



Firmware Release Note

ZyXEL G-560

Release V1.00(ZE.4)C0

Date: **October 04, 2005**

ZyXEL G-560 Standard Version release V1.00(ZE.4)C0 Release Note

File Name:

G560 V1.00(ZE.4)C0.bin (used by Web F/W upgrade)
G560.img (used by TFTP F/W upgrade)
Htmfile (the same as G560.img)

Supported Platforms:

ZyXEL G-560 (Rev.2)

Software Base Versions:

TI APDK 6.0

Notes:

1. F/W upgrade/downgrade procedure :
Upgrade to ZE.4 from ZE.1 or ZE.2
V1.00(ZE.1)C0.bin --> V1.00(ZE.2)C0.bin --> V1.00(ZE.3)C0.bin --> V1.00(ZE.4)C0.rom
Downgrade from ZE.4 to ZE.1 or ZE.2
V1.00(ZE.4)C0.bin --> V1.00(ZE.3)C0.rom --> V1.00(ZE.2)C0.bin --> V1.00(ZE.1)C0.bin
2. This version supports downgrade firmware version to V1.00(ZE.3)xxx feature.
3. This version supports WDS (wireless distribution system), WPA2 (WiFi Protected Access 2), WPA2-PSK and WPA | WPA2-mixed features.
4. This version also supports WMM/QoS (Wireless Multimedia) feature.
5. It also supports 7 languages Web UI (Traditional Chinese, English, French, Spanish, Italian, Germany and Russian) for above features.
6. This version supports TI' s dynamic configuration (DUT would not reboot after applying setting, except Change IP address, Reset-2-Factory, Firmware upgrade, Upgrade configuration...)
7. CLI command sets are different between TI AP-DK 5.2.2.22 (ZyXEL G-560) and TI AP-DK 6.0 (ZyXEL G-560 Rev.2)

Known Issues:

1. Under 802.1x security mode, WLAN station(s) cannot get IP via DHCP protocol successfully.
[P.S.] All broadcast packet(s) from AP to WLAN cannot be received correctly...
2. In "Access Point + Bridge" mode (WDS), it does not support loop network topology.
[P.S.] For getting acceptable Tx/Rx performance, we suggest 5 pcs of WDS link at most.
3. If both DUT and WLAN station(s) enable TI proprietary G+ function, the Tx (DUT→WLAN Station) throughput is not good, but Rx (WLAN station→DUT) throughput is Ok!
4. If the length of DUT' s SSID is more than 23 characters, then... after finishing O.T.I.S.T. process, WLAN station cannot associate to DUT successfully.
[P.S.] That' s because the lack of ZyXEL O.T.I.S.T. specification!
5. Under bellow network topology and security configuration:
a) WinXP ServicePack2 (Windows Zero Config) ↔ G-560 ↔ G2000Plus (PEAP server)
b) WLAN station: 802.1X-PEAP or WPA-PEAP
c) G-560: 802.1X or WPA
WLAN station(s) cannot certificate successfully!

[P.S.] It's Ok if WLAN station(s) use **Odyssey 3.0** client.

CI Command List:

Main Features:

Release History:

V1.00(ZE.4)C0:

1. [bug fixed]
Sympton: The information note(s) of "Access Point + Bridge" page is not correct!!
Condition: 1) Settings->Wireless (Access Point + Bridge) page
2) Scroll "Access Point + Bridge" page down and check its information note.
2. [bug fixed]
Sympton: If invoke O.T.I.S.T. from Web GUI, then it would pop-up "OTIST in progress" warning message on Web GUI after finishing O.T.I.S.T. process.
Condition: 1) Web GUI: Settings->Wireless->OTIST. Click "Start" button to initiate O.T.I.S.T. process and wait for about 3 minutes
3. [bug fixed]
Sympton: When enabling QoS/WMM function on Web GUI, DUT's Beacon should contain WMM information in Information Element fields.
Condition: 1) Settings->Wireless->Wireless Settings. Check QoS/WMM checkbox and then click "Apply" button.
2) Start Sniffer/Airopeek/Ethereal tools to capture DUT's Beacon frames and extract its content.
4. [bug fixed]
Sympton: The Help file of "Access Point + Bridge" mode is not correct!!
Condition: 1) Web GUI: Settings->Wireless (Access Point + Bridge). Click Help icon at the top right corner of windows.
2) Check if Help file (Access Point + Bridge) is correct?
5. [bug fixed]
Sympton: Although configuring 2 DUTs (DUT-1 and DUT-2) to "Access Point + Bridge" mode, and input correct remote MAC(s), but WLAN station(s) that associated to different DUTs cannot ping each other successfully!!
Condition: 1) Web GUI: Settings->Wireless (Access Point + Bridge). Input remote MAC(s) and click "Apply" button to apply setting.
2) 2 laptop(s) with PCMCIA WLAN card and associate to different DUTs
3) Open DOS prompt window in Laptop-1 and ping Laptop-2 via WDS link (ie: Laptop-1 → DUT-1 → DUT-2 → Laptop-2). Check if it work successfully?
6. [bug fixed]
Sympton: If both DUT and WLAN station(**G-162, v2.0.0.6**) enable TI proprietary G+ function, the Tx (DUT→WLAN Station) throughput is not good, but Rx (WLAN station→DUT) throughput is Ok
Condition: 1) Web UI: Settings->Wireless, select "G+" and apply it.
2) G-162 Utility: Select transfer rate: "G+/125Mbps" and apply it.
3) Use NetIQ Chariot to measure WLAN Tx and Rx throughput. It should above 27Mbps.

V1.00(ZE.4)B1|2005/09/09:

7. [Enhancement]

This version can be downgraded to previous F/W version (V1.00(ZE.3)xxx) directly from Web UI using [g560 V1.00\(ZE.3\)B1_2005.09.09 trace32.rom!](#)

8. [Enhancement]

Add **【WPA | WPA2 mixed】** and **【WPA-PSK | WPA2-PSK mixed】** features to ZyXEL G-560 that based on TI AP-DK 6.0 (both WPA and WPA2 STAs can associate to DUT.)

9. [bug fixed]

Sympton: After configuring wireless NIC via OTIST function, the OTIST LED should light On. But, it does not light On!!

Condition: 1a) Settings->Wireless->OTIST. Press "Start" button to invoke and then wait it to finish...
1b) Press "Reset" button in rear panel for 1-3 seconds and then release to invoke OTIST function, and then wait it to finish...

10. [bug fixed]

Sympton: When using passphrase to generate WEP key(s) on Web GUI, it cannot accept "space" between characters (ex: "I am Jacky").

Condition: 1) Settings->Wireless->Security (WEP 64/128/256). Input "I am Jacky" in passphrase field and click "generate" to generate WEP key1... key4

11. [bug fixed]

Sympton: When enabling QoS/WMM function on Web GUI, DUT's Beacon should contain WMM information in Information Element fields.

Condition: 1) Settings->Wireless->Wireless Settings. Check QoS/WMM checkbox and then click "Apply" button.

2) Start Sniffer/Airopeek/Ethereal tools to capture DUT's Beacon frames and extract its content.

12. [bug fixed]

Sympton: The error message of WEP passphrase function is different between Wireless Security and SetupWizard Web GUI.

Condition: 1a) Web GUI: Settings->Wireless->Security. Select WEP item, enter "I am Jacky" in passphrase field and then click "Generate" button.

1b) Web GUI: SetupWizard->Step3 (security). Select WEP item, enter "I am Jacky" in passphrase field and then click "Generate" button.

13. [bug fixed]

Sympton: The WEP Encryption field would show empty while switching security mode from None to WEP. So that, if user enter WEP key(s) into Key field and click "Next" button to finish SetupWizard, it would cause STA cannot associate to DUT with the same WEP key.

Condition: 1) Web GUI: Settings->Management->Configuration File (Reset Factory Default field). Click "Apply" button to do Reset-2-Default.

2) Web GUI: SetupWizard->Step3 (security). Select WEP item from drop-down menu, then check 64-Bit is shown?

3) Enter WEP key(s) and finish SetupWizard, then try to associate to DUT with the same WEP key by STA.

14. [bug fixed]

Sympton: Configure DUT as WPA-PSK security mode and assign a specific pre-shared key. After finishing OTIST function, STA: G220F cannot associate to DUT under Win2000/XP. The same problem while using WEP-64/128/256 bits security mode.

Condition: 1) Web GUI: Settings->Wireless->Security. Select WPA-PSK item from drop-down menu, enter pre-shared key greater than 8 bytes and click "Apply" button.

- 2) Web GUI: Settings->Wireless->OTIST. Uncheck generate WPA-PSK automatic checkbox and click "Start" button to begin OTIST function (about 180 seconds.)
- 3) Start OTIST function of STA: G220F utility to communicate with DUT.
- 4) Check if G220F associate to DUT successfully after waiting 180 seconds (OTIST finished.)

15. [bug fixed]

Sympton: Configure DUT as WPA-PSK security mode and assign a specific pre-shared key. After finishing OTIST function, STA: G360 cannot associate to DUT under Win2000/XP. The same problem while using WEP-64/128/256 bits security mode.

Condition: 1) Web GUI: Settings->Wireless->Security. Select WPA-PSK item from drop-down menu, enter pre-shared key greater than 8 bytes and click "Apply" button.

- 2) Web GUI: Settings->Wireless->OTIST. Uncheck generate WPA-PSK automatic checkbox and click "Start" button to begin OTIST function (about 180 seconds.)
- 3) Start OTIST function of STA: G360 utility to communicate with DUT.
- 4) Check if G360 associate to DUT successfully after waiting 180 seconds (OTIST finished.)

16. [bug fixed]

Sympton: Configure DUT to 802.1X security mode with RADIUS IP/Mask/Gateway, Shared Secret and apply it. While STA has associated to DUT and try to get IP via DHCP protocol, it would be failed in Windows 2000 environment.

Condition: 1) Web GUI: Settings->Wireless->Security (802.1X mode). Enter RADIUS IP/Mask/Gateway, Shared Secret and click "Apply" button.

- 2) Configure STA to "Get IP automatically" and try to associate to DUT using the same security setting. Check if STA get IP from DHCP Server successfully?

17. [bug fixed]

Sympton: After configuring DUT's IP, Mask, and Gateway (192.168.1.100) in SetupWizard successfully, Web GUI: Status shows 0.0.0.0 (it's must be wrong!)

Condition: 1) Web GUI: SetupWizard->Step1 (Static-IP). Enter IP, Mask and Gateway (192.168.1.100) into related fields and click "Next" button to finish SetupWizard.

- 2) Check if the Geteway field in Web GUI: Status show correctly (192.168.1.100)?

V1.00(ZE.4)B1|2005/07/21:

18. [Feature Change]

The latest version (V1.00(ZE.3)B3 | 2005.07/21) cannot be upgraded from previous F/W directly from Web UI!

19. [Enhancement]

Add WDS bridge/repeater feature to ZyXEL G-560 that based on TI AP-DK 6.0 WDS Crude mode. User can add 4 WDS bridge/repeater(s) at most for data communication...

20. [Enhancement]

Add WPA2 and WPA2-PSK features to ZyXEL G-560 that based on TI AP-DK 6.0 (using AES for 802.11 data encryption instead of TKIP.)

V1.00(ZE.2)C0:

Convert version string from "1.00(ZE.2)B1 | 2005/02/18" to "V1.00(ZE.2)C0"

V1.00(ZE.2)B1|2005/02/18:

21. [bug fixed]

Sympton: DHCP (client) packets: Option 12 field (host name) of DHCP Discovery/Request packets is not G-560's "Device Name".

Condition: 1) Settings->System->System Settings or Setup Wizard->Step1 (IP address assignment). Change G-560's IP setting to DHCP and then press "Apply" button.

2) Use Sniffer/Ethereal tools to capture LAN packets (BOOTP/DHCP protocol), extract packet and see option-12's content.

22. [bug fixed]

Sympton: G-560 cannot save DHCP setting after modifying and pressing "Apply" button on Web UI, but static-IP can.

Condition: 1) Settings->System->System Settings or Setup Wizard->Step1 (IP address assignment).

2) Change G-560's IP setting to Static-IP, assign IP/NetMask/Gateway and then press "Apply" button.

3) Change G-560's IP setting to DHCP and then press "Apply" button.

4) After Web page refreshed, G-560's IP setting doesn't change (It still shows Static-IP setting.)

23. [bug fixed]

Sympton: G-560 cannot change WLAN intra-BSS traffic setting after modifying and pressing "Apply" button on Web UI.

Condition: 1) Settings->Wireless. Check G-560's WLAN intra-BSS traffic setting and then press "Apply" button.

2) Uncheck G-560's WLAN intra-BSS traffic setting and then press "Apply" button.

3) After Web page refreshed, G-560's WLAN intra-BSS traffic setting still checked (It doesn't change.)

24. [bug fixed]

Sympton: G-560 cannot change WLAN max client limitation setting after modifying and pressing "Apply" button on Web UI.

Condition: 1) Setting->Wireless. Check G-560's WLAN max client limitation setting and then press "Apply" button.

2) Uncheck G-560's WLAN max client limitation setting and then press "Apply" button.

3) After Web page refreshed, G-560's WLAN max client limitation setting still checked (it doesn't change)

V1.00(ZE.1)C0:

Convert version string from "1.00(ZE.1)B4 | 2004/12/14" to "V1.00(ZE.1)C0"

1.00(ZE.1)B4|2004/12/14:

1. [bug fixed]

Sympton: IP/Netmask/Gateway textboxes cannot use dot/Tab key to jump to next field quickly and correctly.

Condition: 1). Settings->System->System Settings. Click one of these textbox fields, input values and press dot/Tab key, it may not jump to next textbox field correctly.

2. [bug fixed]

Sympton: Passphrase function always generates the forth WEP key of 64/128/256-bit WEP to "0000... 0"

Condition: 1). Settings->Wireless->Security. Set wireless security to WEP (64/128/256-bit).

- 2). Enter printable string in passphrase textbox, click passphrase button to generate 4 keys.
- 3). Click apply button (wait for AP reboot), and then use CLI to see its setting:
MAIN->privacy->showdefault.

3. [bug fixed]

Sympton: OTIST LED cannot light ON after finishing OTIST handshaking.

Condition: 1) Invoke OTIST function via RESET button (h/w) or Web (s/w).

2). After finishing OTIST handshaking, OTIST LED in front panel won't light ON.

1.00(ZE.1)B3|2004/12/06:

1. [feature changed]

128-bit WEP Passphrase function would generate 1 key and set it to all 4 keys (compatible with other ZyXEL wireless products)

2. [feature changed]

Association list page should includes associated date/time.

3. [feature changed]

Add Russian language Web UI into G-560.

4. [feature changed]

Add ZyXEL specific O.T.I.S.T. (one-touch intelligent security technology) multi-language help Web pages into G-560.

5. [bug fixed]

Sympton: While O.T.I.S.T. is in progress, DUT's Web UI can also apply new settings.

Condition:

6. [bug fixed]

Sympton: After enabling dynamic-IP (DHCP client) in Setup Wizard page, DUT neither reply any page nor switch to other Web page.

Condition:

7. [bug fixed]

Sympton: DUT displays message: "HREF without Appldata is found...Change HREF" while clicking "Start" button in O.T.I.S.T. page sometimes.

Condition:

8. [bug fixed]

Sympton: After finishing O.T.I.S.T. handshaking, O.T.I.S.T. LED cannot light ON correctly.

Condition: 1). Settings->Wireless->OTIST. Click "Start" button and wait for OTIST handshaking finished (about 180 seconds).

2). See O.T.I.S.T. LED on G-560 front panel

9. [bug fixed]

Sympton: After upgrading firmware from non-OTIST to OTIST version, several fields in O.T.I.S.T. page would display "undefined".

Conditon: 1). Upgrade firmware from non-OTIST version to OTIST version.

2). Open Settings->Wireless->OTIST page.

1.00(ZE.1)B1|2004/11/15:

1. [feature changed]

Add ZyXEL specific O.T.I.S.T. (one-touch intelligent security technology) function in Web UI and H/W button (press RESET button for 1~3 seconds and then release).

2. [feature changed]

Add "Hide SSID" function and use disable as its default value;

Add auto option into "Preamble Type" field.

3. [feature changed]

Use "*****" as WEP key1~4, WPA-PSK pre-shared key, WPA and 802.1X shared-key on Web UI.

4. [feature changed]

Add "(Web) system timeout management" CLI command:

MAIN->mgmt->showWebTimeout & setWebTimeout <min>

5. [feature changed]

Unless reset-to-default value, "Password Change" page won't display again once applied new password.

6. [feature changed]

Allow Web browser to be closed without log out, and then log in again without waiting for 5 minutes (only for the same IP).

7. [bug fixed]

Sympton: ZyXEL's Web site hyperlink in Copyright.htm is <http://www.zyxel.com.tw>

Condition:

8. [bug fixed]

Sympton: After changing device name in System page and apply, it won't be updated immediately on IE 5.0

Condition: 1). Settings->System->System Settings. Change device name and click "Apply" button.

1.00(ZE.0)B6|2004/10/20, 1.00(ZE.0)C0:

1. [feature changed]

Remove ZyXEL specific O.T.I.S.T. function from CLI command

2. [bug fixed]

Sympton: Press RESET button over 6 seconds, DUT won't reset-to-default and reboot.

Condition:

1.00(ZE.0)B5|2004/10/15:

1. [bug fixed]

Sympton: Once logging out Web UI, then it cannot log in again on IE 5.0 (javascript error)

Condition:

2. [bug fixed]

Sympton: After modifying time setting in Time Settings and apply, DUT would log out unexpectedly.

Conditon:

1.00(ZE.0)B4|2004/10/11:

1. [feature changed]

Telnet and Web interface cannot be logged in at the same time, and telnet's priority is higher than Web.

2. [feature changed]

Add 256-bit WEP Passphrase function.

3. [feature changed]

Add Web multi-language help files (except O.T.I.S.T. and Russian language)

4. [bug fixed]

Sympton: After applying new settings, Status page doesn't display save or not information.

Conditon:

5. [bug fixed]

Sympton: Several Web UI functions are different with Help files information, ex: Wireless Settings.

Condition:

6. [bug fixed]

Sympton: Multi-language messages cannot be displayed correctly on IE 5.0

Condition:

7. [bug fixed]

Sympton: SSID and Device name fields doesn't have 防呆機制

Conditon:

1.00(ZE.0)B3|2004/09/16:

1. [feature changed]

Disable max. clients, RTS/CTS and Fragmentation threshold fields as G-560 default settings;

Enable Intra-BSS traffic fields as G-560 default setting;

Set Preamble type: Long as G-560 default setting.

2. [feature changed]

Only 1 client (through LAN or WLAN) can log in DUT's Web UI at the same time;

DUT's Web UI should log out automatically after user idle over 5 minutes.

3. [feature changed]

Expand max. length of SSID field to 32 characters.

4. [bug fixed]

Sympton: When entering illegal value (ex: "aaa") in max. clients, RTS/CTS or Fragmentation threshold fields and apply, DUT will reboot.

Condition:

5. [bug fixed]

Sympton: DUT cannot apply Gateway IP address in System Settings page.

Condition: 1). Settings->System->System Settings. Change Gateway IP address and click "Apply" button.

6. [bug fixed]

Sympton: Multi-language Web UI (ex: French, Italian, Spanish and Germany) cannot display correctly.

Conditon: 1). In Login page, press one of six language icons.

1.03(ZE.0)B2|2004/09/01:

1. [feature changed]

Change Tx output power control options to full, 50%, 25% and 12.5%.

2. [bug fixed]

Sympton: In Setup Wizard page, the WEP keys aren't correct as in Security page.

Conditon: 1). Settings->Wireless->Security (Encryption Method: WEP). Input specific WEP keys and click "Apply" button.

2). Setup Wizard->Step.3 Security Settings. Key1 isn't the same as we set in above step.

3. [bug fixed]

Sympton: 128-bit WEP passphrase function of G-560 isn't compatible with G-162 utility.

Condition: 1). Settings->Wireless->Security (Encryption Method: WEP, 128-bit). Input characters

into passphrase textbox field and click "Generate" button.

2). Input characters into passphrase field of G-162 utility and select key index. They are different except key1.

4. [bug fixed]

Sympton: If new password is set to 30 characters, then DUT cannot use new password.

Condition: 1). Settings->Management ->Password. Input 30 characters New and Confirm passwords, then click "Apply" button.

2). Logout G-560, and then login again... failed.

5. [bug fixed]

Sympton: After applying new wireless settings, G-560's throughput will drop down half.

Condition: 1). Settings->Wireless->Wireless Settings. Click "Apply" button and use NetIQ chariot to measure its throughput.

6. [bug fixed]

Sympton: If Max. clients, RTS/CTS and Fragmentation threshold is set to max. value, then they'll be disabled in Web UI.

Condition: 1). Settings->Wireless->Wireless Settings. Change Max. clients, RTS/CTS or Fragmentation threshold to max. value, then click "Apply" button.

2). Re-open Settings->Wireless->Wireless Settings page, they'll be disabled.

7. [bug fixed]

Sympton: Web UI displays wrong wording "! Backup !" in Configuration File page.

Condition: 1). Open Settings->Management ->Configuration File page.

8. [bug fixed]

Sympton: "device name" field would not be updated immediately on Web.

Condition: 1). Open Setup Wizard->Step.1 or Settings->System->System Settings page. Change device name and then click "Apply" button.

9. [bug fixed]

Sympton: If wireless mode change from B-only/B+ to G+, then G-162 cannot connect to it using G+ mode.

Condition: 1). Settings->Wireless->Wireless Settings. Set wireless mode to B-only or B+ mode, then apply it.

2). In the same page, change wireless mode to G+ mode, then apply it.

3). Open G-162 client utility, set data rate to 125Mbps (G+) and connect to G-560.

10. [bug fixed]

Sympton: It always shows "confirm password error" message while once changing password with different New and Confirm passwords input.

Condition: 1). Login G-560 and input New and Confirm passwords to change old one.

2). Input different passwords into New and Confirm fields, click "Apply" button.

3). In error message page, click hyperlink: "Return" to go back to step.2

1.02(ZE.0)B1|2004/08/20:

1. [feature changed]

It should displays all "0" on Web UI if DUT's WEP keys is empty.

2. [feature changed]

Expand max length of passphrase textbox field to 32 characters.

3. [feature changed]
Change DUT's default date/time from 1970/01/01 to 2004/01/01.
4. [feature changed]
Change DUT's default SSID to "ZyXEL G-560"
5. [feature changed]
Add warning Web page while upgrading firmware or config. Data in progress.
6. [bug fixed]
Sympton: Initial wrong VLINQ clock rate (62.5MHz>125MHz)
Condition:
7. [bug fixed]
Sympton: DUT displays message: "HREF without Appldata is found...Change HREF" on Web UI.
Condition: 1). Modify DUT's setting and click "Apply" button on Web UI, ex:
Settings->Wireless->Wireless Settings... etc.
8. [bug fixed]
Sympton: After applying different IP address to DUT, it'll neither reply Web page nor display warning information.
Condition: 1). Settings->System->System Settings. Check "Use Fixed IP Address" in IP address assignment part.
2). Change IP address to other values, ex: 192.168.1.2 to 192.168.1.3, and apply.
9. [bug fixed]
Sympton: Gateway IP address cannot set to "0.0.0.0"
Condition: 1). Settings->System->System Settings. Change Gateway IP address to "0.0.0.0", then click "Apply" button.
10. [bug fixed]
Sympton: WEP Passphrase function only accepts 0... 9 and a... f/A... F keys, or it'd display error message.
Condition: 1). Settings->Wireless->Security (Encryption Method: WEP).
2). Input characters except 0... 9, a... f or A... F into passphrase textbox, and click "Generate" button.
11. [bug fixed]
Sympton: DUT's Web pages cannot display correctly on Netscapt/Mozilla.
Condition: 1). Settings->Wireless->Wireless Settings. Select "B+" in wireless mode field, it'd display empty string in this field.

1.01(ZE.0)B1|2004/08/10:
First Firmware Release

Telnet and CLI Command:

Command Class List Table		
BIT	privacy	4x
mgmt	serv	hal
wpa	show	
wds	ssidMgmt	

Command				Description
MAIN	replevel			Update [set reset] Report level: repl [- +]<level_id>.
	reboot			reboot the AP.
	version			Display version information (TI APDK).
	!			Execute the last command.
	help			Display help message.
	exit			Quit the CLI console.
	BIT			G-560 Built In Tests (BIT) sub menu.
		fcc		fcc - interactive selection of band, channel, rate and mode.
		telec		telec - interactive selection of channel per current band.
		perTxCfg	<dstMAC>	perTxCfg <dstMAC>. Other parameters are interactive.
		perRxCfg		perRxCfg. Interactive command.
		perClrStat		Clears PER statistics.
		perTxStop		Stops Tx in PER test.
		perRxStat		Shows Rx statistics.
		perTxStat		Shows Tx statistics.
		Stop		Stops test mode, and reboot (must).
		manufac_test		Display G-560 information, ex: version, MAC, SSID, channel, regulator...
		help		Display this help message.
		exit		Quit this sub-menu.
	mgmt			
		accessPrint		Print Access List
		accessSetMAC		Add MAC address to access list <mac>
		accessRemMAC		Remove MAC address from access list <index>
		accessEnable		Enable access list <type(1-black, 0-white)>
		accessDisable		Disable access list
		deauthmng		Send a DeAuthentication message to a station <mac> <reason>
		disassocmng		Send a DisAssociation message to a station <mac> <reason>
		staTable		Print the station table
		hashTable		Print the hash table
		ratesTable		Print the station rates table
		counters		Print the mgmt counters
		log		Enable/Disable Mgmt log <mode(1-On, 0-Off)>
		aging		Enable/Disable Mgmt aging mechanism <mode(1-On, 0-Off)>
		show		Show parameters
		setWebtimeout		setWebTimeout <mins>
		showWebtimeout		Show web time out (mins)
		help		Display this help message
		exit		Quit this sub-menu

		test-mgmt		
			ratesTable	Print the station rates table
			null	Send a null mgmt frame <FC> <SA> <DA> <BSSID>
			a1	Send an authentication#1 frame <SA> <AlgoNum>
			a3	Send an authentication#3 frame <SA> <AlgoNum> <challenge>
			assoc	Send an association frame <SA> <PBCC (1-On, 0-Off)> <privacy (1-On, 0-Off)> <four x (1-On, 0-Off)>
			reassoc	Send a ReAssociation frame <SA> <PBCC (1-On, 0-Off)> <privacy (1-On, 0-Off)> <four x (1-On, 0-Off)>
			deauth	Send a DeAuthentication frame <SA> <reason>
			disassoc	Send a DisAssociation frame <SA> <reason>
			class3	Send class3 message to Mgmt task <SA> <index>
			challenge	Show the challenge text that was sent to a station <index>
			staTable	Print the station table
			hashTable	Print the hash table
			findSta	Find a station index <mac>
			insertSta	Find and insert a station index <mac>
			removeSta	Remove a station index <index>
			log	Enable/Disable Mgmt log <mode>
			reset	Reset Mgmt table
			showc	Show parameters.
			shows	Print the WLAN configuration params
			reboot	reboot the AP
			help	Display this help message
			exit	Quit this sub-menu
	wpa			
		show		Show WPA configuration
		staTable		Print the station table
		mode		Set allowed station types, 1 - On, 0 - Off <Legacy Stations> <EAP-TLS Stations> <WPA Stations>
		pass		Set the pass phrase mode (0 - None, 1 - HEX, 2 - ASCII)
		hex		Set PSK in HEX format, enter 8 numbers of 32 bits
		pwd		Set PSK in ASCII format, maximum 63 characters
		cipher		Set default cipher, used only when EAP-TLS stations are allowed and Legacy stations are not allowed, (1 - WEP 40, 2 - WEP 104, 3 - WEP 232)
		gtk		Set Group key update interval, in seconds

		secret		Set Radius Secret, maximum 63 characters
		port		Set Radius Port <port>
		addr		Set Radius IP Address <addr 1> <addr 2> <addr 3> <addr 4>
		gateway		Set Default Gateway <addr 1> <addr 2> <addr 3> <addr 4>
		reboot		reboot the AP
		help		Display this help message
		exit		Quit this sub-menu
		test-wpa		
			staTable	Print the station table
			rsnTable	Print the station's RSN IE
			insertSta	Find and insert a station index <mac>
			a1	Send an authentication#1 frame <SA> <AlgoNum>
			assocStation	Send assoc from station <SA> <RNS IE (0, 1)> <RNS le Len> <RSN le Value>
			reAssocStation	Send reAssoc from station <SA> <RNS IE (0, 1)> <RNS le Len> <RSN le Value>
			auth	Authorize a station <mac>
			deauth	De Authorize a station <mac>
			show	Show WPA configuration
			mac	Is mac authorized in TX direction
			suite	Set station suite <MAC> <0 - NONE, 1 - WEP, 2 - TKIP>
			bcast	Set broadcast suite <0 - NONE, 1 - WEP, 2 - TKIP>
			vector	Run MICHAEL test vectors
			setRxKey	Set Rx Mic key, <MAC> <key[1]><key[8]>
			setTxKey	Set Tx Mic key, <MAC> <key[1]><key[8]>
			micReportRx	Set Mic Failure report in the RX path, <1 - report, 0 - do not report>
			micReportStation	Set Mic Failure report from station, <1 - report, 0 - do not report>
			genTxMicFailure	Generate a TX Mic failure for a station <mac>
			reboot	reboot the AP
			help	Display this help message
			exit	Quit this sub-menu
	privacy			
		showconfig		Print privacy configuration parameters.
		shownotify		Show privacy notification information.
		showdefault		Show WEP default keys.
		counters		Print the WLAN privacy counters.
		authalgo		Set authentication algorithm <index(0,1)> <algorithm(1-Open system, 2-Shared key)> <mode(1-Enable, 0-Disable)>.
		timeout		Set authentication response timeout

			<1..4294967295>.
		option	Set privacy option <1-On,0-Off>.
		invoke	Set privacy invoked <1-On,0-Off>.
		id	Set WEP default key ID <id (0..3)>.
		exclude	Set exclude unencrypted <1-On,0-Off>.
		def5	Set default key <index (0..3)> <key[1]> <key[5]>.
		def13	Set default key <index (0..3)> <key[1]> <key[13]>.
		def29	Set default key <index (0..3)> <key[1]> <key[29]>.
		map5	Set WEP mapping key <index (0..9)> <mac addr> <1-On,0-Off> <key [1]> <key[5]>.
		map13	Set WEP mapping key <index (0..9)> <mac addr> <1-On,0-Off> <key [1]> <key[13]>.
		map29	Set WEP mapping key <index (0..9)> <mac addr> <1-On,0-Off> <key [1]> <key[29]>.
		bit	Set privacy bit flag, when on, if the AP has privacy and the st ation does not have, don't associate the station. <1-On,0-Off>.
		reboot	reboot the AP
		help	Display this message
		exit	Quit this sub-menu
	serv		
		vhcf	Set vHCF parameters.
		Enable	Service Enable.
		Disable	Service Disable.
		dualAP	Set Dual Ap status < 0= regular, Other = Dual>.
		woneIndex	Set the Wone configuration Index.
		macaddr	Set the WLAN port MAC address <mac>.
		rates	Set the 802.11b AP rates, <Max basic rate> <Max supported rate>. The max supported rate must be higher or equal to the max basic rate. The available rates are: 1, 2, 5 (for 5.5), 11 & 22.
		grates	Set the 802.11g AP rates used in Extended IE. For each rate enter : 'Y'=Supported, 'B'=Basic Supported, 'N'=Not supported, 'Enter'=unchanged.
		addrates	Set the additional 802.11g AP rates used in Legacy IE. For each rate enter : 'Y'=Supported, 'B'=Basic Supported, 'N'=Not supported, 'Enter'=unchanged.
		respratemode	Set the (re)Associate Response supported rates IE mode :

			0=All AP rates in D6.1 format, 1=Only AP rates supported by STA in STA format.
		channel	Set the channel.
		beacon	Set the WLAN beacon period <1..65535>.
		ssid	Set SSID.
		dtim	Set the WLAN DTIM period <1..255>
		rts	Set RTS threshold <0..2347>
		short	Set the short retry limit <1..255>
		long	Set the long retry limit <1..255>
		fallback	Set rate fallback value
		adapt	Set rate adaptation <0-Disable, 1-Enable>
		frag	Set the fragmentation threshold <256..2346>
		transmit	Set the Max Transmit MSDU Lifetime <1..4294967295>
		receive	Set the Max Receive Lifetime <1..4294967295>
		show	Print the WLAN configuration params
		prinrates	Print the Rates configuration params
		counters	Print the WLAN counters
		defaults	WARNING: FOR DEBUG USE ONLY!!! Restore nvram defaults.
		reboot	reboot the AP.
		agile	Set agile attribute <1-On,0-Off>
		preamblemode	Set preamble mode: <0-Always Long, 1-Always Short, 2-Local STAs>
		dynalgotimeout	Set Enhanced Dynamic Algorithms Timeout in [ms]
		pbccalgo	Set PBCC algorithm Mode: <0-Always off, 1-Always on, 2-Local STAs, 3-Dynamic, 4-Enhanced Dynamic>
		slotmode	Set Short Slot Time mode: <0-Always off, 1-Always on, 2-Local STAs, 3-Enhanced Dynamic>
		slotthreshold	Set Short Slot Time threshold (# of B rate packets)
		protmode	Set Protection Mode: <0-Always off, 1-Always on, 2-Local STAs, 3-Dynamic, 4-Enhanced Dynamic>
		prottype	Set Protection Type <0-RTS/CTS, 1-CTS To Self, 2-TI proprietary>
		dot11mode	Set 802.11 Mode <0-Mixed mode, 1-802.11b only, 2-802.11b+, 3-802.11g only, 4-802.11a >
		CwMinMode	Set CwMin mode: <0-(CwMin=31), 1-(CwMin=15), 2-(CwMin dot11mode dependent)>. Note that CwMin=15 in any mode when 4x is enabled.
		caloption	Set the radio calibration option
		calinterval	Set the radio calibration interval in

				[sec], 0-Disable
		usageTimeMode		Set the band Usage Time type: 0 = short 1 = long
		setUsageTime		Set the band Usage Time
		radioParams		Edit Radio parameter table
		help		Display this message
		exit		Quit this sub-menu
		features		Advanced features (e.g. 802.11d) configuration
			show	Show 802.11 d & h config params.
			printreg	Show Regulatory Domain information.
			channel	Set the channel
			multidomain	Enable - 1 and Disable - 0 multidomain capability (802.11d)
			powerconst	Set power constraint (default = 0 dBm)
			SetRegDomain	Set Regulatory Domain from a list (default = FCC)
			txpowerlevel	Set Max Tx Power Level <1..5>
			setpowerlevels	Set the 5 Tx power levels (dBm) per band (1st param, 0-G, 1-A)
			countrystring	Set dot11CountryString (2 bytes)
			reboot	reboot the AP
			help	Display this help message
			exit	Quit this sub-menu
		QoS		
			show	Print QoS configuration
			enableWME	Set WME parameters <0-Disable, 1-Enable> <Classifier Mode 0-VLAN, 1-DiffServ, 2-UDP Port for Debug only>
			setAC	Set AC parameters <0-AP, 1-STA>
			help	Display this message
			exit	Quit this sub-menu
	show			
		bssbridge		Bss Bridge Statistics
		powersave		Power Save Status
		txstat		Print Tx Statistics
		mibwlan		Print WLAN MIB2 counters
		lanstat		Print EMAC MIB2 counters
		lanpool		Print EMAC buffer pool
		memmgrstat		Print Memory Manager statistics
		rateadapt		Print Rate Adaptation status
		help		Display this help message
		exit		Quit this sub-menu
	4x			
		show		Show the 4x params.
		concatsize		Set the max concatenation size (1522-4095)
		set		Enable/Disable 4x Feature, <4x Enable(1-On, 0-Off)> <Concatenation(1,0)> <Ack Emulation(1,0)>

		mixmode		Enable/Disable 4x with cck
		bursting		Enable/Disable Packet bursting <mode(1-On, 0-Off)>
		dbg		Enable/Disable concat debug <mode(1-On, 0-Off)>
		table		Displays four X table
		featureset		4x FeatureSet (0/1)
		burstLimit		Set Packet burst time limit in MicroSec.
		reboot		reboot the AP
		help		Display this help message
		exit		Quit this sub -menu
	hal			
		fwVersion		Print the firmware version
		acxParams		Print Acx100 nvram parameters
		txinfo		Print Tx Info <Qid=0,1 EnableQprint = 0-FALSE/1-TRUE> (queues and buffers)
		rxinfo		Print Rx Info (queues and buffers)
		txqueue		Print Tx queue <Qid=0,1> status
		txIndicator		Print Tx queue <Qid=0,1> status
		rxqueue		Print Rx queue <Qid=0> status
		txbufs		Print Tx buffers status
		intr		Print Interrupt object status
		mbox		Print mailbox object status
		acxstat		Print Acx100 statistics
		restartstat		Print restart statistics
		restartenable		Enable FW Watchdog WA <1-enable 0-disable>
		waoptions		Set WA options: Rx Free Mem (0-disable,1-enable) Beacon not sent (0-disable, N-trigger time[sec]) Tx Acx free (0-disable, N-trigger time[sec]) Rx Cons FCS (0-disable, N-trigger time[sec])
		energydetectEn		Enable Energy Detect <1-enable 0-disable>
		energydetectSh		Displays energy detect status
		vlynqerrorsCnt		Dispalys number of vlynq errors occurred
		help		Display this help message
		exit		Quit this sub -menu
		Diag		Hal diagnostic parameters.
			eed	Serial EEPROM dump
			eer	Serial EEPROM read <addr>
			eew	Serial EEPROM write <addr> <value>
			SetTxCompleteTrsh	Set Tx Complete Threshold (Val)
			SetPsMode	SetPsMode(Val) - Set Ps mode (0, 1)
			PrintRegs	Print low level registers
			PhyRegWrite	PhyRegWrite(Addr, Val) - Write Phy register
			PhyRegRead	PhyRegRead(Addr) - Read Phy register

			MacRegWrite	MacRegWrite(Addr, Val) - Write Mac register
			MacRegRead	MacRegRead(Addr) - Read Mac register
			SetRxPromiscuous	SetRxPromiscuous(Val) - Set Promiscuous mode (0, 1)
			ModeSniffer	ModeSniffer(Val) - Set Mode Sniffer (0,1)
			PrintFwVersions	Print Fw versions
			SelectFwNumber	SelectFwNumber(Val) - 0 or 1 (local), 2 (remote)
			SetQueueSizeType	SetQueueSizeType(Val) - Type = 0(more queues) or 1
			PrintRadioVer	Print Radio versions
			SelectRadioNum	SelectRadioNumber(Val) - 0 or 1 (local), 2 (remote)
			SetNvByte	SetNvByte(Addr, Val) - Set hal nvram byte
			TraceEnable	TraceEnable(Val) - Enable tracer (0, 1)
			TracePrint	TracePrint(Num, From) - Print trace info.
			TraceRxStat	Print the tracer Rx statistics
			help	Display this message
			exit	Quit this sub-menu
	wds			
		enable		Enable WDS service: 1 - enable, 0 - disable
		apply		Save params and restart the WDS manager
		show		Show the WDS params
		report		Show the WDS report
		stat		Show the WDS statistics
		infodb		Show information database
		hop		Set the WDS hop number. 0 - root, 1 - not root
		name		WDS name (max 8 symbols)
		chSelect		Channel select mode 0 - user, 1 - auto
		autoconfig		Auto config mode 0 - disable, 1 - enable
		privacy		WDS privacy 0 - disable, 1 - enable
		secret		Shared secret (max 32 symbols)
		bssmode		BSS mode 0 - disable, 1 - enable
		crudemode		Crude mode 0 - disable, 1 - enable
		uplink		Uplink MAC address
		downlink0		Downlink #0 MAC address
		downlink1		Downlink #1 MAC address
		downlink2		Downlink #2 MAC address
		downlink3		Downlink #3 MAC address
		severity		Print severity - error warning info
		defaults		Reset WDS configuration to defaults
		restart		Restart WDS manager with current config
		reboot		reboot the AP
		help		Display this message

		exit		Quit this sub-menu
	ssidMgmt			
		show		Print the SSID params
		ssid		Set SSID
		hiddenssid		Enable / Disable Hidden SSID mode
		multiplessid		Enable / Disable Multiple SSID node ,case enable, <vlan_tag> for primary ssid
		addssid		Add Multiple SSID element for <vlan>
		removessid		Add Multiple SSID element for <vlan>
		reboot		reboot the AP
		help		Display this message
		exit		Quit this sub-menu