IEEE802.11n/a/b/g
Embedded Wireless LAN (Access point / Station)

FXE3000 Series

FXE3000-US, FXE3000-EU, FXE3000-TW, FXE3000-KR

* Specifications, color and design of the products are subject to change without notice.

This product is an embedded-type wireless LAN board that is compatible with the wireless LAN standards IEEE802.11n/a/b/g and supports wide input power supplies (5 to 30 VDC) and power supplied from the LAN connector.*

Just connecting this product to a LAN port of an LAN-compliant equipment, then the equipment will features the latest standards-compatible higher security, stable communication and easy maintenance without its OS or CPU.

* The IEEE802.3af and IEEE802.3at standards are not supported.

* The contents in this document are subject to change without notice.
* Visit the CONTEC website to check the latest details in the document.
* The information in the data sheets is as of December, 2023.

Features

Compatible with 4 standards, IEEE802.11n/a/b/g
You can choose 24 ch (W52/W53/W56/W58*1) in the 5 GHz (IEEE802.11n/a), and in the 2.4 GHz (IEEE802.11n/b/g), you can choose from 1 to 13ch *2. So, it is possible to design a flexible wireless network to adjust a radio wave interference.

Supports a various power supply
This product supports an AC adapter (sold separately), DC power supplies from 5 to 30 VDC, and power supplied from the LAN connector.

Multiple operating modes, station (slave station), access point (master station), and repeater.
You can use this product not only as a station (a slave station) but also as an access point (a master station) and as a repeater by switching modes.

The proprietary encryption technology "WSL" that is available along with WPA2/WPA and WEP.
In addition to the certifications for advanced security standards WPA2/WPA and IEEE802.1X, this product is also equipped with our proprietary encryption technology "WSL", which can be used at the same time as these certifications. MAC address filtering and ESSID hiding are also supported.

Features variety of functions, including VLAN and a virtual AP function
This product is equipped with a VLAN function for constructing virtual networks and a virtual AP function for operating one AP as multiple virtual APs with different security settings. Also, large capacity event logs (with approximately 15,000 events, which is 7 times our conventional products) can be saved.

*1 : W52: 36, 40, 44, 48ch / W53: 52, 56, 60, 64ch / W56: 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140ch / W58: 149, 153, 157, 161, 165ch
Supported channels are different depending on the country in which the product is used.
*2 : Supported channels are different depending on the country in which the product is used.

Packing List

Main unit (One of the followings)
[FXE3000-US, FXE3000-EU, FXE3000-TW, FXE3000-KR]...1
Setup Guide * ... 1
Serial number Label ...1
CE Declaration ...1 (FXE3000-EU only)
UKCA Declaration ...1 (FXE3000-EU only)

* The language of the Setup Guide varies depending on the product.

Specification

Function specification

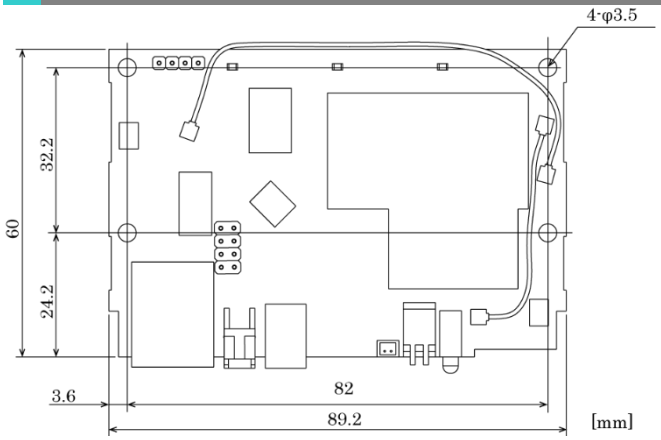
Name		Specification
Unit Type		Station / Access Point / Repeater
Wired LAN		
	Ethernet standard	IEEE802.3(10BASE-T), IEEE802.3u(100BASE-TX)
	Port Speed	10/100Mbps/Half Duplex, Full Duplex/1
Wireless LAN		
	Wireless Networking Standard	IEEE802.11n, IEEE802.11a, IEEE802.11b, IEEE802.11g
	Channel	Varies depending on the country in which the product is used.
	IEEE802.11n	
	Data transmission speed *1	300 - 6.5Mbps[MSC0 - 15, Short/Long GI] (Fixed/Auto)
	IEEE802.11a	
	Data transmission speed *1	54, 48, 36, 24, 18, 12, 9, 6Mbps (Fixed/Auto)
	IEEE802.11b	
	Data transmission speed *1	11, 5.5, 2, 1Mbps (Fixed/Auto)
	IEEE802.11g	
	Data transmission speed *1	54, 48, 36, 24, 18, 12, 9, 6Mbps (Fixed/Auto)
	Security	
	IEEE802.11n	WPA(AES), WPA2(AES), WPA-PSK(AES), WPA2-PSK(AES), WSL(combination mentioned above are possible)
	IEEE802.11a/b/g	WEP(open/ Shared Key /Auto), WPA(AES, TKIP), WPA-PSK(AES,TKIP), WPA2(AES, TKIP), WPA2-PSK(AES,TKIP), IEEE802.1X(EAP-TLS, PEAP), WSL(combination mentioned above are possible)
Antenna		chip-antenna×2 MIMO
External dimension (mm)		60.0(W) x 89.2(D) x 17.5(H)
Weight		50g

*1 These are theoretical values based on their respective wireless LAN standards; they do not indicate actual data transfer rates.

Installation Environment Requirements

Name		Specification
Input voltage range		5VDC±5% (DC Jack), 5 - 30VDC±5% (power connector), 24VDC±10% (PoE)
Rating input current		0.83A (5VDC input), 0.15A (30VDC input) (Max.), 0.18A (PoE input 24V)
Operating ambient temperature		0 - 50°C
Operating ambient humidity		10 - 90%RH (No condensation)
Floating dust particles		Not extreme
Corrosive gases		None
Approval standards	FXE3000-US	FCC, IC, WPC, IMDA, UL/cUL, RoHS Compliant
	FXE3000-EU	CE Marking (RE, RoHS), UKCA, NBTC
	FXE3000-TW	NCC, RoHS Compliant
	FXE3000-KR	KC, RoHS Compliant

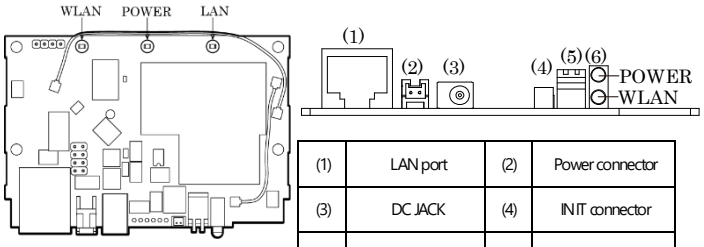
External Dimensions



List of Option

FX-AC053	AC Adapter
FX-ANT-CEX2	SMA Coaxial conversion Cable (0.12m)
FX-ANT-CEX3	SMA conversion Cable (0.2m)
FX-ANT-C05	Extension Cable (0.5m)
FX-ANT-C12	Coaxial Cable (12m)
FX-ANT-C25H	Coaxial Cable (25m)
FX-ANT-A8	5GHz/2.4GHz Board mounting Antenna

Component Name

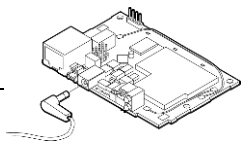


(1)	LAN port	(2)	Power connector
(3)	DC JACK	(4)	INIT connector
(5)	DIP Switches	(6)	DIP LED

Power Supply

Using the DC JACK

The power plug to be used must conform to EIAJ voltage classification 2.



⚠ CAUTION

When supplying power via the LAN connector, do not use a combination of power supplied from the power connector and the AC adapter.
When supplying power, only use a single power supply method.

Using the Power connector

The power connector in Figure 1 can be used to supply power from an external source. Use the following power cable or its equivalent.

Power connector			
Housing: JST S02B-PASK-2(LF)(SN) Cable: AWG28-16(equivalent to it)			
Pin No.	Name	Operation / Function	
1	Vi+	5-30VDC±5%	 1 pin
2	Vi-	GND	

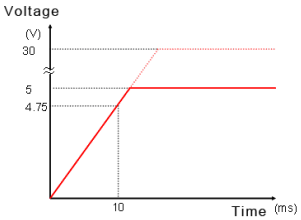
⚠ CAUTION

When supplying power from the power connector, do not use a combination of power supplied via the LAN connector and the AC adapter.

When supplying the LAN cable power

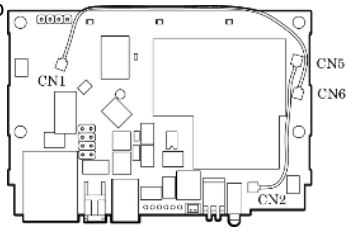
⚠ CAUTION

- Create the power cable correctly as specified. Using the power cable with the housing pins assigned wrong numbers may result in device faults or accidents.
- The input voltage range of this product is from 5 to 24 VDC ±5%. Supply power outside that range may result in device faults or accidents.
- Use the power supply whose supply voltage rises to at least 4.75VDC within the input voltage range within 10ms. Using a power supply which does not satisfy this condition may result in device faults or accidents.
- Input voltage range: 5 to 30 VDC ± 5%. Use a power supply that rises to 4.75 VDC or higher in the input voltage range within 10 ms. There is a risk of damage to the device or accident if a power supply outside this range is used.



Connecting the external antenna

This product uses a MIMO antenna system, which allows two antennas to be used simultaneously. When connecting the external antennas, connect two antennas.



Remove the white harnesses from connectors 1 and 6 and from connectors 2 and 5.

Connect an FX-ANT-CEX2 or FX-ANT-CEX3 conversion cable to connectors 5 and 6, and connect an optional CONTEC antenna to the end of each conversion cable.

Recommended removal tool: U.FL-LP-N-2 (HRS)

Differences from FXE2000 Series

FXE3000 Series, the higher-grade model of the conventional FXE2000 Series, has the main differences as follows:

	FXE3000 Series	FXE2000 Series
External dimension (mm)	60.0(W) x 89.2(D) x 17.5(H)	87.0(W) x 89.2(D) x 17.5(H)
Rating input current	0.83A (5VDC input), 0.15A (30VDC input) (Max.), 0.18A (PoE input 24V)	1.05A (5VDC input), 0.19A (30VDC input) (Max.), 0.24A (PoE input 24V)

FXE3000 Series in use channel

FXE3000 number of channels that can be used in the Series are as follows.

		Access point / Repeater	Station
FXE3000-US	11b/g/n (24G)	1ch, 2ch, 3ch, 4ch, 5ch, 6ch, 7ch, 8ch, 9ch, 10ch, 11ch	1ch, 2ch, 3ch, 4ch, 5ch, 6ch, 7ch, 8ch, 9ch, 10ch, 11ch
	11a/n (5G)	36ch, 40ch, 44ch, 48ch, 149ch, 153ch, 157ch, 161ch, 165ch	36ch, 40ch, 44ch, 48ch, 52ch, 56ch, 60ch, 64ch, 100ch, 104ch, 108ch, 112ch, 116ch, 132ch, 136ch, 140ch, 149ch, 153ch, 157ch, 161ch, 165ch
FXE3000-EU	11b/g/n (24G)	1ch, 2ch, 3ch, 4ch, 5ch, 6ch, 7ch, 8ch, 9ch, 10ch, 11ch, 12ch, 13ch	1ch, 2ch, 3ch, 4ch, 5ch, 6ch, 7ch, 8ch, 9ch, 10ch, 11ch, 12ch, 13ch
	11a/n (5G)	36ch, 40ch, 44ch, 48ch, 52ch, 56ch, 60ch, 64ch, 100ch, 104ch, 108ch, 112ch, 116ch, 120ch, 124ch, 128ch, 132ch, 136ch, 140ch	36ch, 40ch, 44ch, 48ch, 52ch, 56ch, 60ch, 64ch, 100ch, 104ch, 108ch, 112ch, 116ch, 120ch, 124ch, 128ch, 132ch, 136ch, 140ch
FXE3000-TW	11b/g/n (24G)	1ch, 2ch, 3ch, 4ch, 5ch, 6ch, 7ch, 8ch, 9ch, 10ch, 11ch	1ch, 2ch, 3ch, 4ch, 5ch, 6ch, 7ch, 8ch, 9ch, 10ch, 11ch
	11a/n (5G)	56ch, 60ch, 64ch, 100ch, 104ch, 108ch, 112ch, 116ch, 132ch, 136ch, 140ch, 149ch, 153ch, 157ch, 161ch, 165ch	56ch, 60ch, 64ch, 100ch, 104ch, 108ch, 112ch, 116ch, 132ch, 136ch, 140ch, 149ch, 153ch, 157ch, 161ch, 165ch
FXE3000-KR	11b/g/n (24G)	1ch, 2ch, 3ch, 4ch, 5ch, 6ch, 7ch, 8ch, 9ch, 10ch, 11ch, 12ch, 13ch	1ch, 2ch, 3ch, 4ch, 5ch, 6ch, 7ch, 8ch, 9ch, 10ch, 11ch, 12ch, 13ch
	11a/n (5G)	36ch, 40ch, 44ch, 48ch, 52ch, 56ch, 60ch, 64ch, 100ch, 104ch, 108ch, 112ch, 116ch, 120ch, 124ch, 149ch, 153ch, 157ch, 161ch	36ch, 40ch, 44ch, 48ch, 52ch, 56ch, 60ch, 64ch, 100ch, 104ch, 108ch, 112ch, 116ch, 120ch, 124ch, 149ch, 153ch, 157ch, 161ch