ROScube-I

ROS 2-enabled robotic controller based on Intel® Core™ processors

Features

- x86-64 mainstream architecture for ROS 2 development
- Comprehensive I/O for connecting a wide range of devices
- Ruggedized, secure connectivity with locking USB ports

Introduction

The ADLINK ROScube-I with exceptional I/O connectivity enables a wide variety of sensors and actuators for unlimited robotic applications. Also supported are Intel® VPU and Nvidia GPU cards for computation of AI algorithms and inference. ROScube-I is a perfect platform for development of industrial use service robotic applications such as autonomous mobile robots (AMR) and autonomous mobile industrial robots (AMIR).

Specifications

	ROScube-I
System Core	
Processor	Intel® Core™ i7-8850H/i5-8400H
Memory	4GB /8GB /16GB
Graphics	
Graphics Output	1x HDMI
Front Panel I/O Interface	
Ethernet	2x GbE
USB 3.1 Gen 1	6
Serial Ports	1x RS-232/485 + 3x RS-232
Side Panel I/O Interface	
GPIO	20-bit
Other Control Signals	UART, SPI, CAN, I²C, PWM
Storage Device	
M.2 Extension	1x Key B+M 3042/2280
SD Card	1x microSD
Optional Expansion	
Expansion I/O	Optional 1x PCIe x16 + 1x PCIe x4
Power Requirements	
DC Input	9 - 36VDC
AC Input	Optional 280W adapter
Fail Reset	Recovery / Reset
Power LED Indicator	Storage / WDT
Mechanical	
Dimensions	Core module: 190mm (W) x 210mm (D) x 80mm (H)
	With expansion box: 322mm (W) x 210mm (D) x 80mm (H)
Weight	approx. 5 kg
Mounting	Wall mount
Environmental	
Operating Temperature	0°C to 50°C
Operating Humidity	95% @40˚C (non-condensing)
Storage Temperature	-40°C to 85˚C
Software	
Software Development Kit	ADLINK Neuron SDK
Environment	ROS/ROS 2
Middleware	ADLINK Enterprise DDS