



Product Brief

Model: TLG8402 series

Ver.1.8

1CH-Gateway with LoRa®
1CH-Vehicle-Gateway with LoRa®



1. Description

TLG8402 series is the 1 channel(1CH) LoRa® gateway for various Internet of Things (IoT) applications that adopt LoRaWAN® network solution for receiving data on the specified frequency and spreading factor (SF). There are two main branches of the TLG8402 series, V1 and V2. TLG8402V1 is designed for general indoor applications, and TLG8402V2 is an automotive-grade gateway. LoRaWAN® is a standard protocol of the Low Power Wide Area Network (LPWAN) it uses the ISM band and focuses on IoT applications.

TLG8402 equip with a Kiwi TLM922S LoRa® module with plenty of certificate¹, it offers LoRa®, WiFi 2.4GHz, ethernet, and LTE for both LAN and WAN connectivity². For WiFi feature, TLG8402V1 supports both AP and station mode, and configuration could easily be done by browsers. It is designed for fewer quantity sensors wireless transmission applications, i.e.: smart retail, and cold chain management.

¹ Automotive grade certifications, ISO16750, E-Mark

² Detail hardware configurations are shown in ordering list.

2. Features

- Long-range transmission
- Packet forwarding to external LoRaWAN® server
- Gateway setting via web browser

3. Applications

- Cold chain
- Cold Rooms
- Chillers
- Refrigerated Transport
- Refrigerator Van/Reefer Cargo Ship)
- Warehouse
- Pharmaceutical

4. Product Specifications

CORE		
MODEL NAME	TLG8402	
SOC	ATSAMD21G	
RF Module	TLM922S	
FLASH	8 MB	
MEMORY	256 KB (Embedded)	
NETWORK COMMUNICATION		
LoRa FREQUENCY RANGE	920.6~928 MHz (Japan) 920~925 MHz (Taiwan) 902~928 MHz(USA)	
LTE Module	Quectel EC25 series	
LTE FREQUENCY RANGE	[Japan] LTE FDD: B1/B3/B8/B18/B19/B26 LTE TDD: B41 WCDMA: B1/B6/B8/B19 [Taiwan] LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 LTE TDD: B40 WCDMA: B1/B2/B5/B8 [USA] LTE FDD: B2/B4/B12 WCDMA: B2/B4/B5	
WIRELESS TRANSMISSION	WiFi 2.4GHz (802.11b/g/n) Support station and AP mode	
LAN	10/100 Mbps	
LoRa ANTENNA	[TLG8402V1] 2 dBi [TLG8402V2] 0 dBi	
WIRELESS ANTENNA	Module embedded	
LTE ANTENNA	Embedded, 3 dBi	
I/O		
INTERFACE	COMMON	Micro USB power-in x1 Nano SIM Card socket x1 Config button x1 Hardware / Factory reset button x1

		LoRa antenna jack x1
	UNIQUE	[TLG8402V1] LAN port x1 [TLG8402V2] 3-pin wafer connector for vehicle power-in x1
LED INDICATION		LED indicator x4 (Power / LoRa / WiFi / LTE)
POWER INPUT		DC5V DC12V/24V input though 3-pin wafer connector (V2 only)
MECHANISM		
DIMENSION (MM)		135.6 x 107.1 x 33 mm
WEIGHT (w/o ACCESSORIES)		170 g
ACCESSORIES IN PACKAGE ³		Adapter x1 ⁵ USB cable x1 Car Power Cable x1 LoRa antenna x1
ENVIRONMENT		
OPERATION TEMPERATURE		-20 ~ 65 °C
STORAGE TEMPERATURE		[TLG8402V1] -20 ~ 70°C [TLG8402V2] -40 ~ 85°C
CERTIFICATE ⁴		TELEC, VCCI, NCC, ISO16750, E-Mark

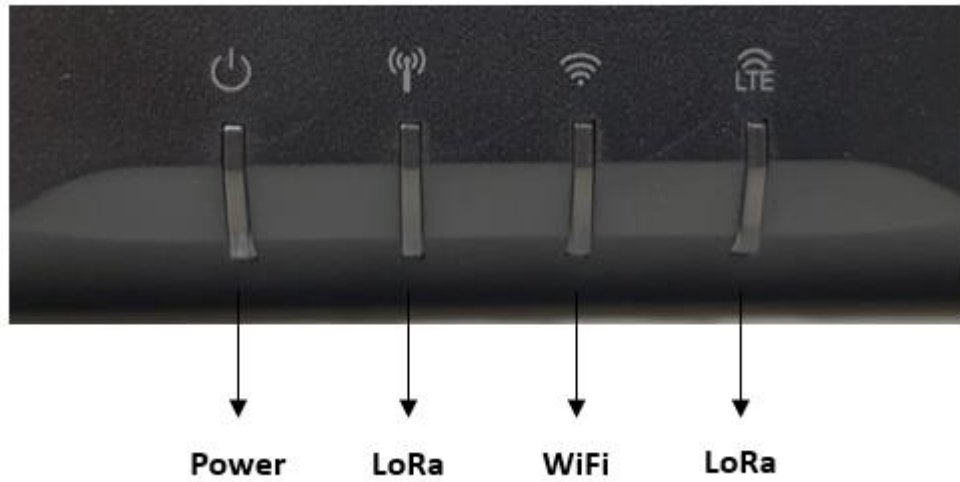
³ Car power cable is only for TLG8402V2, and there are two types of car power cable, cigarette lighter or car fuse type.

⁴ ISO16750, E-Mark are only certificated for TLG8402V2

⁵ There are two types of power adapter, the model name are ATM012T-W050UU and A138A-120150U-US 4 separately.

5. LED and I/O Description

5.1. LED Indicator



<p><u>Power:</u></p> <ul style="list-style-type: none"> ● Power on 	<p><u>LoRa Status:</u></p> <ul style="list-style-type: none"> ● Flashing green while data receiving and transmitting
<p><u>WiFi:</u></p> <ul style="list-style-type: none"> ● Turn on while WiFi connected 	<p><u>LTE:</u></p> <ul style="list-style-type: none"> ● Turn on while LTE connected

5.2. I/O Description

<p><u>TLG8402V1</u></p> <ul style="list-style-type: none"> ● Micro USB power-in x1 ● Nano SIM Card socket x1 ● Config button x1 ● Hardware / Factory reset button x1 ● LAN port x1 	<p><u>TLG8402V2</u></p> <ul style="list-style-type: none"> ● Micro USB power-in x1 ● 3-pin wafer connector for vehicle power-in x1 ● Nano SIM Card socket x1 ● Config button x1 ● Hardware / Factory reset button x1
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6. Mechanical Drawing

Unit: mm

