

Contactless CbM sensor with mm-wave radar

■ Features

- Using 79GHz millimeter wave Radar technology
- On-board SoC FPGA for embedded radar processing to improve data throughput
- Contactless measurement regardless any mechanical resonance
- Wideband vibration measurement up to 40KHz
- Spot vibration sensing with narrow FoV
- Available to detect around 0.03um vibration (peak-to-peak amplitude)
- Measuring high temperature machine due to contactless
- PoE (Power over Ethernet)



■ Applications

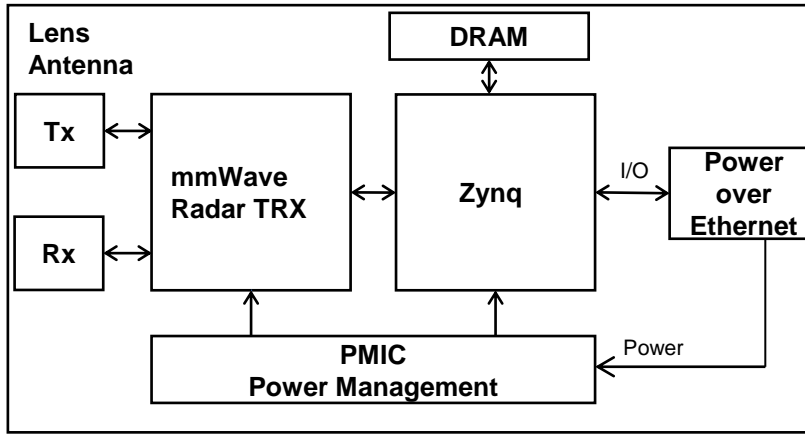
- CbM (Conditional Based Maintenance)
 - 24/7 continuous condition monitoring for precision equipment
 - Periodic inspection
 - Remote monitoring
- Research and development



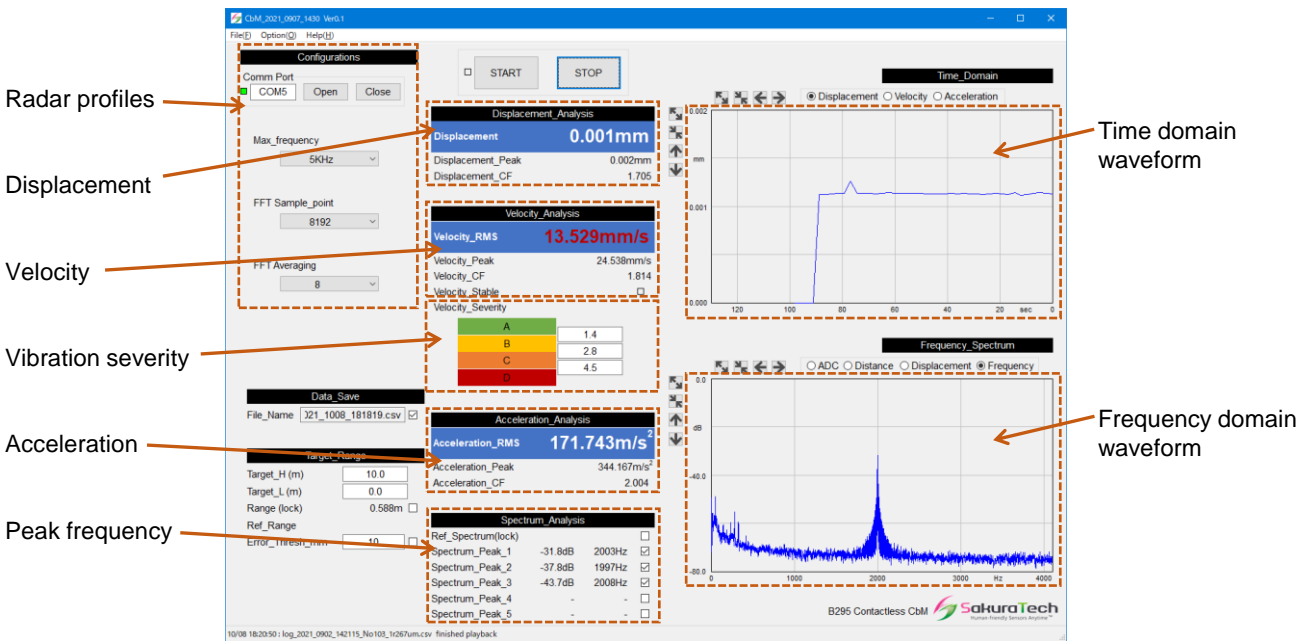
■ Specifications

Frequency	79GHz (ARIB STD-T111) certified
Tx Power	10dBm (no license required)
Radar type	FMCW
Detection Range	<5m (for vibration sensing)
FoV	±3°
Range accuracy	<20mm
Displacement accuracy	<0.4um
Vibration peak detection accuracy	<0.03um (@Frequency response)
Vibration frequency	max. 10KHz (B295-01) / 40KHz (B295-02)
Protection	IP65
Power	PoE 10Watts avg.
Interface	100BASE-T + PoE
Size (W x H x D)	139 x 150 x 80 mm

Hardware block diagram



Reference application software



Ordering Guide

Product Name	Product Number	Comments
miRadar® CbM	B295-01	Vibration frequency range <10KHz
	B295-02	Vibration frequency range <40KHz

Note : Any product appearances, specifications, etc. are subject to change for improvement without prior notice. When exporting the product, confirm the country of destination, application, and customer. If any of them falls into an objective requirement, please take the necessary procedures, including export certificate application.

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