

Confidential		P. 1								
MegaChips Corporation		Document No.								
Product Specification										
<div>TITLE</div> <div>Shriker-G0+ Evaluation Kit ~ User Manual ~</div>										
<table><tr><td>Product Number</td><td></td></tr><tr><td>Product Name</td><td>Shriker-G0+ Evaluation Kit</td></tr><tr><td>Customer Name</td><td></td></tr></table>					Product Number		Product Name	Shriker-G0+ Evaluation Kit	Customer Name	
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Product Name	Shriker-G0+ Evaluation Kit									
Customer Name										
Sub Group	Revision	Final Approved								
Manual		Approved								
		Checked								
		Created	Mar 30, 2016	A.Takabatake						

Standard	Shriker-G0+ Evaluation Kit ~ User Manual ~	No.	
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1. Product Overview

1.1. Introduction

Shriker-G0+ is one of the reference designs of BlueChip Wireless. Connected with power supply and external controller such as PC, it works as a wireless transceiver using 902~928MHz frequency band.

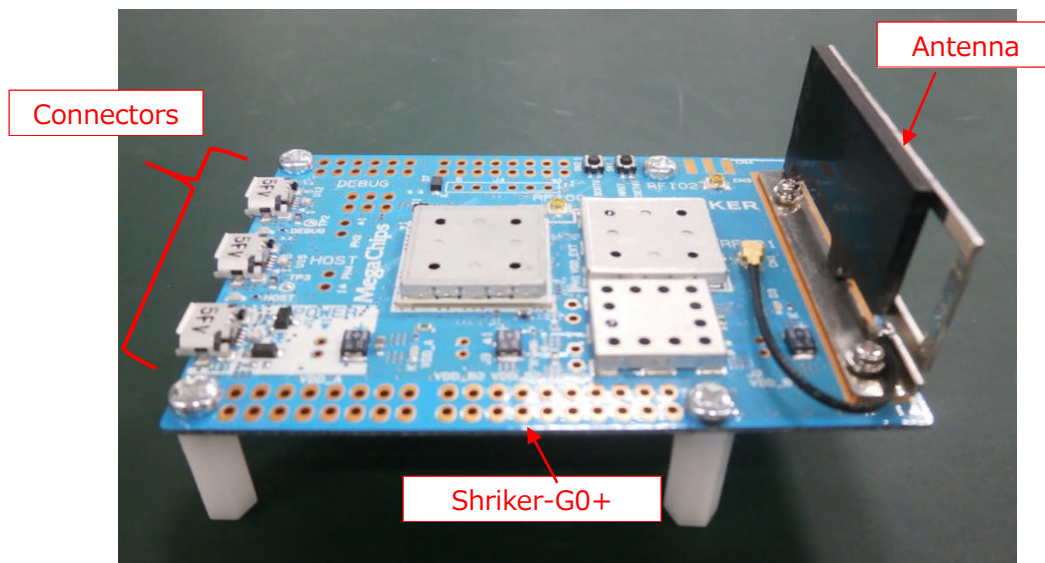


Figure 1 Shriker-G0+

1.2. Features

- ✧ Better solution for IoT products.
- ✧ MegaChips SDK supported.
- ✧ Simple command interface via USB connection
- ✧ Radio certification: FCC Part 15.247
 - Frequency: 902-928MHz
 - Output power: 1W
 - Frequency Hopping Spectrum System
- ✧ Support multiple bitrates: 50kbps/100kbps/200kbps
- ✧ Compact on-board antenna.
- ✧ 5V DC power supply.

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2. Specifications

2.1. System Specifications

Table 1 System Specifications

Interface	
Interface Type	USB2.0 (converted from 115.2kbps UART)
Connector	two USB micro-B connectors
Data Rate	115.2kbps
Power Supply	
AC Adaptor	AC120V/60Hz, DC5V/1A output
Board Supply Voltage	5V DC
Board Current (5.0V DC)	Transmit: 850mA Receive: 60mA
Physical Properties	
Board Size	77.50mm x 55.88mm
Operating Temperature	0 to 60°C

2.2. Radio Specifications

Table 2 Radio Specifications

General	
Frequency	902-928MHz
Modulation	GFSK (Frequency Shift Keying)
Spread Spectrum	FHSS (Frequency Hopping Spread Spectrum)
Channel Spacing	500kHz
Data Rate	50kbps, 100kbps, 200kbps
Encryption	128-bit AES Encryption
Performance	
Transmit Power Output	1W
Receiver Sensitivity	-109dBm @50kbps -105dBm @100kbps -102dBm @200kbps
Certifications	
FCC Part 15.247	1W, FHSS, 902-928MHz (Not certified yet)

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2.3. Approved Antennas

Table 3 Approved Antennas

#1: NISSEI Inv-F antenna	
Manufacture	Nissei Electric Co.,Ltd
Type	Inverted F antenna
Gain	1.4dBi (peak)
Connector	MHF
Size	47mm x 20mm x 6.7mm

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3. Operation

3.1. Typical System Setup

To start wireless communication, you have to connect Shriker-G0+ with Windows PC and power supply.

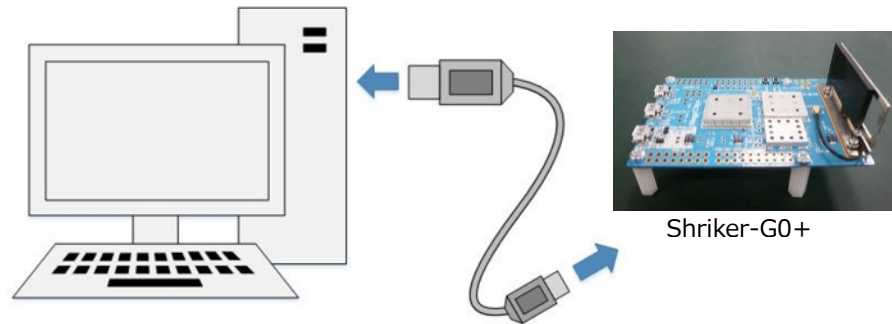


Figure 2.Connection with PC

After connection with Windows PC, the USB driver will be installed into PC automatically. If the driver installation is successful, a COM port will be added to the Windows PC system. If failed, please get the VCP Driver from the following site and install it manually.

<http://www.ftdichip.com/>

3.2. Operation

Please see the operation manual released with control software.

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<p>4. FCC Notices</p> <p>4.1. Compliance Statement (Part 15.19)</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. <p>4.2. CAUTION</p> <p>Any changes or modifications not expressly approved by MegaChips Corporation could void the user's authority to operate the equipment.</p> <p>4.3. Endpoint Location</p> <p>This equipment must be installed and operated in accordance with provided instructions and the antenna(s) 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. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.</p> <p>4.4. RF Interference</p> <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>4.5. End Product Labeling</p> <p>This transmitter module is authorized only for use in device where the antenna may be installed such that 20cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains FCC ID: 2AGYI-SHKG0P "</p>			

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4.6. Information for the OEMs and Integrators

The following statement must be included with all versions of this document supplied to an OEM or integrator, but should not be distributed to the end user.

- 1) This device is intended for OEM integrators only.
- 2) Please see the full Grant of Equipment document for other restrictions.

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Definition/Revision History						
Standard				No.		
Date of D/R/A	Rev.	Contents of Definition/Revision	D/R/A by			
			Final Aprv.	Aprv.	Rvw.	Crt.
Mar 30, 2016		Released				A.Takabatake