Athena General Robot Platform

Product Selection Guide

Low cost

Small robot development platform

Rich configuration and high scalability

Introduction

Athena is a small-sized and low cost robot development platform designed by SLAMTEC. It meets small robot application development requirements like intelligent patrol robot and delivery robot and etc.

With build-in SLAMWARE Cube autonomous localization and navigation suite, it is ideal to finish path finding, localization and navigation tasks and come with different applications to work in various commercial environment

Athena adopts multi-sensor fusion technology integrating lidar, ultrasonic sensor, cliff sensor, magnetic sensor, depth camera, bumper, which makes it to have an excellent mapping, localization and navigation performance in complicated and changing environment.

Performance & Parameters

Robot Name			Athena General Purpose Robot Platform		
Robot Version			**Professional**	**Standard**	**Wholesale**
ID					
Core Feature			SLAM localization and navigation	SLAM localization and navigation	SLAM localization and navigation
Hardware System			SLAMCUBE（K1M1）	SLAMCUBE（K2M1）	SLAMCUBE（K2M1）
VSLAM			Optional（*Note 1）	None（* Note 1）	None
Wheel Type			Two wheel differential driving	Two wheel differential driving	Two wheel differential driving
Mass & Volume	Dimension		404mm*390mm*470mm（±10mm）	404mm*390mm*283mm（±10mm）	404mm*390mm*231mm（±10mm）
	Weight		About 20kg	About 20kg	About 20kg
	Top Weight		About 20-30kg	About 20-30kg	About 20-30kg
Mapping Performance	Map definition		5cm	5cm	5cm
	Maximum Mapping Area		500m *500m	350m *350m	350m *350m
User interface	Hardware Interface	Ethernet	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
		User Power	DC 20~25.2V 5A Max	DC 20~25.2V 5A Max	DC 20~25.2V 5A Max
		System Switch	Yes（*Note 1）	Yes	Self-defined 15 pin interface
		Emergency Stop	Yes	Yes	
		Brake Release	Yes	Yes	
		Turn Light	Yes	Yes	None
		Wi-Fi	5G&2.4G 802.11a/b/g/n/ac	5G&2.4G 802.11a/b/g/n/ac	5G&2.4G 802.11a/b/g/n/ac
	Software	SLAMWARE™	Windows/iOS/Android/Linux	Windows/iOS/Android/Linux	Windows/iOS/Android/Linux
Walking Performance	Walking Speed		0~1m/s	0~1m/s	0~1m/s
	Maximum Passing Slope		5°	5°	5°
	Maximum Passing Obstacle Height		20mm	20mm	20mm
	Maximum Passing Gap Width		40mm	40mm	40mm
Sensor Performance	Rplidar	Scan Radius	40m	25m	25m
	Single Hole Type USS	Number	3	3	3
		Maximum Detecting Distance	45cm	45cm	45cm

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	Standard USS	Number	2	2	2
		Maximum Detecting Distance	45cm	45cm	45cm
	Multi-cliff Sensor	Number	1	1	1
		Minimum Detecting Distance	5cm	5cm	5cm
	Magnetic Sensor	Number	2	2	2
	Depth Camera	Number	1	Extension supported（*Note 1）	Extension supported
		Detecting Distance Range	0.3m~3m		
		Field of View(FOV)	H67.9° V45.3°		
		USB Port	2.0		
	Mechanical Bumper	Number	2	2	2
		Minimum Trigger Stress	8N	8N	8N
Battery		Capacity & Specification	24V15AH	24V15AH	24V10AH
		Power Dissipation In Stand-by Time	<20W	<20W	<20W
		Working Hours	＜＝4.5h（walking constantly after fully charged）	＜＝4.5h（walking constantly after fully charged）	＜＝3h（walking constantly after fully charged）
		Maximum Walking Distance	＜＝8 KM（0.5m/s constantly）	＜＝8 KM（0.5m/s constantly）	＜＝5 KM（0.5m/s constantly）
Autonomous Recharging		Charging Station	24V6A	24V6A	Optional
		Charging Time	＜＝3h	＜＝3h	
		Quick Charging Station	24V10A — Optional	24V10A — Optional	无
		Charging Time	＜＝1h	＜＝1h	
Operating Environment		Operating Temperature	0°~40°	0°~40°	0°~40°
		Operating Humidity	30%~70%	30%~70%	30%~70%

*Note 1:

Optional: the product supports to specific configuration which is not included in the normal delivery.

Yes: Product delivery included.

None: Product delivery not included or product not supported.

Extension supported: the product supports to receive depth camera data via SDK interfaces.