



# **User Command Set Reference Manual**

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## COMMAND SYNTAX

This section covers the commands to control all system parameters available via the serial port or Telnet. The section is broken down into two subsections to cover the AP and SU individually. The structure of each subsection is as follows:

***command [option1/option2/...optionX] <variable>***

where:

***command*** is the actual syntax of the command

***option1, option2...optionX*** is the actual syntax of the option

***variable*** is an alpha or numerical variable within the specified valid range

**[ ]** Square brackets surrounding an option or variable indicate an optional entry.

**< >** V-brackets surrounding an option or variable indicate a required entry.

**/**Vertical slash indicates "or". Pick one of the options separated by the slash

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## 1. Command Name: *apsearch*

**Description:** This command allows an SU to find any Access5800 AP on a given set of channels and polarizations, with signal strength information attached.

**Syntax:** *apsearch <sec><ch#> v|h <ch #> v|h ...*

**<sec>** Time in seconds

**<ch#>** Channel number (1~30)

**v|h** polarization option (v for vertical; h for horizontal)

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	off	Serial/Ethernet	N/A

**Example:** *apsearch 30 1 v 1 h 2 v 2 h* (30 seconds search on channel 1v, 1h, 2v and 2h)

### Expected Output:

- 1) Max RSSI detected in dBm from all sources for each freq and polarization searched.
- 2) Average RSSI in dBm from all sources for each freq and pol searched.
- 3) The encoded baseid and apid information for each AP found. Reading from the left, the encoded baseid is located in the 1<sup>st</sup> and 2<sup>nd</sup> digits and the apid information is located in the 3<sup>rd</sup> and 4<sup>th</sup> digits. To decode the base id, subtract hex 80 from the 1<sup>st</sup> and 2<sup>nd</sup> digits and convert to decimal. To obtain the apid, simply convert the 3<sup>rd</sup> and 4<sup>th</sup> digits to decimal. For example, if the encoded data is 8512, the baseid is decimal 5, and the apid is decimal 18.
- 4) The number of good packets received from each AP found over the time period specified for each AP
- 5) The average RSSI for each AP found over the time period specified.

**Related Commands:** N/A

## 2. Command Name: *bcastsuimage <all/suid> <hw ver>*

**Description:** This command allows the AP to broadcast the SU software image with baud rate of 2.8KB/s for 15 minutes.

**Syntax:** *bcastsuimage <all/suid> <hw ver>*

**<main>:** SU main image

<fpga>: SU fpga image  
 <hw ver>: hardware version (0001)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *bcastimage <all/suid> 0001* (hardware version 1)

**Expected Output:** NULL

**Related Commands:** N/A

### 3. Command Name: *bcastsuimage stop*

**Description:** This command stops the regular broadcast.

**Syntax:** *bcastimage stop*

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *bcastimage stop*

**Expected Output:** NULL

**Related Commands:** N/A

### 4. Command Name: *bcastsuimage*

**Description:** This command displays the status of the image broadcast.

**Syntax:** *bcastusimage*

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *bcastsuimage*

**Expected Output:** Target (all or suid), hardware version, throughput, remained broadcast time in second,

**Related Commands:** N/A

### 5. Command Name: *bcastscant <all/suid>*

**Description:** This command broadcasts the new scan table (frequency and polarization) to ALL SU's in a sector, and writes them to non-volatile memory. The broadcast will last 60 minutes unless you terminate it by using command ***bcastscant stop***. To activate the change, you need to reboot the radio.

Note: Make sure that you make the changes on SU's first, then the AP.

**Syntax:** ***bcastscant <all|suid> <scan table>***

**<all>:** all SU's in a sector

**<suid>:** an individual SU with a specified SU identification (1-8190)

**<scan table>:** channel numbers and polarizations (i.e. ***1 h 2 h***)

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su	Serial/Ethernet	auto

**Example:** ***bcastscant all 1 h 2 h 3 h***

**Expected Output:** NULL

**Related Commands:** N/A

## 6. Command Name: ***bcastscant stop***

**Description:** This command allows the AP to stop the scan table broadcast operation.

**Syntax:** ***bcastscant stop***

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** ***bcastscant stop***

**Expected Output:** NULL

**Related Commands:** ***bcastscant <all>|<suid>, bcastscant***

## 7. Command Name: ***cf2cf***

**Description:** This command is used during site survey and screening prior to activation of an AP for general service to customers. It tests the 2 way radio link quality by sending continuous test packets out to a single

SU which must be running **cf2cf su** on the same channel with the same packet size specified.

The channel used for the test must be specified or the last valid channel will be used by default. The default frame size is 1760 bytes, but may be changed. If the frame size is changed, then the next time **cf2cf ap** is run, the packet size will remain the last specified size.

The test will run continuously until stopped and will display the results of the test as stated below under Expected Output.

**Syntax:** **cf2cf** <ap> / <su>

**ap:** start cf2cf at ap

**su:** start cf2cf at su

AP/SU	Opmode	Comm. Link	Update Flash
AP	off	Serial/Ethernet	N/A

**Example:** **cf2cf ap** (the launch of cf2cf at the AP site)

**Expected Output:**

- 1) Sequence number.
- 2) Number of packets received.
- 3) Number of good packets received.
- 4) Number of packets with header corrupted.
- 5) Number of payload packets corrupted.
- 6) Number of packets transmitted

**Related Commands:** **freq** <channel #> <polarization> to specify the channel and polarization you want to run **cf2cf** on.

## 8. Command Name: **dloadsufw** <main|fpga]

**Description:** This command loads the SU software images (main and fpga) from AP's TFTP buffer to RAM so that they are ready to be broadcasted to the SU's in the sector.

**Syntax:** **dloadsufw** <main|fpga>

<main>: SU main image

<fpga>: SU fpga image

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/off	Serial/Ethernet	N/A

**Example:** *dloadsufw fpga*

**Expected Output:**

.....

```
SU Main Image Checksum = 7BF805BD
SU FPGA Image Checksum = EB7C6118
```

```
>> SU Whole Image Checksum = 677466D5
```

**Related Commands:** N/A

## 9. Command Name: *freq*

**Description:** This command provides capability to turn on/off echo from the unit in hyperterminal or telnet session. **Please note** that you only need to turn the echo off (to eliminate double-character) when you use telnet on Windows XP or Linux workstation.

**Syntax:** *echo* [on|off]

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ALL	Serial/Ethernet	N/A

**Example:** *echo off*

**Expected Output:** N/A

**Related Commands:** N/A

## 10. Command Name: *freq*

**Description:** This command displays the current transmit/receive channel in terms of channel number, polarization, and frequency in MHz.

**Syntax:** *freq*

AP/SU	Opmode	Comm. Link	Update Flash
AP	ap	serial/ethernet	N/A

**Example:** *freq*

**Expected Output:** Channel number, polarization, and frequency in MHz.

**Related Commands:** N/A

### 11. Command Name: *freq scantable*

**Description:** This command displays the channel table in AP or SU in terms of channel number and polarization. There is only one entry in AP and possibly multiple entries in SU.

**Syntax:** *freq scantable*

AP/SU	Opmode	Comm. Link	Update Flash
AP/SU	ap/su/off	Serial/Ethernet	N/A

**Example:** *freq scantable*

**Expected Output:**

Channel number and polarization.

**Related Commands:** *freq writescan*

### 12. Command Name: *freq channeltable*

**Description:** This command displays the frequency assignment table. There are 30 memory locations that can store frequency information. The factory default is as follows:

Channel 1: 5736 MHz  
 Channel 2: 5756 MHz  
 Channel 3: 5776 MHz  
 Channel 4: 5796 MHz  
 Channel 5: 5816 MHz  
 Channel 6: 5836 MHz

**Syntax:** *freq channeltable*

AP/SU	Opmode	Comm. Link	Update Flash
AP	ap/su/off	Serial/Ethernet	N/A

**Example:** *freq channeltable*

**Expected Output:**

Channel number and its corresponding frequency.

**Related Commands:** N/A

**13. Command Name: *freq writechannel***

**Description:** This command assigns frequencies to channel numbers in FLASH memory. All frequencies are in MHz. **IMPORTANT:** This is an advanced feature that not needed for typical networks.

**Syntax:** *freq writechannel* [*<ch#><freq>*]...

*<ch#>*: channel number (1~31)  
*<freq>*: frequency in MHz (5736MHz~5836MHz)

AP/SU	Opmode	Comm. Link	Update Flash
AP/SU	ap/su/off	Serial/Ethernet	auto

**Example:** *freq writechannel 2 5756 4 5796* (assigns channel 2 to 5756MHz and channel 4 to 5796MHz)

**Expected Output:** Success

**Related Commands:** N/A

**14. Command Name: *freq writescan***

**Description:** This command writes channel number and polarization to the scan table. In the AP, there shall be only 1 entry in the table, while there might be multiple entries in the SU’s scan table. Reboot is needed to activate the new channel. If there are multiple entries in the table, the first channel will be used when the unit is powered up. If the SU can NOT associate with an AP on this channel, subsequent channels will be tried until the SU associates with the AP.

**Syntax:** *freq writescan* [*<ch#><h/v>*] (1 entry only for AP)  
*freq writescan* [*<ch#><h/v>*]... (1 or more entries for SU)

*<ch#>*: channel number (1~31)  
*<h/v>*: antenna polarization (h for horizontal and v for vertical)

AP/SU	Opmode	Comm. Link	Update Flash
AP/SU	ap/su/off	Serial/Ethernet	manual

**Example:** *freq writescan 2 v* (use channel 2 on vertical polarization at AP)

**Expected Output:** Success

**Related Commands:** *freq writechannel*, *updateflash systemsetting*

**15. Command Name: *opmode***

**Description:** This command changes the current operation mode from "off" to "ap" or "su".

**Syntax:** *opmode* <ap>/<su> [*y*]

**y:** This option is needed when the *defaultopmode* is off.

AP/SU	Opmode	Comm. Link	Update Flash
AP/SU	off	Serial/Ethernet	N/A

**Example:** *opmode ap* (turn on the AP)  
*opmode su* (turn on the SU)

**Expected Output:** Either the AP or the SU is turned on - start to send/receive data.

**Related Commands:** N/A

**16. Command Name: *\_password***

**Description:** This command allows you to change the login password.

**Syntax:** *\_password* <*new password*><*confirmed new password*>

<*new password*>: maximum 15 characters, alphanumeric with no spaces, and case sensitive

<*confirmed new password*>: maximum 15 characters, alphanumeric with no spaces, and case sensitive

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	auto

**Example:** *\_password cabxyz cabxyz*

**Expected Output:** NULL

**Related Commands:** N/A

**17. Command Name: *power***

**Description:** This command displays the current transmit RF power level from the antenna connector (SU) or delivered into the internal patch antenna (AP).

**Syntax:** *power*

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	N/A

**Example:** *power*

**Expected Output:** Power in dBm.

**Related Commands:** N/A

### 18. Command Name: *power set*

**Description:** This command sets AP transmit output power. SU's transmit output power is controlled by the AP. When the SU is just coming up, it will transmit in maximum power (18dBm). Then the AP will adjust SU's output power based on the setting of target RSSI.

**Syntax:** *power set <power>*

*<power>*: output power (-12dBm~+18dBm)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/su/off	Serial/Ethernet	manual

**Example:** *power set +15* (set output power to +15dBm)

**Expected Output:** NULL

**Related Commands:** N/A

### 19. Command Name: *reboot*

**Description:** This command will reload code and configuration from persistent memory to the unit.

**Syntax:** *reboot*

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	N/A

**Example:** *reboot*

**Expected Output:** NULL

**Related Commands:** N/A

## 20. Command Name: *remarks*

**Description:** This command provides the capability to document the radio. The maximum link for the remark is 28 characters including spaces and punctuations.

**Syntax:** *remarks*

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	N/A

**Example:** *remarks ABC customer*

**Expected Output:** N/A

**Related Commands:** N/A

## 21. Command Name: *restart*

**Description:** This command allows the AP to restart itself without the need of reloading the code. Before and after the restart, the unit will stay in the same operational mode, while the new configuration stored in non-volatile memory will be activated.

**Syntax:** *restart*

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	N/A

**Example:** *restart*

**Expected Output:** NULL

**Related Commands:** *reboot*

## 22. Command Name: *rfrxthreshold*

**Description:** This command specifies the lowest level of signal strength that the AP will process upon receiving a RF signal. This function is aimed to improve AP's resistance to interference from distant base stations or other radios using the same frequency.

Note: Raising the threshold will increase the interference immunity of the AP with the tradeoff of reducing the coverage radius.

**CAUTION: You MUST set this parameter first before making change on *rssitarget*. The *rssitarget* threshold must be greater than the *rfrxthreshold* by at least 5 dB for proper operation.**

**Syntax: *rfrxthreshold* < values >**

< **values** >: threshold values with the following options: off, -80, -75, -70, or -65dBm.

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	manual

**Example: *rfrxthreshold off*** (disable the threshold so that the AP will process any signal within its sensitivity level)

**Expected Output:** NULL

**Related Commands:** *set rssitarget*

### 23. Command Name: *rss* [*r*]

**Description:** This command displays received signal strength (rssi) on the current channel and polarization while the opmode is "su". If the *r* option is used the rssi value will be updated every second.

**Syntax: *rss* [*r*]**

*r*: Repeat the command continuously until "ENTER" key is pressed.

AP/SU	Opmode	Comm. Link	Update flash
SU	su	Serial/Ethernet	N/A

**Example: *rss r*** (*continuous rssi value every second until Enter key is pressed*).

**Expected Output:** Display signal strength from AP to SU (in dBm).

**Related Commands:** *rss* <*ch #*><*v/h*>

### 24. Command Name: *set apid*, *set suid*

**Description:** This command assigns an identification number to an AP or SU. The apid stored in an AP is used by external management software to uniquely identify an AP in a given basestation configuration.

**Syntax:** *set apid <apid>; set suid <suid>*

*<apid>*: ap identification number (1-255)

*<suid>*: su identification number (1-8190)

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	off	Serial/Ethernet	manual

**Example:** *set apid 5* (set ap id to 5)

**Expected Output:** NULL

**Related Commands:** N/A

## 25. Command Name: *set baseid*

**Description:** This command sets the base station id in the AP or SU. Generally used to identify a basestation, which is comprised of multiple APs. **The SU baseid must match the baseid stored in any AP that it may potentially communicate with.** For example, in a given sector two APs may split the total number of subscribers in that sector into two separate databases, one loaded into each AP. If one AP is taken offline, the other AP may temporarily have a new database loaded into it that has all the subscribers in it, including the ones from the AP that was taken offline.

In this case the baseid must be the same so that the subscribers can establish communications with the AP.

**Syntax:** *set baseid <baseid>*

*<baseid>*: base identification number (1-127)

AP/SU	Opmode	Comm. Link	Update flash
AP	off	Serial/Ethernet	manual

**Example:** *set baseid*

**Expected Output:** NULL

**Related Commands:** N/A

**26. Command Name: *set defaultopmode***

**Description:** This command sets the defaulted operational mode for both AP and SU upon powering up the unit.

**Syntax:** *set defaultopmode* <off|ap|su>

**off:** set defaulted operational mode to off

**ap:** set defaulted operational mode to ap

**su:** set defaulted operational mode to su

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	manual

**Example:** *set defaultopmode off* (the unit, either AP or SU will be in off mode—neither sending nor receiving data, upon powering up)

**Expected Output:** NULL

**Related Commands:** N/A

**27. Command Name: *set httpport***

**Description:** This command provides capability to change the port number for HTTP access.

**Syntax:** *set httpport* <port number> (default = 80)

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ALL	Serial/Ethernet	Manual

**Example:** *set httpport 100*

**Expected Output:** NULL

**Related Commands:** N/A

**28. Command Name: *set ip***

**Description:** This command sets the ip address of both AP and SU. It is a little bit tricky to set the IP address via telnet. Because once the IP address is modified, the telnet session will be terminated. Please follow the following steps to change the IP address.

0. telnet with current IP
1. run command *set ip*

2. you will lose the telnet session
3. telnet with new IP
4. run command ***updateflash systemsetting***

**Syntax:** *set ip <ip address>*

**<ip address>**: in spaced decimal form, such as xxx.xxx.xxx.xxx with each of the four address fields assigned as many as 255 vaules.

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	manual

**Example:** *set ip 192 168 0 232* (set unit IP, either AP or SU to 192.168.0.232)

**Expected Output:** NULL

**Related Commands:** N/A

## 29. Command Name: *set subnet*

**Description:** This command sets the subnet mask on the AP for SNMP trap configuration.

Note: This subject is no used for routing, but for SNMP management only.

**Syntax:** *set subnet <subnet mask>*

**<subnet mask>**: in spaced decimal form, such as xxx.xxx.xxx.xxx with each of the four address fields assigned as many as 255 vaules.

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/off	Serial/Ethernet	manual

**Example:** *set subnet 255.255.255.0* (set unit subnet mask, either AP or SU to 255.255.255.0)

**Expected Output:** NULL

**Related Commands:** N/A

## 30. Command Name: *set gateway*

**Description:** This command sets the default gateway on the AP for SNMP trap configuration.

Note: This gateway is not used for routing, but for SNMP management only.

**Syntax:** *set gateway <default gateway>*

**<default gateway>**: in spaced decimal form, such as xxx.xxx.xxx.xxx with each of the four address fields assigned as many as 255 vaules.

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	manual

**Example:** *set gateway 192.168.100.1* (set unit default gateway, either AP or SU to 255.255.255.0)

**Expected Output:** NULL

**Related Commands:** N/A

### 31. Command Name: *set mir*

**Description:** This command enables or disables the maximum information rate (MIR) threshold.

**Syntax:** *set mir [on|off]*

**on:** enable the MIR Threshold

**off:** disable the MIR Threshold

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/off	Serial/Ethernet	manual

**Example:** *set mir on* (enable the MIR threshold)

**Expected Output:** NULL

**Related Commands:** N/A

### 32. Command Name: *set mir threshold*

**Description:** This command sets the maximum data throughput or maximum information rate (MIR) threshold at the AP. This command is useful in optimizing bandwidth usage.

**Syntax:** *set mir threshold < value>*

**< value>:** threshold value in kbps (1000~9999)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/off	Serial/Ethernet	manual

**Example:** *set mir threshold 5000* (sets maximum data throughput to 5000kbps)

**Expected Output:** NULL

**Related Commands:** N/A

### 33. Command Name: *set rssitarget*

**Description:** This command provides the capability to set the target RSSI value on the AP which can be used to power level ALL SU's in a sector. When the *rfrxthreshold* is disabled, the setting of *rssitarget* shall be no less than -77dBm. When *rfrxthreshold* is enabled, the setting of *rssitarget* shall be 5dB greater than *rfrxthreshold*.

**Syntax:** *set rssitarget <value>*

**<value>:** target RSSI value in dBm

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/su/off	Serial/Ethernet	manual

**Example:** *set rssitarget -80*

**Expected Output:** NULL

**Related Commands:** *su powerleveling all, rfrxthreshold*

### 34. Command Name: *set servicerange*

**Description:** This command sets (with argument) or displays (no argument) the service range in miles, with maximum of 30 miles. This parameter is to aid the calculation of waiting time for polling response.

**Syntax:** *set servicerange [value]*

**<value>:** range in miles (0~30)

AP/SU	Opmode	Comm. Link	Update flash
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AP	ap/off	Serial/Ethernet	manual
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**Example:** *set servicerange 10*

**Expected Output:** NULL

**Related Commands:** N/A

### 35. Command Name: *ssrssi <ch #> <v|h>*

**Description:** This command is one of the site survey tools for AP/SU to do antenna alignment, SU particularly. It provides a real-time continuous RSSI reading on the channel and polarization specified, as the antenna moved.

**Syntax:** *ssrssi <ch #> <v|h>*

*<ch #>*: Channel number

*<v|h>*: Polarization

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	off	Serial/Ethernet	N/A

**Example:** *ssrssi 1 h*

**Expected Output:** NULL

**Related Commands:** N/A

### 36. Command Name: *su*

**Description:** This command displays the smart polling stage that all SU's are in.

**Syntax:** *su*

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *su*

**Expected Output:** all SU's with associated polling stage

**Related Commands:** N/A

**37. Command Name: *su <all/suid>***

**Description:** This command allows the AP to retrieve and display the following SU attributes for an individual SU or all SU's in a sector:

- 1) SU priority level (*r* for regular, *p* for priority)
- 2) The measured distance in miles from AP to SU
- 3) CIR/MIR settings
- 4) Current bandwidth usage in kbps (updated each second)
- 5) Current RSSI level at AP
- 6) Authentication status (Y or N)

**Syntax:** *su <all/suid>*

*<all>*: all SU's in a sector

*<suid>*: an individual SU with a specified SU identification (1~8190)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *su 4*

**Expected Output:** all parameters mentioned above for an SU with suid of 4.

**Related Commands:** N/A

**38. Command Name: *su info***

**Description:** This command will request and display the following from the SU:

- 1) Hardware version
- 2) Firmware date code
- 3) FPGA date code
- 4) Image checksum
- 5) Device ID
- 6) Scan sequence table
- 7) Packet filter on/off
- 8) Auto scan ap on/off
- 9) Tcp/IP for AP on/off
- 10) Httpd on/off
- 11) Remarks

**Syntax:** *su info <suid>*

**<suid>**: SU identification (1~8190)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	manual

**Example:** *su info 1*

**Expected Output:** value associated with parameters specified above

**Related Commands:** N/A

### 39. Command Name: *su ip*

**Description:** This command provides capability for the AP to change SU's IP address remotely.

**Syntax:** *su ip <suid> <ip addr>*

**<suid>**: SU ID

**<ip address>**: IP address

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	Auto

**Example:** *su ip 1000 192.168.100.100*

**Expected Output:** NULL

**Related Commands:** *set ip*

### 40. Command Name: *su live*

**Description:** This command displays all SUs which are currently associated with no other details.

**Syntax:** *su live*

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *su live*

**Expected Output:** All associated SU's displayed along with their SU ID's.

**Related Commands:** *su, su priority, su poweroff*

**41. Command Name: *su password***

**Description:** This command provides capability for the AP to change SU(s) password remotely.

**Syntax:** `su password <all|suid> <new pwd> <confirmed pwd>`

**<all|suid>:** All SU(s) in the sector or a specific SU  
**<new pwd>:** New password (max. 15 characters)  
**<confirmed pwd>:** New password (max. 15 characters)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	Auto

**Example:** `su password all trango trango`

**Expected Output:** NULL

**Related Commands:** `_password`

**42. Command Name: *su ping***

**Description:** This command pings an individual SU via the RF link and displays its current distance from AP and RSSI information. This is the signal strength of the SU at the AP. This command does not ping the Ethernet port of the SU. It is used to verify that an SU radio section is responding. The SU must have its opmode set to "SU".

**Syntax:** `su ping <suid> | <all>`

**<suid>:** SU identification (1~8190)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** `su ping`

**Expected Output:** there are 10 pings are sent to the SU and the average, minimum and maximum values are displayed.

**Related Commands:** `su info, su status, su powerleveling`

**43. Command Name: *su powerleveling***

**Description:** This command will level a specific SU transmit power until it matches the target RSSI as specified in the *set rssidtarget* command. This will recalibrate the SU transmit level.

**Syntax:** *su powerleveling <suid>*

**<suid>:** SU identification (1~8190)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *su powerleveling 4*

**Expected Output:** NULL

**Related Commands:** *set rssidtarget*

#### 44. Command Name: *su poweroff*

**Description:** This command will display all suid numbers for SUs which are in the poweroff association group.

**Syntax:** *su poweroff*

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *su poweroff*

**Expected Output:**

**Related Commands:** *su, su priority, su live*

#### 45. Command Name: *su priority*

**Description:** This command will display all suid numbers for SUs which are in the priority association group.

**Syntax:** *su priority*

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *su priority*

**Expected Output:**

**Related Commands:** *su*, *su live*, *su poweroff*, *su priority*

#### 46. Command Name: *su reboot*

**Description:** This command allows an AP to reboot SU.

**Syntax:** *su reboot* <*suid*> | <*all*>

<*suid*>: SU identification (1~8190)

<*all*>: all SU's

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	manual

**Example:** *su reboot 4* (reboot SU 4)

**Expected Output:** NULL

**Related Commands:** *su restart*

#### 47. Command Name: *su restart*

**Description:** This command allows the AP to restart SU(s) without the need of reloading the code. Before and after the restart, the unit(s) will stay in the same operational mode, while new configurable stored in persistent memory will be activated.

**Syntax:** *su restart* <*all*> | <*suid*>

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *su restart all*  
Restart all SU(s) in a sector.

**Expected Output:** NULL

**Related Commands:** *su reboot*

#### 48. Command Name: *su status*

**Description:** This command requests the current status of an associated SU by suid number and includes the following information:

- 1) Current time mark

- 2) RF payload packet (KB) received by the SU
- 3) RF payload packet (KB) transmitted by the SU
- 4) Ethernet payload packet (KB) received by the SU
- 5) Ethernet payload packet (KB) transmitted by the SU
- 6) RSSI(AP->SU) Signal strength read at SU
- 7) RF transmit power output (dBm)
- 8) Temperature in Celcius

Please note that all these values will be refreshed with the frequency of 1 minute. This command shows the snapshot of all these values when the function is called, within a particular minute.

**Syntax:** *su status <suId>*

**<suId>:** SU identification (1~8190)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** *su status 4*

**Expected Output:** value of parameters specified above

**Related Commands:** *su info*

#### 49. Command Name: *su sw*

**Description:** This command sets the SU's switch # on or off.

**Syntax:** *su sw <suId><sw#><on/off>*

**<suId>:** SU identification (1~8190)

**0:** Broadcast packet filter.

**1:** Automatically scan AP per writescan table (SU only)

**2:** Activate the SU TCP/IP service through AP (SU only)

**3:** Activate SU to SU (AP only)

**4:** Broadcast time stamp to SU (AP only)

**5:** Activate HTTP

**on:** enable

**off:** disable

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	auto

**Example:** *su sw <suId><sw#><on/off>*

**Expected Output:**

**Related Commands:** N/A

**50. Command Name: *su sw all***

**Description:** This command provides the capability for AP to broadcast switch setting to the entire sector served by the AP.

**Syntax:** `su sw all <switch #> <on/off>`

**<switch #>:** Switch number  
**<on/off>:** On/off of the switch

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	Auto

**Example:** `su sw all 2 off`

**Expected Output:** NULL

**Related Commands:** `su sw suid`

**51. Command Name: *su testrflink***

**Description:** This command test the link between AP and SU(s) in the sector.

**Syntax:** `su testrflink <suid> [r]`  
`su testrflink <all> [r]`  
**<suid>:** SU identification (1~8190)  
**<all>:** all SU's in the sector  
**[r]:** repeat the command until space key is pressed

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	manual

**Example:** `su testrflink 4 r`  
 Test the RF link at SU 4 continuously.

**Expected Output:** # of packets sent out from an AP, and # of packets received from SU(s).

**Related Commands:** N/A

**52. Command Name: *su testrflink aptx***

**Description:** This command provides capability for the AP to specify number of packets sent out in 1 second during the link test.

**Syntax:** `su testrflink aptx <value>`

**<value>:** The number of packets [20,100]

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	N/A

**Example:** `su testrflink aptx 100`

**Expected Output:** AP TX [100] AP RX [100] SU RX [100]

**Related Commands:** `su testrflink`

**53. Command Name: *sudb dload***

**Description:** This command downloads and interprets the SU database file from the tftpd buffer into volatile memory (non-permanent).

**Syntax:** `sudb dload`

AP/SU	Opmode	Comm. Link	Update flash
AP	off	Serial/Ethernet	manual

**Example:** `sudb dload`

**Expected Output:** NULL

**Related Commands:** `updateflash sudb, sudb view`

**54. Command Name: *sudb view***

**Description:** This command displays the following items in the SU database for all suid numbers:

- 1) Attribute (priority=0005, regular user =0001)
- 2) CIR in kbps
- 3) MIR in kbps
- 4) MAC address in hex (6 octets)

**Syntax:** `sudb view`

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/off	Serial/Ethernet	N/A

**Example:** *sudb view*

**Expected Output:** parameters specified above

**Related Commands:** *sudb add, sudb delete, sudb modify*

**55. Command Name:** *sudb add*

**Description:** This command adds a new entry to the SU database. For each SU entered, the following information must be specified:

- 1) The suid number
- 2) Attribute (pr=priority, reg=regular user)
- 3) CIR in kbps
- 4) MIR in kbps
- 5) Device ID (MAC address in hex - 6 octets)

**Syntax:** *sudb add <suid>[pr|reg]<cir><mir><device id>*

**<suid>:** SU identification (1~8190)  
**pr:** priority user  
**reg:** regular user  
**<cir>:** confirmed information rate (0~9999)  
**<mir>:** maximum information rate (0~9999)  
**<device id>:** xx xx xx xx xx xx in hexadecimal

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/off	Serial/Ethernet	manual

**Example:** *sudb add 4 pr 9999 9999 f3 3c 50 67 89 d4*

**Expected Output:** NULL

**Related Commands:** *sudb view, sudb add, sudb delete, sudb modify, updateflash sudb*

**56. Command Name:** *sudb delete*

**Description:** This command removes an SU entry from the subscriber database. The SU is specified by its suid number.

**Syntax:** *sudb delete <suid>*

**<suid>**: subscriber ID (1~8190)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/off	Serial/Ethernet	manual

**Example:** *sudb delete 4* (remove SU 4 from the subscriber database)

**Expected Output:** NULL

**Related Commands:** *sudb view, sudb add, sudb modify, updateflash sudb*

**57. Command Name: *sudb modify***

**Description:** This command modifies CIR, MIR, and group settings for a single suid entry. SUs in the same group can communicate with each other except group 0.

**Syntax:** *sudb modify <suid> [cir|mir|su2su]> <throughput|group>*

**<suid>**: subscriber ID (1~8190)

**[cir]**: committed information rate in kbps (0 to 9999)

**[mir]**: maximum information rate

**[su2su]**: subscriber to subscriber

**<throughput|group>**: committed/maximum information rate in kbps (0 to 9999) or group 0-9,A-F (use with **su2su**)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap/off	Serial/Ethernet	manual

**Example 1:** *sudb modify 4 cir 9999* (set SU4 CIR to 9999kbps)

**Example 2:** *sudb modify 34 su2su 3* (assign su id 34 to group 3)

**Expected Output:** NULL

**Related Commands:** *sudb view, sudb add, sudb delete, updateflash sudb*

**58. Command Name: *sulog***

**Description:** This command displays the following statistics for ALL SU's in a sector served by the AP.

- 1) Current time mark (ms)
- 2) RF payload packet (KB) received by the SU
- 3) RF payload packet (KB) transmitted by the SU
- 4) Ethernet payload packet (KB) received by the SU
- 5) Ethernet payload packet (KB) transmitted by the SU
- 6) RSSI(AP->SU)
- 7) RF transmit power output (dBm)
- 8) Temperature

Please note that all these values will be refreshed with the frequency of 10 minute. This command shows the snapshot of all these values when the function is called, within a particular 10 minute.

**Syntax:** *sulog*

< **value**>: threshold value in kbps (1-18)

AP/SU	Opmode	Comm. Link	Update flash
AP	ap	Serial/Ethernet	manual

**Example:** *sulog*

**Expected Output:** value of parameters specified above

**Related Commands:** *log*

## 59. Command Name: *survey*

**Description:** This command gives an RF spectrum analysis of the entire band (5725MHz~5850MHz) by frequency and antenna polarization.

**Syntax:** *survey* <**time**> <**h/v**>

<**time**>: duration of the survey in second (16-4294967295)

AP/SU	Opmode	Comm. Link	Update flash
AP	off	Serial/Ethernet	manual

**Example:** *survey 30 h* (Run survey for 30 seconds on horizontal polarization)

**Expected Output:** The average and peak RSSI is displayed for each valid channel and polarization.

**Related Commands:** N/A

**60. Command Name:** *sw <0/1/2/3/4/5>*

**Description:** This command sets or displays the switch settings (on or off) for the AP or SU. The switches define the following parameters:

**Syntax:** *sw <0/1/2/3/4/5> [on/off]*

- 0:** Broadcast packet filter.
- 1:** Automatically scan AP per writescan table (SU only)
- 2:** Activate the SU TCP/IP service through AP (SU only)
- 3:** Activate SU to SU (AP only)
- 4:** Broadcast time stamp to SU (AP only)
- 5:** Activate HTTP (AP only)
- on:** enable
- off:** disable

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	manual

**Example:** *sw 0 on* (enable broadcast packet filter)

**Expected Output:** NULL

**Related Commands:** N/A

**61. Command Name:** *sysinfo*

**Description:** This command displays the AP system information:

- 1) Firmware version
- 2) Main Image Checksum
- 3) SU Image Checksum (AP only)
- 4) Device ID (MAC address - 6 octets)
- 5) Opmode
- 6) Default opmode
- 7) Opmode start time
- 8) Service range (AP only)
- 9) IP Address
- 10) Telnetd status
- 11) TFTPd status
- 12) File name in TFTPd buffer (for SU only displayed if SW 2 is "on")
- 13) File Length in TFTPd buffer if TFTPd is on (for SU only displayed if SW 2 is "on")

- 14) MIR Threshold on or off (AP only)
- 15) MIR Threshold in kbps (AP only)
- 16) Traffic - current, updated once per second (AP only)
- 17) Max Traffic - Peak traffic since power-on (AP only)
- 18) Current RF Channel and polarization
- 19) RF receive threshold (AP only)
- 20) Current RF transmit power
- 21) Channel Table
- 22) Channel Scan Sequence (SU only)
- 23) Broadcast packet status (blocked or not blocked)
- 24) Auto scanning status (on or off, applies to SU only)
- 25) TCP/IP service status for AP (on or off, applies to SU only)
- 26) Remarks text string

**Syntax: *sysinfo***

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	N/A

**Example: *sysinfo***

**Expected Output:** parameters listed above

**Related Commands:** N/A

**62. Command Name: *tftpd***

**Description:** This command displays and enables or disables the tftp (trivial file transfer protocol) server. It is recommended that this server be left off unless the AP or SU firmware in FLASH memory is being uploaded. After the firmware has been uploaded, tftpd should be turned off. The filename and file length in bytes will be displayed when tftpd is enabled.

**Syntax: *tftpd [on|off]***

***no option:*** display tftp status

***on:*** enable tftp (trivial file transfer protocol)

***off:*** enable tftp

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	N/A

**Example: *tftpd on***

**Expected Output:** NULL

Related Commands: N/A

### 63. Command Name: *updateflash*

**Description:** This command writes a downloaded software image to persistent memory.

Note: all software images must be uploaded into the tftpd buffer using tftp prior to using this command.

**Syntax:** *updateflash* <*mainimage* | *fpgaimage* | *sumainimage* | *sufpgaimage*>

<*mainimage*>: write AP main software to persistent memory  
 <*fpgaimage*>: write AP FPGA software to persistent memory  
 <*sumainimage*>: write SU main software to persistent memory  
 <*sufpgaimage*>: write SU FPGA software to persistent memory

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	Yes

**Example:** *updateflash mainimage*

**Expected Output:** *updateflash systemsetting*

Related Commands: N/A

### 64. Command Name: *updateflash systemsetting*

**Description:** This command writes the current configuration variables into the flash memory in the system configuration section. **IMPORTANT: This command saves all local settings and should be done after any changes are made.**

**Syntax:** *updateflash systemsetting*

AP/SU	Opmode	Comm. Link	Updated flash
AP/SU	ap/su/off	Serial/Ethernet	Yes

**Example:** *updateflash systemsetting*

**Expected Output:** NULL

Related Commands: N/A

**65. Command Name: *updateflash sudb***

**Description:** This command writes the current subscriber database into FLASH memory to make the changes permanent.

**Syntax:** *updateflash sudb*

AP/SU	Opmode	Comm. Link	Updated flash
AP	ap/off	Serial/Ethernet	Yes

**Example:** *updateflash sudb*

**Expected Output:** NULL

**Related Commands:** *sudb view*

**66. Command Name: *ver***

**Description:** This command displays the following firmware information:

- 1) System firmware version number and date code
- 2) Main program firmware version
- 3) FPGA program version
- 4) Main image checksum
- 5) SU image checksum (AP only)

**Syntax:** *ver*

AP/SU	Opmode	Comm. Link	Update flash
AP/SU	ap/su/off	Serial/Ethernet	N/A

**Example:** *ver*

**Expected Output:** parameters shown above

**Related Commands:** *sysinfo*