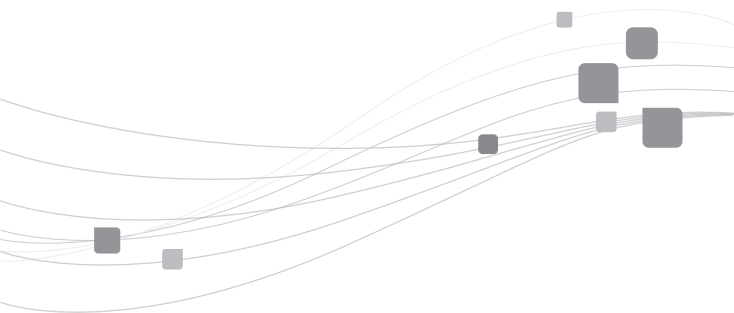# ZXHN F680

GPON ONT

User Manual

ZTE CORPORATION

ZXHN F680
GPON ONT
User Manual

Manual No: SJ-20190805153024-001
Edition Time: 2019-11-06(R1.0)

LEGAL INFORMATION

1 Safety Precautions

Usage Cautions

- Read all the safety cautions carefully before using the device.
- Only use the accessories included in the package, such as power supply adapter.
- Do not extend the power cord, otherwise the device will not work.
- The power supply voltage must meet the requirements of the device input voltage (The voltage fluctuation range is less than 10%).
- Keep the power plug clean and dry to prevent any risk of electric shock or other dangers.
- Disconnect all the cables during a lightning storm to prevent the device from damage.
- Power off and unplug the power plug when the device is not in use for a long time.
- Do not attempt to open the covers of the device. It is dangerous to do so when the device is powered ON.
- Do not directly stare at the optical interface to prevent any eye injuries.
- Power off and stop using the device under the conditions such as, abnormal sound, smoke, and strange smell. Contact the service provider for mainte-nance if the device is faulty.

Environment Requirements

- Ensure proper ventilation to the device. Place the device away from direct sunlight and never spill any liquid on the device.
- Do not place any object on the device to prevent any deformation or damage to the device.
- Do not place the device near any source of heat or water.
- Keep the device away from any household appliances with strong magnetic or electric fields, such as microwave oven and refrigerator.

Cleaning Requirements

- Before cleaning, power off the device, and unplug all the cables connected to the device, such as power cable, optical fiber, and Ethernet cable.
- Do not use any liquid or spray to clean the device. Use a soft dry cloth.

Environment Protection

- Do not dispose the device or power adapter improperly.
- Observe the local regulations about the equipment disposal or treatment.

Environmental Information

The equipment you purchased has required the extraction and use of natural resources for its production. It may contain substances that are hazardous to

people's health and to the environment. To avoid putting such substances into our environment and to reduce pressure on our natural resources, we ask that you reuse or recycle your end-of-life equipment by using an accredited electronics take-back system.

The symbols below indicate that this product should be reused or recycled and not simply discarded. Please locate and use an appropriate reuse and recycling site.

If you need more information on collection, reuse and recycling systems, contact your local or regional waste administration. You may also contact your equipment provider for more information on the environmental performances of these products.

2 Package Content

Please make sure the ZXHN F680 package contains the following items.

Item	Quantity
ZXHN F680 unit	One
AC-DC power supply adapter	One
RJ-45 Ethernet cable	One
User manual	One

Note:

The list is only for reference. The actual contents may vary from the list.

If any of the items included in the package is incorrect, lost or damaged, please contact your service provider. If you need to replace the product, please keep the package and all the items in good condition.

3 Indicator

Figure 3-1 shows the indicators on the front panel of the ZXHN F680 unit.

Figure 3-1 Indicators on the Front Panel
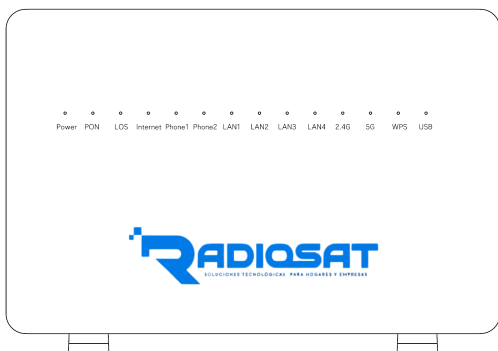
Table 3-1 describes the indicators on the front panel of the ZXHN F680 unit.

Table 3-1 Descriptions of the Indicators on the Front Panel

Indicator	Status	Description
Power	Off	The device is not powered on.
	Solid green	The device is powered on.
PON	Off	The device has not started the registration process or the device is not powered on.
	Solid green	The device registration is successful.
	Flashing (2 Hz) green	The device is being registered.
	Flashing (1 Hz) green	The device is being upgraded.
LOS	Off	The device received optical power is normal.
	Solid red	The optical transmitter of the PON interface is powered off.
	Flashing red	The device received optical power is lower than the optical sensitivity of the receiver.

Indicator	Status	Description
Internet	Off	The device is not powered on or the Ethernet connection does not exit.
	Solid green	The Ethernet port is connected but no data is transmitted via the Ethernet port.
	Flashing green	The data is transmitted via internet connection.
Phone1,Phone2	Off	the device is powered off or unable to register on the soft switch/IMS.
	Solid green	The device has registered on the soft switch/IMS but no traffic is being transmitted.
	Flashing green	The voice service traffic is being transmitted or received.
LAN1–LAN4	Off	The device is not powered on or the network link is not established.
	Solid green	The network link has been established but no data is being transmitted or received.
	Flashing green	Data is being transmitted or received.
2.4G	Off	The device is not powered on or the wireless interface is disabled.
	Solid green	The wireless interface is enabled.
	Flashing green	The data is being transmitted or received.
5G	Off	The device is not powered on or the wireless interface is disabled.
	Solid green	The wireless interface is enabled.
	Flashing green	The data is being transmitted or received.
WPS	Flashing yellow	The device is powered off or the WPS function is disabled.
	Solid green	Some devices has connected the Wi-Fi using WPS.
	Flashing green	Some devices are trying to connect the Wi-Fi using WPS.

Indicator	Status	Description
USB	Off	The device is not powered on or the USB interface is not connected.
	Solid green	The USB interface is connected and operating in host mode, but no data is being transmitted.
	Flashing green	Data is being transmitted on the interface.

4 Interface

Figure 4-1 shows the interfaces and buttons on the side panel of the ZXHN F680 unit.

Figure 4-1 Interfaces and Buttons on the Side Panel
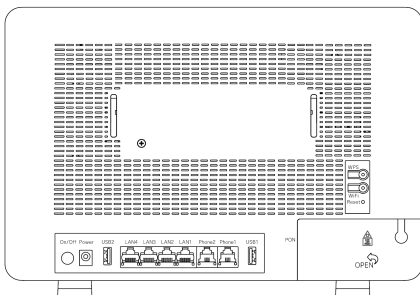
Table 4-1 describes the buttons on the side panel of the ZXHN F680 unit.

Table 4-1 Descriptions of the Buttons on the Side Panel

Button	Description
On/Off	Power switch.
Power	12 V DC power connector.
USB2	Standard USB 2.0 interface, connected to a USB storage device for file sharing, fast backup, and data restoration.
LAN1–LAN4	RJ-45 Ethernet interface, it is used to connect the modem to computer , STB or other network devices.

Button	Description
Phone1 Phone2	RJ-11 telephone interface, connected to the telephone with RJ-11 telephone cable.
USB1	Standard USB 3.0 interface, connected to a USB storage device for file sharing, fast backup, and data restoration.
WPS	Wi-Fi protection button. To enable the Wi-Fi protection function, press this button, so that users can access the network without entering their passwords.
Wi-Fi	When the device is powered on, press the button for less than three seconds to enable or disable the Wi-Fi function.
Reset	When the ZXHN F680 is powered on, press and hold the Reset button for one second to restart the ZXHN F680. The user's settings information will not be lost. When the ZXHN F680 is powered on, press and hold the Reset button for more than five seconds to restore the ZXHN F680 to the factory settings.
PON	PON interface.

5 Product Features

The ZXHN F680 is an ITU-T G.984 and ITU-T G.988 compliant optical network terminal (ONT) that is designed for high-end home users. It is well suited to fiber to the home (FTTH) scenarios and supports desktop mounting. At the network side, it supports 2.488Gbps downlink and 1.244Gbps uplink.

Interfaces

- GPON interface: GPON standard, SC/APC, comply with ITU G.984.1–G.984.5 standards.
- Ethernet interface: Four 10/100/1000M Ethernet interface, comply with IEEE 802.3 and IEEE 802.3u standards.
- Phone interface: RJ-11 interface.
- Wi-Fi interface: Complying with IEEE 802.11b/g/n standard and IEEE 802.11a/n/ac standard.
- USB interface: Supports USB host ports that comply with USB 2.0/3.0 specifications.

Technical Features

- Broadband service access: Connected to Internet through the GPON access method.
- Ethernet service access: Provides Four Ethernet interfaces, connected to the Ethernet devices, such as the user PC. Provides the Internet access and IPTV services.
- Phone service access: Supports SIP protocol.
- WLAN: Provides Internet service for the users through the WLAN method.

- Data sharing, backup, and restoration: provides the USB 2.0 and USB 3.0 interface connected to a USB storage device for file sharing, fast backup, and data restoration.
- Security: Provides multi-level authentication based on the device, user and service, and provides the data channel encryption for safety.
- QoS: Provides QoS services meeting the requirements of various services for the local devices and network.
- Network management: Provides multi-mode network management.

6 Product Specifications

For the product specifications of the ZXHN F680, refer to Table 6-1.

Table 6-1 Product Specifications

Technical Specifications	
Dimensions	305mm × 212mm × 75mm (Width × Depth × Height)
Power adapter	Input: AC 100 V – 240 V, 50 Hz/60 Hz Output: DC 12 V, 2.5 A
Environment Requirements	
Operation temperature	0 °C – 40 °C (32 °F – 104 °F)
Storage temperature	-40℃ to 70℃ (-40℉ to 158℉)
Operation humidity	5% – 95% (non-condensing)
Wi-Fi Radio Specifications	
Frequency bands	Maximum Output Power
Wi-Fi 2.4 GHz band: 2400 – 2483.5 MHz	EIRP: 19 ± 1 dBm
Wi-Fi 5 GHz band: 5150 – 5250 MHz	EIRP: 22 ± 1 dBm
Wi-Fi 5 GHz band: 5250 – 5350 MHz	EIRP: 22 ± 1 dBm
Wi-Fi 5 GHz band: 5470 – 5725 MHz	EIRP: 29 ± 1 dBm

Software Versions	
Software version	V9.0.xxPxTx(x can be 0 – 99, and x represents different customization, and do not affect the product firmware and RF output power.)

7 Cable Connection

Figure 7-1 shows the devices that are connected to the ZXHN F680 device.

Figure 7-1 Entire Connection
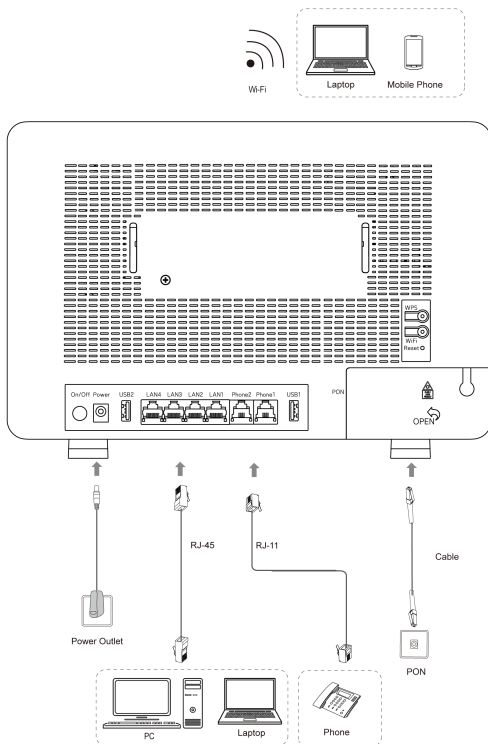
After the devices are connected to the ZXHN F680 device, press the power button. When the corresponding indicators on the front panel are On, you can enjoy various services provided by the service provider.

The factors affecting the wireless network coverage range include the location of the product, distance between the product and a wireless terminal, number of obstacles, obstacle material and density, and interference source. It is recommended that you place the product in accordance with the following principles to maximize the strength of wireless signals.

- The product should be far away from the objects affecting wireless signal propagation, for example, an object with a high reflectivity such as a metallic object or a mirror.
- The product should be far away from an electrical appliance with a strong magnetic or electric field, for example, a microwave oven, a refrigerator, a wireless router, a cordless phone, or a Bluetooth product.
- The product should be installed on the same floor as the applied area.
- Do not put other objects on the product. Try to reduce the number of obstacles between the product and a wireless terminal.
- Horizontally place the product in the middle of the applied area and do not put it in a corner.
- Do not place the product at a high position while it is placed horizontally. The recommended height is 1.2 to 1.5 meters.

8 Troubleshooting

The Power indicator on the front panel is off after the power button is pressed.
The power adapter is not correctly connected to the device. Be sure to use the power adapter supplied with the device.

The LOS indicator is flashing red or solid red after the device is powered on.
- The optical fiber is not correctly connected to the ONT PON interface.
- The optical fiber is broken or damaged.
- If the indicator is solid red or keeps flashing, please contact the service provider for maintenance.

The PON indicator on the front panel is off or flashing green after the device is powered on.
- The GPON link is not established.
- The ONT is not registered.
- Please contact the service provider for help.

The green LAN indicator on the front panel is off after the device is powered on.
- The corresponding LAN link is not established.
- The Ethernet cable is not correctly connected to the LAN interface.
- The network device connected to the LAN interface is not powered on.

9 FCC Statement

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment

does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

⚠️ *Caution!*

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CERTIFICATION

CHECKER _____

DATE _____

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