# ZyXEL VES-1012 firmware V3.41(DB.3)C0

# Release Note /Manual Supplement

**Date: March 09, 2003**

***Version:***

F/W Version: V3.41(DB.3)C0 | 03/09/2004

***Supported Platforms:***

V3.41(DB.3)C0 supports models: VES-1012.

***CAUTION:***

Because a bug is found in version 3.40 or 3.30 when new firmware is updated, we need a patch file to be the medium when update version 3.41 firmware to 3.40 or 3.30. So, if the current version of firmware in the machine is version 3.40 or 3.30, please update 340DB1Patch.bin first. In this process, if current version is 3.30, configuration file 340DB1C0.rom must be updated simultaneously. If current version is 3.40, configuration file is no need to change. After system reboot, you can update version 3.41 immediately.

If you update version 3.41 directly but do not update 340DB1Patch.bin first, the original firmware will not be updated and system will be hanged. After reboot the system, the machine is worked well in firmware version 3.40 (original firmware in the machine will not be changed).

When firmware version 3.41 is in the machine, there is no need to update 340DB1Patch.bin first if you wanted to downgrade to be version 3.40 or 3.30.

In additional, please update configuration when update to version 3.41.

Firmware 340DB1Patch.bin is based on 340DB1C0, just fixed the bug for firmware updating.
341DB0b0 is based on 340DB1Patch.
341DB1b0 is based on 341DB0C0.
341DB1C0 is based on 341DB1b0.
341DB2b0 is based on 341DB1C0.
341DB2C0 is based on 341DB2b0.
341DB3b0 is based on 341DB2C0.
341DB3C0 is based on 341DB3b0.

## *Bug Fixed:*

Formal release based on 341DB3b0.

## *Change History:*

**V3.41(DB.3)b0 (2003/03/04)**

**Bug Fixed:**
1. Fixed bug that log message “LT buff overflow (ifIndex=xx)” will be recorded twice if buffer overflow is happened in LT side only once
2. Fxed the bug that VLAN setup can not be finished completely if ping CPU continuously in Port-Based VLAN mode.

**V3.41(DB.2)C0 (2003/02/10)**

Formal release based on 341DB2b0.

**V3.41(DB.2)b0 (2003/02/02)**

Modified:

1. This firmware is based on 341DB1b0 (or 341DB1C0).

2. SW to VDSL (in LT) is forced to 100M Full Duplex, VDSL to ethernet PHY (in NT) and ethernet PHY to external device (in NT) are Autoneg with Full and Half Duplex support.

3. Change the value of register 0x8D47 to be 0xAD and 0xBF for LT and NT, respectively. This is caused by Full Duplex.

**V3.41(DB.1)C0 (2003/01/30)**

Based on V3.41(DB.1)b0, change to formal release.

**V3.41(DB.1)b0 (2003/01/16)**

Bug Fixed:
1. Remove all workaround method for buffer overflow done by Zyxel, and then apply all of suggestions made by Infineon.

Registers and values changed:
Register 0x2c, set to be 0x2.
Register 0x979B, set to be 0x1F.

2. Periodically monitoring register 0x9775, if it is different from zero, clear this register and then reset this channel.

3. Increase SNR for High QAM, thus VDSL speed 18/16 can be reached for short distance if Rate adaptation is enabled.

Change following registers in CPE:
Register 0xC82A replace value 0x21 with 0x42.
Register 0xC848 replace value 0x2A with 0x42.
Register 0xC866 replace value 0x35 with 0x42.

4. VES-1012 can support HALF duplex only, this is recommend by Infineon also.

**V3.41(DB.0)C0 (2003/12/09)**

Known Bug

For VES-1012, there is a bug that if connection setting is sending 42Mbits or larger of unicast packets both to VDSL modem and Ethernet ports. VDSL modem 1 to 6 are sending packets to Ethernet port 13, and all of the other VDSL ports are sending packets to Ethernet port 14. In this status, the traffic in upstream of VDSL modem will be hanged.

To do a workaround, we add a mechanism to monitor the Rx counter of VDSL modem every one minutes. If there are 15 times we detect continuously that this counter is not increased, we treat upstream of this VDSL modem is locked and no packet can be transmitted via upstream of VDSL modem, this VDSL line will be reset.

This workaround method maybe got a drawback if VDSL modem is connected but Ethernet of this modem is not connected to any personal computer. In this status, this VDSL modem will be reset every 15 minutes.

But in field application, this is never happened because the OS of personal computer will periodically send ARP packet to network to do something.

**V3.41(DB.0)b10 (2003/12/09)**

Bug Fixed
Fixed the bug that Ethernet of CPE will restart autoneg continuously.

**V3.41(DB.0)b9 (2003/12/09)**

Known Bug

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**V3.41(DB.0)b8 (2003/12/05)**

Bug Fixed
Fixed bug that system will crash if GVRP learnt 4094 VLAN and CI command “bridge vdb status” is executed continuously.

**V3.41(DB.0)b7 (2003/12/04)**

Modified:
Current version of VDSL driver is 0.73. It is backward to version 0.71 and adding some workaround method for problem that upstream can not transmit any packet even though downstream is OK.

Bug Fixed:
Fixed bug that function enable and disable and port number of Telnet setting in WEB will cause system crashed.

Fixed bug that Flow control cannot work between VDSL lines and Uplink port.

Adding workaround method for hang problem of upstream of CPE, if this is happened, system will reset VDSL channel after 15 minutes later.

Fixed bug that DUT crash after learning 4096 dynamic VLAN and modifying GVRP timer settnig or displaying dynamic VLAN table.

Fixed bug that cannot login CGI after DUT leant 4094 VLAN entries.

Fixed bug that VDSL lines continuously link down/up in bi-directional unicast traffic.

Fixed bug that cannot access CGI after executing Ping with dash parameter in CGI.

**V3.41(DB.0)b6 (2003/11/24)**

Bug Fixed:
1. Fixed Bug that web can not login with empty password.
2. Fixed the bug that STPLastTopChangeTime (MIB) can not work.
3. Remove spReadL() in MENU 2 otherwise new setting stored in spSysParam will be overwritten by content of flash.
4. Fixed bug for dot1dtpportstatus.
5. Remove invalid entries in dot1dtpportport.
6. If STP is changed, flush arp table.
7. Add workaround to avoid PEF22822 in LT side dead.
8. If STP changed, arp will be flushed.

**V3.41(DB.0)b5 (2003/11/07)**

Modified:
1. Because currently used CPU is phase out, modified code to fit new CPU.
2. Current Version of HTP is 0.39

Bug_Fixed:
1. Fixed bug that system will be hanged after one day.
2. Fixed bug that Static VLAN of Q-MIB can not work finely.

**V3.41(DB.0)b4 (2003/10/10)**
Fixed the problem that CPE will be hanged after long term heavy traffic testing.

**V3.41(DB.0)b3 (2003/10/07)**

**New Feature:**
1. Adding Ether-Like MIB.
2. Adding RMON MIB.
3. Adding 802.1P MIB
4. Adding 802.1Q MIB.

**Not Supported Entries of MIB:**

Not Supported Entries of Ether-Like MIB:

| Not supported entries | Reason |
|---|---|
| dot3StatsSQETestErrors | Chip not supported |
| dot3StatsDeferredTransmissions | Chip not supported |
| dot3StatsExcessiveCollisions | Chip not supported |
| dot3StatsInternalMacTransmitErrors | Chip not supported |
| dot3StatsCarrierSenseErrors | Chip not supported |
| dot3StatsInternalMacReceiveErrors | Chip not supported |

Not Supported Entries of RMON MIB:

RMON MIB only support OID 1.3.6.1.2.1.16.1, 1.3.6.1.2.1.16.2, 1.3.6.1.2.1.16.3, and 1.3.6.1.2.1.16.9

**V3.41(DB.0)b3_EBT0325 (2003/03/25)**
**Bug Fixed:**
Fix the bug that CI command “vdsl status” inconsistent with Menu24.1.1. This bug is caused by using error frequency table.

**Modified**:
Remove interleave control for long loop (VDSL).

**V3.41(DB.0)b2 (2003/03/11)**

**Bug Fixed:**

Fix the bug that users except administrator can not login after setup and login immediately.

**V3.41(DB.0)b1 (2003/03/04)**

**New Feature:**

Total number of WEB Client increased to be 6.
Total number of SNMP Client increased to be 6.
Total number of Trap receiver increased to be 2.

**V3.41(DB.0)b0 (2003/01/16)**

**New VDSL Rate Adaptation Algorithm**

In previous firmware, the VDSL rate adaptation algorithm is not good enough. We implement a binary search trial and error algorithm for rate adaptation. However, it is slow, and buggy.

Now, we implement a new rate adaptation algorithm, that can automatically probing the SNR of the line, and decide appropriate rates for upstream and downstream based on probed SNR within 1 minutes in most case.

**Limiting Number of MAC Address**

This feature allows network manager to limit number of MAC addresses on VDSL port. For example, if network manager set "Limiting Number of MAC Address" to 5 on VDSL port 2. system will only learned 5 MAC addresses from port 2, so only 5 PCs which connecting to port 2 can communicate with other port. If the 6$^{th}$ PC is trying to communicate with other port, it's not allowed. The 6$^{th}$ PC will be waiting still one of 5 MAC addresses aging timeout. The 6$^{th}$ PC's MAC address will be learned.

Due to hardware limitation, some packets come from 6$^{th}$ PC may be transmitted through switch. However, because most of packets from 6$^{th}$ PC is discarded, 6$^{th}$ PC can not make and keep any connection to any servers through this switch. But if user use packet generator (like SMARTBIT) to test this function, he will see some of leak packets. However, in real case, this user can not have any valid network access.

**BroadCast Storm Control ---- Menu 2**

This option allows the user to limit the number of broadcast frames into the switch. A threshold of number of broadcast frames can be set. When the number of cumulated non-unicast frames is over the programmed threshold, the broadcast frame is discarded.

**Port Mirroring ---- Menu 2**

This feature provides complete network monitoring capability at 100 Mbit/s. A copy of egress (TX) data and ingress (RX) data of the monitored port is sent to their snooping ports.

**Edit Filter – Menu 6.1 and 6.13**

This function allows user to set static MAC address into the system. If some static MAC address is set into system, this MAC is no more been aged out.

**Default ROM Setting – CI Command (sys loadrom)**

This feature provides users to restore default ROM setting to system.

**MIB -- RFC2674, RFC1493**

Those MIB is about the definitions of managed objects for bridge with traffic classes, multicast filtering and virtual LAN extensions.

**VDSL mode per port -- Menu 6.1**

This feature provides users to set VDSL mode and rate by port.

**Add a Special Mode for VDSL mode setting – Menu 6.1**
This mode can support 13 types of VDSL speed for both Upstream and Downstream.

**MAC address process**
Add a CI command to do flush all MAC entries stored, “sw mac flush”.

**Add Port-Based VLAN setting into Menu 17**
Now, user can do Port-Based VLAN setting via SMT.

**Increase number of static tag VLAN to be 128.**