

# XenG101G Gesture Recognition Control

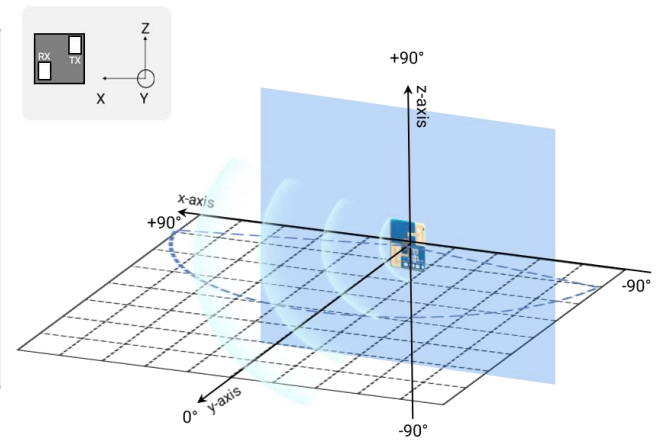
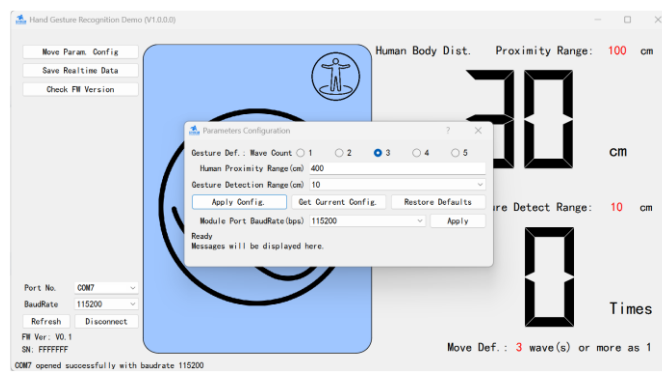
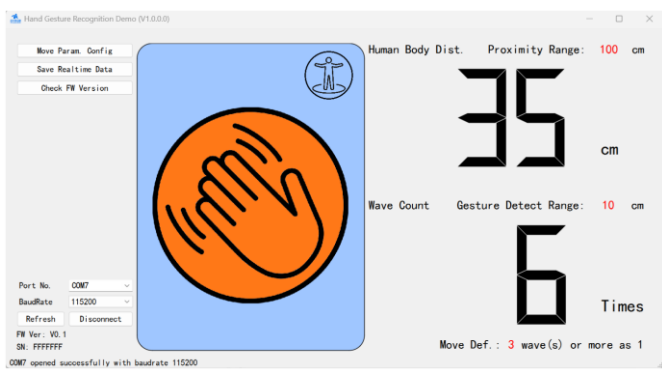
## Hand Wave Gesture Recognition mmWave Sensor



XenG101G is a high-precision 24GHz mmWave sensor reference design, integrating hand wave recognition and human proximity wake-up functionality. Based on FMCW technology and target recognition algorithms, it accurately detects hand wave gestures (1~20 cm) and measures human distance (0.2 ~ 4 m). It enables proximity-based wake-up and gesture control for smart devices, making it ideal for applications such as smart displays, smart home systems, smart appliances, and smart kitchen and bath products.

Specifications	
Human Proximity Range	0.2 ~ 4 m
Hand Gesture Range	Wave 1 ~ 20 cm
Human Detection Accuracy	± 20 cm
Horizontal FOV	150 °
Azimuth FOV	150 °
Operating Frequency	24 ~ 24.25 GHz FCC/CE compliant
Operating Voltage	3.3 V
Average Operating Current	100 mA
Max. EIRP	11 dBm
Refresh Cycle	50 ms

- ### Features
- Gesture recognition:** Non-contact control with high-precision hand wave detection.
  - Convenient Development:** Integrated human sensing and distance measurement function with multi-parameter configuration.
  - Accurate Ranging:** Human distance measurement accuracy of ±20 cm with configurable sensing range.
  - Interference Shielding:** Precisely defined gesture recognition zone to block out interference beyond the designated area.



Visualization Tool for Hand Gesture Recognition

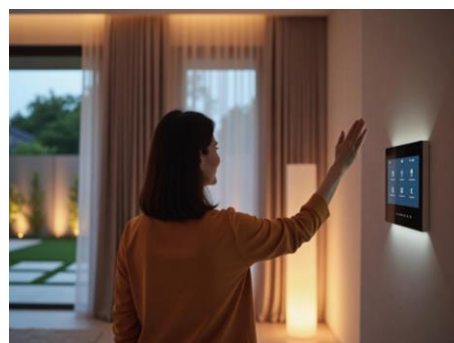
Illustration of Detection Range



Smart TV Screens



Smart Appliances



Smart Lighting



Smart Kitchen & Bath