by WATTS

Product Specification

Ethernet Gateway
WNG3-9-EGW-CCE

Nexa™ Ethernet Gateway features a powerful wireless transceiver with up to 1 Watt of transmission power and an amplified receiver. The gateway can send and receive data communications with Nexa sensors 2,000+ feet through 18+ walls in commercial building environments. The gateway allows Nexa sensors to communicate with the Nexa cloud platform without needing a computer. Simply provide power and plug the gateway into an open Ethernet port with an internet connection. The gateway automatically connects to Nexa servers, providing the perfect solution for internet enabled commercial locations. This advanced gateway enables fast, reliable IoT data solutions. The Nexa system is specifically designed to respond to the increasing market need for global technology that accommodates various vertical IoT application segments and remote wireless sensor management solutions.

Primary Applications

- Domestic hot water pipes, risers, and branches
- Cold water lines
- Boiler and chiller supply and return
- Ambient temperature

Features

- 4G LTE CAT-M1/NB2 cellular technology
- Wireless range of 2,000+ feet through 18+ walls[1]
- Frequency-hopping Spread Spectrum (FHSS)
- Best-in-class interference immunity
- Encrypt-RF® Security (256-bit Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- 32,000 sensor message memory[2]
- Over-the-air (OTA) firmware updates (future-proof)
- True plug and play, hassle-free internet configuration setup
- No computer required for operation
- Local LEDs with transmission and online status indicators
- AC power adapter
- RJ-45 with 10/100BASE-TX Ethernet jack for configuration and server connectivity

Range in feet (Non-line-of-sight)

NOTICE

Watts is not responsible for the failure of alerts due to connectivity issues, power outages, or improper installation.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Inquire with governing authorities for local installation requirements.

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[1] Actual range may vary depending on environment.

[2] Total messages in memory varies with sensor type; 32,000 applies to temperature sensors. Additional information available at Nexa.

Technical Specification

Call customer service if you need assistance with technical details.

Model	
Ethernet	WNG3-9-EGW-CCE
Ethernet	
Hardware	IEEE 802.3 10/100BASE-TX compatible controller
Operation	Full- and Half-Duplex
Cross-over Correction	Automatic MDI/MDI-X
Protocols Supported	DHCP, DNS, NTP, UDP, TCP, SNMP, Modbus TCP
Device Memory	Typically, 32,000 sensor messages varies based on sensor type (Sensor messages are stored in the event of an internet outage and transferred when the connection is restored.)
Power	
Input Power	5.0 VDC @ 1 A
Mechanical	
Cable Connector	RJ45
LEDs	Internet Connectivity, Gateway Services, Nexa Network Status
Enclosure	
Material	ABS
Dimensions	5.0 in. x 3.8 in. x 1.5 in.
Weight	7 oz
Environmental	
Operating Temperature	-4°F to 140°F (-20°C to 60°C)
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Wireless	
Transmit Power	+30dBm or 1W
Antenna Type	Connector: RP-SMA Gain: 3.0 dBi (Antenna EIRP: 32.6dBm or 1.8W rating)
Wireless Range[1]	2,000+ ft. non-line-of-sight
Security	Encrypt-RF® (256-bit key exchange and AES-125 CTR)
Certifications	900 MHz product; FCC ID: ZTL-G2XL1 and IC: 9794A-G2XL1

[1] Actual range may vary depending on the installation environment.

Dimensions

Radio

5.004 in.

3.80 in.

1.51 in.
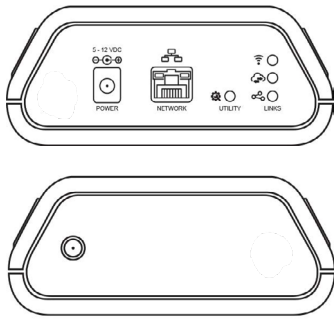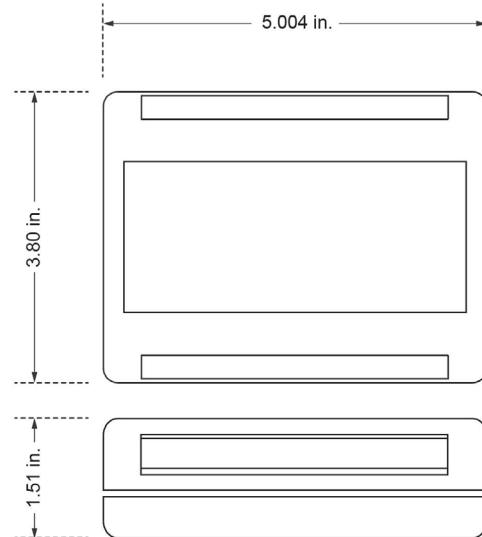
Nexa Antenna (Extended Details)

Frequency Range	902-946 (MHz)
Gain	3 dBi
VSWR	1.8 Max
Polarization	Vertical
Impedance	50 (Ω)
Connector Type	RP-SMA male
Antenna Length	8.26 in. (210 mm)
Type	Omni-directional dipole antenna

Operating Conditions

Nexa gateways are designed for applications in ordinary environments (normal room temperature, humidity, and atmospheric pressure). Do not use the gateways under the following conditions, as these factors can deteriorate the product characteristics and cause failures and burnout.

- Corrosive or deoxidizing gas such as chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas, nitric oxide gas
- Volatile or flammable gas
- Dusty conditions
- Under extremely low or high pressure
- Wet or excessively humid locations
- Places where salt water, oils, chemical liquids, or organic solvents are routinely present
- Applications/locations prone to excessive or strong vibration
- Other places where similar hazardous conditions exist

Use these products within the Nexa specified temperature range. Higher temperatures may cause deterioration of the characteristics or the material quality.

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