

iGS02E Specification

Ethernet Beacon Gateway

iGS02E is a BLE beacon gateway and bridge in 10/100M Ethernet interface. The gateway reads iBeacon and Eddystone like beacon or customized Tag(w/ sensor) format and sends to standard server, like TCP, HTTP, and MQTT. User can configure the gateway through a simple web UI or Telnet command.



Features

- Size: 55mmx55mmx18mm(not including antenna)
- Input: 5V, 500mA, micro-USB
- Operating temperature: -20°C to 60°C
- Low power consumption, averagely 190mA working current
- Remote software upgrade
- Reads multiple BLE devices in the same time
- Support TCP/HTTP(s)/MQTT(s) server
- Support POE through splitter(optional)
- Certificate:FCC/IC/TELEC /CE

BLE

- Standalone 2dBi dipole antenna
- Reads message advertised from BLE device
- The gateway can broadcast as a beacon while receiving the BLE beacon
- 50M range in open space

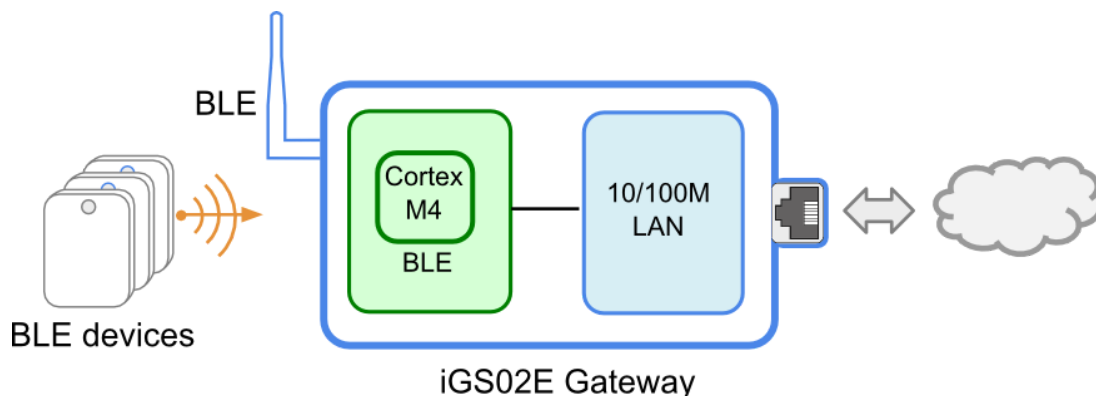
Ethernet

- 10/100M Ethernet
- 10BASE-T and 100BASE-TX auto-negotiation
- IEEE 802.3az Energy Efficient Ethernet
- HP Auto-MDIX crossover function
- IEEE802.3x flow control for Full-Duplex mode

Applications

- iBeacon/Eddystone/tag receiver for location tracking
- BLE sensor reader for sensor network
- Building automation
- Health and wellness monitoring
- Cycling, biking
- Security
- Location tracking
- Access management
- Advertisement
- Industrial automation

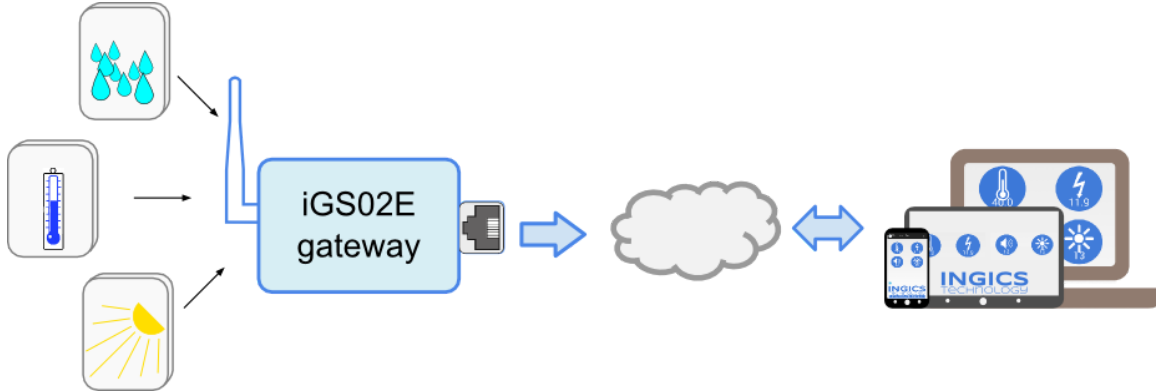
Block Diagram



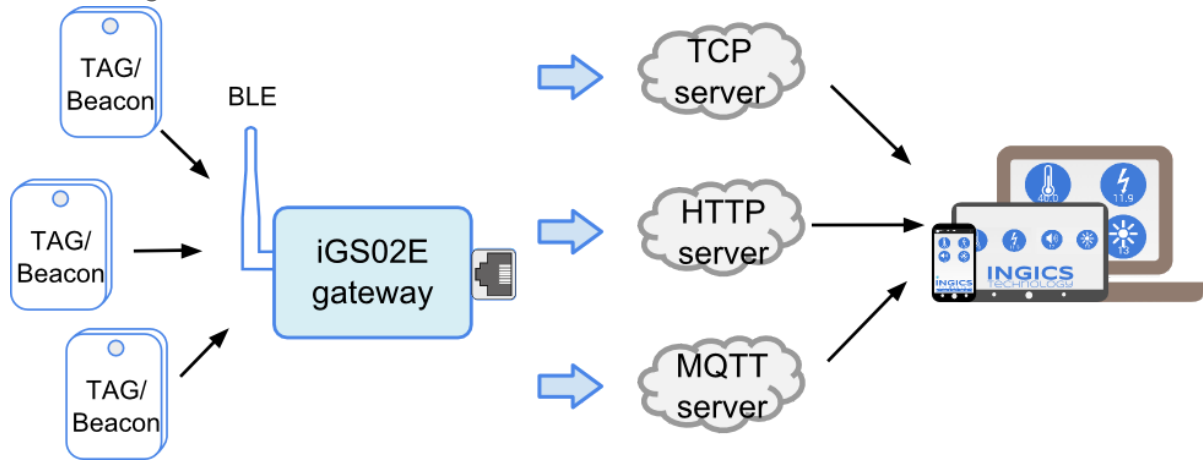
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Typical Applications

1. Collecting BLE sensor data and sending to cloud server



2. Location Tracking with different kinds of server in the internet or cloud



3. Working with POE



Specification

Absolute Maximum Rating

Supply Power	Max. +5.5 Volt
Storage Temperature	-40° to 85° Celsius
Voltage Ripple	+5%

Recommendable Operation Condition

Operating Temperature	-20° to 60° Celsius
Humidity	Max 95%, Non condensing, relative humidity
VDD	+5 Volt +- 5%

Current Consumption

Working mode (reading BLE and send to server)	Average: 190 mA(typical) Max:260mA(typical)
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BLE RF Specification

Transmit Power	Max.: 8dBm
Receiver Sensitivity	-84 dBm @1Mbps, 0.1 %BER
Maximum Input Level	-20dBm
Frequency Deviation	+250 kHz @BLE
Antenna	2dBi dipole antenna
Range	50M in open space

POE Splitter

POE standard	IEEE 802.3af support mode A(power from 1-2, 3-6) and mode B(power from 4-5, 7-8)
Input Voltage	44-57VDC
Output Voltage	5VDC, 2A
Dimension	83mmX30mmX23mm, not including the cable length
Operation Temperature	0-40°C

Dimension

Dimensions L x W x H (mm)	55 x 55 x 18 (not including antenna and antenna connector)
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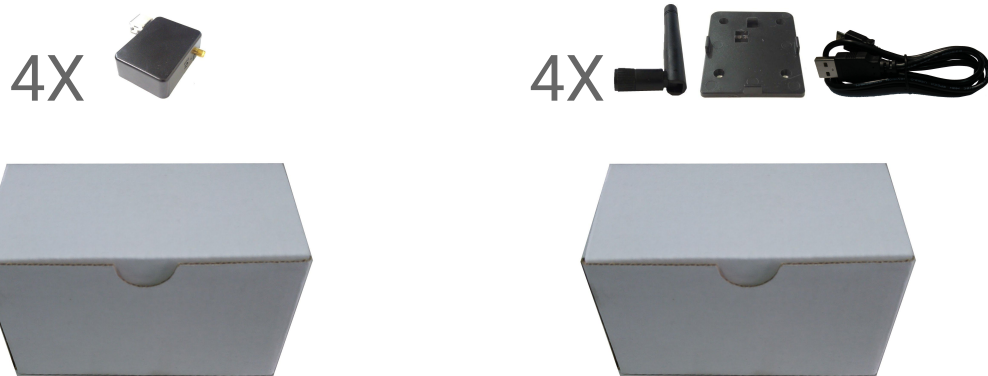
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Packing

Each iGS02E has its accessories including antennas, micro-USB cable, and holder.



Two packing boxes(size: 11cmX5.5cmx6.5cm) contain 4 units of iGS02E and accessories.



Revision History

DATE	REVISION	CHANGES
Apr 17, 2018	0a	Initial release
Apr 30, 2018	0b	Add working with POE figure
Feb 20,2019	01	Add FCC/IC statement and DOC for CE
Jul 29, 2019	01a	Add POE splitter specification
Dec 12, 2019	01b	Add certificate information in feature section

Statement

Federal Communication Commission Interference Statement

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 of the following measures:

- . 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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC 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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

Industry Canada Statement

This device complies with Industry Canada licence-exempt RSS standard.

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.

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.

IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limit set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Cet équipement est conforme aux CNR-102 d'Industrie Canada. Cet équipement doit être installé et utilisé avec une distance minimale de 20 centimètres entre le radiateur et votre corps. Cet émetteur ne doit pas être co-localisées ou opérant en conjonction avec autre antenne ou émetteur. Les antennes utilisées pour cet émetteur doivent être installés et fournir une distance de séparation d'au moins 20 centimètre de toute personne et doit pas être co-située ni fonctionner en conjonction avec une autre antenne ou émetteur.

DECLARATION OF CONFORMITY

EU RED - DIRECTIVE 2014/53/EU -
EU-LOW VOLTAGE DIRECTIVE 2014/35/EU -
EU EMC-DIRECTIVE 2014/30/EU -

This Declaration that the following designated product

BLE-WiFi Gateway
Model No.: IGS02E
Brand Name: INGICS

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complies with the essential requirements of the **EU RED - DIRECTIVE 2014/53/EU, EU-LOW VOLTAGE DIRECTIVE 2014/35/EU, EU EMC-DIRECTIVE 2014/30/EU** on the approximation of the laws of the Member States relating to **Radio Spectrum Matters/RF Exposure**.

Assessment of compliance of the product with the requirements relating to radio spectrum matters was based on Annex IV of the Directive **2014/53/EU** and the following standard:

EMC	Radio Spectrum	Safety
EN 301 489 -1: V 2.2.0 (2017) EN 301 489 -17: V 3.2.0 (2017)	EN 300 328 (V 2.1.1, 2016-11)	IEC 62368-1:2014, modified and EN 62368-1:2014/A11:2017


EMC
EN 55032 Class A(2015),
EN55024(2010/A1:2015), (IEC/EN61000-4-2(2009)/-3(2006+A2:2010)/-4(2012)/
-6(2014)/-8(2010))
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This declaration is issued by
INGICS TECHNOLOGY.
2F., No.15-2, Changshou St.,
Shulin Dist., New Taipei City 238,, Taiwan, R.O.C.
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Furthermore we declare that our product will be produced in correspondence with all requirements according to the Directive 2014/53/EU, LOW VOLTAGE DIRECTIVE 2014/35/EU and Council Directive 2014/30/EU.

Name: J.K.Fan

Title: President

Signature 

Date: May 23, 2018