

The 4G-Gateway for Split System Heat Pump

Revision History			
Version	Author	Description	Issue Date
0.1	TL Cheung	Initial Release	2021-10-21
0.2	TL Cheung	Change to “BLE 4.2” in the Product Specification	2021-10-22
0.3	TL Cheung	Perfect RF description	2021-11-15

Product Specification	
Product:	4G-Gateway
Model:	BODG-100
Rating:	5Vdc, 550 mA (max)
Operating temperature:	-10°F to 160°F
Storage temperature:	-40°F to 185°F
Moisture Resistance:	90% RH
Wireless Communication:	LTE Cat-M BLE 4.2
Wired Communication:	RS-485
BLE Operation Frequency:	2402MHz~2480MHz
BLE Channel Numbers:	40
BLE Channel Separation:	2MHz
BLE Modulation Type:	GFSK
Crystal for BLE:	38.4MHz
BLE Antenna Type:	Integral Antenna
BLE Antenna Gain:	3.83dBi

LTE Antenna Type:	Dipole Antenna
LTE Antenna Gain:	band 2: 4.715dbi, band 4: 4.31dbi, band 5: 4.149dbi, band 12: 0.885dbi, band 13: 1.427dbi, band 25: 4.72dbi, band 26: 4.244dbi

Product Description

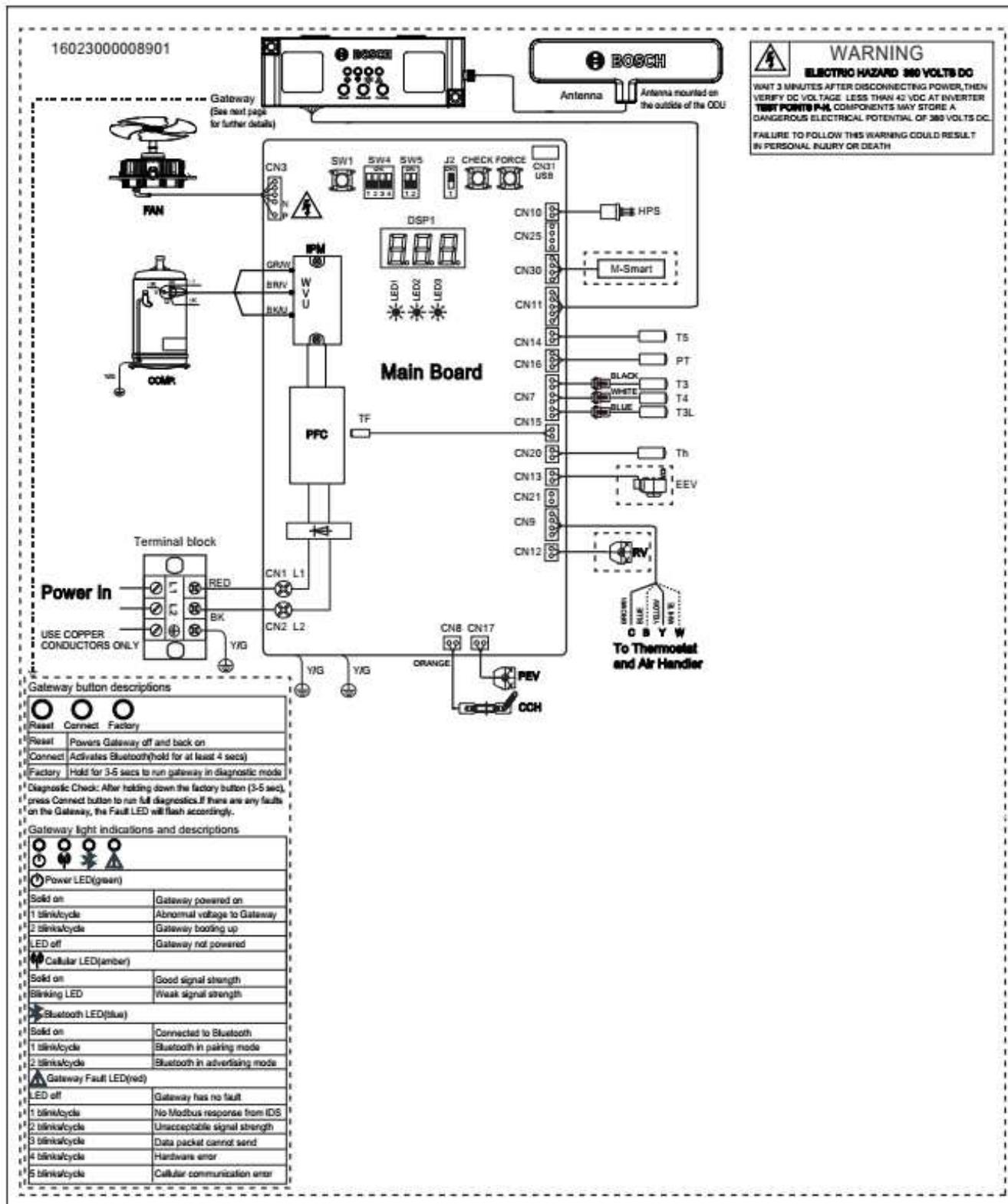
This is a LTE IoT gateway with the following main features:

- Provide IDS outdoor unit wireless connectivity: to send data to the network cloud via LTE Cat-M.
- Provide homeowners the ability to remotely monitor the unit
- Provide contractors and service technicians the ability to view unit data via a local Bluetooth connection.
- Derive power from the existing IDS ODU control board power supply.

Product Diagram

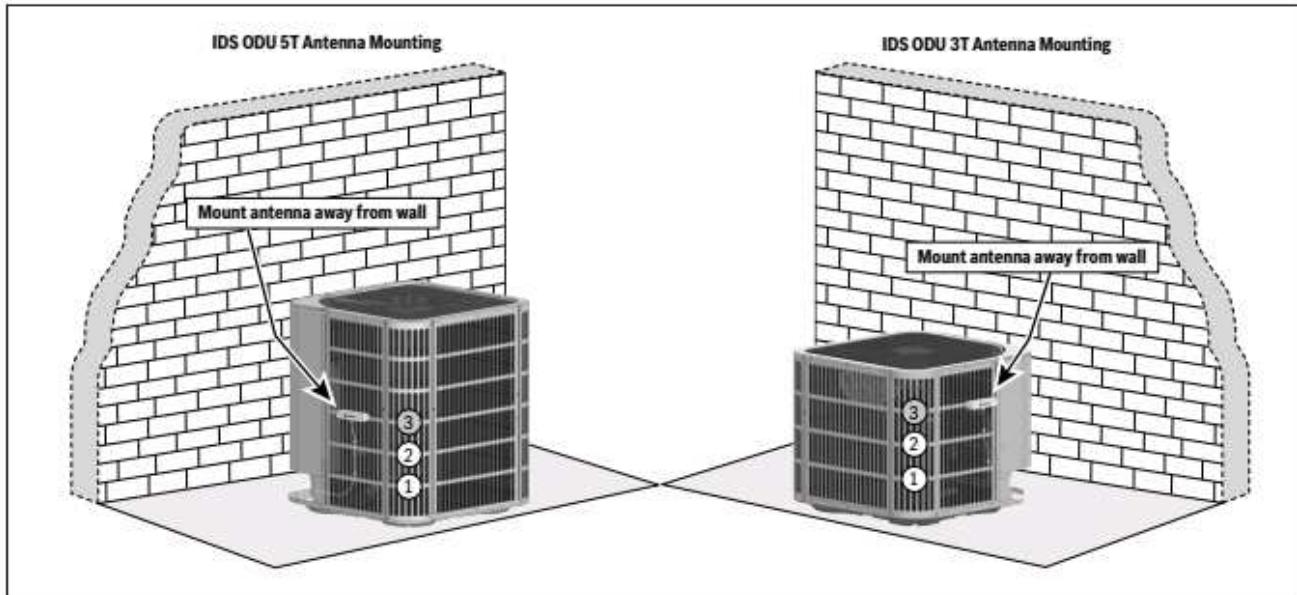


Product Wiring Diagram

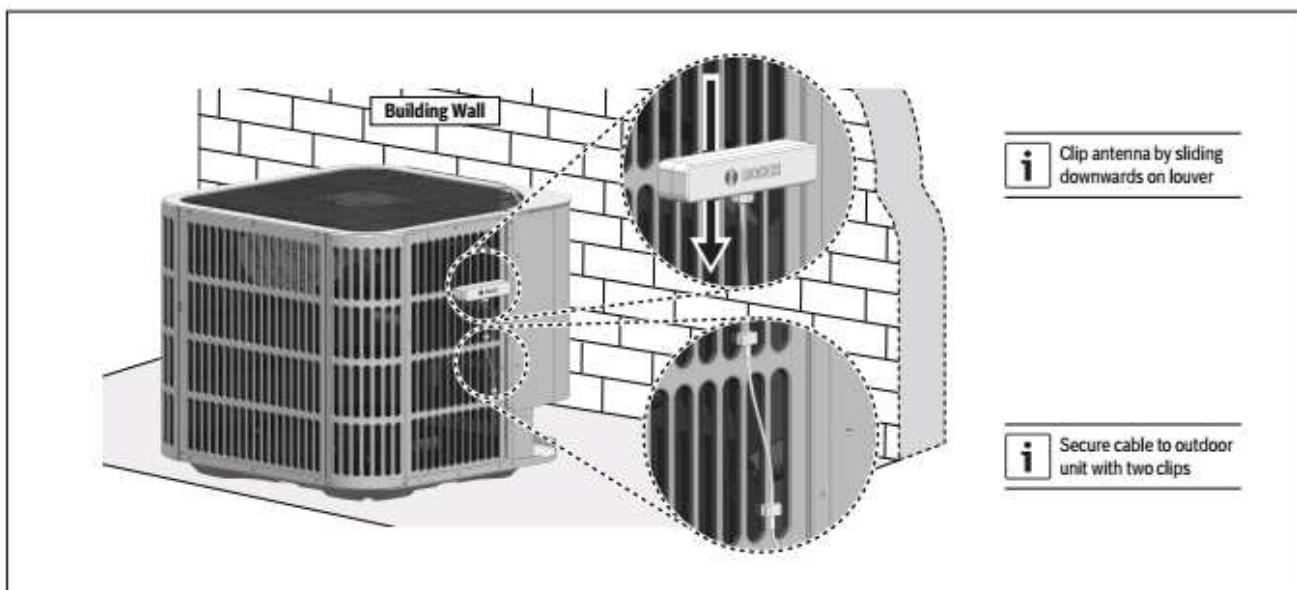


Installation

Mount antenna on top of Louver ③ on the left or right side of the control board access panel away from the wall.



How to Clip the Antenna



	<p>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:</p> <ul style="list-style-type: none">-- 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. <p>Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.</p> <p>This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:</p> <ol style="list-style-type: none">(1) This device may not cause harmful interference, and(2) this device must accept any interference received, including interference that may cause undesired operation.
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	<p>This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:</p> <p>(1) This device may not cause interference.</p> <p>(2) This device must accept any interference, including interference that may cause undesired operation of the device</p> <p>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 :</p> <ol style="list-style-type: none">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.
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	<p>RF Exposure:</p> <p>This equipment complies with FCC/ISED RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.</p>
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	<p>CAN ICES-3 (B)/NMB-3 (B)</p> <p>This Class B digital apparatus complies with Canadian ICES-003.</p> <p>Cet appareil numérique de classe B est conforme à la norme canadienne ICES-003.</p>
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