
TYPE-GJ1 Users Manual

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1. Introduction

本書は組込み型 Wireless Bridge TYPE-GJ1 について説明するものです。

This document describes about “embedded Wireless Bridge TYPE-GJ1.

2. Overview

TYPE-GJ1 は Single Band IEEE802.11bgn 準拠のインテリジェントモジュールです。本モジュールは EU RoHS 指令 2009/95/EC(Lead Free)及び中国版 RoHS に適合しています。本モジュールは MAC/BBP チップセット RTL8196C と RTL8188CE(Realtek 社)を採用しています。また、このモジュールは 1 ストリームの 11n システム及び 40MHz 帯域幅モードをサポートしています。

TYPE-GJ1 is Single Band IEEE802.11bgn intelligent radio module. This module complies with EU RoHS Directive 2009/95/EC(Lead Free) and China RoHS with exemptions. This module has an MAC/BBP Chipset RTL8196C and RTL8188CE (Realtek) internally. Also this module supports high speed one stream 11n technology and 40MHz band width mode.

機能 (Features):

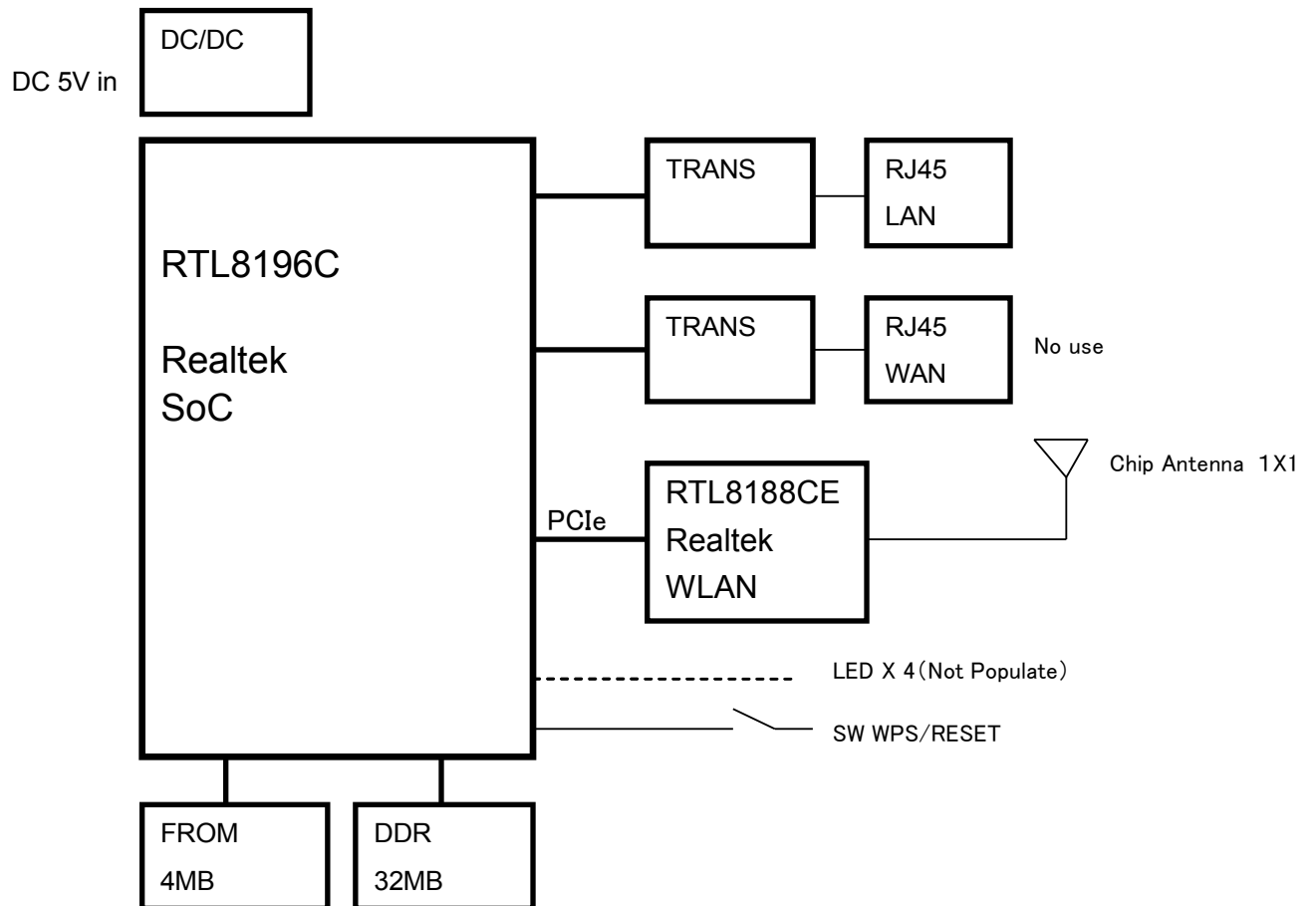
- IEEE802.11b/g/n 準拠(2.4GHz)
IEEE 802.11b/g/n conformity (2.4GHz)

- 1 ストリーム 1 x 1 11n システム及び 40MHz 帯域幅モード対応 (スループット理論値 150Mbps)
Two stream 1 x 1 11n technology and 40MHz band width mode. (Throughput up to 150Mbps)

- データレート 802.11b/g 1-54Mbps, 802.11 MCS0-7対応
Data rates of 1 - 54 Mbps for 802.11b/g and MCS0-7 for 802.11n

- “Short Gard Interval”モード対応
Support “Short Gard Interval” mode.

3. Block diagram



4-1. General specifications

Item	Specification	Unit	Note
電源コネクタ Power connector	Micro B (USB)	—	
インターフェイス Device Interfaces	IEEE802.3u 10/100BASE 2port	—	WAN, LAN port
	IEEE802.11b/g/n	—	
重さ Weight	13.8	g	Typ
寸法 Dimensions	54 x 37 x 18	mm	W x H x D, PCB Thickness = 1.0mm * 7.項参照。See section 7.
MTBF	90,000	h	Min.

4-2. Environmental specifications

Item	Specification	Unit	Note
保存温度 Storage temperature	-20 to +60	°C	
保存湿度 Storage humidity	Max 95%	%RH	Non condensing
動作温度 Operating Temperature	0 to +55	°C	Ambient
動作湿度 Operating humidity	10 to 90	%RH	Non condensing

Item	Specification			Unit	Note
電源電圧 Power supply voltage	Min.	Typ.	Max.	V	動作条件 Operating Conditions
	4.75	5.0	5.25		

4-4. Radio configuration and general specifications

Item	Specification		Unit	Note
Chipset	SoC RTL8196C / WLAN RTL8188CE (Realtek)		—	
中心周波数 Center frequency	11b	2412 – 2472	MHz	
	11g	2412 – 2472	MHz	Ch.1~Ch.13
	11ng HT20	2412 - 2472	MHz	
	11ng HT40	2422 - 2462	MHz	Ch.3~Ch.11
チャンネル間隔 Channel spacing	11b/11g/11ng HT20/HT40	5	MHz	
通信レート Rate スキームコード Scheme code	11b	1, 2, 5.5L, 5.5S, 11L, 11S	Mbps	
	11g	6, 9, 12, 18, 24, 36, 48, 54	Mbps	
	11ng 1Stream	MCS0, 1, 2, 3, 4, 5, 6, 7	—	
変調方式 Modulation type	11b	DSSS(CCK,DQPSK,DBPS K)	—	
	11g/11ng	DSSS-OFDM (64QAM,16QAM,QPSK,BPS K)	—	

5. System Requirements (for the install)

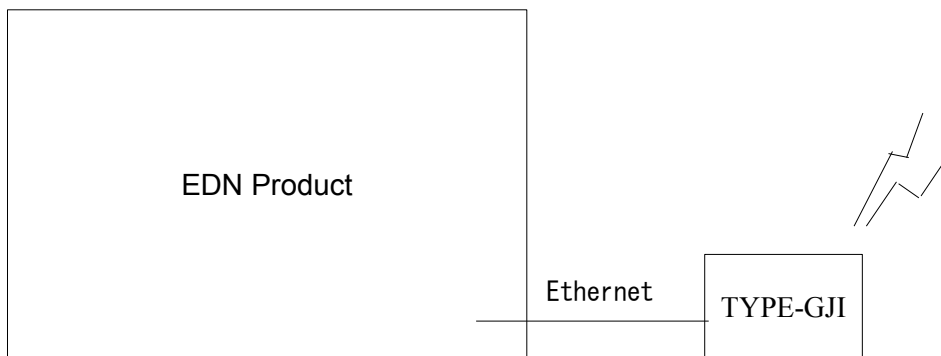
The configuration of this product uses a special protocol.
The exhibition of those procedures is kept by contract.

OS: Embedded Linux or Embedded windows PC

H/W: Ethernet port is required

6. Setup

TYPE-GJ1 connect to the Ethernet port of the END product.
The END product can use the wireless LAN by setting it using a special protocol.



7. Compliance

FCC ID:BBP-WLBRG01

IC :144D-WLBRG01

NOTICE

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:

- 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.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with Part 15 of FCC Rules and Industry Canada licence-exempt RSS standard(s). 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 this device.

Le présent appareil est conforme aux la partie 15 des règles de la FCC et 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.

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

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body (excluding extremities: hands, wrists, feet and ankles).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles les radioélectriques (RF) de la FCC lignes directrices d'exposition dans le Supplément C à OET65 et d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le dispositif rayonnant et le corps (à l'exception des extrémités : mains, poignets, pieds et chevilles).

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This radio transmitter (identify the device by certification number, or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type 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 (identifier le dispositif par son numéro de certification ou son numéro de modèle s'il fait partie du matériel de catégorie I) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Antenna information: Omni-directional Chip Antenna Peak Gain 0.5dBi

FCC WARNING :

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

Manual and Product Labeling information To The End User

The end user manual shall include all required regulatory information/warning as show in this manual.

And when this module is installed in the host product, you must include a "Contain FCC ID : BBP-WLBRG01"

and a "Contain IC: 144D-WLBRG01" in the label of the host product.