

# **PX7501-B0/AX7501-B0/AX7501-B1/PM7510-00 Generic**

Firmware Release Note

V5.17(ABPC.5)D0

|           |              |
|-----------|--------------|
| Date:     | May 02, 2024 |
| Author:   | PeiPing Chen |
| Reviewer: | Justin Lin   |

**THIS DOCUMENT CONTAINS PROPRIETARY TECHNICAL INFORMATION THAT IS THE PROPERTY OF THE Zyxel AND SHOULD NOT BE DISCLOSED TO OTHERS IN WHOLE OR IN PART, REPRODUCED, COPIED, OR USED AS BASIS FOR DESIGN, MANUFACTURING OR SALE OF APPARATUS WITHOUT WRITTEN PERMISSION OF Zyxel.**

## TABLE OF CONTENTS

|  |    |
|--|----|
| REVISION HISTORY.....                      | 5  |
| SUPPORTED PLATFORMS:.....                  | 7  |
| VERSIONS: .....                            | 7  |
| NOTES:.....                                | 7  |
| PUBLIC DOMAIN SOFTWARE ANNOUNCEMENTS ..... | 7  |
| KNOWN ISSUES.....                          | 9  |
| MODIFICATIONS IN 5.17(ABPC.5)D0 .....      | 10 |
| MODIFICATIONS IN 5.17(ABPC.5)C0.....       | 10 |
| MODIFICATIONS IN 5.17(ABPC.5)B4.....       | 10 |
| MODIFICATIONS IN 5.17(ABPC.5)B3.....       | 11 |
| MODIFICATIONS IN 5.17(ABPC.5)B2.....       | 12 |
| MODIFICATIONS IN 5.17(ABPC.4)D0 .....      | 13 |
| MODIFICATIONS IN 5.17(ABPC.4)C0.....       | 13 |
| MODIFICATIONS IN 5.17(ABPC.4)B6.....       | 14 |
| MODIFICATIONS IN 5.17(ABPC.4)B5.....       | 14 |
| MODIFICATIONS IN 5.17(ABPC.4)B4.....       | 14 |
| MODIFICATIONS IN 5.17(ABPC.4)B3.....       | 15 |
| MODIFICATIONS IN 5.17(ABPC.4)B2.....       | 15 |
| MODIFICATIONS IN 5.17(ABPC.3)D0 .....      | 18 |
| MODIFICATIONS IN 5.17(ABPC.3)C0.....       | 18 |
| MODIFICATIONS IN 5.17(ABPC.3)B4.....       | 18 |
| MODIFICATIONS IN 5.17(ABPC.3)B3.....       | 18 |
| MODIFICATIONS IN 5.17(ABPC.3)B2.....       | 19 |
| MODIFICATIONS IN 5.17(ABPC.3)B1.....       | 20 |
| MODIFICATIONS IN 5.17(ABPC.2.1)C0 .....    | 20 |
| MODIFICATIONS IN 5.17(ABPC.2.1)B2 .....    | 20 |

|  |    |
|--|----|
| MODIFICATIONS IN 5.17(ABPC.2.1)B1 .....                      | 21 |
| MODIFICATIONS IN 5.17(ABPC.2)C0.....                         | 22 |
| MODIFICATIONS IN 5.17(ABPC.2)B5.....                         | 22 |
| MODIFICATIONS IN 5.17(ABPC.2)B4.....                         | 22 |
| MODIFICATIONS IN 5.17(ABPC.2)B3.....                         | 23 |
| MODIFICATIONS IN 5.17(ABPC.2)B2.....                         | 24 |
| MODIFICATIONS IN 5.17(ABPC.2)B1.....                         | 25 |
| MODIFICATIONS IN 5.17(ABPC.1)C0.....                         | 26 |
| MODIFICATIONS IN 5.17(ABPC.1)B7.....                         | 26 |
| MODIFICATIONS IN 5.17(ABPC.1)B6.....                         | 26 |
| MODIFICATIONS IN 5.17(ABPC.1)B5.....                         | 27 |
| MODIFICATIONS IN 5.17(ABPC.1)B4.....                         | 27 |
| MODIFICATIONS IN 5.17(ABPC.1)B3.....                         | 28 |
| MODIFICATIONS IN 5.17(ABPC.1)B2.....                         | 28 |
| MODIFICATIONS IN 5.17(ABPC.1)B1.....                         | 29 |
| MODIFICATIONS IN 5.15(ABPC.0)C0.....                         | 31 |
| MODIFICATIONS IN 5.15(ABPC.0)B7.....                         | 31 |
| MODIFICATIONS IN 5.15(ABPC.0)B6.....                         | 31 |
| MODIFICATIONS IN 5.15(ABPC.0)B5.....                         | 32 |
| MODIFICATIONS IN 5.15(ABPC.0)B4.....                         | 32 |
| MODIFICATIONS IN 5.15(ABPC.0)B3.....                         | 33 |
| MODIFICATIONS IN 5.15(ABPC.0)B2.....                         | 33 |
| MODIFICATIONS IN 5.15(ABPC.0)B1.....                         | 33 |
| CHECK LIST FOR THE ITEMS MAY BE RELATED TO HW FUNCTIONS..... | 34 |
| DEFAULT SETTING: .....                                       | 35 |
| MANUFACTORY DATA .....                                       | 35 |



## Revision History

| Date       | Release | Author       | Description                         |
|------------|---------|--------------|-------------------------------------|
| 2019/03/15 | 1.0     | Joanna Su    | FW release for V5.15(ABPC.0)b1      |
| 2019/04/23 | 1.1     | Joanna Su    | FW release for V5.15(ABPC.0)b2      |
| 2019/06/04 | 1.2     | Joanna Su    | FW release for V5.15(ABPC.0)b3      |
| 2019/08/23 | 1.3     | Justin Lin   | FW release for V5.15(ABPC.0)b4      |
| 2019/12/27 | 1.4     | Justin Lin   | FW release for V5.15(ABPC.0)b5      |
| 2020/02/27 | 1.5     | Justin Lin   | FW release for V5.15(ABPC.0)b6      |
| 2020/03/18 | 1.6     | Justin Lin   | FW release for V5.15(ABPC.0)b7      |
| 2020/03/20 | 1.7     | Justin Lin   | FW release for V5.15(ABPC.0)C0      |
| 2021/02/26 | 2.0     | Justin Lin   | FW release for V5.17(ABPC.1)b1      |
| 2021/04/23 | 2.1     | Justin Lin   | FW release for V5.17(ABPC.1)b2      |
| 2021/05/21 | 2.2     | Justin Lin   | FW release for V5.17(ABPC.1)b3      |
| 2021/06/25 | 2.3     | Justin Lin   | FW release for V5.17(ABPC.1)b4      |
| 2021/08/06 | 2.4     | Justin Lin   | FW release for V5.17(ABPC.1)b5      |
| 2021/11/10 | 2.5     | Justin Lin   | FW release for V5.17(ABPC.1)b6      |
| 2021/11/30 | 2.6     | Justin Lin   | FW release for V5.17(ABPC.1)b7      |
| 2021/11/30 | 2.7     | Justin Lin   | FW release for V5.17(ABPC.1)C0      |
| 2021/10/15 | 3.0     | Justin Lin   | FW release for V5.17(ABPC.2)b1      |
| 2021/12/29 | 3.1     | PeiPing Chen | FW release for V5.17(ABPC.2)b2      |
| 2022/03/10 | 3.2     | PeiPing Chen | FW release for V5.17(ABPC.2)b3      |
| 2022/04/22 | 3.3     | PeiPing Chen | FW release for V5.17(ABPC.2)b4      |
| 2022/05/13 | 3.4     | PeiPing Chen | FW release for V5.17(ABPC.2)b5      |
| 2022/06/01 | 3.5     | Justin Lin   | FW release for V5.17(ABPC.2)C0      |
| 2022/08/10 | 3.6     | PeiPing Chen | FW release for<br>V5.17(ABPC.2.1)b1 |
| 2022/08/19 | 3.7     | PeiPing Chen | FW release for<br>V5.17(ABPC.2.1)b2 |
| 2022/08/19 | 3.8     | PeiPing Chen | FW release for<br>V5.17(ABPC.2.1)C0 |
| 2022/08/31 | 4.0     | PeiPing Chen | FW release for V5.17(ABPC.3)b1      |
| 2022/10/20 | 4.1     | PeiPing Chen | FW release for V5.17(ABPC.3)b2      |
| 2022/11/21 | 4.2     | PeiPing Chen | FW release for V5.17(ABPC.3)b3      |

|            |     |              |                                |
|------------|-----|--------------|--------------------------------|
| 2022/12/30 | 4.3 | PeiPing Chen | FW release for V5.17(ABPC.3)b4 |
| 2023/01/05 | 4.4 | PeiPing Chen | FW release for V5.17(ABPC.3)C0 |
| 2023/01/12 | 4.5 | PeiPing Chen | FW release for V5.17(ABPC.3)D0 |
| 2023/04/28 | 5.0 | PeiPing Chen | FW release for V5.17(ABPC.4)b2 |
| 2023/06/16 | 5.1 | PeiPing Chen | FW release for V5.17(ABPC.4)b3 |
| 2023/07/28 | 5.2 | PeiPing Chen | FW release for V5.17(ABPC.4)b4 |
| 2023/08/11 | 5.3 | PeiPing Chen | FW release for V5.17(ABPC.4)b5 |
| 2023/09/01 | 5.4 | PeiPing Chen | FW release for V5.17(ABPC.4)b6 |
| 2023/09/20 | 5.5 | PeiPing Chen | FW release for V5.17(ABPC.4)C0 |
| 2023/09/20 | 5.6 | PeiPing Chen | FW release for V5.17(ABPC.4)D0 |
| 2023/12/15 | 6.0 | PeiPing Chen | FW release for V5.17(ABPC.5)b2 |
| 2024/03/01 | 6.1 | PeiPing Chen | FW release for V5.17(ABPC.5)b3 |
| 2024/03/29 | 6.2 | PeiPing Chen | FW release for V5.17(ABPC.5)b4 |
| 2024/04/24 | 6.3 | PeiPing Chen | FW release for V5.17(ABPC.5)C0 |
| 2024/05/02 | 6.4 | PeiPing Chen | FW release for V5.17(ABPC.5)D0 |

**PX7501-B0/AX7501-B0/AX7501-B1/PM7510-00  
Generic  
V5.17(ABPC.5)D0  
Release Note**

Date: May 02, 2024

**Supported Platforms:**

Zyxel PX7501-B0/AX7501-B0/AX7501-B1/PM7510-00

**Versions:**

Firmware Version: V5.17(ABPC.5)D0

Bootbase Version: V1.66 | 03/01/2024 18:37:40

Kernel version: 4.1.52

BSP version: 502L07p2

WLAN code version : 17.10.188.75

3G WWAN package version : 1.24

**Notes:**

**Public Domain Software Announcements**

| Open Source<br>Used In<br>Product | Version | From (Source)   | License Terms | Modified<br>/ Used |
|-----------------------------------|---------|---|---------------|--------------------|
| atftp                             | 0.7.1   | <a href="https://sourceforge.net/projects/atftp/">https://sourceforge.net/projects/atftp/</a>   | GPLv2         | Modified           |
| bridge-Utills                     | 1.5     | <a href="https://git.kernel.org/pub/scm/linux/kernel/git/she-mminger/bridge-utils.git/">https://git.kernel.org/pub/scm/linux/kernel/git/she-mminger/bridge-utils.git/</a> | GPLv2         | Modified           |
| busybox                           | 1.20.1  | <a href="https://busybox.net/">https://busybox.net/</a>   | GPLv2         | Modified           |
| clinkc                            | 2.4     | <a href="https://sourceforge.net/projects/clinkc/">https://sourceforge.net/projects/clinkc/</a>   | BSD           | Modified           |

|                        |               |   |                |          |
|------------------------|---------------|---|----------------|----------|
| conntrack-tools        | 1.4.3         | <a href="https://git.netfilter.org/conntrack-tools/">https://git.netfilter.org/conntrack-tools/</a>   | GPLv2          | Used     |
| dnsmasq                | 2.78          | <a href="http://www.thekelleys.org.uk/dnsmasq/doc.html">http://www.thekelleys.org.uk/dnsmasq/doc.html</a>   | GPLv2          | Modified |
| dropbear               | 2022.83       | <a href="https://github.com/mkj/dropbear">https://github.com/mkj/dropbear</a>   | MIT            | Modified |
| ebtables               | 2.0.10-4      | <a href="https://git.netfilter.org/ebtables/">https://git.netfilter.org/ebtables/</a>   | GPLv2          | Modified |
| eventlog               | 0.2.10        | <a href="https://github.com/balabit/eventlog">https://github.com/balabit/eventlog</a>   | BSD            | Used     |
| expat                  | 2.5.0         | <a href="https://github.com/libexpat/libexpat">https://github.com/libexpat/libexpat</a>   | MIT            | Used     |
| ez-ipupdate            | 3.0.11b8      | <a href="http://ez-ipupdate.com/">http://ez-ipupdate.com/</a>   | GPLv2          | Modified |
| gettext                | 0.16          | <a href="http://www.gnu.org/software/gettext/">http://www.gnu.org/software/gettext/</a>   | GPLv2          | Used     |
| glib                   | 2.37.7        | <a href="http://www.gtk.org/">http://www.gtk.org/</a>   | LGPLv2         | Used     |
| iproute2               | 2.6.33        | <a href="https://github.com/shemminger/iproute2">https://github.com/shemminger/iproute2</a>   | GPLv2          | Modified |
| iptables               | 1.4.21        | <a href="https://git.netfilter.org/iptables/">https://git.netfilter.org/iptables/</a>   | GPLv2          | Modified |
| jpegsrvc               | v9a           | <a href="http://www.iij.org/">http://www.iij.org/</a>   | IJG            | Used     |
| json-c                 | 0.13.1        | <a href="https://github.com/json-c/json-c/downloads">https://github.com/json-c/json-c/downloads</a>   | MIT            | Modified |
| libedit                | 20080712-2.11 | <a href="http://pkgs.fedoraproject.org/repo/pkgs/libedit/libedit-20080712-2.11.tar.gz/">http://pkgs.fedoraproject.org/repo/pkgs/libedit/libedit-20080712-2.11.tar.gz/</a> | BSD            | Modified |
| libffi                 | 3.0.11        | <a href="http://pkgs.fedoraproject.org/repo/pkgs/libffi/libffi-3.0.11.tar.gz/">http://pkgs.fedoraproject.org/repo/pkgs/libffi/libffi-3.0.11.tar.gz/</a>                   | MIT            | Used     |
| libiconv               | 1.11.1        | <a href="http://www.gnu.org/software/libiconv/">http://www.gnu.org/software/libiconv/</a>   | LGPLv2         | Modified |
| libnetfilter_conntrack | 1.0.4         | <a href="https://git.netfilter.org/libnetfilter_conntrack/">https://git.netfilter.org/libnetfilter_conntrack/</a>   | GPLv2          | Used     |
| libnetfilter_queue     | 1.0.2         | <a href="https://git.netfilter.org/libnetfilter_queue/">https://git.netfilter.org/libnetfilter_queue/</a>   | GPLv2          | Used     |
| libnfnetlink           | 1.0.1         | <a href="https://git.netfilter.org/libnfnetlink/">https://git.netfilter.org/libnfnetlink/</a>   | GPLv2          | Used     |
| libnl-tiny             | 0.1           | <a href="https://github.com/openwrt/openwrt/tree/master/package/libs/libnl-tiny">https://github.com/openwrt/openwrt/tree/master/package/libs/libnl-tiny</a>               | GPLv2/LGPLv2.1 | Used     |
| libpcap                | 1.1.1         | <a href="http://www.tcpdump.org">www.tcpdump.org</a>  | BSD            | Used     |
| libtool                | 2.4           | <a href="http://www.gnu.org/software/libtool/">http://www.gnu.org/software/libtool/</a>   | GPLv2          | Used     |
| libusb                 | 1.0.9         | <a href="https://sourceforge.net/projects/libusb/">https://sourceforge.net/projects/libusb/</a>   | LGPL 2.1       | Used     |
| Linux/Arm Kernel       | 4.1.52        |   |                | Modified |
| logrotate              | 3.7.1         | <a href="https://launchpad.net/ubuntu/hardy/i386/logrotate/">https://launchpad.net/ubuntu/hardy/i386/logrotate/</a>   | GPLv2          | Modified |
| mailsend               | 1.17b15       | <a href="https://github.com/muquit/mailsend/">https://github.com/muquit/mailsend/</a>   | BSD            | Modified |



|                |           |   |                       |          |
|----------------|-----------|---|-----------------------|----------|
| ncurses        | 5.7       | <a href="http://ftp.gnu.org/pub/gnu/ncurses/">http://ftp.gnu.org/pub/gnu/ncurses/</a>   | MIT                   | Modified |
| net-snmp       | 5.8       | <a href="http://www.net-snmp.org/">http://www.net-snmp.org/</a>   | BSD/BSD-like          | Modified |
| ntfs-3g        | 2022.10.3 | <a href="http://ntfs-3g.org">http://ntfs-3g.org</a>   | GPLv2/LGPLv2          | Used     |
| ntpclient      | 2007_365  | <a href="http://doolittle.icarus.com/ntpclient/">http://doolittle.icarus.com/ntpclient/</a>                                     | GPLv2                 | Modified |
| openssl        | 3.1.2     | <a href="http://www.openssl.org">http://www.openssl.org</a>   | OpenSSL               | Modified |
| popt           | 1.16      | <a href="http://rpm5.org/files/popt/">http://rpm5.org/files/popt/</a>   | MIT                   | Modified |
| ppp            | 2.4.3     | <a href="http://www.roaringpenguin.com/pppoe">http://www.roaringpenguin.com/pppoe</a>   | GPLv2/BSD             | Modified |
| pure-ftpd      | 1.0.50    | <a href="http://pureftpd.org">http://pureftpd.org</a>   | ISC/BSD               | Modified |
| radvd          | 1.8       | <a href="http://www.litech.org/radvd/">http://www.litech.org/radvd/</a>   | BSD                   | Used     |
| readline       | 5.2       | <a href="http://cnswww.cns.cwru.edu/php/chet/readline/rlt_op.html">http://cnswww.cns.cwru.edu/php/chet/readline/rlt_op.html</a> | GPLv2                 | Used     |
| samba          | 3.6.25    | <a href="http://www.samba.org/samba/">http://www.samba.org/samba/</a>   | GPLv3                 | Modified |
| sqlite         | 3.6.23.1  | <a href="http://www.sqlite.org/">http://www.sqlite.org/</a>   | Public Domain License | Used     |
| syslog-ng      | 3.38.1    | <a href="https://github.com/balabit/syslog-ng">https://github.com/balabit/syslog-ng</a>   | GPLv2                 | Used     |
| tcpdump        | 4.99.4    | <a href="http://www.tcpdump.org/">http://www.tcpdump.org/</a>   | BSD                   | Used     |
| udhcp          | 0.9.8     | <a href="http://udhcp.busybox.net/">http://udhcp.busybox.net/</a>   | GPLv2                 | Modified |
| usb-modeswitch | 2.1.0     | <a href="http://www.draisberghof.de/usb_modeswitch/">http://www.draisberghof.de/usb_modeswitch/</a>                             | GPLv2                 | Used     |
| util-linux     | 2.21.2    | <a href="https://github.com/karelzak/util-linux/">https://github.com/karelzak/util-linux/</a>                                   | GPLv2                 | Used     |
| wide-dhcpv6    | 20080615  | <a href="https://sourceforge.net/projects/wide-dhcpv6/">https://sourceforge.net/projects/wide-dhcpv6/</a>                       | BSD                   | Modified |
| quagga         | 1.2.4     | <a href="https://github.com/Quagga/quagga">https://github.com/Quagga/quagga</a>   | GPLv2                 | Used     |
| Zlib           | 1.2.7     | <a href="https://github.com/madler/zlib">https://github.com/madler/zlib</a>   | zlib                  | Used     |
| miniupnp       | 2.3.1     | <a href="https://github.com/miniupnp/miniupnp">https://github.com/miniupnp/miniupnp</a>   | BSD                   | Used     |

## Known issues

| Modules | Issue  | Risk Impact Information |
|---------|--|-------------------------|
| WiFi    | #144426 [Wireless] Using Android phone and iPhone can't connect DUT via wireless 2.4G/5G QR code. (Security mode=WPA3) |                         |

## Modifications in 5.17(ABPC.5)D0

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                     |
|------------------|---|
| FCS              | Based on 5.17(ABPC.5)C0, Change to D0 version |

## Modifications in 5.17(ABPC.5)C0

### ● Feature Enhancement

| Modified Modules | Features Enhancement List  |
|------------------|--|
| OpenSSL 3.1.2    | <p><b>OpenSSL 3.1.2 Upgrade Notification:</b></p> <ul style="list-style-type: none"> <li>- The certificates signed using SHA1 or older/weaker hashes are no longer supported for authenticating servers or clients.</li> <li>- Before upgrading the firmware:               <ul style="list-style-type: none"> <li>- Please ensure that certificates in your devices are not using weak hashes.</li> <li>- If weak hashes are detected, kindly update and verify your certificates promptly with stronger hash (The minimum recommended hash strength is SHA256).</li> </ul> </li> </ul> |
| FCS              | Based on 5.17(ABPC.5)b4, Change to FCS version   |

## Modifications in 5.17(ABPC.5)b4

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                      |
|------------------|--|
| ZYEE             | [#184745][#220400813]Container based F-secure. |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| MPro Mesh        | [#207915][#240300916] AX7501 Guest network not working from a wired WX5600 AP. |

|                |   |
|----------------|---|
| TR-069         | [#207724][#240200784] GPN Device.WiFi.  |
|                | [#209014][#230201031] Wrong event types sent after fw upgrading.  |
|                | [#209016][#230801660] Change GUI language by TR069  |
| TR-369         | [#207777][DST] TR-369 setting does not match DST.   |
| GUI            | [#208359][#240301182] Conditionally unable to open Connectivity List and add new Parental Control rule.                               |
|                | [#209013][#230900302] VLAN Group - GPON bridge  |
| Configurati on | [#208358][#240100410] EX5401, Custom ROMD configuration handling moving from ABY03->5 and traffic separation from EM1->EM2.           |
| VoIP           | [#208697][#240101401] CPE cannot receive Some Incoming Calls after Huawei adds the new SIP service port 5062 to the Soft Switch (SS). |

## Modifications in 5.17(ABPC.5)b3

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|---|
| LED              | [#197861][eITS#230400862] EMG3525-T50B LED control  |
| CLI              | [#205726][eITS#231200465] EX5501 + OPAL family, Feature improvement request - WAN ip lease time |
| System           | [Feature]Support PM7510 series.   |
| SFP              | [#206180][#240200476] AX7501-B1 / not supported SFP-31W2ASM10-DR (1GB).                         |
|                  | [#206184][#240200485] AX7501-B1 / not supported SFP-31W2ASM10-DR (1GB).                         |
|                  | [#206383][#240200555] AX7501, Add SFP support - GLC-BX-U-1315-20-SC-O.                          |
|                  | [#206948][#240201326] AX7501, Add SFP support - GLC-BX-D-1513-20-O.                             |
|                  | [#206944][ #240201524] AX7501, Add SFP support - APSB53123CDL20.                                |
|                  | [#206943][ #240201523] AX7501, Add SFP support -  |

|                 |
|-----------------|
| APSB35123CDS20. |
|-----------------|

## ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| Vulnerability    | [#204907] [Vulnerability] Zyxel-SI-1536 [Vulnerability] Buffer overflow vulnerability in the "traceroute" command of DX3300-T1 CPE |
|                  | [#240200940] PEN test report issue 3.1.2   |

## Modifications in 5.17(ABPC.5)b2

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|---|
| System           | [#182233: [ETSI EN 303 645] 5.3-2: When the device is not a constrained device, it shall have an update mechanism for the secure installation of updates. |
|                  | [#197870] [#230601286] End users are complaining about - DNSmasq vulnerabilities and symptoms   |
|                  | [#197875] [ENHANCEMENT] Enhancement Request for EX3510/EX5510/EX7710 - MAC filter - MAC address mask.   |
|                  | [#197866] [Security] Setting Up the Password Strength   |
|                  | [#198184] OPAL Generic Reboot 頁面設計  |
| CLI              | [#183196] [#230101253] AX7501, From CLI, display remaining lease time on WAN ip lease   |
|                  | [#197869] [#230500277] EX5601, CLI cfg command to IGMP snooping   |
| SFP              | [#196137] [#230800888] AX7501-B0/B1, New SFP: OP3401G   |
| MPro Mesh        | [#197859] [#230300767] EX5601, MProMesh App feature request to include guest isolation level  |
| TR369            | [#197860] Support TR369   |
| XMPP             | [#197863] [#230601075] XMPP / STUN server support   |
| GUI              | [#197868] [#230301802] EX5601, Feature enhancement - Add connected LANport to client information  |

|         |   |
|---------|---|
| OpenSSL | [#198737] upgrade OpenSSL to 3.1.2  |
| DHCP    | [#200612] [#231000756] Feature Request - DHCP opt 12  |
| TR069   | [#202038] [#231101419] How to change DOS Protection Blocking with TR098                           |
|         | [#202272] [#231000006] IoT SSID (FRQ to propagate 3 parameters from the controller to the agents) |

● **Bug Fixed**

| Modified Modules | Bug Fixed List   |
|------------------|--|
| IPv6             | [#202652] [#231101110] IPv6 from PPPoE connection is lost – continues  |
| System           | [#197862] Zyxel-SI-1498 [Vulnerability] WPS vulnerability on DX3301-T0 CPE in WLAN   |
|                  | [#197864] [System] Wish description Protected Management Frames want to abbreviation, should change to PMF not show Protected MGMT Frames. |
|                  | [#197865] [Security] Unauthenticated Access to APIs  |
|                  | [#197867] [Security] Session/Cookie Security Test  |
|                  | [#198046] [Security] Outdated Software   |
|                  | [#198052] [Security] Header Security Test  |
|                  | [#199670] [Vulnerability] Zyxel-SI-1506 [Vulnerability] Post-authentication buffer overflow in VMG3625-T50B                                |
|                  | [#199704] Upgrade curl to 8.4.0  |

**Modifications in 5.17(ABPC.4)D0**

● **Feature Enhancement**

| Modified Modules | Features Enhancement List                     |
|------------------|---|
| FCS              | Based on 5.17(ABPC.4)C0, Change to D0 version |

**Modifications in 5.17(ABPC.4)C0**

● **Feature Enhancement**

| Modified Modules | Features Enhancement List                      |
|------------------|--|
| FCS              | Based on 5.17(ABPC.4)b6, Change to FCS version |

## Modifications in 5.17(ABPC.4)b6

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| MPro Mesh        | [#196683][MPro Mesh] AX7501 Perform Mesh Full Factory Reset. |
| TR143            | [#196943][#230701028] UploadDiagnostic fail AX 7501-B1.      |

## Modifications in 5.17(ABPC.4)b5

### ● Bug Fixed

| Modified Modules | Bug Fixed List  |
|------------------|---|
| IPv6             | [#195460][#230600277] AX7501, prefix changed on br0 after upgrade |
| System           | [#195609][#230600128] EX5401-Bootloop Issue                       |

## Modifications in 5.17(ABPC.4)b4

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| IPv6             | [#193985][#230700605] IPv6 from PPPoE connection is lost.  |
| TR143            | [#192499][#230601511] AX7501-B1 - Query returns wrong result.  |
| MPro Mesh        | [#190961][MPro Mesh_Agent] Gateway Internet Speed does not work.   |
|                  | [#182873][#230600828] AX7501, Disabling Mesh does not bring down the backhaul, which is still broadcasted as a hidden SSID |

### ● Feature Enhancement

| Modified | Features Enhancement List |
|----------|---------------------------|
|----------|---------------------------|

| Modules |  |
|---------|--|
| SFP     | [#192796][#230601569] Active Fiber SFP Transceiver works not in the AX 7501-B1.                  |
| WLAN    | [#192624][#230600825] AX7501, SSID naming logic when disabling mesh and allowing separate SSIDs. |

## Modifications in 5.17(ABPC.4)b3

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| TR069            | [#187630][#230400446] AX7501, iPerf from TR069 fail if the iPerf parameters are sent in separate SPVs. |
| Security         | [#190137][#230500907] Possible security flaw that allows to retrieve root password.                    |

## Modifications in 5.17(ABPC.4)b2

### ● Feature Enhancement

| Modified Modules | Features Enhancement List  |
|------------------|--|
| MPro Mesh        | [#186282][OPAL Generic] Controller Guest (1/2/3) WiFi on/off 下放到 Extender. |
|                  | [#184243][OPAL Regular] support APP 3.0                                    |
| GUI              | [#184844] Networks Topology.   |
|                  | [#184762][GUI] Compact help link adding into GUI.                          |
|                  | [#184761][OPAL Generic] GUI translation_ES_NL.                             |
|                  | [#182309][OPAL Generic] No QoS setup page on OPAL for xPON products.       |
|                  | [#188589][#221000063] Change the wording in SteerStatus.                   |
|                  | [#188521][#220901659] Translation error WIFI password strength at DX3301.  |
|                  | [#188520][#220901550] Translation error WIFI password strength.            |
| System           | [#184836] Support Web http redirect to https.                              |

|                 |   |
|-----------------|---|
|                 | [#184776] Console redirect/Zconsole monitor.  |
|                 | [#182244][ETSI EN 303 645] The consumer IoT device shall protect the confidentiality of critical security parameters that are communicated via remotely accessible network interfaces.  |
|                 | [#188519][#221101418] OPAL, Partial factory reset option with firmware upgrades. (tr069/gui) 220701077.   |
|                 | [#188518][#220701077][System] OPAL, Feature proposal/request - Soft-Reset feature.  |
| Syslog          | [#182251][ETSI EN 303 645] 5.8-2: The confidentiality of sensitive personal data communicated between the device and associated services shall be protected, with cryptography appropriate to the properties of the technology and usage. |
| DNS             | [#187138][#221102029] EX5501, Proxy DNS - Primary to Secondary fallback method.   |
| Interface Group | [#186408][#230100744] EX5601, bridge config improvement.  |
| VOIP            | [#186396][#221101135][EX5601-T0] Grain IT - TLS encrypt the SIP signaling.  |
| IPv6            | [#184828][#221200506] Configuration of the AFTR should be possible with URL.  |
| DHCP            | [#184823][#220900410] DHCP option providing CPE firmware version.   |
| WIFI            | [#188608][#220901661] EX5601, Configurable WiFi Country Code (ISO 3166-1 alpha-2).  |
|                 | [#188590] [#230200423] WX5600-T0 TR-098 support for WiFi X_ZYXEL_CountryCode.   |
| SFP             | [#186886][#230301237] AX7501, Support for SFP: METRIC MI-SF34G1-020AD   |
|                 | [#186887][#230301236] AX7501, Support for SFP: Hexatronic BX10-U  |

● **Bug Fixed**

| Modified Modules | Bug Fixed List |
|------------------|----------------|
|------------------|----------------|



|              |  |
|--------------|--|
| DNS          | [#188691][#230400106] EX3301-T0 / DNSProxy issue when Primary DNS unreachable.   |
| MPro Mesh    | [#188671][#230400635] WX3401 not able to join mesh with EX5401 or AX7501 and Guest Network.                                      |
|              | [#187014][#230301473] AX7501, WX3401 not able to join mesh with AX7501 with Guest Network.                                       |
| TR069        | [#188595][#230301653] EX5601, CurrentTime not reporting in accordance to the TR-069 standard.                                    |
|              | [#188594][#230201161] WX5600, enable/disable SSH via ACS.  |
|              | [#183352][#221101357] Issues with setting some parameters via TR069  |
|              | [#183355][#220401035][TR-069] SPV WiFi BeaconType failed   |
|              | [#186185][##230300897] AX7501, iPerf from tr069 fail, DownloadDiagnostics not ok, UploadDiagnostics ok.                          |
| Certificates | [#188593][#230300429] EX5601, certificate Common Name doesn't match host name.   |
| ROMD         | [#188592][#221200930] EX5601, romd backup include option 125 devices specific option value.                                      |
|              | [#184817][#230100138] Rom-d backup.  |
| GUI          | [#188591][#230300494] EX3301, GUI menu visible prior to login.   |
| WLAN         | [#186384][#230100382] EX5601, Not possible to enable 5GHz WiFi in GUI, if WiFi first is turned off by physical button.           |
|              | [#184684][#220601144] WiFi button not working correct (behavior change).   |
| IPv6         | [#184810][#221200452] Activate IPV6 Default gateway by TR069.  |
| DHCP         | [#184804][#221101734] No Management connection with new FW Version.  |
| NTP          | [#184799][#220900371] NTP Time Server URL cannot support "-".  |
| System       | [#184254][CVE-2022-4203,4304,4450][CVE-2023-0215~0217,0286,0401][Zyxel-SI-1464] [Vulnerability] OpenSSL multiple vulnerabilities |
|              | [#182874][#230101319] AX7501, Lifemote trigger uncontrolled memory usage with script that is working for all other device types  |

## Modifications in 5.17(ABPC.3)D0

- Feature Enhancement

| Modified Modules | Features Enhancement List                    |
|------------------|--|
| FCS              | Based on 5.17(ABPC.3)C0, release D0 firmware |

## Modifications in 5.17(ABPC.3)C0

- Feature Enhancement

| Modified Modules | Features Enhancement List                       |
|------------------|---|
| FCS              | Based on 5.17(ABPC.3)b4, Change to FCS version. |

## Modifications in 5.17(ABPC.3)b4

- Bug Fixed

| Modified Modules | Bug Fixed List  |
|------------------|---|
| Security         | [#178839][Security]Zyxel-SI-1441 [Vulnerability] Hidden SSID and symbolic Links in ftpd of AX7501-B0.<br>- Add romcover |
| TR069            | [#180454][#221200772] AX7501, TransferComplete messages without Start/Complete Time value, reference: 221100865         |
| System           | [#221001669] Broken devices - When this issue happen, the data partition would broke and restore to default.            |

## Modifications in 5.17(ABPC.3)b3

- Feature Enhancement

| Modified Modules | Features Enhancement List                                   |
|------------------|---|
| lperf            | [#164238][#220400115] AX7501, include MAC-ranges for iPerf. |

- Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| Security         | [#178839][Security]Zyxel-SI-1441 [Vulnerability] Hidden SSID and symbolic Links in ftpd of AX7501-B0 |
| TR069            | [#178738][#221100670] Can't modify the WAN interface default gateway by TR069                        |
| GUI              | [#177126][WLAN] When Wireless only enable 2.4G or 5G, GUI doesn't show Wi-Fi QR code                 |

## Modifications in 5.17(ABPC.3)b2

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                                |
|------------------|--|
| System           | [#175627][#221000644] AX7501, Support for SFP OP4420D-35 |
|                  | [#174570][#220901591] AX7501, Add SFP support            |

### ● Bug Fixed

| Modified Modules | Bug Fixed List  |
|------------------|---|
| IPv6             | [#175301][#221000378] ZYX-409 AX7501 - dhcp6c breaks on UnspecFail advertisements   |
|                  | [#175290][#221000377] ZYX-407 AX7501 - Client does not send router advertisements on LAN with prefix lifetimes based on IA_PD lifetimes |
|                  | [#175288][#221000376] ZYX-406 AX7501 - DUT does advertise itself as a default router when WAN RA lifetime is 0                          |
|                  | [#175287][#221000374] ZYX-405 AX7501 - Two DHCPv6 Solicit packages are sent after renew and rebind fails                                |
|                  | [#175286][#221000373] ZYX-404 AX7501- After some time, prefix delegation DHCPv6 client on WAN interface stops                           |
|                  | [#220900584] ZYX-342, Packets sent to unreachable subnets in the delegated prefix are not dropped                                       |
| WAN              | [#173876][#220801049][330379] AX7501-B0 / P2P firmware sends 2 Mac addresses requests   |

|          |  |
|----------|--|
| UPnP     | [#173212][#220900242] AX7501, UPnP doesn't work on .2C0  |
| Security | [#176288]Zyxel-SI-1433 [Vulnerability] Buffer overflow vulnerabilities and command injection vulnerability for AX7501-B1 Generic |

## Modifications in 5.17(ABPC.3)b1

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                              |
|------------------|--|
| System           | [#164754][Feature] Support PX/AX7501-B1                |
| WIFI             | [#172100][Feature] Upgrade wlan driver to 17.10.188.75 |
| MPro Mesh        | [#171367][Feature] Support EasyMesh R2                 |

### ● Bug Fixed

| Modified Modules | Bug Fixed List  |
|------------------|---|
| PON              | [#171525][#220701134] Downstream corrected and uncorrected FEC blocks AX 7501-B0                                |
| WIFI             | [#169504][VMG3625-T50B] WiFi button not working correct<br>- Align WiFi on/off behavior with HW button and GUI. |

## Modifications in 5.17(ABPC.2.1)C0

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                         |
|------------------|---|
| FCS              | Based on 5.17(ABPC.2.1)b2, Change to FCS version. |

## Modifications in 5.17(ABPC.2.1)b2

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                            |
|------------------|--|
| Iperf3           | [FEATURE] Update checking policy for iperf3 license. |

## Modifications in 5.17(ABPC.2.1)b1

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|---|
| PON              | [FEATURE][#166924][#220200664] AX7501 bridge configuration                  |
| SFP              | [FEATURE][#167013][#220500514] Problem AX7501-B0 with 10GBASE-T SFP+ (RJ45) |
|                  | [FEATURE][#169065][#220601041] AX7501, Fiberworks 10G SFPs                  |
|                  | [FEATURE][#163999][#220301699] AX7501, XGS-PON OP49N2-SU support            |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| PON              | [BUGFIX][#169644][#220601090][320028] AX7501-B0 / Does not synchronize with the new firmware.              |
|                  | [BUGFIX][#169648][#220601424] Wrong speed mode on 2F0  |
|                  | [BUGFIX][#169636][#220601441] After the upgrade the ont is xgpon   |
|                  | [BUGFIX][#165249][#220400806] (ZYX-338 AX7501, PON not working after reset).                               |
|                  | [BUGFIX][#170576][#220600695] AX7501 - ONT Mismatch between actual and planned upstream rate               |
|                  | [BUGFIX][#170684][#220701000] LAN port shut down issue.  |
|                  | [BUGFIX][#170380][#220700783] Customer reports that PPPoE WAN disappear on GUI with ZTE OLT in the morning |

### ● Issues have been enhanced

| Modified Modules | Bug Fixed List   |
|------------------|--|
| PON              | [BUGFIX][#170379][#220700765] Adding services without reboot |

## Modifications in 5.17(ABPC.2)C0

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                      |
|------------------|--|
| FCS              | Based on 5.17(ABPC.2)b5, Change to FCS version |

## Modifications in 5.17(ABPC.2)b5

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                     |
|------------------|---|
| GUI              | [#166326][OPAL Generic] GUI translation_ES_NL |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| Security         | [#166005][Security] CPE happen "Invalid memory segment access" after Create Certificate Request. |

## Modifications in 5.17(ABPC.2)b4

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|---|
| WAN              | [#164015][#220301711] Allow HTTP/HTTPS access via IPoE interface.                             |
| WIFI             | [#159699][#220100035] EX5501, Device.WiFi.MultiAP.  |
| Security         | [#164360][Vulnerability] Infinite loop in BN_mod_sqrt() of OpenSSL when parsing certificates. |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| WLAN             | [#164007][#220301708] Device sets EasyMesh ON and OFF when |

|             |   |
|-------------|---|
|             | X_ZYXEL_EXT.EasyMesh.Enable is disabled   |
|             | [#164004][#220301715] The TR69 X_ZYXEL_Wireless_Mode for 5Ghz Band-AX Mixed mode value is not consistent      |
|             | [#163020][WLAN] 5G Guest SSID switch button doesn't link with 2.4G Guest SSID behavior when onssid is enable. |
| RemoteM GMT | [#162931][#220300408] Admin login still possible even after mgmt service has been reconfigured AX 7501-B0     |
| Security    | [#164250][#220400041] VMG8825, cleartext storage of information.  |
| Iperf3      | [#160295][#220100815] AX7501, iperf3 not working  |

## Modifications in 5.17(ABPC.2)b3

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|---|
| System           | [#160480][OPAL Generic] Disable the FTP function.   |
| WPS              | [#156352][OPAL Generic] Change WPS button trigger condition.  |
| DHCP             | [#161466][#220100965] Support LAN DHCP option 43 suboptions to forward acs url.<br>[#162091][#220300140] AX7501, Requested support for lan dhcp option 43 suboptions using cwmp to forward acs url.                     |
| TR069            | [#159523][#211200832] Please sent TR069 cnonce in hexadecimal format.   |
| GUI              | [#162045][OPAL Generic] Portuguese GUI translation.<br>[#162101][OPAL Generic] French GUI translation.<br>[#162310][OPAL Generic] Italian GUI translation   |
| VoIP             | [#153060][#210701730] AX7501 - [ZAB-4] [SIP] Call hold does not work.<br>[#152599][#210701727] AX7501 - [ZAB-7] [SIP] Call is not executed when pound key is present.<br>[#156443][#210601569] Call Hold does not work. |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| WIFI             | [#156808][Wireless] DUT 5G channel on Band 2 (60), smart phone can't connect.    |
| GUI              | [#155931][GUI] GUI pop out warm message after key in 72 hex.                     |
| VoIP             | [#152404][#210701735] AX7501 - [SIP] User-agent format does not follow standard. |

## Modifications in 5.17(ABPC.2)b2

### ● Feature Enhancement

| Modified Modules | Features Enhancement List  |
|------------------|--|
| TR-069           | [#158392][211200292] Change the GPON serial number for the ACS communication AX 7501-B0. |
| GUI              | [#147787][#210401424] Transceiver information DDML via CLI WEB GUI AX7501-B0.            |
|                  | [#157765][#211101024] It is possible to see and check optical power.                     |
| WAN              | [#158905][#211200757] ROM-D config can only hold one Default Gateway AX 7501-B0.         |

### ● Bug Fixed

| Modified Modules | Bug Fixed List  |
|------------------|---|
| Security         | [BUGFIX][#146975][Security] L2TP VPN can't work on MultiWAN interface.  |
| WLAN             | [BUGFIX][#152457][WLAN] MAC Authentication page does not block duplicate MAC Address.                               |
| System           | [#157516][System] Portmirror page can't display monitor interface list when no wan connect.                         |
| GUI              | [#156514][GUI] In bridge <-> routing mode, IPv6 DHCP behavior does not follow IPv4 DHCP.                            |
| TR069            | [#155173][#210901346]The TR69 X_ZYXEL_Wireless_Mode for 5Ghz Band AX Mixed mode acceptable value is not consistent. |



|  |   |
|--|---|
|  | TR-181: Device.WiFi.Radio.{i}.OperatingStandards<br>TR-098:<br>InternetGatewayDevice.LANDevice.{i}.WLANConfiguration.{i}.X_<br>ZYXEL_OperatingStandards |
|--|---|

## Modifications in 5.17(ABPC.2)b1

### ● Feature Enhancement

| Modified Modules | Features Enhancement List  |
|------------------|--|
| System           | [#155086][Feature Enhancement][AX7501-B0] Support to set specify WAN type<br>[#155208][Feature Enhancement][AX7501-B0] Support XGPON with PM7000-00/01<br>[#149820][#210600835] EX5501 . disable F-secure<br>[#155286][#210401425] AX7501, show sfp link status<br>[#132874][#200701283] EX5501, LED control |
| IPv6             | [#150626][#210600904][230757] AX7501-B0 / RA-MTU   |
| NAT              | [#145239][#210200785] Question: PCP (Port Control Protocol) support  |
| GUI              | [#147255][#210401527] EMG3525 Configure available cards in web-gui<br>[#149438][#210600461] EX5401, disable or optimize client check<br>[#137229][#200901344] Feature request change SLID value AX 7501-B0<br>[#147975][OPAL Generic] Media Server GUI Change  |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| GUI              | [#150913][#210601930] DS-Lite setting missing Automatically configured by DHCP DX5401-B0 |
| TR69             | [#154485][#210900863] EX5501, Value for  |

|  |  |
|--|--|
|  | StaticAddressNumberOfEntries does not survive boot |
|--|--|

## Modifications in 5.17(ABPC.1)C0

### ● Feature Enhancement

| Modified Modules | Features Enhancement List                      |
|------------------|--|
| FCS              | Based on 5.17(ABPC.1)b7, Change to FCS version |

## Modifications in 5.17(ABPC.1)b7

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|---|
| System           | [#157660][#211100671] AX7501, support for 3 SFPs<br>[#157783][#211101324] AX7501-B0 Addon ethernet SFP dongle support<br>[#15796][#211101415] 1G SFP transceiver works not AX 7501-B0 |
| TR069            | [#155239][#210901600] Change CWMP implementation from SN to GPON SN AX 7501-B0  |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| TR069            | [#157272][#211001429] ACS problems with EX5501             |
| IPv6             | [#157439][#211000436] IPv6 neighbor not working AX 7501-B0 |

## Modifications in 5.17(ABPC.1)b6

### ● Bug Fixed

| Modified Modules | Bug Fixed List                                 |
|------------------|--|
| TR069            | [#157272][#211001429] ACS problems with EX5501 |

|      |  |
|------|--|
| IPv6 | [#157439][#211000436] IPv6 neighbor not working AX 7501-B0 |
|------|--|

## Modifications in 5.17(ABPC.1)b5

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|---|
| System           | [#152090][#210701278] AX7501, eth-sfp doesn't work<br>[#152091][#210701804] AX7501, CTS SFP support<br>[#210701688] AX7501-B0 questions on features - SFP |

### ● Bug Fixed

| Modified Modules | Bug Fixed List  |
|------------------|---|
| TR069            | [#151496][#210301420] TR069 ACS get parameter / refresh objekt error AX 7501-B0 |
| MPro Mesh        | [#152094][#210701811] AX7501, mesh not enabled when enabling via gui            |

## Modifications in 5.17(ABPC.1)b4

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|---|
| System           | [#150500][#210500683] Transceiver information DDMI via CLI not correct AX7501-B0<br>- Support 1G AE SFP+: fiberONE SFP-GE-BX20-U, ACAL BFi ABSFBL3412-20DAC<br>- Support 10G AE SFP+: fiberONE SFP-10G-BX10-U<br>[#149934] Support ZYXEL SFP+ AM7000-00 |
| DHCP             | [#149486][#210401267] IPv4 DHCP client with 32 MASK works not AX7501-B0.  |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| WAN              | [#148622][#210500535]AX7501, IP.Interface in iptables. |
| System           | [#140348][#201200665]AX7501, link issue.               |

- **Issues have been enhanced**

| Modified Modules | Bug Fixed List                                     |
|------------------|--|
| VoIP             | [#210601494] Random SIP accounts register failure. |

## Modifications in 5.17(ABPC.1)b3

- **Feature Enhancement**

| Modified Modules | Features Enhancement List   |
|------------------|---|
| System           | <ol style="list-style-type: none"> <li>1. [#148279] Multi-language GUI for OPAL generic GW + Extender</li> <li>2. [#147075][Enhance][AX7501-B0] Support SFP+ THMPRS-3511-10A</li> </ol> |
| OMCI             | [#201200573][#148260] Disable Serial Number PLOAM message AX 7501-B0  |
| TR069            | [#148406][#210500049] XGSPON- Apply as Default Gateway for IPV6   |

- **Bug Fixed**

| Modified Modules | Bug Fixed List  |
|------------------|---|
| Security         | [#143384][Vulnerability] BRCM "DeAgg & DeFrag Attacks |
| System           | [#140348][#201200665] AX7501, link issue .            |

## Modifications in 5.17(ABPC.1)b2

- **Feature Enhancement**

| Modified | Features Enhancement List |
|----------|---------------------------|
|----------|---------------------------|

| Modules |  |
|---------|--|
| OMCI    | 1. [#146603][#210300514] XGSPON: Add WAN interface using Hauwei OLT<br>- Feature only work with F0 config. |

● **Bug Fixed**

| Modified Modules | Bug Fixed List   |
|------------------|--|
| Security         | 1. [#146987][#210100668][Vulnerability] Vulnerabilities in Multiple Zyxel Equipment from Sec consult => issue 11   |
| System           | 1. [#144917][#210300995] Option 43 Enable Broadband setting not possible AX 7501-B0<br>2. [#144126][System] Language list include "French · Deutsch · Español" . |

**Modifications in 5.17(ABPC.1)b1**

● **Feature Enhancement**

| Modified Modules | Features Enhancement List   |
|------------------|---|
| System           | 2. [#143718][#210200585] Zyxel PX7501-B0 Traffic management option<br>3. [#125018][#200300516] AX7501, SFP-list config parameter<br>4. [#140347][#201200664] AX7501, redirect_console<br>5. [#133328] Set ONU Vendor ID to ZYXE |

|                         |  |
|-------------------------|--|
| <p>OPAL<br/>Generic</p> | <ol style="list-style-type: none"> <li>1. [#137763][#201001164] AX7501, support for Lifemote agent</li> <li>2. [#143252]upgrade WLAN driver to 17.10.121.37</li> <li>3. [#143397][OPAL] Change time format 00:00-23:59 in Parental control page.</li> <li>4. [#143457][OPAL Generic] Key Feature - F-Secure 2.3</li> <li>5. [#143458][OPAL Generic] Key Feature - ZyEE Container</li> <li>6. [#143464][OPAL Generic] Key Feature - L2TP (default disabled)</li> <li>7. [#143461][OPAL Generic] Key Feature - WPA3 (default Mix mode)</li> <li>8. [#143462][OPAL Generic] Key Feature - WiFi redminer (default disabled)</li> <li>9. [#143779][OPAL Generic] Key Feature - MAP-T/MAP-E</li> <li>10. [#143857][OPAL Generic] Support MproMESH and Multi-language<br/>- Available Languages: en,cz,it,nl,pt,ru,tr,fr,de,es</li> </ol> |
|-------------------------|--|

● **Bug Fixed**

| <p><b>Modified Modules</b></p> | <p><b>Bug Fixed List</b></p>  |
|--------------------------------|---|
| <p>Security</p>                | <ol style="list-style-type: none"> <li>2. [Vulnerability] UPnP protocol can be abused to perform DDoS and/or data exfiltration via SUBSCRIBE capability.</li> <li>3. [#200800711][Vulnerability] CVE-2019-11358 vulnerability - update jQuery to "3.5.1".</li> <li>4. [#210100668][Vulnerability] Vulnerabilities in Multiple Zyxel Equipment from Sec consult =&gt; issue 1,2,4,5, 7~10</li> <li>5. [#210100667][Vulnerability] Dnsmasq multiple vulnerabilities (DNSPooq)</li> <li>6. [Vulnerability][CVE-2020-1971][Openssl] Correctly compare EdiPartyName in GENERAL_NAME_cmp()</li> </ol> |
| <p>IGMP</p>                    | <ol style="list-style-type: none"> <li>3. [#140334][#201200663] AX7501, IGMP snooping issue</li> </ol>  |
| <p>Remote Management</p>       | <ol style="list-style-type: none"> <li>1. [#128707][#200500518] AX7501, dropbear not running after reboot</li> </ol>  |

## Modifications in 5.15(ABPC.0)C0

### ● Feature Enhancement

| Modified Modules | Features Enhancement List   |
|------------------|-----------------------------|
| FCS              | First FCS firmware released |

## Modifications in 5.15(ABPC.0)b7

### ● Feature Enhancement

| Modified Modules | Features Enhancement List |
|------------------|---------------------------|
|                  |                           |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| System           | 1. [BugFix][#125305][Stress] 5G WLAN client does not access internet overnight stress. |

## Modifications in 5.15(ABPC.0)b6

### ● Feature Enhancement

| Modified Modules | Features Enhancement List  |
|------------------|--|
| System           | 1. [Feature] Support FS SFP module<br>- 10G Fiber: SFP-10G-BX<br>- 10G copper: SFP-10G-T |

### ● Bug Fixed

| Modified Modules | Bug Fixed List   |
|------------------|--|
| WAN              | 2. [#121109][WAN] FIBER LED and INTERNET LED are lit when DUT uses SFP 10G Copper EM7000-00.<br>3. [#124298]AX7501, 1G/10G auto-mode fails with fiber disconnected |

## Modifications in 5.15(ABPC.0)b5

### ● Feature Enhancement

| Modified Modules | Features Enhancement List  |
|------------------|--|
| System           | 1. [Feature] Support XGS SFP module for AX7501-B0 <ul style="list-style-type: none"> <li>- Must to reset to default when changing AE model to XGS, and vice versa</li> <li>- Support XGS SFP module:<br/>ZYXEL PM7000-00, Hisense LTF7225-BH+</li> </ul> 2. [Feature] Support ZYXEL SFP module <ul style="list-style-type: none"> <li>- XGS: ZYXEL PM7000-00</li> <li>- 10G copper: ZYXEL EM7000-00</li> </ul> |
| WLAN             | 1. [Enhancement] Upgrade wifi driver to 17.10.99.1301<br>2. [Enhancement] Change WLAN country code to E0/0   |

### ● Bug Fixed

| Modified Modules | Bug Fixed List |
|------------------|----------------|
|                  |                |

## Modifications in 5.15(ABPC.0)b4

### ● Feature Enhancement

| Modified Modules | Features Enhancement List  |
|------------------|--|
| System           | 3. [#107837][#190600142] AX7501, 1G/100M SFP <ul style="list-style-type: none"> <li>- Support 10G/1G WAN rate auto detect</li> </ul> Note: Chipset limitation: <ul style="list-style-type: none"> <li>- SFP module must plug in and connect cable during boot up</li> <li>- If SFP module is not in SFP support list, may work fail</li> <li>- If switch port is auto-nego 100M/1G, may work fail</li> </ul> |



- **Bug Fixed**

| Modified Modules | Bug Fixed List |
|------------------|----------------|
|                  |                |

## Modifications in 5.15(ABPC.0)b3

- **Feature Enhancement**

| Modified Modules | Features Enhancement List           |
|------------------|-------------------------------------|
|                  | 1. PX7501-B0 and AX7501-B0 is co-fw |

- **Bug Fixed**

| Modified Modules | Bug Fixed List |
|------------------|----------------|
|                  |                |

## Modifications in 5.15(ABPC.0)b2

- **Feature Enhancement**

| Modified Modules | Features Enhancement List |
|------------------|---------------------------|
|                  |                           |

- **Bug Fixed**

| Modified Modules | Bug Fixed List |
|------------------|----------------|
|                  |                |

## Modifications in 5.15(ABPC.0)b1

- **Feature Enhancement**

| Modified Modules | Features Enhancement List |
|------------------|---------------------------|
|                  |                           |

● **Bug Fixed**

| Modified Modules | Bug Fixed List |
|------------------|----------------|
|                  |                |

**Check list for the items may be related to HW functions**

| Items   | Any change? | Comments |
|---|-------------|----------|
| DSL/Modem code  | N           |          |
| DSL/GE/PON<br>Application/Driver code<br>and setting parameters | N           |          |
| Wireless driver<br>(WiFi/3G/WiMAX/LTE..)                        | N           |          |
| VoIP driver & setting   | N           |          |
| Video decoder driver  | N           |          |
| Memory access related<br>(like tuning DDR<br>parameters, etc)   | N           |          |
| Dying gasp  | N           |          |
| LED behavior  | N           |          |
| SDK version upgraded  | N           |          |

| Items  | Any change? | Comments |
|--|-------------|----------|
| NAND Flash:<br>File system type change;<br>Partition layout change | N           |          |
| Others   | N           |          |

### Default Setting:

1. Default setting table : <http://ctoredmine.zyxel.com/issues/107349> Default setting config field
2. Default URL: <http://192.168.1.1>

### Manufactory Data

|                        |                                     |
|------------------------|-------------------------------------|
| Firmware Version       | : V5.17(ABPC.5)D0                   |
| Bootbase Version       | : V1.66   03/01/2024 18:37:40       |
| Vendor Name            | : Zyxel Communications Corp.        |
| Product Model          | : AX7501-B0                         |
| Serial Number          | : S210Y43032047                     |
| GPON Serial Number     | : ZYXE53724E52                      |
| GPON Password          | : 1234567890                        |
| First MAC Address      | : D43DF3998314                      |
| Last MAC Address       | : D43DF399831F                      |
| MAC Address Quantity   | : 12                                |
| Default Country Code   | : FF                                |
| Boot Module Debug Flag | : 01                                |
| Kernel Checksum        | : 0000C0DD                          |
| RootFS Checksum        | : 0000867E                          |
| Romfile Checksum       | : N/A (default)                     |
| Main Feature Bits      | : 00                                |
| Other Feature Bits     | :                                   |
| ffada83c:              | 04050701 ffffffff 01030000 00000000 |
| ffada84c:              | ffffffff ffffffff ffffffff          |

|                        |                                     |
|------------------------|-------------------------------------|
| Firmware Version       | : V5.17(ABPC.5)D0                   |
| Bootbase Version       | : V1.66   03/01/2024 18:37:40       |
| Vendor Name            | : Zyxel Communications Corp.        |
| Product Model          | : AX7501-B1                         |
| Serial Number          | : S210Y43032047                     |
| GPON Serial Number     | : ZYXE53724E52                      |
| GPON Password          | : 1234567890                        |
| First MAC Address      | : D43DF3998314                      |
| Last MAC Address       | : D43DF399831F                      |
| MAC Address Quantity   | : 12                                |
| Default Country Code   | : FF                                |
| Boot Module Debug Flag | : 01                                |
| Kernel Checksum        | : 0000C0DD                          |
| RootFS Checksum        | : 0000867E                          |
| Romfile Checksum       | : N/A (default)                     |
| Main Feature Bits      | : 00                                |
| Other Feature Bits     | :                                   |
| ffada83c:              | 04050701 ffffffff 01030000 00000000 |
| ffada84c:              | ffffffff ffffffff ffffffff          |

|                        |                               |
|------------------------|-------------------------------|
| Firmware Version       | : V5.17(ABPC.5)D0             |
| Bootbase Version       | : V1.66   03/01/2024 18:37:40 |
| Vendor Name            | : Zyxel Communications Corp.  |
| Product Model          | : PX7501-B0                   |
| Serial Number          | : S210Y43032047               |
| GPON Serial Number     | : ZYXE53724E52                |
| GPON Password          | : 1234567890                  |
| First MAC Address      | : D43DF3998314                |
| Last MAC Address       | : D43DF399831F                |
| MAC Address Quantity   | : 12                          |
| Default Country Code   | : FF                          |
| Boot Module Debug Flag | : 01                          |
| Kernel Checksum        | : 0000C0DD                    |
| RootFS Checksum        | : 0000867E                    |
| Romfile Checksum       | : N/A (default)               |

```

Main Feature Bits      : 00
Other Feature Bits    :
ffada83c: 04050701 ffffffff 01030000 00000000
ffada84c: ffffffff ffffffff ffffffff
    
```

```

Firmware Version      : V5.17(ABPC.5)D0
Bootbase Version      : V1.66 | 03/01/2024 18:37:40
Vendor Name           : Zyxel Communications Corp.
Product Model         : PM7510-00
Serial Number         : S090Y00009998
GPON Serial Number    : ZYXE1234560E
GPON Password         : 1234567890
First MAC Address     : C86C87556600
Last MAC Address      : C86C8755660B
MAC Address Quantity  : 12
Default Country Code  : FF
Boot Module Debug Flag : 01
Kernel Checksum       : 0000C0DD
RootFS Checksum       : 0000867E
Romfile Checksum      : N/A (default)
Main Feature Bits     : 00
Other Feature Bits    :
ff85734c: 04050701 ffffffff 01030000 00000000
ff85735c: ffffffff ffffffff ffffffff
    
```

| Zyxel SW Check List                 |   |
|-------------------------------------|---|
| Project                             | PX7501-B0_Generic & AX7501-B0_Generic & AX7501-B1_Generic & PM7510-00 |
| WEB 显示的 SW Ver<br>/FIRMWARE_VERSION | V5.17(ABPC.5)D0   |
| Default IP                          | 192.168.1.1   |
| Telnet(Enable/Disable)              | Disable   |
| factory.rom                         | N/A   |
| Generate Key Tools Ver              | Zyxel_GenKeyTool_V2.4_64_v8_ABPC_C0.exe                               |

|  |   |
|--|---|
| Generate Key Parameter                       | Usage: Zyxel_GenKeyTool_V2.4_64_v9_ABPC_D0.exe --devcnt 1 --mac C86C87338001 --macqty 12 --sn S192Y12345678 --ssidprefix Zyxel_ --ssid5Gprefix Zyxel_ --ssidsuffixlen 4 --ssidsrc "MAC" --ssidmode 2.4G_5G_NO_SUFFIX --ssidsrcoffset 2 --adminpwlen 8 --adminpwencrypt SHA256 --adminpwsrc SN --supervisorpwlen 10 --supervisorpwencrypt SHA256 --Generic_letter_case MixcaseSpecial --supervisorpwsrc ADMIN --gponsnlen 16 |
| Input MAC                                    | C86C87338001  |
| Input SN                                     | S192Y12345678   |
| Output SSID_2.4G                             | Zyxel_8002  |
| Wireless Key                                 | pNM3#y3!u3  |
| WEBGUI ID                                    | admin   |
| WEBGUI PWD                                   | LF3cQK3*  |
| xPON SN                                      | ZYSE87338001  |
| Supervisor random password Tools Ver or atck | New_AutoGenSupervisorPassword.exe or ATCK   |
| Supervisor random password Tools Parameter   | New_AutoGenSupervisorPassword.exe S190012345678   |
| Out.txt                                      | <Serial Number> : S190012345678<br>supervisor password = rD569D435N   |
| .bm 和.bin 文件 MD5 值                           |   |