





Install Instructions

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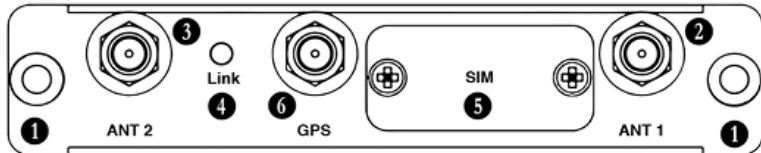
The Airwall Expansion Module is a user-installable card that enables cellular communication on compatible Tempered Airwall Gateways.

19410 Hwy 99, Suite A #119
 Lynnwood, WA 98036

Models

PLF-0119-01	PLF-0120-01
SFF-MOD-EC25AF North America Cellular Expansion Module	SFF-MOD-EG25 Worldwide Cellular Expansion Module
	

Front Panel



- | | |
|---|----------------------|
| 1. Thumb screws for securing the module | 4. Link activity LED |
| 2. Cellular antenna 1 | 5. SIM slot |
| 3. Cellular antenna 2 | 6. GPS antenna |

Specifications

Base Module	
Storage Temp range	-40° to 85° C (-40° to 185° F)
Operating Temp range	-30° to 70° C (-22° to 158° F)
Operating humidity	5% to 95%
Indicators	1 x Link activity LED
Mounting	1 x Expansion bay
SFF-MOD-EC25AF North America Cellular Expansion Module	
4G Cellular Modes	LTE: 1900(B2)/ 1700(B4)/ 850(B5)/ 700(B12)/ 700(B13)/ 700(B14)/ 1700(B66)/ 600(B71) MHz LTE Category 4 Downlink: 150 Mbps Uplink: 50 Mbps
3.5G Cellular Modes	UMTS/HSDPA/HSUPA/HSPA+/DC-HSPA+: 1900(B2)/1700(B4)/850(B5) MHz Data (HSPA+) rates: Downlink: Up to 42 Mbps (HSDPA category 24) Uplink: Up to 5.76 Mbps (HSUPA category 6)
GPS (GNSS) Modes	Supported Constellations: GPS, GLONASS, BeiDou, Galileo, QZSS
Cellular antenna connectors	2x SMA female connectors
GPS antenna	1x SMA female connector
SIM card slot	1x externally accessible 3FF micro SIM card slot
Regulatory approvals	FCC Part 15B class A CAN ICES-3 (A) / NMB-3 (A) Contains FCCID: N7NHL7588, IC ID: 2417C-HL7588, Approved Radio: NL-SW-LTE-S7588

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

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

SFF-MOD-EG25 Worldwide Cellular Expansion Module	
4G Cellular Modes	LTE: 2100(B1)/ 1900(B2)/ 1800(B3)/ 1700(B4)/ 850(B5)/ 2600(B7)/ 900(B8)/ 700(B12)/ 700(B13)/ 800(B18)/ 800(B19)/ 800(B20)/ 1900(B25), 850(B26)/ 700(B28)/ 2600(B38)/ 1900(B39)/ 2300(B40)/ 2500(B41) MHz LTE: Category 4 Downlink: 150 mbps (FDD), 130 mbps (TDD) Uplink: 50 mbps (FDD), 30 mbps (TDD)
3.5G Cellular Modes	DC-HSPA+ / HSPA+ / HSPA/ UMTS/ WCDMA: 2100(B1)/ 1900(B2)/ 1700(B4)/ 1900(B5)/ 800(B6)/ 900(B8)/ 800(B19) MHz Downlink: Category 24: 42 mbps Uplink: Category 5: 5.76 mbps
GPS (GNSS) Modes	Supported Constellations: GPS, GLONASS, BeiDou, Galileo, QZSS
Cellular antenna connectors	2x SMA female connectors
GPS antenna	1x SMA female connector
SIM card slot	1x externally accessible 3FF micro SIM card slot
Regulatory approvals	EN 55032: 2015+A11:2020, EN 61000-3-3: 2013+A1: 2019, EN IEC 61000-3-2: 2019, EN 55035: 2017+A11:2020 EN 301 489-1 V2.2.3, EN 301 489-19 V2.2.0, EN 301 489-52 V1.1.0 EN 62311:2020, EN 50665:2017 ETSI EN 301908-2 V11.1.2, ETSI EN 301908-13 V11.1.2, ETSI EN 301908-1 V13.1.1, ETSI EN 303 413 V1.1.1 VCCI-CISPR 32: 2016, 47 CFR Part 15, Subpart B, ICES-003:Issue 7 AS/NZS CISPR 32: 2015+A1:2020

Installation

Install or remove SIMs in the module:

Warning: Make sure the module is not connected to a power source before inserting or removing SIMs.

- Using a Phillips-Head screwdriver, remove the screws from the plate labeled **SIM** and then remove the plate, revealing the SIM slots.
- Insert the SIMs firmly into the slots.
- Replace the plate and screws.

You can then install the module in the expansion bay. To remove a SIM, follow the same procedure and carefully pull the SIM from its slot.

Install the module in the expansion bay:

Warning: Make sure the Airwall is not connected to a power source before inserting the module into the expansion bay.

- Using a Phillips-Head screwdriver, remove the screws from the plate labeled **Expansion Bay** and then remove the plate.
- Slide the module, label side up, into the expansion bay until the module is fully seated in the bay, flush with the front of the Airwall.
- Secure the unit by tightening the two thumb screws on the module.

You can then apply power to the Airwall. To remove the module, follow the same procedure and carefully pull the module from the expansion bay.

FCC/ICES Compliance

United States:

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

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.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

Contains FCCID: XMR201808EC25AF

Canada:

English

This device complies with Industry Canada license-exempt RSS standards. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This Class A digital apparatus complies with Canadian ICES-003.

Contains IC: 10224A-2018EC25AF

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

French

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Contient IC: 10224A-2018EC25AF

Cet appareil et son antenne(s) ne doit pas être co-localisés ou fonctionner en association avec une autre antenne ou transmetteur.

Radiation Exposure

MPE exclusion distance / RF exposure statement

This equipment complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

SFFMODEC25AF Antenna gain and EIRP restrictions

This device has been approved for use with the included antenna.

For Maximum Permissible Exposure purposes, the maximum transmit power of this device is 25 dBm.

The device may be installed with a 3rd party antenna system provided that it meets the following maximum gain restrictions:

Band	Uplink Frequency (MHz)	Max. Antenna gain (dBi)
LTE / WCDMA B2	1850 - 1910	8.0
LTE / WCDMA B4	1710 - 1755	5.0
LTE / WCDMA B5	824 - 849	9.416
LTE B12	699 - 716	8.734
LTE B13	777 - 787	9.173
LTE B14	788 - 798	9.255
LTE B66	1710 - 1780	5.0
LTE B71	663 - 698	8.545

SFFMODEG25G EIRP restrictions

This device has been approved for use with the included antenna.

For Maximum Permissible Exposure purposes, the maximum transmit power of this device is 25 dBm.

- Max 25 dBm: WCDMA: 2100(B1)/ 1900(B2)/ 1700(B4)/ 1900(B5)/ 800(B6)/ 900(B8)/ 800(B19) MHz
- Max 25 dBm: LTE: 2100(B1)/ 1900(B2)/ 1800(B3)/ 1700(B4)/ 850(B5)/ 2600(B7)/ 900(B8)/ 700(B12)/ 700(B13)/ 800(B18)/ 800(B19)/ 800(B20)/ 1900(B25), 850(B26)/ 700(B28)/ 2600(B38)/ 1900(B39)/ 2300(B40)/ 2500(B41) MHz

Additional SFFMODEG25 Notices:

Hereby, Tempered Networks, Inc declares that the radio equipment type SFFMODEG25 is in compliance with the Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://repo.tempered.io/DoC/SFFMODEG25>.

The SFFMODEG25 can be used in all EU Member States and the UK.

EU Legislation:

- Directive 2014/53/EU (RED)
- Directive 2011/65/EU amended by Directive 2017/2102/EU (RoHS)

UK Legislation:

- S.I. 2017 No. 1206
- S.I. 2012 No. 3032