

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

Firmware Release Note

V5.17(ABPC.5.2)C0

Date:	July 01, 2024
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## 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 V5.17(ABPC.2.1)b1
2022/08/19	3.7	PeiPing Chen	FW release for V5.17(ABPC.2.1)b2
2022/08/19	3.8	PeiPing Chen	FW release for 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
2023/04/28	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
2023/12/15	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
2024/05/29	6.4	PeiPing Chen	FW release for V5.17(ABPC.5.1)b1
2024/05/29	6.5	PeiPing Chen	FW release for V5.17(ABPC.5.1)C0
2024/06/28	6.6	PeiPing Chen	FW release for V5.17(ABPC.5.2)b1
2024/07/01	6.7	PeiPing Chen	FW release for V5.17(ABPC.5.2)C0

## PX7501-B0/AX7501-B0/AX7501-B1/PM7510-00 Generic V5.17(ABPC.5.2)C0 Release Note

Date: July 01, 2024

### Supported Platforms:

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

### Versions:

Firmware Version: V5.17(ABPC.5.2)C0

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 Used In Product	Version	From (Source)	License Terms	Modified / 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.5.2)C0

### ● Feature Enhancement

Modified Modules	Features Enhancement List
FCS	Based on 5.17(ABPC.5.2)b1, Change to FCS version

## Modifications in 5.17(ABPC.5.2)b1

### ● Bug Fixed

Modified Modules	Bug Fixed List
Vulnerability	[#213686][CVE-2024-38266, 38267, 38268, 38269][Zyxel-SI-1559] Multiple authenticated buffer overflow vulnerabilities.
TR069	[#213134][#240600932] AX7501, TR069 communication issue with authentication, see 240501006.
System	[#213503][#240600746] AX7501, Rejecting firmware due to WebGUI https CA handling and http shut down decision.

## Modifications in 5.17(ABPC.5.1)C0

### ● Feature Enhancement

Modified Modules	Features Enhancement List
FCS	Based on 5.17(ABPC.5.1)b1, Change to FCS version

## Modifications in 5.17(ABPC.5.1)b1

### ● Bug Fixed

Modified Modules	Bug Fixed List
Vulnerability	[#211607] [CVE-2024-5412][Zyxel-SI-1557][Vulnerability] Unauthenticated heap buffer overflow in the libclinkc library.

## 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
Configuration	[#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] [CVE-2024-0816][Zyxel-SI-1536] [Vulnerability] Buffer overflow vulnerability in the "traceroute" command.

[#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] [CVE-2011-5053][Zyxel-SI-1498][Vulnerability] WPS vulnerability on 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] [CVE-2023-37929][Zyxel-SI-1506][Vulnerability] Post-authentication buffer overflow.
[#199704] Upgrade curl to 8.4.0	

## 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 Modules	Features Enhancement List
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.
Certificate	[#188593][#230300429] EX5601, certificate Common Name



s	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)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. - 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
Iperf	[#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 - 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] (ZYG-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 onessid 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. [#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. [#162101][OPAL Generic] French GUI translation. [#162310][OPAL Generic] Italian GUI translation
VoIP	[#153060][#210701730] AX7501 - [ZAB-4] [SIP] Call hold does not work. [#152599][#210701727] AX7501 - [ZAB-7] [SIP] Call is not executed when pound key is present. [#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 warn 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 DDMMI 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.
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## ● 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 TR-098: InternetGatewayDevice.LANDevice.{i}.WLANConfiguration.{i}.X_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 [#155208][Feature Enhancement][AX7501-B0] Support XGPON with PM7000-00/01 [#149820][#210600835] EX5501. disable F-secure [#155286][#210401425] AX7501, show sfp link status [#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 [#149438][#210600461] EX5401, disable or optimize client check [#137229][#200901344] Feature request change SLID value AX 7501-B0 [#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 [#157783][#211101324] AX7501-B0 Addon ethernet SFP dongle support [#15796][#211101415] 1G SFP transceiver works not AX 7501-B0

TR069	[#155239][#210901600] Change CWMP implementation from SN to GPON SN AX 7501-B0
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- **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 [#152091][#210701804] AX7501, CTS SFP support [#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 - Support 1G AE SFP+: fiberONE SFP-GE-BX20-U, ACAL BFi ABSFBL3412-20DAC - Support 10G AE SFP+: fiberONE SFP-10G-BX10-U [#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	1. [#148279] Multi-language GUI for OPAL generic GW + Extender 2. [#147075][Enhance][AX7501-B0] Support SFP+ THMPRS-

	3511-10A
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 Modules	Features Enhancement List
OMCI	1. [#146603][#210300514] XGSPON: Add WAN interface using Hauwei OLT - 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 2. [#144126][System] Language list include "French · Deutsch · Español" .

## Modifications in 5.17(ABPC.1)b1

### ● Feature Enhancement

<b>Modified Modules</b>	<b>Features Enhancement List</b>
System	2. [#143718][#210200585] Zyxel PX7501-B0 Traffic management option 3. [#125018][#200300516] AX7501, SFP-list config parameter 4. [#140347][#201200664] AX7501, redirect_console 5. [#133328] Set ONU Vendor ID to ZYXE
OPAL Generic	1. [#137763][#201001164] AX7501, support for Lifemote agent 2. [#143252]upgrade WLAN driver to 17.10.121.37 3. [#143397][OPAL] Change time format 00:00-23:59 in Parental control page. 4. [#143457][OPAL Generic] Key Feature - F-Secure 2.3 5. [#143458][OPAL Generic] Key Feature - ZyEE Container 6. [#143464][OPAL Generic] Key Feature - L2TP (default disabled) 7. [#143461][OPAL Generic] Key Feature - WPA3 (default Mix mode) 8. [#143462][OPAL Generic] Key Feature - WiFi redminer (default disabled) 9. [#143779][OPAL Generic] Key Feature - MAP-T/MAP-E 10.[#143857][OPAL Generic] Support MproMESH and Multi-language - Available Languages: en,cz,it,nl,pt,ru,tr,fr,de,es

● **Bug Fixed**

<b>Modified Modules</b>	<b>Bug Fixed List</b>
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Security	<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>
IGMP	<ol style="list-style-type: none"> <li>3. [#140334][#201200663] AX7501, IGMP snooping issue</li> </ol>
Remote Management	<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	<ol style="list-style-type: none"> <li>1. [BugFix][#125305][Stress] 5G WLAN client does not access internet overnight stress.</li> </ol>

## Modifications in 5.15(ABPC.0)b6

### ● Feature Enhancement

Modified Modules	Features Enhancement List
System	<ol style="list-style-type: none"> <li>[Feature] Support FS SFP module <ul style="list-style-type: none"> <li>10G Fiber: SFP-10G-BX</li> <li>10G copper: SFP-10G-T</li> </ul> </li> </ol>

### ● Bug Fixed

Modified Modules	Bug Fixed List
WAN	<ol style="list-style-type: none"> <li>[#121109][WAN] FIBER LED and INTERNET LED are lit when DUT uses SFP 10G Copper EM7000-00.</li> <li>[#124298]AX7501, 1G/10G auto-mode fails with fiber disconnected</li> </ol>

## Modifications in 5.15(ABPC.0)b5

### ● Feature Enhancement

Modified Modules	Features Enhancement List
System	<ol style="list-style-type: none"> <li>[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: <ul style="list-style-type: none"> <li>ZYXEL PM7000-00, Hisense LTF7225-BH+</li> </ul> </li> </ul> </li> <li>[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> </li> </ol>
WLAN	<ol style="list-style-type: none"> <li>[Enhancement] Upgrade wifi driver to 17.10.99.1301</li> <li>[Enhancement] Change WLAN country code to E0/0</li> </ol>

### ● Bug Fixed

Modified	Bug Fixed List
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Modules	

### 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