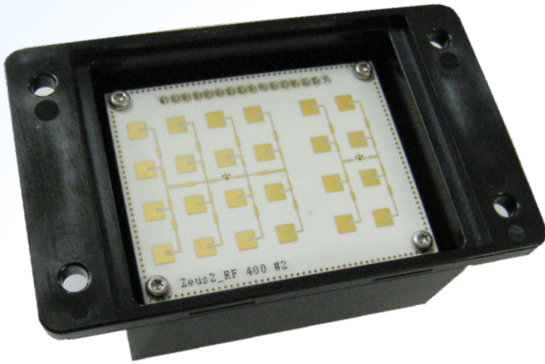


# 24GHz



# ST24ZS2

## Radar Sensor Product Evaluation Kit

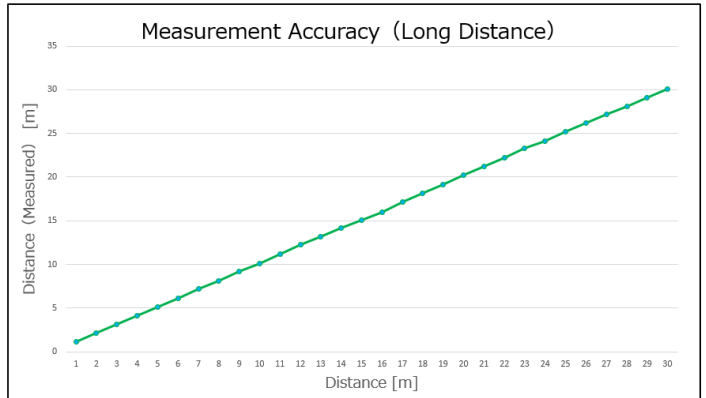


ST24ZS2A4442H

- UART-USB converter board included
- Software for checking operation included
- Radio wave absorber for calibration included
- With Technical Standards Conformity Certification
- They are certified with radio regulatory in Japan



Short Distance Measurement Accuracy (Gain: +14dB)



Long Distance Measurement Accuracy (Gain: +40dB, RCS: 20dBsm)

Radar Kit App 2

File Setting Layout

Port: COM64 Disconnect

Data Interval: Minimum: 0 [ms]

IF Gain: 14dB Set

Calibration: Set Reset

Average: Arithmetic: 1 Moving: 1 Write Read

IF Chart: IF waveform (I, Q)

Spectrum: Draw Phase Spectrum

Target List:

	Distance [m]	Amplitude FFT Value	Phase [rad]
1	2.61	96	2.05
2	4.28	20	-0.64
3			
4			
5			

Observation Target: Distance - [m] 2.61 Observation target

Amplitude - FFT Value: 96 Phase - [rad]: 2.05

S-Takaya, ST24ZS2, v0001 | 18.00sps / 55.6ms

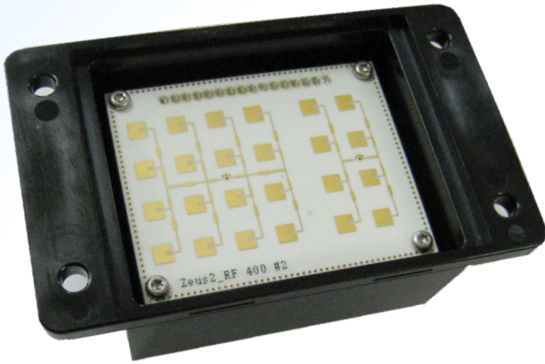
Graphical User Interface

# 24GHz



# ST24ZS2

## Radar Sensor Product Evaluation Kit

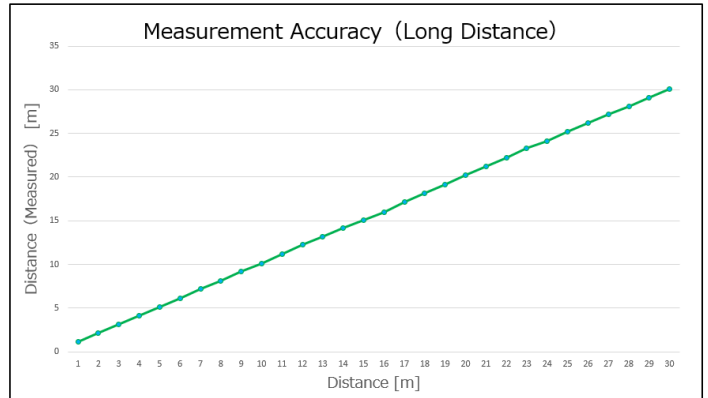


ST24ZS2A4442H

- UART-USB converter board included
- Software for checking operation included
- Radio wave absorber for calibration included
- With Technical Standards Conformity Certification
- They are certified with radio regulatory in Japan



Short Distance Measurement Accuracy (Gain: +14dB)



Long Distance Measurement Accuracy (Gain: +40dB, RCS: 20dBsm)

Radar Kit App 2

File Setting Layout

Port: COM64 Disconnect

Data Interval: Minimum: 0 [ms]

IF Gain: 14dB Set

Calibration: Set Reset

Average: Arithmetic: 1 Moving: 1 Write Read

IF Chart: IF waveform (I, Q)

Spectrum: Draw Phase Spectrum

Target List:

	Distance [m]	Amplitude FFT Value	Phase [rad]
1	2.61	96	2.05
2	4.28	20	-0.64
3			
4			
5			

Observation Target: Distance - [m]: 2.61 Observation target

Amplitude - FFT Value: 96 Phase - [rad]: 2.05

S-Takaya, ST24ZS2, v0001 | 18.00sps / 55.6ms

Graphical User Interface

## Specifications

Size	mm	50(W) × 82(D) × 28.8(H)
Interface		UART(USB) (1)
Supply Voltage	V	5.0 (1)
Current Consumption(Typ)	mA	340
RF Frequency	GHz	24.05 - 24.25
Modulation Bandwidth	MHz	24.05 - 24.25
Detection Range	m	0.1 - 30 (2)
Range Measurement Accuracy	m	±0.1 (2)
Chirp Time	ms	2.5

(1) PC connection by the attached UART-USB conversion, works with bus power.

(2) Based on our measurement environment.

## Antenna Variations

Type Name		ST24ZS2 A4222H	ST24ZS2 A4242H	ST24ZS2 A4422H	ST24ZS2 A4442H
Antenna Type					
TX	Patch	4 x 2	4 x 2	4 x 4	4 x 4
RX	Patch	2 x 2	4 x 2	2 x 2	4 x 2
Transmitter Antenna Half-power Angle (Typ)					
Azimuth	deg	±20	±20	±10	±10
Elevation	deg	±10	±10	±10	±10
Receive Antenna Half-power Angle (Typ)					
Azimuth	deg	±20	±20	±20	±20
Elevation	deg	±20	±10	±20	±10
Polarization Direction(3)		Horizontal	Horizontal	Horizontal	Horizontal
Output Power(Typ)	dBm EIRP	+21	+21	+24.5	+24.5

(3) When the sensor product is installed horizontally(landscape).

When using vertical polarization, install the sensor product vertically.

•Please contact the a sales company listed on the right or the following.  
for inquiries about this catalog.

•This specification is subject to change without prior notice.

•The display may differ from the actual display.

•Measured values are those under our test conditions.

Therefore, in actual measurement, the measured value differs depending on the situation in the measurement environment.

### S-TAKAYA ELECTRONICS INDUSTRY CO.,LTD

3121-1 Satomi Satosho-cho,Asakuchi-gun, Okayama,  
719-0301,JAPAN

<https://www.s-takaya.co.jp>

### Macnica TecStar Company, Inc.

<https://www.macnica.co.jp/business/semiconductor/manufacturers/infineon/>

### NEXTY Electronics Corporation

<http://www.nexty-ele.com/nat/>

### TOKYO ELECTRON DEVICE LIMITED

<https://www.teldevice.co.jp/>

### MARUBUN CORPORATION

<https://www.marubun.co.jp>