Ultra Short Range Radar
User's Manual   ver.1.1

Apr. 26th 2018

Perfecting the Art of Electronics

ALPS ®

1. Product/Model

Product Name	Ultra Short Range Radar
Model Number	UKAZA2A001
FCC ID	2ACH3UKAZA2A0
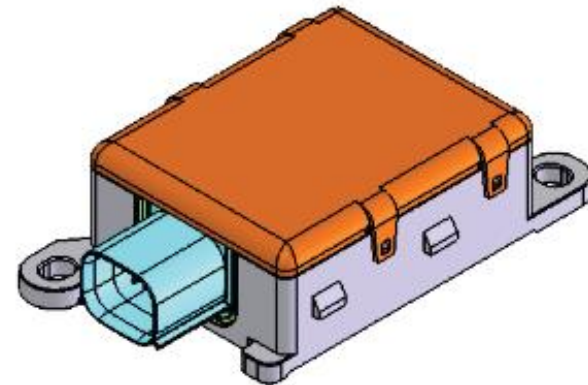
2. Spec/Power/Frequency

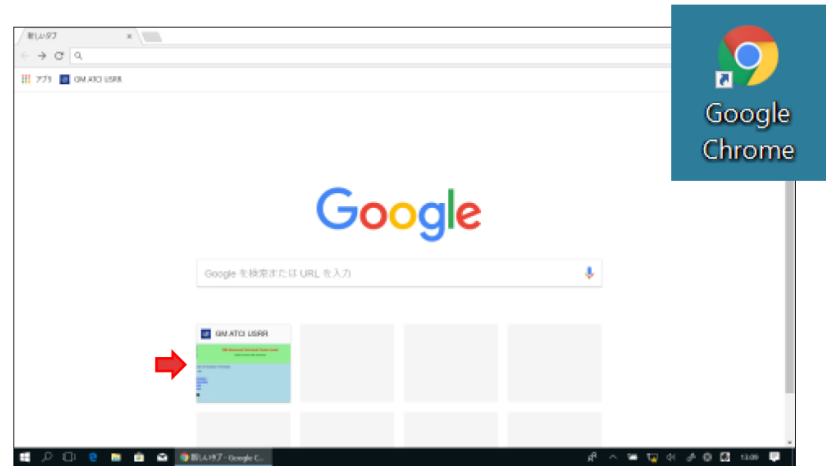| Item	Value	Unit
Output Power at RF IC *1	10 (typical)	dBm
EIRP	2.9 (peak)	dBm/MHz
Frequency	77 to 80.6	GHz
Modulation	FMCW	
Power Voltage	12 (typical)	V
Current Consumption	1100 (peak)	mA
Electrical Interface	BroadR-Reach 100Mbps	-
Operating Temperature	-40 to 85	degC

*1: This value doesn't include the antenna feed line and pattern.

3. Operation Manual

Connection of equipment

- Microsoft Surface
- Logitec Ethernet adapter
- USB
- Ethernet
- No password
- Media converter board
- Reset button
- Red LED
- Blue LED
- Radar Module
- BroadR-Reach 1pair twist cable
- AC adapter(12V)
- DC power supply(12V) Current limit :2A over

Common operation step1

Google Chrome

Launch Google Chrome on Surface and launch the USRR Control Web Interface.
(You can also access "10.1.1.19" directly in the URL.)
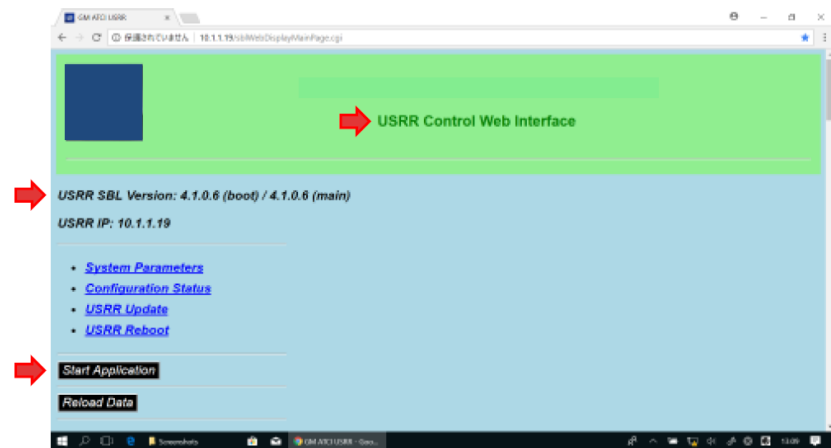
Overview

FMCW/CW mode common operation

Step0. Supply 12 V from AC adapter to Media converter board.
    →The blue LED on the Media converter board lights up.
    Supply 12V from the DC power supply to Radar module.
    →The red LED on the Media converter board lights up.
     If it does not light up, press the reset button or turn the power to the Media converter board again.
Step1. Launch Google Chrome on Surface and launch the USRR Control Web Interface.
Step2. Press the "Start Application"
Step3. Press the "Return to USRR Main Page"
Step4. USRR Version Number: 4.4.22.13 is activated.

FMCW mode operation

Operation mode:Operational
Start Sampling ☑
USRR Start ☑
Press the "Submit" button

CW mode operation

Run Script on Desktop
 Enter Operating frequency <GHz>
 Enter Operating frequency <MHz>
 Enter TX channel
 Operation mode:Sampler
 Start Sampling ☑
 USRR Start ☑
 Press the "Submit" button

Common operation step2

USRR Control Web Interface

USRR SBL Version: 4.1.0.6 (boot) / 4.1.0.6 (main)

USRR IP: 10.1.1.19

- System Parameters
- Configuration Status
- USRR Update
- USRR Reboot

Start Application

Reload Data

The USRR Control Web Interface is started.
(Confirm that it is "USRR SBL Version:4.1.0.6(boot)/4.1.0.6(main)")
Press the "Start Application"

3. Operation Manual
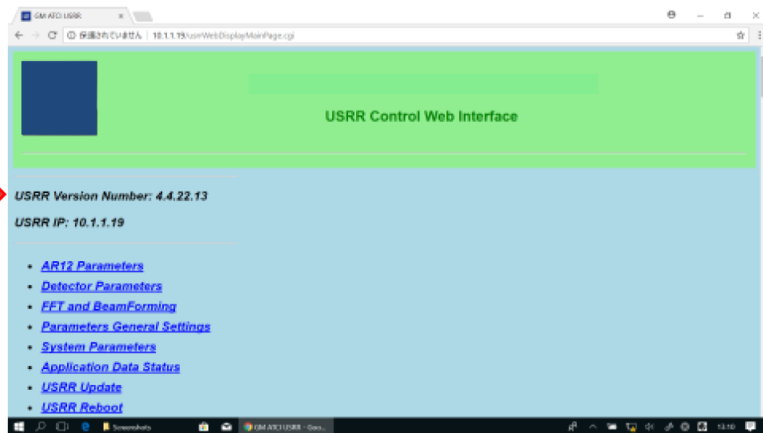
Common operation step3

USRR Starting Application ...

Please Wait And/Or Reload Application Web Page ...

Return to USRR Main Page

FMCW mode

If this screen takes a long time,
Press the "Return to USRR Main Page"

Common operation step4

USRR Control Web Interface

USRR Version Number: 4.4.22.13

USRR IP: 10.1.1.19

- AR12 Parameters
- Detector Parameters
- FFT and BeamForming
- Parameters General Settings
- System Parameters
- Application Data Status
- USRR Update
- USRR Reboot

USRR Version Number: 4.4.22.13 is activated.

FMCW mode operation

USRR Control Web Interface

- USRR Update
- USRR Reboot

Reload Data

AR12 Parameters:

AR12 Parameters
Operation Mode: Operational
Sample Mode: ADC
Sampler Decimation:
Start Sampling: ✓
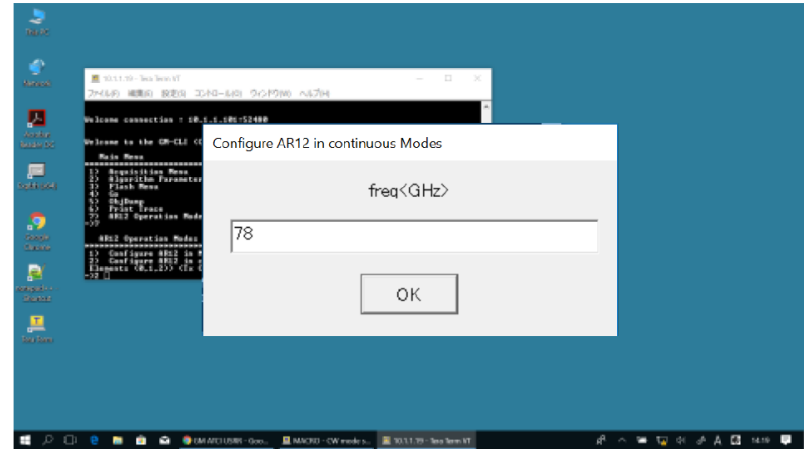USRR Start: ✓

Submit
Return to Top

Detector Parameters:

Operation mode:Operational
Start Sampling ☑
USRR Start ☑
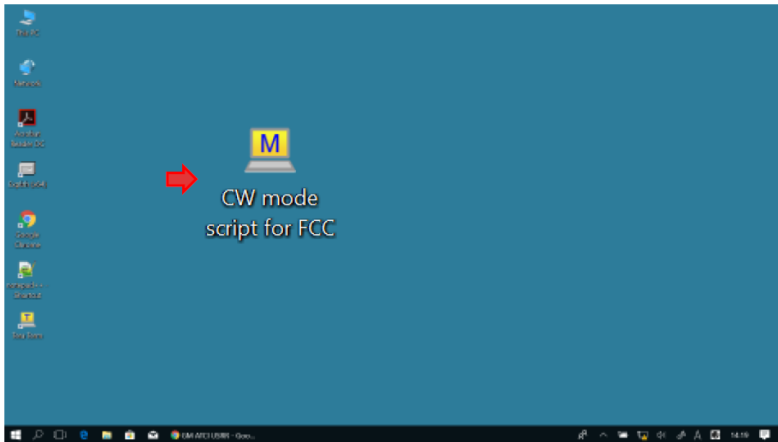Press the "Submit" button

CW mode
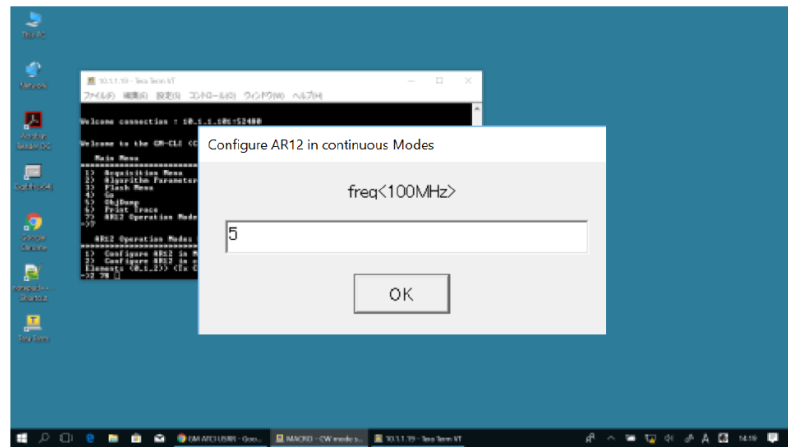
CW mode operation step2

Enter Operating frequency <GHz>

In case of 78.5 GHz, input "78"

CW mode operation step1

Run Script (CW mode script for FCC.ttl) on Desktop
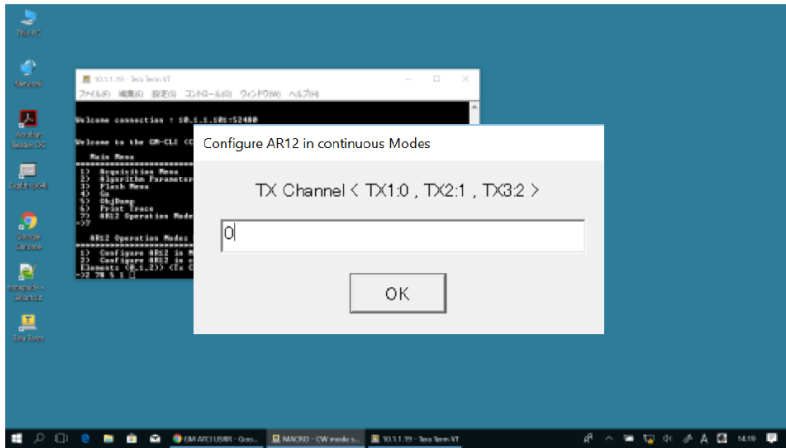
CW mode operation step3

Enter Operating frequency <MHz>

In case of 78.5 GHz, input "5"

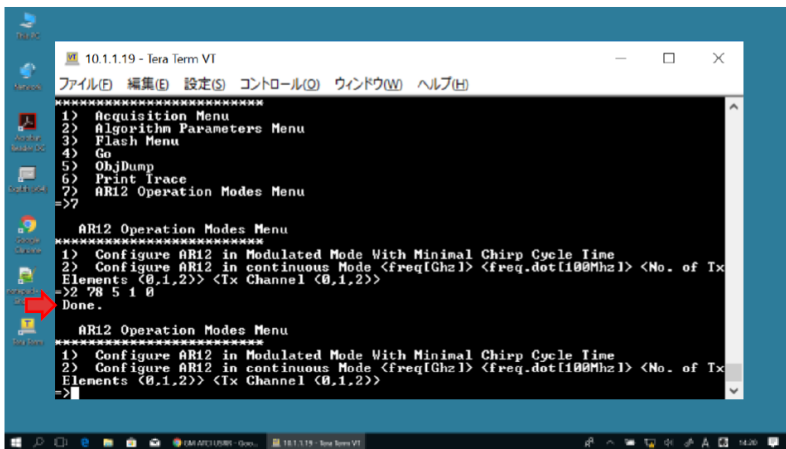# 3. Operation Manual

CW mode operation step4

Enter TX channel

In case of TX1, input "0"

CW mode operation step6
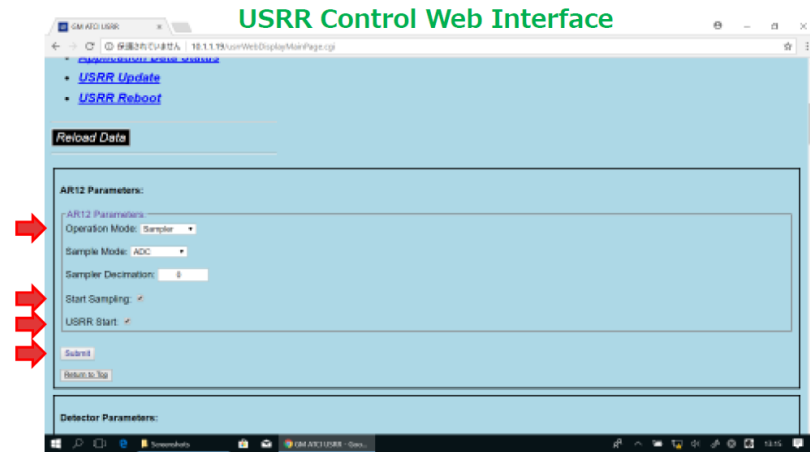
USRR Control Web Interface

Operation mode:Sampler
Start Sampling ☑
USRR Start ☑
Press the "Submit" button

CW mode operation step5

"Done." Is displayed with the correct setting

If not displayed, execute again from CW mode operation Step1.

About resetting

To change the setting, turn off the power of the USER 12 V, turn on the power again, and start again from "Common operation step 1". This is the same for both FMCW mode and CW mode.

1. Need to have more than 2A capability for a power source.

2. Do not touch I/F metal pins in connector by your hand directly.

3. Do not drop the product.

4. Do not remove a plastic cover which is top of the product.

5. Need to turn 12V power off before disconnecting the I/F cables.

End of Slides

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