
"OK" after modem has switched to UHF mode	NA
Programming menu	*
Modem switches to GSM mode	NA
"0" = Reception enabled	*
"1" = Reception disabled	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
To be defined	NA
Modem switches to sleep mode	NA
"nnn.nnnnn MHz"	*
"nnn.nnnnn MHz"	*
"nnn.nnnnn MHz"	*
"nnn.nnnnn MHz"	*
"OK" or "ERROR"	*
"OK" or "ERROR"	*
"nnn.nnnnn MHz"	*
"OK" or "ERROR"	NA
"S" = Single Channel (default)	*
"D" = Dual Channel	*
"R" = Reverse Dual Channel	*
"OK" or "ERROR"	*
"nnn.nnnnn MHz"	*
"OK" or "ERROR"	*
"nnn.nnnnn MHz"	NA
"OK" or "ERROR"	NA
"nnn.nnnnn MHz"	NA
"OK" or "ERROR"	NA
decimal number "+nnnn", "-nnnn", "+nn" or "-nn"	*
"25.0 kHz", "12.5 kHz" or "20.0 kHz"	*
"OK" or "ERROR"	NA
"0" = FEC OFF	*
"1" = FEC ON	*

"OK" or "ERROR"	*
For example "0 ms" or "50 ms"	*
"OK" or "ERROR"	*
"-xxx dBm"	*
"0" = Repeater OFF "1" = Repeater ON	*
"OK" or "ERROR"	*
For example "50mW", "1000 mW" Apart from other compilations, VAR2 responds with the number of the active memory location and its value. For example, the response "3, 126" means that the memory location 3 is active and its value for the power level is 126.	*
"OK" / "ERROR"	*
"-nnn dBm", nnn is a decimal value of field strength between -80 dBm and -118 dBm. Value is available 7 s after reception, after that the response is "<-118 dBm". SATELLINE-3AS Epic returns the stronger value of two receivers.	*
"0" = Satel 3AS "1" = Option 1 (PacCrest 4-FSK) "2" = Option 2 (PacCrest GMSK) "3" = Option 3 (TrimTalk GMSK)	*
"OK" or "ERROR"	*
"-nnn dBm" (for example "-80 dBm" or "-112 dBm")	*
"OK" or "ERROR"	*
"OK" or "ERROR", then modem resets required blocks.	*
3AS-OEM11 specific - TX/RX LED outputs are forced G = green led on, red off R = red led on, green off O = normal mode This mode is not saved to eeprom by SI **> command	*
For example "-31", "-2", "7" or "No sensor" if not available	*
"OK" followed by RSSI info from remote modem	*
"0" = Transmitter tests are OFF "1" = Carrier test is ON "2" = Deviation test is ON	*

"OK" or "ERROR"	*
"OK" or "ERROR"	NA

*	*	*	*
NA	NA	NA	NA
NA	NA	NA	NA
NA	NA	NA	NA
*	*	*	*
*	*	*	*
NA	NA	NA	NA
*	*	*	*
NA	NA	NA	NA
*	*	*	*
*	*	*	*
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NA	NA	NA	NA
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*	*	*	*
NA	NA	NA	NA
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NA	NA	NA	NA
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NA	*	NA	NA

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