

# **P-2812HNU-F1**

## **Generic**

Firmware Release Note

V1.00(AACC.3)C0

Date: Mar. 10, 2014

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## Revision History

<b>Date</b>	<b>Release</b>	<b>Author</b>	<b>Description</b>
2011/11/22	1.0.0	Louie Lo	File create
2012/08/28	1.0.1	Tresia Wu	Release V1.00(AACC.0)b4, only change bootloder
2012/09/07	1.0.2	Tresia Wu	Release V1.00(AACC.0)b5
2012/10/26	1.0.3	Tresia Wu	Release V1.00(AACC.0)b6
2012/11/08	1.1.0	Tresia Wu	Release V1.00(AACC.1)b1
2013/02/18	1.1.1	Tresia Wu	Release V1.00(AACC.1)b2
2013/04/14	1.1.2	Tresia Wu	Release V1.00(AACC.1)b3
2013/04/25	1.1.3	Tresia Wu	Release V.100(AACC.1)b4
2013/05/20	1.1.4	Tresia Wu	Release V1.00(AACC.1)b5
2013/06/06	1.1.5	Tresia Wu	Release V1.00(AACC.1)b6
2013/06/29	1.1.6	Tresia Wu	Release V1.00(AACC.1)b7
2013/07/12	1.1.7	Tresia Wu	Release V1.00(AACC.1)b8
2013/08/01	1.1.8	Tresia Wu	Release V1.00(AACC.1)C0
2013/09/27	1.2.0	Tresia Wu	Release V1.00(AACC.2)b1
2013/10/15	1.2.1	Tresia Wu	Release V1.00(AACC.2)b2
2013/11/12	1.2.2	Tresia Wu	Release V1.00(AACC.2)C0
2013/12/27	1.3.0	Tresia Wu	Release V1.00(AACC.3)b1
2014/01/23	1.3.1	Tresia Wu	Release V1.00(AACC.3)b2
2014/02/14	1.3.2	Tresia Wu	Release V1.00(AACC.3)b3
2014/03/10	1.3.3	Kevin Ou	Release V1.00(AACC.3)C0



# ZyXEL P-2812HNU-F1 Generic V1.00(AACC.3)C0 Release Note

Date: Mar. 10, 2014

## Supported Platforms:

ZyXEL P-2812HNU-F1 / P-2812HNUL-F1

## Versions:

Bootbase version: [V3.09|01/24|2013\(AACC\)](#) [New]

Firmware version: V1.00(AACC.3)C0

DSL code version: AnnexA\_551506\_551501

WLAN code version: RT3062\_LinuxAP\_V2.5.0.2

Voice code version: 3.13.0 IFX TAPI

## Notes:

1. User need to accept cookies in their web browsers to use the device GUI correctly.
2. MAC address MUST start from xx:xx:xx:xx:xx:x0 or xx:xx:xx:xx:xx:x8 otherwise WLAN will not work.
3. This firmware can also use P-2812HNUL-F1 OBM firmware bootloader.
4. The bootloader in this version supports Lantiq CPU VR9 v1.2.

## Features list:

- ✓ Dual WAN (xDSL/Ethernet) Mode to ease ISP deployment (switch by configuration)
- ✓ Built-in Firewall to keep users from common Internet attacks
- ✓ Wireless LAN 802.11b/g/Draft-N standards supported
- ✓ USB Peripherals for File Sharing, Printer and 3G WAN backup
- ✓ Built-in Phone Sockets for Voice over IP Service
- ✓ QoS embedded to help prioritize important services
- ✓ TR Protocol Family supported for industry-level device management
- ✓ Support IPv6 Dual Stack
- ✓ Support login privilege

- ✓ Support ROM-D
- ✓ DSL (ADSL/VDSL) Auto fall back without reboot.
- ✓ Auto sense WAN.
- ✓ WOL (Wake on LAN) feature.
- ✓ Guest Wireless LAN feature.
- ✓ LED control.
- ✓ Multiple vlans on LAN.

## Modifications in V1.00(AACC.3)C0

Change to FCS version

## Modifications in V1.00(AACC.3)b3

[Bug Fixed]

1. [SPR- 140122158] When VLAN auto hunting is enabled and the daemon hunting failed, all the settings in broadband page can't work successfully unless we reboot the device.

## Modifications in V1.00(AACC.3)b2

[Bug Fixed]

1. Set all LAN ports to become bridge via auto-provision. 3 LAN ports are in DATA interface group and 1 LAN port is in IPTV interface group. If we don't watch IPTV, the DATA client can access internet. But if we start to play IPTV, the DATA client can't access internet anymore.

[Configuration Modification]

1. Modify some generic default settings.
  - i. Remove time server address.
  - ii. Disable daylight saving in default.
  - iii. Open all LAN side remote management.
  - iv. Enable WAN DHCP log and disable all VoIP logs in default.
  - v. Disable UPnP in default.
  - vi. Change VoIP country code from USA to NORWAY.
  - vii. LAN DNS value set to "DNS proxy" in default.
  - viii. Set SNMP trap destination to 0.0.0.0
  - ix. Change host name from "router" to "P-2812HNU-Fx"

- x. Change LAN IP pool starting address from 192.168.1.33 to 192.168.1.2 and pool size change to 253.
- 2. Enable TR-069 in default. Whenever firmware upgrade, TR-069 will be enabled.

## Modifications in V1.00(AACC.3)b1

[Bug Fixed]

1. [SPR-130718495] The selections of "Available LAN Interfaces" displayed repeatedly when user modify the interface group.
2. [SPR-121123957] EtherWAN interface doesn't bind any LAN interfaces, so interface grouping can't work.
3. [SPR-111202242] When key in wrong word in Static Route page, it can be success.
4. [SPR-111205329] When change Wireless set (Channel or Security...), IGMP will stop via LAN.
5. [SPR-111205330] When first play IGMP after return to default, Wireless can't work.
6. [SPR-120315278] Default LAN can't ping to each other under interface grouping.
7. [SPR-121122860] Modify "IP Pool Starting Address" and "Pool Size", then DUT can't surf internet.
8. [SPR-120105280] There is "4to6 Tunnel" item in edit page, when select IPv6/IPv4 mode as IPv4 only or IPv6/IPv4 dual stack.
9. [SPR-130618312] IGMP is disabled on Bridge mode.
10. [SPR-120914002] CPU 1.1 - Port rate with (Full/100/1000) and (Half/100/1000) after setup, LAN PC cannot get IP address anymore.
11. PPPoE can't play multicast stream.
12. If we modify ACL rule more than 15, LAN PC didn't login GUI and DUT keep loading status.
13. A MAC book wireless client can't surf internet via IPv6.
14. The VoIP parameter TransmitGain & ReceiveGain are different between CLI and WEB GUI.
15. SIP account support "@", "-", and ".".

## Modifications in V1.00(AACC.2)C0

Change to FCS version

## Modifications in V1.00(AACC.2)b2

[Bug Fixed]

1. DSL interface is still present in the switch\_utility when the CPE is in ETHER WAN-mode. This causes IGMP to be returned on WAN with the FA-MAC and causes both the MAC duplicate issue and IGMP traffic sent back to core from the CPE.

## Modifications in V1.00(AACC.2)b1

[Bug Fixed]

1. Wireless 11n & 11b Tx power too low.
2. When firewall is disabled, we shouldn't open port 7676/10000/10001/2000/2001/18888/49152 in default.

## Modifications in V1.00(AACC.1)C0

Change to FCS version

## Modifications in V1.00(AACC.1)b8

[Bug Fixed]

1. [ITS:130403713][ITS:130601610] when we enable wireless and boot up the device, we'll see a no security mystery SSID appears.
2. [ITS:130602864] when we change rom-d by multi-boot tool, the encrypt password can't be decrypted by the firmware.
3. Change the account password via GUI and backup the config file. If we using TR-069 to set this rom file as default rom-d, the password will be changed to 1234.
4. Wireless LAN client and LAN client cannot ping each other.

[FEATURE ENHANCED]

1. Multiple vlans on LAN. When using a bridge mode, we can allow at most 8 vlans to pass through the CPE from WAN to LAN directly.
2. Interface grouping cannot group the inactive SSID.



## Modifications in V1.00(AACC.1)b7

[Bug Fixed]

1. [SPR-130618346] VLAN on LAN setting on GUI should be rearranged.
2. [SPR- 130618313] When modify the bridge interface, the item “6 to 4 tunnel” should not show up.
3. [SPR- 130617283] WLAN  $\longleftrightarrow$  WAN wireless throughput can't pass PQA criterion.
4. [ZyXEL PQA Bug] DUT will occur "call traces" when you configure QoS General traffic priority.
5. Caller-ID not working under UK region.
6. Passwords are not being supported correctly in ROM-d. Change the passwords from GUI and backup it then upload it via FTP as ROM-d. We'll discover that the new passwords fail after reset to default.

## Modifications in V1.00(AACC.1)b6

[Bug Fixed]

1. [SPR- 121123947] Web redirect page doesn't display when CPE has no WAN IP.
2. [SPR- 121123948] Web redirect page doesn't display when WAN no link.
3. [SPR- 121123949] Click WPS button with PBC method in WPS page, WLAN PC can't connect to DUT with VDSL WAN interface. But use EtherWAN and ADSL WAN interface, it work well.
4. [SPR- 130311825] The image location displayed improperly on connection status page with chrome browser.

[FEATURE ENHANCED]

1. Multiple vlans on LAN. When using a bridge mode, we can allow at most 3 vlans to pass through the LAN side.

## Modifications in V1.00(AACC.1)b5

[Bug Fixed]

1. [SPR-130311828] The Up time had no unit on System Status.
2. [SPR-130311836] The first letter should be capitalized on wireless channel status page.
3. [SPR-130312939] VDSL throughput too low.
4. [SPR-130418961] EtherWAN wired throughput is bad.

5. [SPR-121127116] VDSL can't access internet without vlan tag.
6. [SPR-130315216] When ADSL/EtherWAN changes to VDSL, CPE can't surf internet.
7. SIP server can't stop sending 181(call is being forwarded) until timeout, cause out CPE didn't send PRACK packet.
8. The device should support DNS SRV when the outbound proxy is enabled.
9. When our device sends RFC2833, but PSTN GW reply to use PCM, it does not fallback to PCM.
10. Security hole when switch ADSL/VDSL. When link up on ADSL and device change to ADSL mode, device can be accessed by GUI from wan host.
11. After reset to default, the STB can't play.
12. CPE receives a package with the protocol field set to 50 in the IP header it immediately crashes and starts to reboot.
13. Summertime change didn't happen.
14. If we got two SIP servers, one is on the WAN side of default gateway (the server for LAN clients to register) and another one is on the WAN side of VoIP interface (the server which CPE already registered). Then LAN clients can't register on the server.

#### [FEATURE ENHANCED]

1. Implement Guest WLAN feature.
2. Increase kernel network connection track hash table size.
3. Add the web GUI WLAN setting bandwidth: 20MHz or 20/40MHz
4. LED control. Allow user can decide how the LEDs on the device should behave, ex. all off.

## **Modifications in V1.00(AACC.1)b4**

#### [Bug Fixed]

1. [SPR-130312939] VDSL through put too low.
2. [SPR-130418961] EtherWAN wired throughput is bad.

## **Modifications in V1.00(AACC.1)b3**

#### [Bug Fixed]

1. [SPR-130315216] When ADSL/EtherWAN changes to VDSL, CPE can't surf internet.
2. [SPR-130312939] VDSL through put too low.
3. Security issue on GUI (Diagnostic page, system page and time setting page).

4. When TR-069 is enable, connect from WAN side via <http://wan-ip:7676/UE/FormDisplay> with browser. If we fill in more than 50 characters, the TR-069 task will down.

## Modifications in V1.00(AACC.1)b2

### [Bug Fixed]

1. [SPR-120604187] When delete WAN interface, all rule will disappear in interface group page.
2. [SPR-121127116] VDSL can't access internet without vlan tag.
3. [Bug fix from MSTC] After upgrade to UGW5.2 the device will sometimes not be initialized correctly and not be able to route traffic.
4. [Bug fix from MSTC] Bug in Session Match causing sessions to freeze.
5. [Fullrate #50] IPsec daemon prints too many logs even when IPsec VPN is inactive.
6. When the CPE boots up, sometimes wireless will died.
7. When Baby monitor turns on, wireless throughput goes bad.
8. After firmware upgrade to 100AACC1b1, the throughput drops.

### [FEATURE ENHANCED]

1. Support ADSL Annex M in default.
2. Support concurrent bridge and routing with single WAN (default is disable).

## Modifications in V1.00(AACC.1)b1

### [Bug Fixed]

1. When client pings the PC at same subnet with CPE, the WAN packets will bring gateway's MAC instead of CPE's MAC.
2. After user modifies the WAN type from IPoE to PPPoE, the SIP provider's bound interface is disable.
3. Modify spelling wrong on GUI.

### [FEATURE ENHANCED]

1. Update code base from UGW 4.3 to UGW 5.2 (Linux kernel from 2.6.20.19 to 2.6.32.32).
2. When caller id payload type is DTMF, the display method change
  - "D1#": Anonymous calls
  - "D2#": International call
  - "D3#": Technically impossible

3. Auto sense WAN. The behavior is like this:
  - a. When reset to default:

Device detects EtherWAN or DSL automatically, if both Ether and DSL cables plug, the first priority is Eth. If detects Ether, CPE will reboot and link up in Ether mode. If detect DSL, CPE will reboot and link up in DSL mode.
  - b. When device configured one of Eth or DSL mode already,

User needs to choose another mode on GUI first. The device will reboots and changes to what the user has chosen.
  - c. ADSL/VDSL

Device detects ADSL/VDSL without reboot. (This feature only implement on hardware CPU version VR9 V1.2).

## Modifications in V1.00(AACC.0)b6

### [Bug Fixed]

1. After FW upgrade, IPTV and VoIP vlan will be set to 0
2. When country code is changed to Finland, ringing voltage should be 75Vrms.
3. After disabling "session timer (RFC 4028)", DUT still sent the first invite without related session timer header. After session timer expired, DUT also send invite or update again.
4. With ftp port change to 10021, ftp client can not the connection by passive mode.
5. GUI shows CPU version "unknown".
6. Remove the HTTP server information, for example, if you type http://192.168.1.1/xxdae, just redirect to the login page.
7. config file can be downloaded without password.
8. User can't use the port 8080 for http remoteMGMT.
9. End user can't use HP printer to print via WLAN.

### [FEATURE ENHANCED]

1. Change DSL code version to AnnexA\_548006\_544401 to support AnnexM.
2. Update WLAN code version to RT3062\_LinuxAP\_V2.5.0.2.
3. Update code base from UGW 4.3 to UGW 5.2 (Linux kernel from 2.6.20.19 to 2.6.32.32).
4. When caller id payload type is DTMF, the display method change
  - "01": Anonymous calls
  - "02": International call
  - "03": Technically impossible
5. xDSL auto-fallback without reboot.

6. Support WOL (wake on LAN) feature.

## Modifications in V1.00(AACC.0)b5

[FEATURE ENHANCED]

1. Protecting mechanism to prevent user loading old firmware which not support Lantiq CPU VR9 v1.2 to the CPE which using VR9 v1.2.
2. Add CPU version on GUI.
3. Add port rate on GUI to solve IOP issue with APPLE Airport Express.

## Modifications in V1.00(AACC.0)b4

[Bug Fixed]

1. MAC book client and Linux client cannot connect on a VPN tunnel by L2TP mode.
2. IPTV will stop because of the crash, after reboot, the IPTV will resume, but WIFI is not up (LED off, no radio out, but GUI indicates enabled). If tried to enable WIFI using hardware button, the device will crash again.

[FEATURE ENHANCED]

4. Merge P-2812HNUL-F1 OBM trunk

## Modifications in V1.00(AACC.0)b3

[Bug Fixed]

1. If WAN2 IP and TR-069 ACS don't at the same network subnet, CPE send ARP to query ACS MAC address

[FEATURE ENHANCED]

1. Modify below default setting.
  - WLAN "Auto" for channel auto selection.
  - System name/Domain name : P-2812HNU-F1

## Modifications in V1.00(AACC.0)b2

[Bug Fixed]

1. When using autoprovision to perform FW upgrade, it would fail due to FW name parsing error.
  - For old FW ID (length 3) use <FWVersion> tag.

- For new FW ID (length 4) use <FWNewVersion> tag.
- Example: Use autoprovision upgrade FW 3.11(TUJ.0)b2 to 1.00(AACC.0)b2

<FWUpgradeInfo>

<FWVersion PARAMETER="configured" TYPE="string" LENGTH="64">V3.11(TUJ.0)b6</FWVersion>

<FWNewVersion PARAMETER="configured" TYPE="string" LENGTH="64">V1.00(AACC.0)b2</FWNewVersion>

<ServerAddress PARAMETER="configured" TYPE="string" LENGTH="64">10.10.100.10</ServerAddress>

<ServerPort PARAMETER="configured" TYPE="uint16" MAX="65535" MIN="0">80</ServerPort>

<FWFilename PARAMETER="configured" TYPE="string" LENGTH="64"> 100AACC0b2.bin</FWFilename>

</FWUpgradeInfo>

## Modifications in V1.00(AACC.0)b1

This firmware is based on 3.11(TUJ.0)C0 to add below modification.

[FEATURE ENHANCED]

1. [Auto-Provision]:Support Auto-Provision in bridgemode.
2. Remove autoprovision menu item in GUI.
3. Based on3.11(TUJ.0)b2 default romfile change below setting.
  - InternetGatewayDevice.WANDevice.1.WANConnectionDevice.1.WANIPConnection.2 to  
InternetGatewayDevice.WANDevice.1.WANConnectionDevice.2.WANIPConnection.1
  - InternetGatewayDevice.WANDevice.1.WANConnectionDevice.1.WANIPConnection.3 to  
InternetGatewayDevice.WANDevice.1.WANConnectionDevice.3.WANIPConnection.1
  - InternetGatewayDevice.LANDevice.1.LANHostConfigManagement.DHCPConditionalServingPool.1. X\_ZyXEL\_VDSL\_ForwardingInterface:  
InternetGatewayDevice.WANDevice.1.WANConnectionDevice.3.WANIPConnection.1
  - InternetGatewayDevice.WANDevice.1.WANConnectionDevice.1.WANIPConnection.3.NATEnabled: 1
  - InternetGatewayDevice.WANDevice.2.WANConnectionDevice.3.WANIPConnection.1.NATEnabled: 1
  - InternetGatewayDevice.Services.VoiceService.1.VoiceProfile.1.  
X\_ZyXEL\_IfName: 1\_2\_0\_1,2\_2\_0\_1
  - InternetGatewayDevice.X\_ZyXEL\_Ext.RemoteManagement.SNMP.

TrapDestination : 90.185.1.46.

- InternetGatewayDevice.X\_ZyXEL\_Ext.RemoteManagement.SNMP. Access: ALL
- InternetGatewayDevice.X\_ZyXEL\_Ext.RemoteManagement.SNMP.  
SetCommunity: Fullrate.
- InternetGatewayDevice.X\_ZyXEL\_Ext.RemoteManagement.SNMP.  
GetCommunity: Fullrate
- InternetGatewayDevice.Services.VoiceService.1.VoiceProfile.1.SIP.  
RegistrarServer: 89.150.161.96
- InternetGatewayDevice.Services.VoiceService.1.VoiceProfile.1.SIP. ProxyServer  
89.150.161.96
- InternetGatewayDevice. ManagementServer. ConnectionRequestPassword:  
cpeP4ss!
- InternetGatewayDevice. ManagementServer. ConnectionRequestUsername:  
cpeconn
- InternetGatewayDevice. ManagementServer. URL: http://acs.fullrate.dk:54321

## Default Settings in Firmware

Refer to the XML format file “\*.rom” in FW release package.

## Public Domain Software Announcements

The following public domain software was used in this firmware release:

Open Source Used in P-2812HNUL-F1 (3rd party software)	Version	From (Source)
MIPS Linux Kernel	2.6.32.32	<a href="http://www.linux-mips.org">http://www.linux-mips.org</a>
bridge-utils	1.4	<a href="http://bridge.sourceforge.net">http://bridge.sourceforge.net</a>
Busybox	1.10.4	<a href="http://www.busybox.net">http://www.busybox.net</a>
dhcpcdetector	1.0b	<a href="http://sourceforge.net/projects/dhcpcdetector/">http://sourceforge.net/projects/dhcpcdetector/</a>
Dnsmasq	2.49	<a href="http://www.thekelleys.org.uk/dnsmasq/">http://www.thekelleys.org.uk/dnsmasq/</a>
Dropbear	0.52	<a href="http://matt.ucc.asn.au/dropbear/dropbear.html">http://matt.ucc.asn.au/dropbear/dropbear.html</a>

Ebtables	2.0.9-2	<a href="http://ebtables.sourceforge.net">http://ebtables.sourceforge.net</a>
fuse	2.8.3	<a href="http://fuse.sourceforge.net/">http://fuse.sourceforge.net/</a>
gettext	0.16	<a href="http://www.gnu.org/software/gettext/">http://www.gnu.org/software/gettext/</a>
Igmpproxy	0.1-beta2	<a href="http://openports.se/net/igmpproxy">http://openports.se/net/igmpproxy</a>
ip6tables	1.4.6	<a href="http://www.netfilter.org">http://www.netfilter.org</a>
iproute2	2.6.24	<a href="http://www.linuxgrill.com/anonymous/iproute2">http://www.linuxgrill.com/anonymous/iproute2</a>
Iptables	1.4.6	<a href="http://www.netfilter.org">http://www.netfilter.org</a>
libbase64	0.0.1	<a href="http://www.gnu.org/software/gnulib">http://www.gnu.org/software/gnulib</a>
Libedit	20080712-2.11	<a href="http://libedit.sourceforge.net">http://libedit.sourceforge.net</a>
Libexif	0.6.19	<a href="http://libexif.sourceforge.net/">http://libexif.sourceforge.net/</a>
Libid3tag	0.15.1b	<a href="http://id3lib.sourceforge.net/">http://id3lib.sourceforge.net/</a>
Libmcrypt	2.5.7	<a href="http://mccrypt.hellug.gr/lib/">http://mccrypt.hellug.gr/lib/</a>
Libpcap	1.0.0	<a href="http://www.tcpdump.org/">http://www.tcpdump.org/</a>
Libogg	1.2.2	<a href="http://xiph.org/ogg/">http://xiph.org/ogg/</a>
Libupnp	1.4.2	<a href="http://dries.ulyssis.org/rpm/packages/libupnp/info.html">http://dries.ulyssis.org/rpm/packages/libupnp/info.html</a>
Libvorbis	1.3.2	<a href="http://xiph.org/vorbis/">http://xiph.org/vorbis/</a>
Linuxigd	1	<a href="http://linux-igd.sourceforge.net">http://linux-igd.sourceforge.net</a>
Logrotate	3.7.1	<a href="http://logrotate.darwinports.com/">http://logrotate.darwinports.com/</a>
mccrypt	2.6.8	<a href="http://mccrypt.sourceforge.net/">http://mccrypt.sourceforge.net/</a>
mhash	0.9.9	<a href="http://mhash.sourceforge.net/">http://mhash.sourceforge.net/</a>
mini_httpd	1.19	<a href="http://www.acme.com/software/mini_httpd/">http://www.acme.com/software/mini_httpd/</a>
minidlna	1.0.19	<a href="http://sourceforge.net/projects/minidlna/">http://sourceforge.net/projects/minidlna/</a>
mtd-utils	1.0.0	<a href="http://www.linux-mtd.infradead.org/">http://www.linux-mtd.infradead.org/</a>
Ncurses	5.7	<a href="http://www.gnu.org/software/ncurses/">http://www.gnu.org/software/ncurses/</a>
Ntpclient	2007	<a href="http://doolittle.icarus.com/ntpclient/">http://doolittle.icarus.com/ntpclient/</a>
Openssh	5.2p1	<a href="http://www.openssh.com">http://www.openssh.com</a>



Openssl	0.9.7f	<a href="http://www.openssl.org/">http://www.openssl.org/</a>
p910nd	0.93	<a href="http://p910nd.sourceforge.net/">http://p910nd.sourceforge.net/</a>
Ppp	2.4.4	<a href="http://samba.org/ppp/index.html">http://samba.org/ppp/index.html</a>
pure-ftpd	1.0.23	<a href="http://pureftpd.org">http://pureftpd.org</a>
radvd	1.7	<a href="http://www.litech.org/radvd/">http://www.litech.org/radvd/</a>
Samba	3.0.36	<a href="http://www.samba.org">http://www.samba.org</a>
sqlite-autoconf	3070500	<a href="http://www.sqlite.org/download.html">http://www.sqlite.org/download.html</a>
StrongSwan	4.2.8	<a href="http://www.strongswan.org/">http://www.strongswan.org/</a>
syslog-ng	2.0.6	<a href="http://www.balabit.com/network-security/syslog-ng/">http://www.balabit.com/network-security/syslog-ng/</a>
Sysstat	8.1.8	<a href="http://pagesperso-orange.fr/sebastien.godard/">http://pagesperso-orange.fr/sebastien.godard/</a>
Tcpdump	4.0.0	<a href="http://www.tcpdump.org/">http://www.tcpdump.org/</a>
Updatedd	2.6	<a href="http://www.philipp-benner.de/updatedd/">http://www.philipp-benner.de/updatedd/</a>
usbautomount	0.0.1	<a href="http://usbmount.alioth.debian.org/">http://usbmount.alioth.debian.org/</a>
wireless_tools	0.29	<a href="http://www.hpl.hp.com/">http://www.hpl.hp.com/</a>
wide-dhcpv6	20080615	<a href="http://sourceforge.net/projects/wide-dhcpv6/">http://sourceforge.net/projects/wide-dhcpv6/</a>

## Manufactory Data in V1.00(AACC.3)C0

**NOTE:** Please use the command "sys romreset 0" to get manufactory data.

ZLD Version : V1.00(AACC.3)  
Bootbase Version : V3.09|01/24|2013(AACC)  
Vender Name : ZyXEL Communications Corp.  
Product Model : P-2812HNU-F1  
Serial Number : ffffffff  
First MAC Address : 001349116688  
Last MAC Address : 00134911668F  
MAC Address Quantity : 08  
Default Country Code : FF

Boot Module Debug Flag : 01

RootFS       Checksum    : 0000cd41

Kernel       Checksum    : 00006789

RomFile      Checksum    : 00003158

Main Feature Bits        : 00

Other Feature Bits       :

06 00 00 04 19 01 00 ff-f8 00 01 00 01 00 00 00

00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00