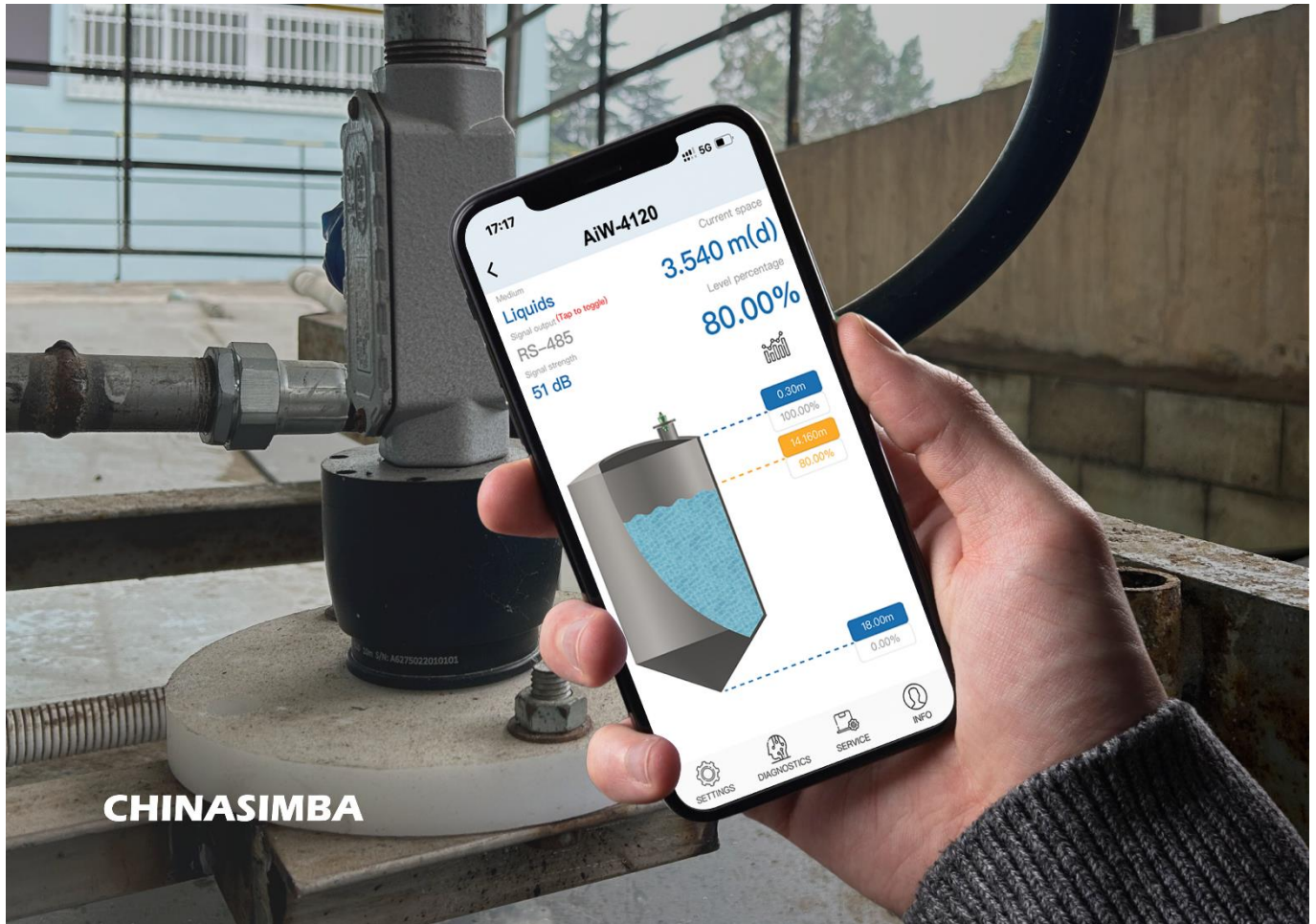


AiW-4120/3648/5112-B Mobile Series *Battery/Solar energy version*

Hydrological Radar Level/Flow Sensors

Application Software & Accessories for the Measurement & Transmission of Surface Water Parameters

Product information Version V.2024



CHINASIMBA

Characteristics

- AiWL-4120/3648/5112 Mobile radar sensor Series are autarkic devices with measured value transmission via radio technology, these are stand-alone radar sensors measure the levels in silos, mobile containers or liquids in tanks safely and reliably, even in remote or difficult-to-access locations.
- The battery-powered NB-IoT/Lora/4G sensors communicate their measured values to the cloud wirelessly and require neither expensive cabling nor their own on-site Internet access.
- Easy installation thanks to long-life battery supply and wireless technology
- Exact measuring results, independent of medium as well as process and ambient conditions
- Economical NB-IoT/Lora/4G solutions transfer level information to the cloud

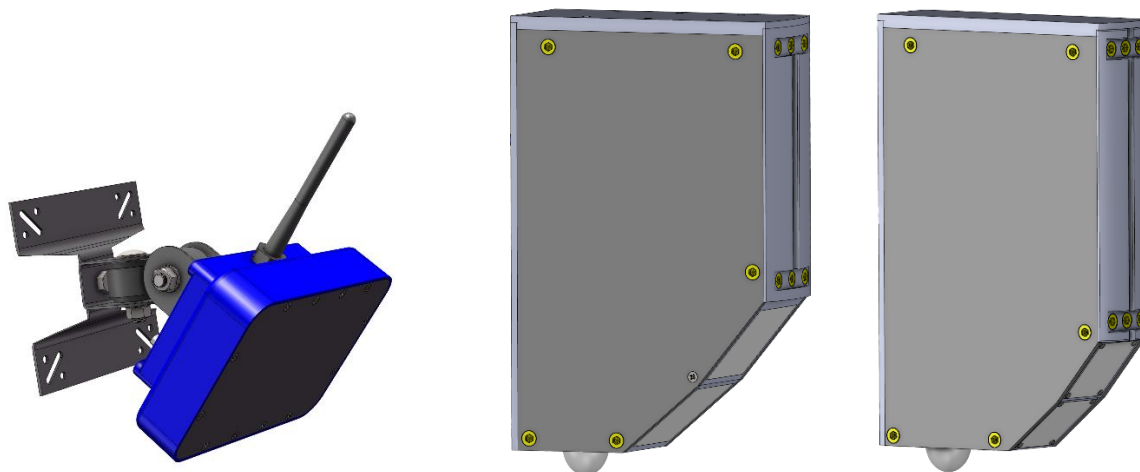
AiW Level Sensor Series Specifications:



	4112B	3648B	4120LB	4120MB
Measuring range	0.25 ... 8/10/15m	0.1 ... 18m	0.15 ... 10/20/30/40m	0.15 ... 10/20/30/50m
Application tank limits	Non-invasive measurement in metallized plastic tanks, TANK DK < 1.9			
Antenna	Built-in planar array	Lens Integrated with the housing	Lens Integrated with the housing	Lens Integrated with the housing
Beam angle	8°	6°	3°	4°
Process fitting /		Thread G2	Thread M56x2	Thread G1½, NPT / M56x2
Material wetted parts	POM (default) / PTFE / PVDF housing	PVDF housing	POM (default) / PTFE / PVDF housing	POM (default) / PTFE / PVDF housing
Frequency range	24GHz	80GHz	122GHz	122GHz
Process temperature	-40°C ... +70°C			
Max. process pressure		-0.1 ... 0.4MPa	-0.1 ... 1.0MPa	-0.1 ... 1.0MPa
Measuring accuracy	±2 mm	±2 mm	±2 mm	±2 mm
Signal output	NB-IoT, 4G, LoRaWAN, Bluetooth		NB-IoT, 4G, LoRaWAN, Bluetooth, Wireless HART	
Indication/Adjustment	1. (APP) Radar MobileManager via BT wireless 2. (PC software) Radar PCManager / PACTware/DTM via a cloud			
Power supply	Integrated batteries 3x 3.6 V (lithium)	Integrated batteries 3x 3.6 V (lithium)	Integrated batteries 3x 3.6 V (lithium)	Integrated batteries 12x 3.6 V (lithium), exchangeable
Bluetooth communication	Integrated Bluetooth 5.0 (Bluetooth 4.0 LE compatible), communication range 40m, in rainy day 20m			
Approvals	CE / IP68			
Applications	Liquids and bulk solids in plastic tanks without process fitting	Liquids and bulk solids in simple process conditions	Liquids and bulk solids in simple process conditions	Liquids and bulk solids in simple process conditions

SERVICE CONTACT: 86-13799977915, 86-18965063391(TECHNICAL SUPPORT), 86-18106067295(AFTER SALE SERVICE)
 ALTHOUGH WE HAVE RECONCILED THE CONTENTS OF THE MANUAL WITH DESCRIPTION OF INSTRUMENT, THERE MAY STILL BE CHANGES WE CANNOT ENSURE THAT IT IS FULLY CONSISTENT. THE CONTENT WILL BE CHECKED AND CORRECTED IN AN ORDERLY, AND THE ERRATA WILL BE IN SUBSEQUENT RELEASES. WE WELCOME USERS TO MAKE VARIOUS SUGGESTIONS FOR IMPROVEMENT. [TECHNICAL DATA SUBJECT TO CHANGE]

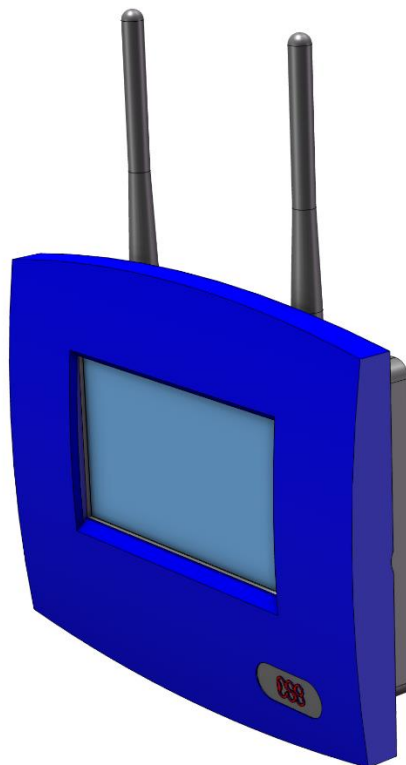
AiW Surface Velocity Series Specifications:



	AiW-5112 / 5112B	AiW-9503	AiW-9503B
Measuring range	0.015 ~ 25 m/s, Detection diagonal distance 0.8 ~ 100 m	Max. Level range 100M, Surface Velocity: 0.005~150m/s, Detection diagonal distance 0.2~45 m	
Radar Emission Frequency	23.8~25.3GHz (Frequency value can be adjusted adaptively) RF output power -5dBm	2xDopplers: 22.5 ~ 26.5GHz 50°/40° / RF output power -2dBm FMCW: 120 ~ 125GHz / RF output power -3dBm	
Antenna	Built-in planar array, gain 32dB	Lens Integrated with the housing	Lens Integrated with the housing
Opening Angle Mounting	12° Azimuth / 24° Elevation, Universal Joint Bracket Rotation range of swivel mount Lateral axis: ±90°, Longitudinal axis: ±90°	Joint Bracket	Joint Bracket
Housing Material	Aluminum housing + POM / PVDF / PTFE (Antenna cover)	POM (default) / PVDF housing	POM (default) / PVDF housing
Measuring Response Time	Effective data output time for power boot <5s, Measurement data update cycle <1.5s		
Ambient Temperature	-40°C ... +70°C / ≤95%RH		
Environmental Pressure	860 ~ 1060 mbar (12,47 ~ 15,37psi)		
Measuring accuracy	Velocity: ±2% of measured value Resolution 0.03mm/s @ 70M high/45°	Velocity: ±2% of measured value/Resolution 0.01mm/s @10M high/40°/50° LEVEL: ±2 mm	
Signal output	NB-IoT / 4G / LoRaWAN / Bluetooth (Annex option: Relay/4-20mA/SDI-12/Wi-Fi)		
Indication/Adjustment	1. (APP) Radar MobileManager via BT wireless 2. (PC software) Radar PCManager via a cloud		
Power supply	6.0 ~ 38VDC, <120mW, solar energy Supports intermittent power supply	Integrated batteries: 18 x 3.6 V (lithium), exchangeable Or Solar energy / Supports intermittent power supply	
Bluetooth communication	Integrated Bluetooth 5.0 (Bluetooth 4.0 LE compatible), communication range 40m, in rainy day 20m		
Approvals	CE / IP68		
Applications	Non-contact, be adapted to all-weather, compact surface water speed radar sensor for measuring open channel flow. In open channels and rivers where reliable velocity data is required continuously during floods or high concentrations of suspended sediment.		

SERVICE CONTACT: 86-13799977915, 86-18965063391 (TECHNICAL SUPPORT), 86-18106067295 (AFTER SALE SERVICE)
 ALTHOUGH WE HAVE RECONCILED THE CONTENTS OF THE MANUAL WITH DESCRIPTION OF INSTRUMENT, THERE MAY STILL BE CHANGES WE CANNOT ENSURE THAT IT IS FULLY CONSISTENT. THE CONTENT WILL BE CHECKED AND CORRECTED IN AN ORDERLY, AND THE ERRATA WILL BE IN SUBSEQUENT RELEASES. WE WELCOME USERS TO MAKE VARIOUS SUGGESTIONS FOR IMPROVEMENT. [TECHNICAL DATA SUBJECT TO CHANGE]

AiW LoRaWAN Gateway Specifications:



CSB Lora Router ECF-103	
Communication range	Open transmission distance up to 5Km @Low rate
Lora Frequency	433/470/868/915 MHz (optional)
Sensitivity	up to -139 dBm
Max. transmit power	+28 dBm
Housing Material	Anodized Aluminum housing + PVDF
Working mode	LoRa, LoRa_AES, LoRa_MESH
Ambient Temperature	-20°C ... +70°C
Input / output	LoRaWAN ↔ GPRS/UMTS/LTE (2G, 3G, 4G, 5G)/internet (APP) Radar MobileManager / (PC software) Radar PCManager / PACTware / DTM via a cloud
interface	GPRS/UMTS/LTE (2G, 3G, 4G)/ /internet 1x PoE 2x USB port 1x SD card
Display / Adjustment	320x240 TFT color LCD with touch screen
Power supply	100 ... 230 VAC, 50/60 Hz, PoE adapter
Mounting	Wall and tube mounting
Approvals	CE / IP65
Applications	Gateway for connecting LoRaWAN sensors to CHINASIMBA PCManager System Easy setup and commissioning through preconfigured settings, System for inventory monitoring as well as remote enquiry and visualization of measurement and location data.

SERVICE CONTACT: 86-13799977915, 86-18965063391(TECHNICAL SUPPORT), 86-18106067295(AFTER SALE SERVICE)
 ALTHOUGH WE HAVE RECONCILED THE CONTENTS OF THE MANUAL WITH DESCRIPTION OF INSTRUMENT, THERE MAY STILL BE CHANGES WE CANNOT ENSURE THAT IT IS FULLY CONSISTENT. THE CONTENT WILL BE CHECKED AND CORRECTED IN AN ORDERLY, AND THE ERRATA WILL BE IN SUBSEQUENT RELEASES. WE WELCOME USERS TO MAKE VARIOUS SUGGESTIONS FOR IMPROVEMENT. [TECHNICAL DATA SUBJECT TO CHANGE]

For more information contact your regional sales representative.

overseas@chinasimba.com

<https://www.chinasimba.com/downloads.html>

CHINASIMBA
ANLYSUN

NOTE: For this Doc., Chinasimba Electronic Co., Ltd is continue to improve and upgrade its products and services, thus, the file information will be covered by changing, without prior notice, nor as promised Chinasimba Electronic Co., Ltd. In addition, the product user manual already includes safe use of warnings. Therefore, if there is any misuse or cause of any event, Chinasimba Electronics Co., Ltd will not take a responsibility.

Chinasimba Electronic Co., Ltd. hereby guarantees that its products are not defective in materials and workmanship and are in complete conformity with the above disclaimer.