



Citrix SD-WAN

Quick Start Guide: 110 LTE WiFi Standard Edition (SE)

Citrix SD-WAN 110-LTE-WiFi-SE Quick Start Guide

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Quick installation and configuration

Review the following information before proceeding with installation of the SD-WAN 110-LTE-WiFi-SE appliance.

Before you begin

Verify that the following components and accessories are included:

- ✓ Citrix SD-WAN 110-LTE-WiFi-SE appliance.
- ✓ Accessory contents:
 - Power adapter - 1
 - Power cable - 1
 - Rubber feet (Desktop mount) – 4
 - Wall mount screws - 2

Optionally, you can also purchase the rack mount shelf.

Citrix SD-WAN 110-LTE-WiFi-SE

The Citrix SD-WAN 110-LTE-WiFi-SE platform is a branch side appliance that can be deployed in micro and small branch offices/Remote sites/ retail stores, and temporary worksites. It is a single box in branch solution that helps to reduce hardware foot print and eases branch deployment.

The Citrix SD-WAN 110-LTE-WiFi-SE appliance is a desktop form factor appliance. This appliance has 2-core processor with 4GB memory and 32GB of storage (SATA-DOM drive).

The following figure shows the front panel of the 110-LTE-WiFi-SE appliance.

Figure 1. Citrix SD-WAN 110-LTE-WiFi-SE front panel



LED Ports – Front

LED	Description
Ethernet Copper Ports LED	Active/Link: Green Speed: 1000 Orange Speed 100: Green Speed 10 : Off
Power LEDs	Power on: Solid Green Power off: Solid Blue Factory Reset: Flashing blue and green (alternatively) Software power cycle: Flashing green for ~15 seconds and then flashing blue for ~25 seconds and then solid green.
WiFi	ON: Enabled OFF: Disabled

LTE	<p>OFF: No signal</p> <p>1 bar: Poor</p> <p>2 bar: Fair</p> <p>3 bar: Good</p> <p>4 bar: Excellent</p>
SIM Card Slot	<p>Mini (2FF) size SIM. Adapters provided in the accessory kit can be used to enable use of Micro (3FF) and Nano (4FF) size SIMs. Snap the smaller SIM into the adapter.</p>
LTE	<p>LTE antenna male connector.</p>

Figure 2. Citrix SD-WAN 110-LTE-WiFi-SE back panel



Note: Port 1/1 is the default LAN port and port 1/2 is the default WAN port. Port 1/3 is disabled. The default LAN IP is 192.168.0.1. For LTE appliances, the LTE SIM slot is also the default WAN port. The WAN ports are configured as DHCP clients.

Port Label	Type	Description
LTE	Antenna male connector	Connector for LTE antenna.
1/1, 1/2 and 1/3	Traffic	Network traffic
1/4	Management port	Use standard mgmt. port description
USB	2 USB ports	USB ports
Serial	RS-232 serial	An RS232 serial console port.
Power	Power button	<ul style="list-style-type: none">• Power OFF state:<ul style="list-style-type: none">○ Press power button and release it immediately: Power on the appliance.○ Press power button and hold it for 10+ seconds: Factory reset the appliance.• Power ON state:<ul style="list-style-type: none">○ Press power button and release it immediately: Orderly shutdown the appliance.○ Press power button and hold it for 5+ seconds: Force shutdown the appliance.
DC 12V	DC Power Supply	Refer System Specifications for power supply information.

Appliance physical installation procedure and precautions

- Horizontal or vertical mount
- Install the equipment near an electrical outlet for easy access.
- Place equipment in a rack with sufficient airflow for safe operation.
- For a closed or multiple-unit rack assembly, the ambient operating temperature of the rack environment might be greater than the ambient temperature of the room. Therefore, consider the lowest and highest operating temperatures of the equipment when making a decision about where to install the appliance in the rack.

The Citrix SD-WAN 110-LTE-WiFi-SE appliance can be installed in the following installation modes:

- Desktop mount
- Wall mount
- Rack mount

Cautions

- Electrostatic discharge (ESD) can damage your equipment.
- Do not place any objects on the appliance.
- Do not cover vent holes on the side of the appliance.
- Surface of the appliance can get heated up.
- Use caution when touching the surface of the appliance.

Electrical safety precautions

During installation or maintenance procedures, wear a grounding wrist strap to avoid ESD damage to the electronics of the appliance. Use a conductive wrist strap attached to a good earth ground or to the appliance. You can attach it to the connector beside the ESD symbol on the back.

Follow basic electrical safety precautions to protect yourself from harm and the appliance from damage.

Be aware of the location of the emergency power off (EPO) switch, so that you can quickly remove power to the appliance if an electrical accident occurs.

Do not use mats designed to decrease static electrical discharge as protection from electrical shock. Instead, use rubber mats that have been specifically designed as electrical insulators.

Ensure that the power supply cords include grounding plugs and are plugged into grounded electrical outlets.

Ensure that the power source can handle the appliance's maximum power consumption rating with no danger of an overload.

A reliable ground must be maintained at all times. Therefore, the rack should be grounded. Pay particular attention to power supply connections other than the direct connection to the branch circuit (for example, connections to power strips).

Warning: There is a risk of explosion, if the battery is replaced with an incorrect battery type.

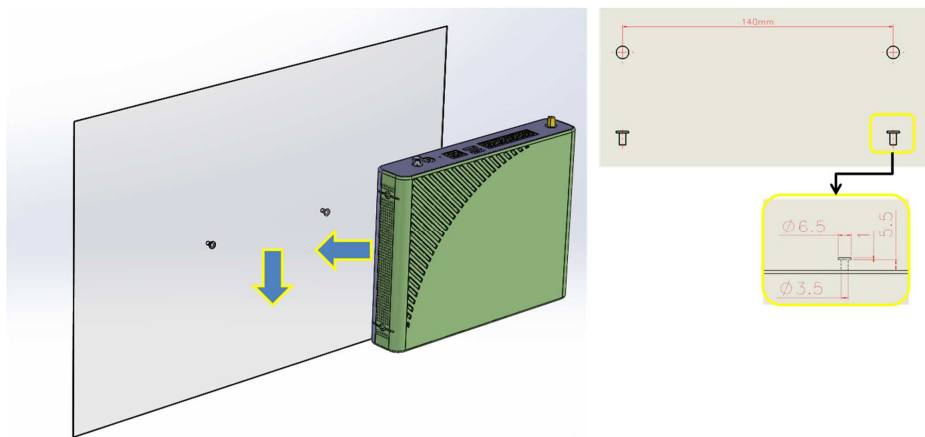
Desktop mount the appliance

The Citrix SD-WAN 110-LTE-WiFi-SE appliance can be desktop mounted using the rubber feet shipped in the appliance package.

Wall mount the appliance

The Citrix SD-WAN 110-LTE-WiFi-SE appliance can be wall mounted by placing and adjusting the appliance screw slots on the wall screws.

The Citrix SD-WAN 110-SE appliance can be wall mounted by placing and adjusting the appliance screw slots on the wall screws.



Use two wall mount screws with the following dimensions:

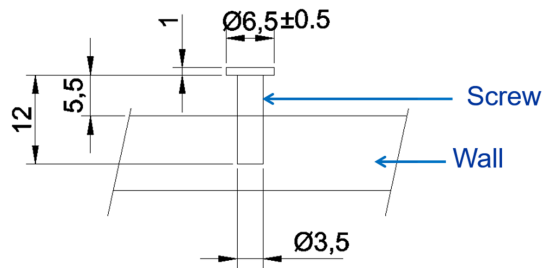
- Screw Length: 12mm
- Screw out of wall: 5.5mm

已註解 [PK[1]: Is this right? Do we provide rubber feet for desktop mount?

已註解 [RP2R1]: Brad to confirm

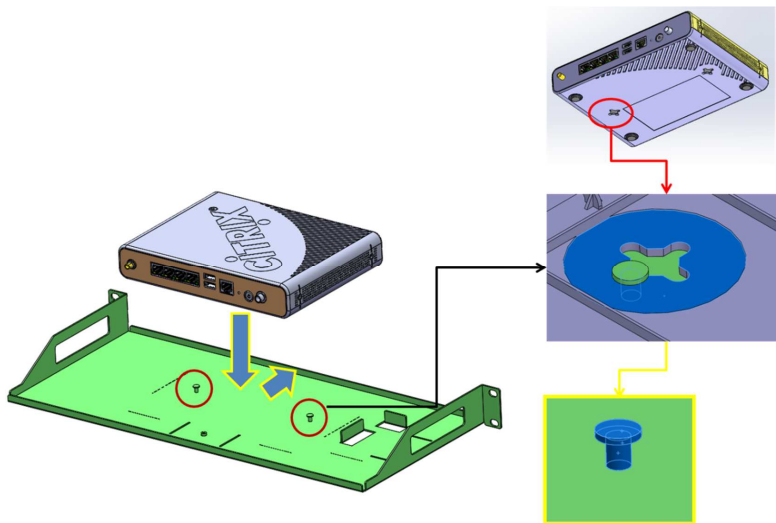
已註解 [RP3R1]:

- Screw head: $\varnothing 6.0\text{mm}$ ~ $\varnothing 7.5\text{mm}$
- Screw body: 3.5mm

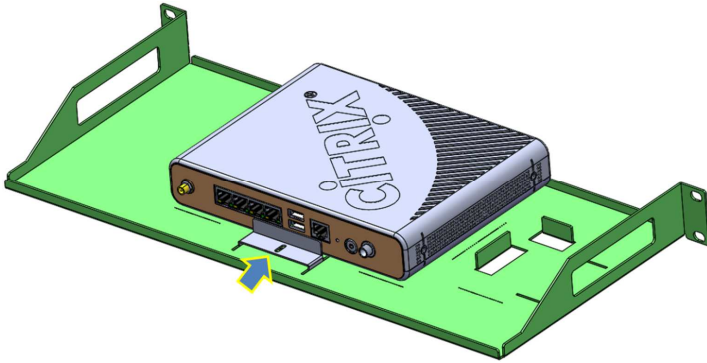


Rack mount the appliance

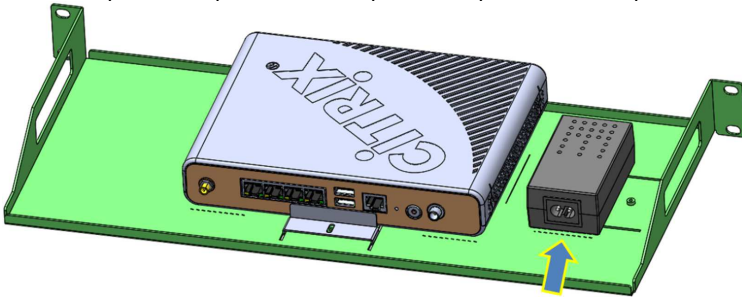
1. Fix the shelf to the rack with the provided screws.
2. Install the chassis. Place the appliance screw slots on the positioning screws on the shelf and slide it, to lock it into position.



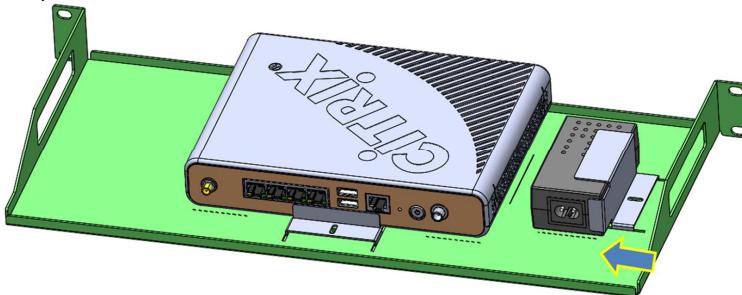
3. Install the chassis fix bracket to hold the appliance in position. Place the chassis fix bracket on the slot and fix it with a screw.



4. Install the power adapter. Place the power adapter on the adapter slot.



5. Install the adapter fix bracket to hold the power adapter in position. Place the adapter fix bracket on the slot and fix it with a screw.



Installing the LTE antennas

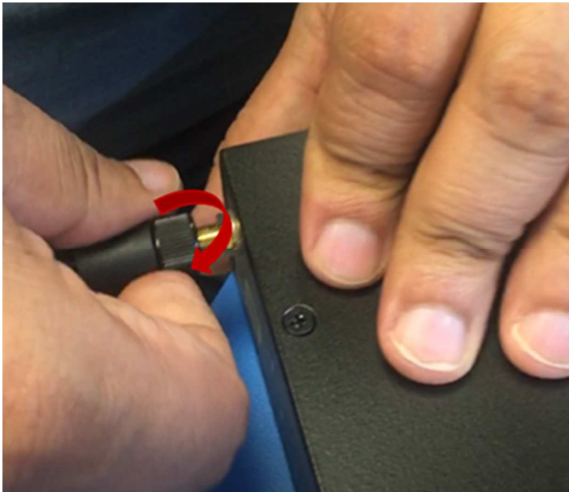
To use the Citrix SD-WAN 110-LTE-WiFi-SE appliance as an LTE modem, install the antennas to the appliance. The antennas are included in the appliance package. The Citrix SD-WAN 110-LTE-WiFi-SE appliance has two SMA coax male connectors at the front and rear of the appliances. The antennas have independent rotating SMA female connectors.

Note: Ensure that both the LTE antennas are installed for better LTE cellular connectivity.

To install the antennas to the appliance:

1. Place the antenna SMA coax connector (F) on the appliance SMA coax connector (M) and rotate the antenna connector clockwise, until the connector is tight.

Note: The recommended torque is 1.8 - 2.5 Lbs force-inch.



2. Adjust the antenna orientation and direction.



3. Similarly connect the other antenna to the rear SMA coax connector (M) of the appliance.

For more information on configuring the LTE functionality using the GUI and CLI, see [Configure LTE functionality](#).

Connecting the appliance to a power source

Connect the power cable to one of the inlet receptacles on the back of the appliance, and connect the other end of the power cable to a power outlet.

Connecting the appliance to the network

Connect the interfaces on the appliance to the network ports on the appropriate switches by using Ethernet/fiber optic cables.

Note: Citrix SD-WAN 11.1 supports day-0 provisioning and day-n management of the appliance through both management and data ports.

Warning: Connecting multiple network ports to the same switch or VLAN can result in a network loop.

Setting up the appliance

1. If you are configuring the appliance using Zero Touch Deployment (ZTD), see [Zero Touch](#).
2. If you are configuring a hardware SD-WAN appliance, physically connect the appliance to a PC. For more information, see [Setting up the Appliance Hardware](#).

已註解 [PK[4]:

已註解 [PK[5R4]: I think the content in the topic, need to be made generic. Applicable to all LTE appliances. Please confirm.

已註解 [PK[6]: The ZTD procedure will be updated as per the new 11.1.0 in-band provisioning feature. The link will be updated when the release happens and the document is published.

To set up your Citrix SD-WAN appliance hardware, do the following:

1. Set up the chassis.

For desktop installation, place the chassis on a flat surface. Ensure that there is a minimum of two inches of clearance at the sides and back of the appliance for proper ventilation.

2. Connect the Power.
 - a. Ensure that the power switch is set to off.
 - b. Plug the power cord into the appliance and an AC outlet.
 - c. Press the power button located on the front of the appliance.
3. Connect the appliance Management Port to a personal computer.

You need to connect the appliance to a PC in preparation for completing the next procedure, setting the Management IP address for the appliance.

Note

Before you connect the appliance, ensure the Ethernet port is enabled on the PC. Use an Ethernet cable to connect the SD-WAN appliance Management Port to the default Ethernet port on a personal computer.

To configure the management IP address for a hardware SD-WAN appliance, do the following:

Note

You must repeat the following process for each hardware appliance you want to add to your network.

1. If you are configuring a hardware SD-WAN appliance, physically connect the appliance to a PC.
 - If you have not already done so, connect one end of an Ethernet cable to the Management Port on the appliance, and the other end to the default Ethernet port on the PC.

Note

Ensure that the Ethernet port is enabled on the PC you are using to connect to the appliance.

2. Record the current Ethernet port settings for the PC you are going to use to set the appliance management IP address.

You need to change the Ethernet port settings on the PC before you can set the appliance management IP address. Record the original settings so you can restore them after configuring the management IP address.

3. Change the IP address for the PC.

On the PC, open your network interface settings and change the IP address for your PC to the following:

- 192.168.100.50

4. Change the Subnet Mask setting on your PC to the following:

- 255.255.0.0

5. On the PC, open a browser and enter the default IP address for the appliance. Enter the following IP address in the address line of the browser:

- 192.168.100.1

Note

Use Google Chrome browser when connecting to a SD-WAN appliance. Ignore any browser certificate warnings for the Management Web Interface.

This opens the SD-WAN management web interface login screen on the connected appliance.

6. Enter the administrator user name and password, and click **Login**. After you have logged into the management web interface, the **Dashboard** page appears.

- Default administrator user name: *admin*
- Default administrator password: *password*

Note: From Citrix SD-WAN 11.0.3 release onwards, it is mandatory to change the default admin user account password while provisioning any SD-WAN appliance or a new SD-WAN SE VPX. This change is enforced using both virtual WAN CLI and UI.

System specifications

The following table summarizes hardware specifications for the Citrix SD-WAN 110-LTE-WiFi-SE platform edition.

Specifications	110-LTE-WiFi-SE	
Regulatory model number	SD-WAN 110-LTE-WiFi	
Memory	4GB	
Non-Volatile Storage	32GB	
LTE	3G, 4G	
WiFi	Dual band 2.4GHz & 5GHz 2x2 MIMO	
LAN Ports	4x GbE RJ45	
USB 2.0	2	
SIM Slot	X2 2FF & adaptors for 3FF and 4FF in accessory kit	
LTE Antenna	External	
Power Supplies	Single (External)	
External power supply ratings	Input voltage / Frequency ranges (normal)	100-240 VAC, 50-60 Hz
	Input current	0.6 A
	Wattage (max)	24W
Appliance Ratings	Input voltage	12 VDC
	Input current	2.0 A
	Wattage (typ)	10W
	Wattage (max)	15.5W
Airflow (front to rear)	n/a: fan-less	
Typical Heat dissipation	34BTU	
Max Heat dissipation	53BTU	
Package weight (lbs.)	2 lbs.	
Package dimensions	15.16"L x 10"W x 3.55"H	
System weight (lbs.)	1.37 lbs.	
System dimensions	8.5"L x 6.25"W x 1.5"H	
Operating temperature	0-40 degree C	
Humidity range	5-90%, Non-condensing	
Industry Standards	GCF, PTCRB, Wi-Fi CERTIFIED™	
Safety Certifications	UL	
Certifications	Anatel, BTK, CE RED, CCC, ENACOM, FCC, ICASA, IFT, ISSED, RCM, SRRC, WPC	
Environmental compliance	RoHS 3, WEEE, REACH	

Wireless WAN (LTE) Specifications

LTE capabilities	110-LTE WiFi			
Module	Quectel EG25-G			
Geography	Global			
LTE category	Cat-4			
Carrier aggregation	No			
SIM slots	2 (only 1 active)			
LTE bands	B1/B2/B3/B4/B5/B7/B8/B12/B13/B20/B25/B26/B28/B38/B39/B40/B41			
Tx output power	Class 3 (23dBm±2dB)			
Antennas	Frequency	690-960	1710-2220	2500-2700
	Peak Gain	1.18 dBi	4.5 dBi	4.0 dBi
Theoretical speeds	150Mbps downlink/50Mbps uplink			

Wireless LAN (Wi-Fi) Specifications -

Wi-Fi capabilities		110-LTE-WiFi	Antenna peak gain
Wi-Fi standards		802.11 a/b/g/n/ac	
Frequency bands (GHz)		2412 MHz, 2417 MHz, 2422 MHz, 2427 MHz, 2432 MHz, 2437 MHz, 2442 MHz, 2447 MHz, 2452 MHz, 2457 MHz, 2462 MHz	2.6 dBi
	Channel width: 20 MHz	5180 MHz, 5200 MHz, 5220 MHz, 5240 MHz, 5745 MHz, 5765 MHz, 5785 MHz, 5805 MHz, 5825 MHz	5.0 dBi
	Channel width: 40 MHz	5190 MHz, 5230 MHz, 5755 MHz, 5795 MHz	
	Channel width: 80 MHz	5210 MHz, 5775 MHz	
Maximum output power		27.70 dBm for 2412 ~ 2462 MHz 21.71 dBm for 5180 ~ 5240 MHz 24.33 dBm for 5745 ~ 5825 MHz	
Max simultaneous SSID's		8	

The Wi-Fi CERTIFIED™ Logo is a certification mark of Wi-Fi Alliance®.

Compliance

Responsible Party – U.S. Contact Information:

Citrix Systems, Inc.
4988 Great America Parkway
Santa Clara, CA 95054 USA

compliance.prime@citrix.com

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, might cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. Users are required to correct the interference at their own expense.

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

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

Radiation Exposure Statement:

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

European Union

This device complies with Directive 2014/53/EU issued by the Commission of the European Community. The EU declaration of conformity is available upon request.

A minimum separation distance of 20 cm must be maintained between the user's body and the device, including the antenna during body-worn operation to comply with the RF exposure requirements in Europe.

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range in all member states: Austria (AT), Belgium (BE), Bulgaria (BG), Croatia (HR), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (EL), Hungary (HU), Iceland (IS), Ireland (IE), Italy (IT), Latvia (LV), Liechtenstein (LI), Lithuania (LT), Luxembourg (LU), Malta (MT),

Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), Switzerland (CH), Turkey (TR), United Kingdom (UK).

This radio transmitter model has been approved to operate with the antennas provided with the device. Any other antennas are strictly prohibited for use with this device.

Brazil:

"Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados".

Canada:

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This radio transmitter (IC: 20012-110LTEWIFI, / Model: SD-WAN 110-LTE-WiFi) has been approved by ISED to operate with the antenna types listed below with maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 20012-110LTEWIFI, / Model: SD-WAN 110-LTE-WiFi) a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

LTE Antenna Type	Manufacturer			Model	Antenna Connector	Antenna Gain									
						WLAN 2.4GHz				WLAN 5GHz					
Dipole	Taoglas			FXP.830.07.0100C	i-pex (MHF)	2.6				5.0					
	Ethertronics			1001932FT	i-pex (MHF)	2.5				4.4					
WiFi Antenna Type	Manufacturer	Model	Antenna Connector	Antenna Gain											
				WCDMA II / LTE 2	WCDMA IV / LTE 4	WCDMA V / LTE 5	LTE 7	LTE 12	LTE 13	LTE 25	LTE 26	LTE 38	LTE 41		
Dipole	Ethertronics	1004112-C003	SMA(M)	4.5	4.5	1.18	4	1.18	1.18	4.5	1.18	4	4		
	Taoglas	TG.30.8113	SMA(M)	3.1	2.7	1.5	2.7	2.6	2.6	3.1	1.5	2.7	2.7		

Radiation Exposure Statement:

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

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm de distance entre le radiateur et votre corps.

Caution :

The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Avertissement:

Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

Mexico:

"La operación de este equipo está sujeta a las siguientes dos condiciones: 1. Es posible que este equipo o dispositivo no cause interferencia perjudicial. 2. Este equipo o dispositivo debe aceptar cualquier interferencia. Incluyendo la que pueda causar su operación no deseada".

Additional information

For information about other Citrix SD-WAN platform editions, see [Citrix SD-WAN Platforms](#).

To contact Citrix Support, call 1-800-4-CITRIX (1-800-424-8749), or log on to My Citrix at <http://www.citrix.com>. You will be asked for your hardware serial number as part of the support process.

Detailed instructions for contacting support can be found at:
<https://www.citrix.com/contact/technical-support.html>.

If you have comments or feedback on this documentation, please send email to nsdocs_feedback@citrix.com.