



## **Silex Technology America**

# **SX-550 CONSOLE COMMANDS**

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## REVISION HISTORY

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1.01	2007.06.06	L. Aydelotte	Added network disconnect timer
1.02	2007.09.05	L. Aydelotte	Added network reset function, extended disconnect timer function Added power control function Added device specific trap trigger definitions
1.03	2007.09.19	L. Aydelotte	Added SET PORT S1 CONSTR default value definition.
1.04	2007.11.29	L. Aydelotte	Added 38400 speed option to CONSOLE SPEED
1.05	2008.03.21	L. Aydelotte	Updated for new power level setting and POWER DELAY command.
1.06	2008.04.24	L. Aydelotte	Added SET/SHOW CONSOLE NOLOG command

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## 1.0 Introduction and command console access information

This document describes console commands that are unique to the Silex Technology SX-550 product. It also describes settings which are common to other products, but behave differently or have different default value(s) than other products. See the Silex console command reference for commands which are common to many products, and for a description of the available means to access the command console.

## 2.0 Network Commands

This group of commands configures the network operation on the SX-550.

### 2.1 SH NW DISCONN

Displays the current value of the network disconnection timer.

sample output:

```
Disconnect Timer: 5
```

### 2.2 SET NW DISCONN

Sets the period of the network link disconnection watchdog timer. In wireless infrastructure mode, this timer monitors the wireless link, and if the unit is not connected to an AP for the time specified, the unit is reset.

```
SET NW DISCONN nn
      n =    0           watchdog timer is disabled
          1-255       watchdog timer period in minutes
```

The factory default value is 5 minutes.

In V1.24 and later, this timer also controls a receive activity monitor when the wireless network link is connected. If no packets are received during the time specified, and the link remains up, the unit will reset at the end of the time period.

NOTE: In bridging mode, this timer is only active if the wireless interface is selected for configuration access.

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## 2.3 SET NW RESET

This command stops, and then restarts the wireless network interface. This will effectively disassociate the unit from an access point, if it is connected. If the unit is in wireless infrastructure mode, the unit will then scan and attempt to reconnect to a suitable access point, if one is available.

```
SET NW RESET
```

## 3.0 Power Configuration

### 3.1 SET POWER LEVEL

This commands sets the power control mode for the SX-550 module.

```
SET POWER LEVEL <power-level>
```

Where <power-level> is a numeric value as follows:

0	High	Control processor runs at maximum speed, Radio never sleeps
1	Medium	Control processor clock reduced to 125Mhz, radio sleeps 2.5 seconds after last activity if connected to AP
2	Low	Control processor clock reduced to 60Mhz. Radio sleeps 20 msec after last activity if connected to AP
3	Low-2	Control processor clock reduced to 60Mhz. Radio sleeps 20 msec after last activity SDRAM clock lowered to 100 Mhz.
4	CPU-low	Control processor clock reduced to 60Mhz Radio never sleeps

The default value is 0.

Note: In firmware version 1.26 and above, if the power level is set to a non-zero value, the special function of GPIO-4 is redefined to monitor the sleep mode of the processor.

### 3.2 SH POWER LEVEL

This commands shows the current power control mode for the SX-550 module.

```
Local> SH POWER LEVEL  
Power Level: high (0)
```

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### 3.3 SET POWER DELAY

This commands sets the power delay interval for the SX-550 module.

```
SET POWER DELAY <delay-in-msec>
```

Where <delay-in-msec> is a numeric value which indicates how many milliseconds the processor waits after the last I/O operation before it goes to sleep. The lower the value, the more aggressively the CPU sleeps, but the greater the response latency. A value of zero disables the timer, so that the CPU never sleeps. The maximum value is 1000 (1 minute).

The default value is 1000.

### 3.4 SH POWER DELAY

This commands shows the current power delay interval for the SX-550 module.

```
Local> SH POWER DELAY  
Delay before CPU sleep = 1000 msec
```

## 4.0 Serial Console Control Commands

This group of commands modifies the operation of the serial console port on the SX-550.

### 4.1 SH CONSOLE SPEED

Displays the configured baud rate for the serial console port.

sample output:

```
Console Speed: 19200 (0)
```

### 4.2 SET CONSOLE SPEED

Sets the baud rate for the serial console

```
SET CONSOLE SPEED n
      n =   19200 (or 0)      19200 baud
           38400             38400 baud
           115200 (or 1)    115200 baud
```

The factory default value is 115200 baud.

### 4.3 SH CONSOLE NOLOG

Displays the configured no logging flag value for the serial console port.

sample output:

```
Disabled
```

### 4.4 SET CONSOLE NOLOG

Sets the console no logging flag for the serial console. If disabled, normal informational messages are displayed on the serial console. If disabled, only responses to console commands will be displayed.

```
SET CONSOLE NOLOG [ EN | DIS ]
```

The factory default value is disabled.

### 4.5 SET PORT S1 CONSTR

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This command sets the console mode string for the unit. If the serial port is in Trap mode, then if the string defined by this command is seen in the serial port input stream, then the serial port will enter console mode. In this mode, data from the serial port is sent to an instance of the configuration console task, and output from the configuration task is sent to the serial port. This allows the data serial port to be used to configure the unit. If no string is defined, then this feature is disabled, and the data serial port cannot be used for configuration. The maximum length of the string is 31 bytes.

If non printing characters are desired in the string, then the value should be prefixed with “\x” and each byte should be defined with two hex characters. The binary equivalent of the two hex characters will be used when scanning the input for a match.

The value given does not take effect until the unit is reset. The default value of this is “+++” on the SX-550.

```
SET PORT S1 CONSTR
```

This version of the command clears the string definition.

```
SET PORT S1 CONSTR +++
```

This version of the commands sets the console mode string to “+++”.

## 5.0 Trap Configuration

Up to 8 separate traps can be configured. They are numbered from 1 to 8. This section describes the specific trigger conditions available for the SX-550.

### 5.1 SET IP TRAP n TRIGger

This command specifies the trigger conditions that will cause a trap to be sent.

```
SET IP TRAP n TRIG <trigger-mask>
```

<trigger-mask> is an integer in hex format representing a 32 bit mask as defined below. If the corresponding bit is 1, the trigger condition is enabled to cause the trap.

<i>Bit #</i>	<i>Hex Value</i>	<i>Trigger condition</i>	<i>Bit #</i>	<i>Hex Value</i>	<i>Trigger condition</i>
0	00000001	Serial Server: Match string 1	16	00010000	GPIO Trigger1: GPIO1 0 to 1
1	00000002	Serial Server: Match string 2	17	00020000	GPIO Trigger2: GPIO2 0 to 1
2	00000004	Serial Server: Match string 3	18	00040000	GPIO Trigger3: GPIO3 0 to 1
3	00000008	Serial Server: Match string 4	19	00080000	GPIO Trigger4: GPIO4 0 to 1
4	00000010	Serial Server: Match string 5	20	00100000	GPIO Trigger5: GPIO5 0 to 1
5	00000020	Serial Server: Match string 6	21	00200000	GPIO Trigger6: GPIO6 0 to 1
6	00000040	Serial Server: Match string 7	22	00400000	GPIO Trigger7: GPIO7 0 to 1
7	00000080	Serial Server: Match string 8	23	00800000	GPIO Trigger8: GPIO8 0 to 1
8	00000100	undefined	24	01000000	GPIO Trigger9: GPIO1 1 to 0
9	00000200	undefined	25	02000000	GPIO Trigger10: GPIO2 1 to 0
10	00000400	undefined	26	04000000	GPIO Trigger11: GPIO3 1 to 0
11	00000800	undefined	27	08000000	GPIO Trigger12: GPIO4 1 to 0
12	00001000	undefined	28	10000000	GPIO Trigger13: GPIO5 1 to 0
13	00002000	undefined	29	20000000	GPIO Trigger14: GPIO6 1 to 0
14	00004000	undefined	30	40000000	GPIO Trigger15: GPIO7 1 to 0
15	00008000	undefined	31	80000000	GPIO Trigger16: GPIO8 1 to 0

NOTE: even if the trigger bit is set by this command, no trap will be entered if the underlying trigger condition has not been configured.

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