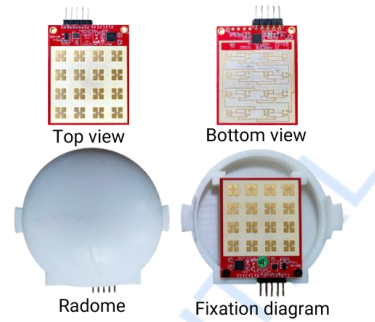


XenD/P108Y Product Specifications

The XenD/P108Y is a miniaturized high-precision liquid and material level detection sensor developed based on ICLEGEND MICRO S5KM312CL. It accurately detects the level of target in the specified range and reports the results in real time by adopting FMCW waveform and applying radar signal processing with the built-in liquid and material level detection algorithm.

With this reference design, users can develop customized miniaturized and high-precision liquid and material level detection products conveniently.



XenD/P108Y Device Map and Fixation Diagram

Product Features

- **Wide Range, High Precision:** The detection precision within the range of 0.15 to 10 meters is 0.03~0.15 millimeters¹
- **Energy-efficient and Easy to Adapt:** Low operating current reduces power consumption and heat generation
- **Compact and Easy to Deploy:** Small size for convenient installation
- **Flexible and Easy to Develop:** Real-time reporting of results with configurable parameter settings

Application Scenarios

- Industrial Application
- Smart Transportation
- Intelligent Cities

Characteristics

Parameter	Min.	Typ.	Max.	Unit	Description
Hardware Xen108 Characteristics					
Operating Frequency	23	-	27	GHz	-
Sweep Bandwidth	-	4	-	GHz	-
Beam Width	-12	-	12	°	-6 dB (round trip)
Max. EIRP	-	11	-	dBm	When equipped with the radome and operated at 25.5 GHz
Operating Voltage	3.0	3.3	3.6	V	-
Hardware Size	-	44 × 36	-	mm ²	-
Environment Temperature	-40	-	85	°C	-
XenD/P108Y System Characteristics					
Detection Range	0.15	-	10	m	-
Precision	0.03	-	0.15	mm	-
Accuracy	-	0.5	-	mm	-
Report Period	50	1,000	60,000	ms	Reconfigurable, refer to section 9.5 of UM10036
Average Operating Current	-	6	-	mA	When report period is 1 s
	-	15	-		When report period is 160 ms

¹ When detecting long distances, the accuracy may fluctuate due to interference from surrounding objects.

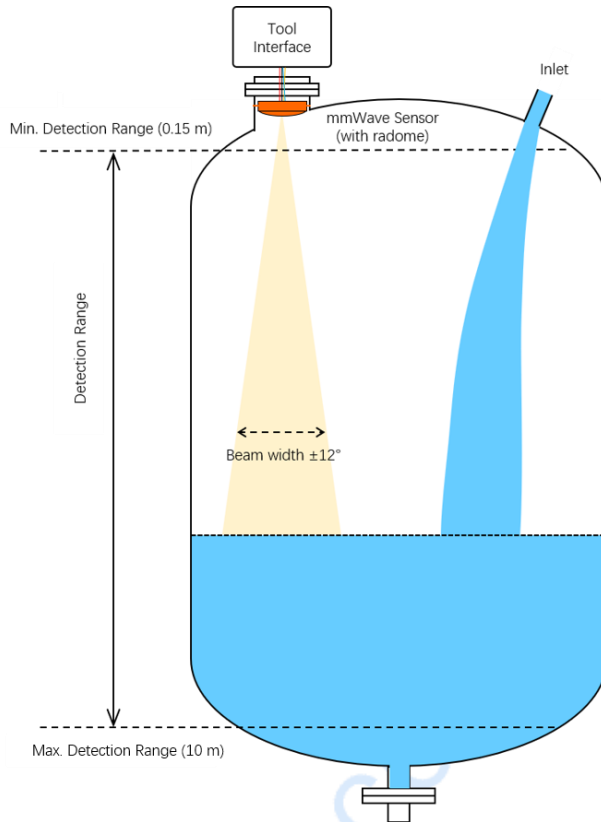
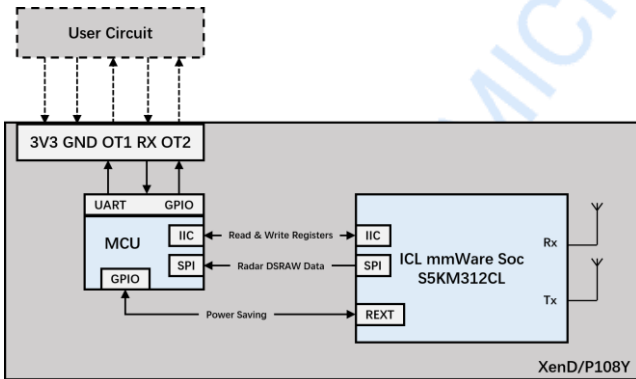


Illustration of the recommended installation

Application



System block diagram

Pin	Description
3V3	Supply power to the sensor, voltage 3.3 V
GND	Ground
OT1	MCU transfer data port
RX	MCU receive data port
OT2	Output IO port

Pin function description

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