H3C WX3800X Series Access Controllers

Hardware Information and Specifications

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Preface

H3C WX3800X Series Access Controllers Hardware Information and Specifications describes product models, technical specifications, ports,and LEDs of the WX3800X series access controllers.

This preface includes the following topics about the documentation:

- Audience.
- Conventions.
- Documentation feedback.

Audience

This documentation is intended for:

- Network planners.
- Field technical support and servicing engineers.
- Network administrators working with the WX3800X series access controllers.

Conventions

The following information describes the conventions used in the documentation.

Command conventions

Convention	Description
Boldface	**Bold** text represents commands and keywords that you enter literally as shown.
Italic	*Italic* text represents arguments that you replace with actual values.
[ ]	Square brackets enclose syntax choices (keywords or arguments) that are optional.
{ x | y | ... }	Braces enclose a set of required syntax choices separated by vertical bars, from which you select one.
[x | y | ...]	Square brackets enclose a set of optional syntax choices separated by vertical bars, from which you select one or none.
{ x | y | ... } *	Asterisk marked braces enclose a set of required syntax choices separated by vertical bars, from which you select a minimum of one.
[x | y | ...] *	Asterisk marked square brackets enclose optional syntax choices separated by vertical bars, from which you select one choice, multiple choices, or none.
&<1-n>	The argument or keyword and argument combination before the ampersand (&) sign can be entered 1 to n times.
#	A line that starts with a pound (#) sign is comments.

GUI conventions

Convention	Description
Boldface	Window names, button names, field names, and menu items are in Boldface. For example, the **New User** window opens; click **OK**.
>	Multi-level menus are separated by angle brackets. For example, **File** > **Create** > **Folder**.

Symbols

Convention	Description
WARNING!	An alert that calls attention to important information that if not understood or followed can result in personal injury.
CAUTION:	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
IMPORTANT:	An alert that calls attention to essential information.
NOTE:	An alert that contains additional or supplementary information.
TIP:	An alert that provides helpful information.

Network topology icons

Convention	Description
	Represents a generic network device, such as a router, switch, or firewall.
	Represents a routing-capable device, such as a router or Layer 3 switch.
	Represents a generic switch, such as a Layer 2 or Layer 3 switch, or a router that supports Layer 2 forwarding and other Layer 2 features.
	Represents an access controller, a unified wired-WLAN module, or the access controller engine on a unified wired-WLAN switch.
	Represents an access point.
	Represents a wireless terminator unit.
	Represents a wireless terminator.
	Represents a mesh access point.
	Represents omnidirectional signals.
	Represents directional signals.
	Represents a security product, such as a firewall, UTM, multiservice security gateway, or load balancing device.
	Represents a security module, such as a firewall, load balancing, NetStream, SSL VPN, IPS, or ACG module.

Examples provided in this document

Examples in this document might use devices that differ from your device in hardware model, configuration, or software version. It is normal that the port numbers, sample output, screenshots, and other information in the examples differ from what you have on your device.

Documentation feedback

You can e-mail your comments about product documentation to info@h3c.com.

We appreciate your comments.

Contents

1 Product overview

Product models

This document is applicable to the WX3800X series access controllers. Table1-1 describes the WX3800X series access controller models.

Table1-1 WX3800X series access controller models

Product series	Product code	Model	Remarks
WX3800X series	EWP-WX3820X	WX3820X	Non-PoE models
	EWP-WX3840X	WX3840X	

Technical specifications

Table1-2 Technical specifications

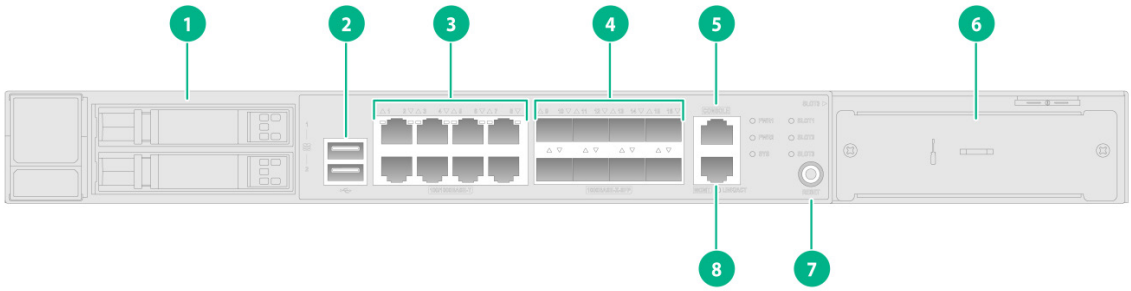
Item	WX3820X	WX3840X
Dimensions (H × W × D)	44 × 440 × 435 mm (1.73 × 17.32 × 17.13 in)	
Weight	9 kg (19.84 lb)	
Console port	1, control port, 9600 bps (default) to 115200 bps	
USB port	2 (USB2.0)	
Management port	1 × 100/1000BASE-T management Ethernet port	
SFP port	8 × 1000BASE-X SFP ports	
100/1000BASE-T autosensing Ethernet port	8	
Reset button (RESET)	• To restore the device to factory default settings, press and hold the button for more than 5 seconds. • To reset the device, press and hold the button for more than 1 second.	
Memory	16GB DDR4	
Storage media	8GB eMMC memory	
Rated voltage range	• PSR250-12A1-D: 100 to 240 VAC @ 50 or 60 Hz • PSR450-12D: –48 to –60 VDC	
System power consumption	36 W to 132.7 W	
Operating temperature	• Without drives: 0°C to 45°C (32°F to 113°F) • With drives: 5°C to 40°C (41°F to 104°F)	
Operating humidity	• Without drives: 5% RH to 95% RH, noncondensing • With drives: 10% RH to 90% RH, noncondensing	

Chassis views

WX3820X&WX3840X

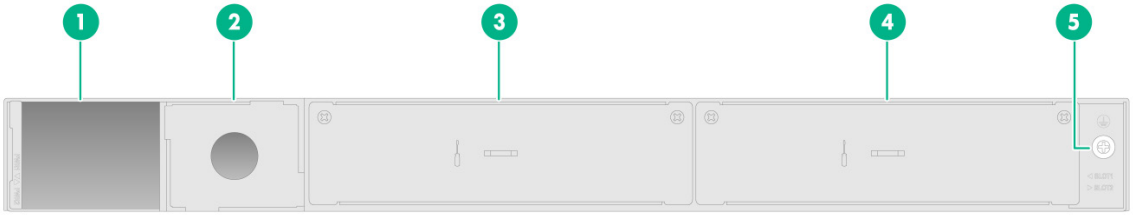
Front and rear views

Figure1-1 Front view



(1) Drive slot	(2) USB port
(3) 100/1000BASE-T autosensing Ethernet ports 1 to 8	(4) 1000BASE-X SFP ports 9 to 16
(5) Console port	(6) Expansion slot 3
(7) Reset button (RESET)	(8) 100/1000BASE-T management Ethernet port

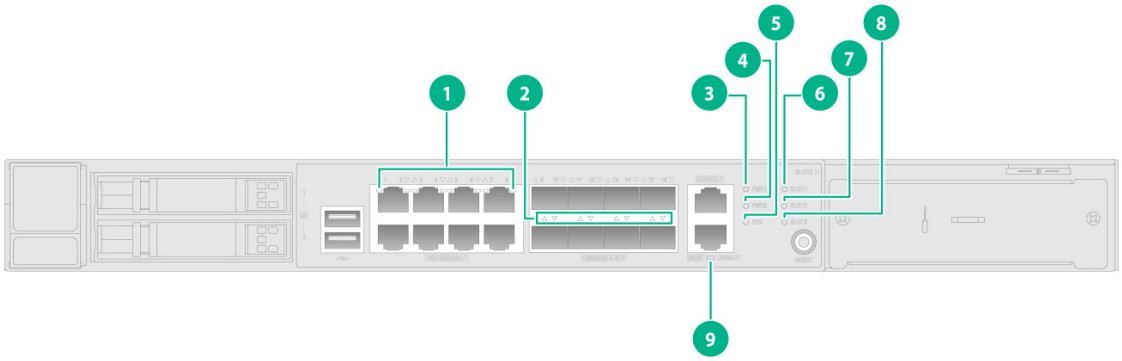
Figure1-2 Rear view



(1) Power supply slot PWR1	(2) Power supply slot PWR2
(3) MIM slot 1	(4) MIM slot 2
(5) Grounding screw	

LED locations

Figure1-3 Front panel LED locations



(1) 100/1000BASE-T autosensing Ethernet port LEDs	(2) 1000BASE-X SFP port LEDs
(3) Power supply status LED (PWR1)	(4) Power supply status LED (PWR2)
(5) System status LED (SYS)	(6) Expansion module status LED (SLOT1)
(7) Expansion module status LED (SLOT2)	(8) Expansion module status LED (SLOT3)
(9) 100/1000BASE-T management Ethernet port status LED (LINK/ACT)	

2 Removable components

Removable components and compatibility matrixes

The access controllers use modular design. Table2-1 describes the compatibility matrix between access controllers and removable components.

Table2-1 Compatibility matrix between access controllers and removable components

Removable components	WX3820X	WX3840X
Removable power supplies		
PSR250-12A1	Supported	Supported
PSR450-12D	Supported	Supported
Expansion modules		
EWPM1WBCE0ENT	Supported	Supported
EWPM1WBCE0ENT-ULTRA	Supported	Supported
EWPXM1XG03	Supported	Supported
EWPXM1XG20	N/A	Supported
Drives		
SSD-1.92T-SATA3-WCG	Supported	Supported

Table2-2 describes the compatibility matrix between expansion modules and expansion slots.

Table2-2 Compatibility matrix between expansion modules and expansion slots

Expansion module	WX3820X		WX3840X	
	Slot 1 Slot 2	Slot 3	Slot 1 Slot 2	Slot 3
EWPM1WBCE0ENT	Supported	N/A	Supported	N/A
EWPM1WBCE0ENT-ULTRA	Supported	N/A	Supported	N/A
EWPXM1XG03	N/A	Supported	N/A	Supported
EWPXM1XG20	N/A	N/A	Supported	N/A

The power supplies support asset management. You can use **`display device manuinfo`** command to view the name, sequence number, and vendor of the power supply you have installed on the device.

Power supplies

Power supply specifications

WARNING!

When the device has power supplies in redundancy, you can replace a power supply without powering off the device. To avoid device damage and bodily injury, make sure the power supply is powered off before you replace it.

Table2-3 Power supply specifications

Power supply model	Item	Specification
PSR250-12A1	Product code	PSR250-12A1-D
	Rated AC input voltage range	100 to 240 VAC @ 50 or 60 Hz
	Rated AC input current	4 A
	Max AC input voltage range	90 to 290 VAC @ 47 to 63 Hz
	Max AC input current	5 A
	Output voltage	12 V/3.3 V
	Output current	20.9 A (12 V)/2 A (3.3 V)
	Max output power	250 W
	Dimensions (H × W × D)	40.2 × 50.5 × 221 mm (1.58 × 1.99 × 8.70 in)
	Operating temperature	–10°C to +55°C (14°F to 131°F)
	Relative humidity	5% RH to 95% RH, noncondensing
PSR450-12D	Product code	PSR450-12D
	Rated DC input voltage range	–48 to –60 VDC
	Rated DC input current	12 A (48 VDC) 10 A (60 VDC)
	Max DC input voltage range	–36 to –72 VDC
	Max DC input current	15 A
	Output voltage	12 V/3.3 V
	Output current	37.5 A (12 V)/2 A (3.3 V)
	Max output power	450 W
	Dimensions (H × W × D)	40.2 × 50.5 × 221 mm (1.58 × 1.99 × 8.70 in)
	Operating temperature	–10°C to +55°C (14°F to 131°F)
	Relative humidity	5% RH to 95% RH, noncondensing

Power supply views

Figure2-1 PSR250-12A1

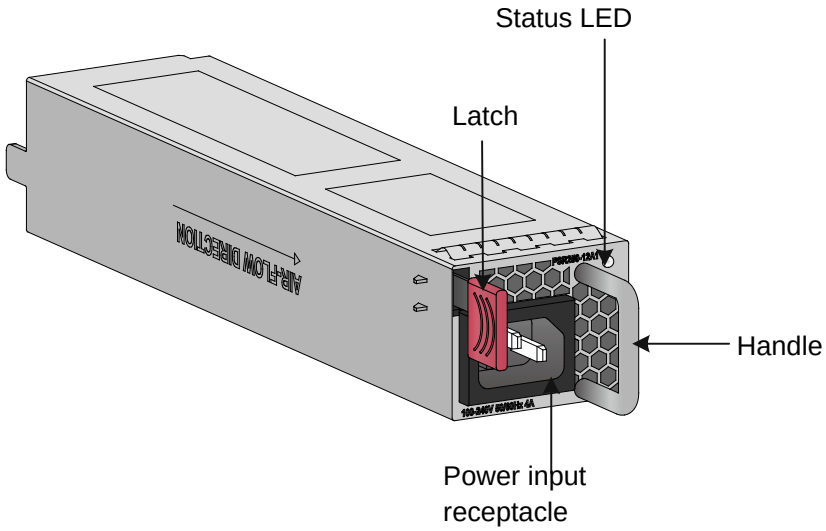
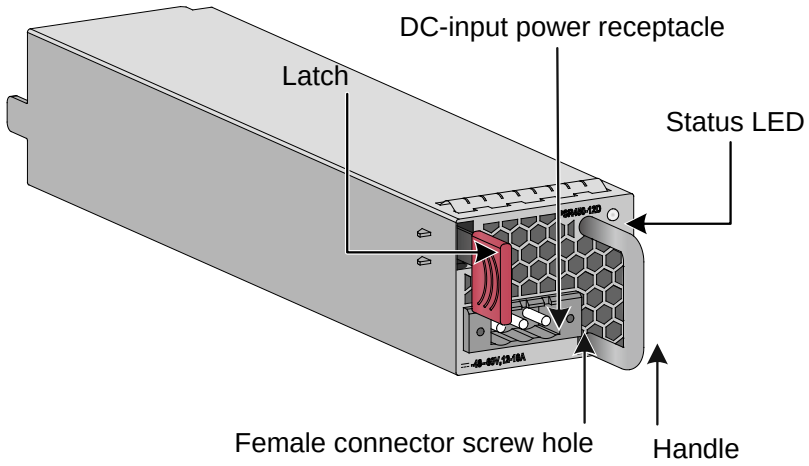


Figure2-2 PSR450-12D



Expansion modules

Expansion module specifications

Table2-4 Expansion module specifications

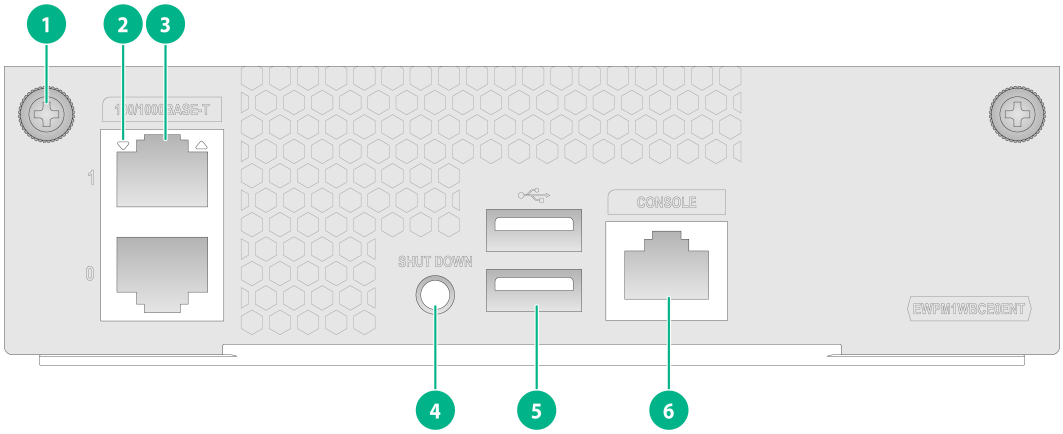
Expansion module model	Item	Specification
EWPM1WBCE0ENT& EWPM1WBCE0ENT-ULTRA	Name	Access controller module
	Port quantity and types	• 2 × 100/1000BASE-T Ethernet ports • 1 × console port

Expansion module model	Item	Specification
		• 2 × USB ports
	Port specifications	• For detailed information about 100/1000BASE-T Ethernet ports, see Table3-8. • For detailed information about the console port, see Table3-1. • For detailed information about USB ports, see Table3-2.
	Power consumption	32.3W～46.2W
	Dimensions (H × W × D)	40.9 × 150 × 242.8 mm (1.61 × 5.91 × 9.56 in)
	Weight	1.1kg (2.43 lb)
EWPXM1XG03	Name	Interface expansion module
	Port quantity and types	• 8 × 100/1000BASE-T autosensing Ethernet ports • 2 × SFP+ fiber ports
	Port specifications	• For detailed information about 100/1000BASE-T autosensing Ethernet ports, see Table3-8. • For information about SFP+ modules and cables supported by the SFP+ fiber ports, see Table3-6.
	Power consumption	2.7W～9W
	Dimensions (H × W × D)	33.3 × 110 × 106 mm (1.31 × 4.33 × 4.17 in)
	Weight	0.4kg (0.88 lb)
EWPXM1XG20	Name	Interface expansion module
	Port quantity and types	2 × 10G BASE-R-SFP+ fiber ports
	Port specifications	For information about SFP+ modules and cables supported by the SFP+ fiber ports, see Table3-6.
	Power consumption	4.8W～6.9W
	Dimensions (H × W × D)	40.1 × 150 × 173 mm (1.58 × 5.91 × 6.81 in)
	Weight	0.4kg (0.88 lb)

Expansion module views

EWPM1WBCE0ENT&EWPM1WBCE0ENT-ULTRA

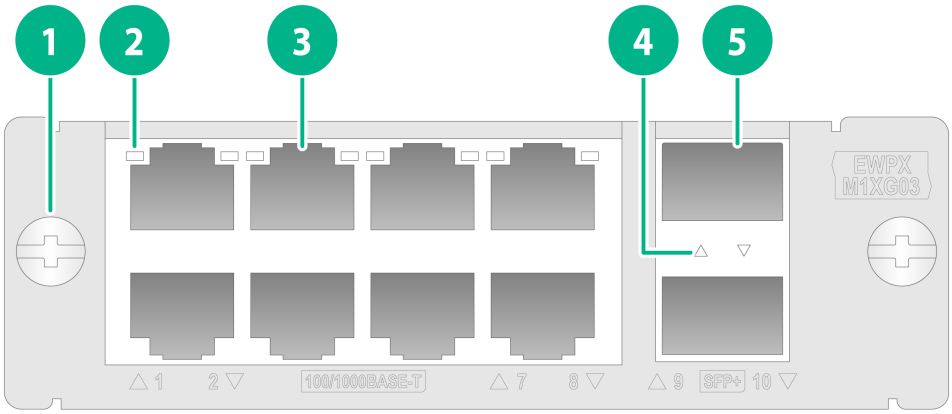
Figure2-3 Front panel



(1) Captive screw	(2) 100/1000BASE-T Ethernet port LED
(3) 100/1000BASE-T Ethernet port	(4) Power button
(5) USB port	(6) Console port

EWPXM1XG03

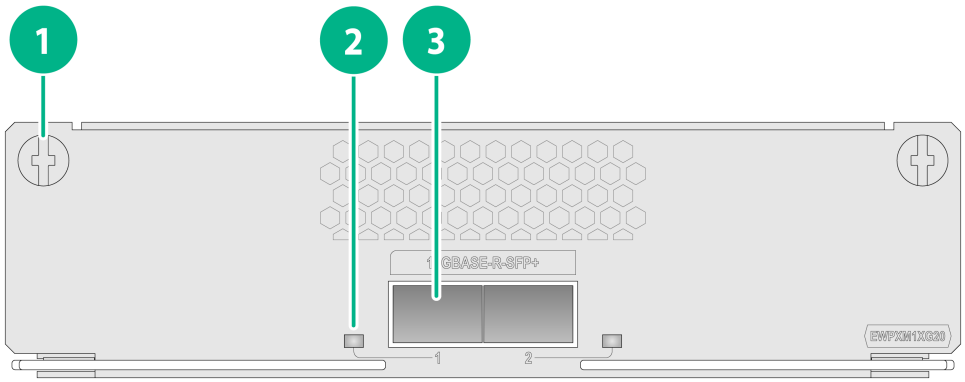
Figure2-4 Front panel



(1) Captive screw	(2) 100/1000BASE-T autosensing Ethernet port LED
(3) 100/1000BASE-T autosensing Ethernet port	(4) SFP+ fiber port LED
(5) SFP+ fiber port	-

EWPXM1XG20

Figure2-5 Front panel



(1) Captive screw	(2) 10G BASE-R-SFP+ fiber port LED
(3) 10G BASE-R-SFP+ fiber port	-

Drives

CAUTION:
To avoid system anomalies, do not hot swap drives.

No drives are provided with the device. Purchase them yourself as required.

Table2-5 Drive specifications

Drive model	Item	Specification
SSD-1.92T-SATA3-WCG	Capacity	1.92 TB
	Port type	SATA
	Port transmission rate	6 Gbps
	Size	SFF

Cables

To avoid interference between cables, layer cables as follows:

- Do not bundle cables in their first 20 m (65.62 ft).
- Separate power cords and twisted pair cables at and around the distribution frame.
- For ports adjacent to one another on the device, the peer ports on the distribution frame are preferably not adjacent, for example:
  - If the device connects to one distribution frame, connect port 1 on the device to port 1 on the distribution frame and port 2 on the device to port 3 on the distribution frame.

    - If the device connects to two distribution frames, connect port 1 on the device to port 1 on distribution frame 1 and port 2 on the device to port 1 on distribution frame 2.
- Keep the device and cables away from the interference source, such as a two-way radio and a high-power variable-frequency drive.

3 Ports and LEDs

Ports

Console port

Table3-1 Console port specifications

Item	Specification
Connector type	RJ-45
Compliant standard	EIA/TIA-232
Port transmission rate	• EWPM1WBCE0ENT&EWPM1WBCE0ENT-ULTRA: 115200 bps • WX3820X&WX3840X: 9600 bps (default) to 115200 bps
Services	• Provides connection to an ASCII terminal • Provides connection to the serial port of a local PC running terminal emulation program
Compatible models	• WX3820X&WX3840X • EWPM1WBCE0ENT&EWPM1WBCE0ENT-ULTRA

USB port

Table3-2 USB port specifications

Item	Specification
Port type	USB 2.0
Compliant standard	OHCI
Port transmission rate	Uploads and downloads data at a rate up to 480 Mbps
Functions and services	Accesses the file system on the flash of the device, for example, to upload or download application and configuration files
Compatible models	• WX3820X&WX3840X • EWPM1WBCE0ENT&EWPM1WBCE0ENT-ULTRA

NOTE:

USB devices from different vendors vary in compatibilities and drivers. H3C does not guarantee correct operation of USB devices from other vendors on the device. If a USB device fails to operate on the device, replace it with one from another vendor.

SFP port

Table3-3 SFP port specifications

Item	Specification
Connector type	LC
Compatible transceiver modules	GE SFP transceiver modules in Table3-4
Compatible models	WX3820X&WX3840X

Table3-4 GE SFP transceiver modules

Transceiver module type	Transceiver module model	Central wavelength	Receiver sensitivity	Fiber diameter	Data rate	Max transmission distance
GE multi-mode module	SFP-GE-SX-MM850-A	850 nm	–17 dBm	50 µm	1.25 Gbps	550 m (1804.46 ft)
	SFP-GE-SX-MM850-D	850 nm	–17 dBm	50 µm	1.25 Gbps	550 m (1804.46 ft)
GE single-mode module	SFP-GE-LX-SM1310-A	1310 nm	–20 dBm	9 µm	1.25 Gbps	10 km (6.21 miles)
	SFP-GE-LX-SM1310-D	1310 nm	–20 dBm	9 µm	1.25 Gbps	10 km (6.21 miles)

NOTE:

- As a best practice, use H3C transceiver modules for the device.
- The H3C transceiver modules are subject to change over time. For the most recent list of H3C transceiver modules, contact your H3C Support or marketing staff.
- For more information about H3C transceiver modules, see *H3C Transceiver Modules User Guide*.
- The transceiver modules that have **MM** and **SM** in their names support multi-mode optical fibers and single-mode optical fibers, respectively.

SFP+ port

Table3-5 SFP+ port specifications

Item	Specification
Connector type	LC
Compatible transceiver modules and cables	• GE SFP transceiver modules in Table3-4 • 10GE SFP+ transceiver modules and cables in Table3-6
Compatible models	• EWPXM1XG03 • EWPXM1XG20

Table3-6 10GE SFP+ transceiver modules and cables

Transceiver module or cable type	Transceiver module or cable model	Central wavelength	Receiver sensitivity	Fiber diameter	Data rate	Max transmission distance
10GE multi-mode module	SFP-XG-SX-MM850-A	850 nm	–9.9 dBm	50 µm	10.31 Gbps	300 m (984.25 ft)
	SFP-XG-SX-MM850-D	850 nm	–9.9 dBm	50 µm	10.31 Gbps	300 m (984.25 ft)
	SFP-XG-SX-MM850-E	850 nm	–9.9 dBm	50 µm	10.31 Gbps	300 m (984.25 ft)
10GE single-mode module	SFP-XG-LX-SM1310	1310 nm	–14.4 dBm	9 µm	10.31 Gbps	10 km (6.21 miles)
	SFP-XG-LX-SM1310-D	1310 nm	–14.4 dBm	9 µm	10.31 Gbps	10 km (6.21 miles)
	SFP-XG-LX-SM1310-E	1310 nm	–14.4 dBm	9 µm	10.31 Gbps	10 km (6.21 miles)
SFP+ cable	LSWM3STK	N/A	N/A	N/A	N/A	3 m (9.84 ft)

Figure3-1 SFP+ cable

(1) Connector (2) Pull latch

NOTE:

- As a best practice, use H3C transceiver modules and cables for the device.
- The H3C transceiver modules and cables are subject to change over time. For the most recent list of H3C transceiver modules and cables, contact your H3C Support or marketing staff.
- For more information about H3C transceiver modules and cables, see *H3C Transceiver Modules User Guide*.
- The transceiver modules that have **MM** and **SM** in their names support multi-mode optical fibers and single-mode optical fibers, respectively.

100/1000BASE-T management Ethernet port

Table3-7 100/1000BASE-T management Ethernet port specifications

Item	Specification
Connector type	RJ-45
Rate, duplex mode, and auto-MDI/MDI-X	• 100 Mbps, half/full duplex • 1000 Mbps, full duplex • MDI/MDI-X autosensing
Transmission medium	Category 5 or above twisted pair cable
Max transmission distance	100 m (328.08 ft)
Compliant standard	IEEE 802.3i, 802.3u, 802.3ab
Functions and services	Device software and Boot ROM upgrade, network management
Compatible models	WX3820X&WX3840X

100/1000BASE-T autosensing Ethernet port

Table3-8 100/1000BASE-T autosensing Ethernet port specifications

Item	Specification
Connector type	RJ-45
Rate, duplex mode, and auto-MDI/MDI-X	• 100 Mbps, half/full duplex • 1000 Mbps, full duplex • MDI/MDI-X autosensing
Max transmission distance	100 m (328.08 ft)
Transmission medium	Category 5 or above twisted pair cable
Compliant standard	IEEE 802.3i, 802.3u, and 802.3ab
Compatible models	• WX3820X&WX3840X • EWPM1WBCE0ENT&EWPM1WBCE0ENT-ULTRA • EWPXM1XG03

LEDs

WX3820X&WX3840X device port status LEDs

System status LED

The system status LED shows the operating status of the device.

Table3-9 System status LED description

LED mark	Status	Description
SYS	Flashing green (4 Hz)	The system is starting up.
	Flashing green (0.5 Hz)	The system is operating correctly.
	Steady red	A critical alarm has been triggered, for example, power supply alarm, fan tray alarm, high temperature alarm, and software loss.
	Off	The device has not started up.

SFP port LED

Table3-10 SFP port LED description

LED status	Description
Steady green	A 1000 Mbps link is present on the port.
Flashing green	The port is receiving or sending data at 1000 Mbps.
Off	No link is present on the port.

100/1000BASE-T management Ethernet port LED

Table3-11 100/1000BASE-T management Ethernet port LED description

LED mark	Status	Description
LINK/ACT	Steady green	A link is present.
	Flashing green	The port is receiving or sending data.
	Off	No link is present.

100/1000BASE-T autosensing Ethernet port LED

Table3-12 100/1000BASE-T autosensing Ethernet port LED description

LED status	Description
Steady yellow	A 100 Mbps link is present on the port.
Flashing yellow	The port is receiving or sending data at 100 Mbps.
Steady green	A 1000 Mbps link is present on the port.
Flashing green	The port is receiving or sending data at 1000 Mbps.
Off	No link is present on the port.

Power supply status LED

The device provides power supply status LEDs to indicate the operating status of power supplies.

Table3-13 Power supply status LED description

LED mark	Status	Description
PWR1/PWR2	Steady green	A power supply is installed in the power supply slot, and the power supply is operating correctly.
	Steady red	A power supply is installed in the power supply slot, but the power supply has failed or is not operating.
	Off	No power supply is installed in the power supply slot.

Expansion module status LED

The device provides expansion module status LEDs to indicate the operating status of expansion modules.

Table3-14 Expansion module status LED description

LED mark	Status	Description
SLOT1 to SLOT3	Steady green	An expansion module is installed in the expansion slot, and the expansion module is operating correctly.
	Flashing red	The device does not support the expansion module model, or the expansion module is faulty.
	Off	No expansion module is installed in the expansion module slot.

Status LED on a power supply

Table3-15 Description for the status LED on a power supply

LEDs status	Description
Steady green	The power supply is operating correctly.
Flashing green	The power supply has power input but is not installed on the device.
Steady red	The power supply is faulty or has entered protection state.
Red/green flashing alternatively	The power supply has generated an alarm for power issues (such as output overcurrent, output overload, and overtemperature), but has not entered protection state.
Flashing red	• The power supply does not have power input. The device is installed with two power supplies. If one has power input, but the other does not, the status LED on the power supply that does not have power input flashes red. • The power supply has entered input undervoltage protection state.
Off	The power supply does not have power input.

Port LED on an expansion module

Table3-16 Description for the port LEDs on an EWPM1WBCE0ENT&EWPM1WBCE0ENT-ULTRA

LED	Status	Description
100/1000BASE-T Ethernet port LED	Steady green	The port is operating at 100/1000 Mbps, and a link is present on the port.
	Flashing green	The port is receiving or sending data at 100/1000 Mbps.
	Off	No transceiver module or cable has been installed or no link is present on the port.

Table3-17 Description for the port LEDs on an EWPXM1XG03

LED	Status	Description
100/1000BASE-T autosensing Ethernet port LED	Steady green	The port is operating at 1000 Mbps, and a link is present on the port.
	Flashing green	The port is sending or receiving data at 1000 Mbps.
	Steady yellow	The port is operating at 100 Mbps, and a link is present on the port.
	Flashing yellow	The port is sending or receiving data at 100 Mbps.
	Off	No transceiver module or cable has been installed or no link is present on the port.
SFP+ fiber port LED	Steady green	The port is operating at 10 Gbps, and a link is present on the port.
	Flashing green	The port is sending or receiving data at 10 Gbps.
	Steady yellow	The port is operating at 1000 Mbps, and a link is present on the port.
	Flashing yellow	The port is sending or receiving data at 1000 Mbps.
	Off	No transceiver module or cable has been installed or no link is present on the port.

Table3-18 Description for the port LEDs on an EWPXM1XG20

LED	Status	Description
10GBASE-R-SFP+ fiber port LED	Steady green	The port is operating at 10 Gbps, and a link is present on the port.
	Flashing green	The port is sending or receiving data at 10 Gbps.
	Steady yellow	The port is operating at 1000 Mbps, and a link is present on the port.
	Flashing yellow	The port is sending or receiving data at 1000 Mbps.
	Off	No transceiver module or cable has been installed or no link is present on the port.

Drive status LED

The device provides drive status LEDs to indicate the operating status of drives.

Table3-19 Drive status LED description

LED status	Description
Steady green	A drive is installed in the drive slot.
Flashing green	Data is being read from or written to the drive.
Off	No drive is installed in the drive slot.

4 Cooling system

To dissipate heat timely and enhance system stability, the device uses a high-performance cooling system. Consider the site ventilation design when you plan the installation site for the device.

Table4-1 Cooling system

Product series	Product model	Airflow direction
WX3800X series	WX3820X	The device supports air inlet from the left and front sides and air outlet from the right and rear sides.
	WX3840X	