

ROScube-X

ROS 2-enabled robotic controller based on NVIDIA® Jetson AGX Xavier™ module

Features

- Powerful AI computing for intelligent robotics development
- Excellent performance per watt with power consumption as low as 20 W
- Compatible with ARM-based ROS 2 environment
- Ruggedized, secure connectivity with locking USB ports



Introduction

ADLINK's ROScube-X, powered by the Xavier module, features an integrated NVIDIA Volta GPU and dual deep learning accelerators, with a wide variety of interfaces for robotic system integration. ROScube-X supports the full complement of resources developed with the NVIDIA JetPack SDK and ADLINK's Neuron SDK, and is specifically suited for robotic applications demanding high-AI computing with minimal power consumption.

Specifications

	ROScube-X
System Core	
Processor	NVIDIA® Jetson AGX Xavier™
Memory	On board 16GB
eMMC	32GB on module
Graphics	
Graphics Output	1x HDMI
Front Panel I/O Interface	
Ethernet	2x GbE
USB 3.1 GEN2	1
USB 3.1 GEN1	6
Serial Port	1x RS-232/485 + 3x RS-232
Side Panel I/O Interface	
GPIO	20bit
Other Control Signals	UART, SPI, CAN, I ² C, PWM, Analog input
Storage Device	
M.2 Extension	1x Key B+M 3042/2280
SD Card	1x microSD
Wireless Module	
M.2 Extension	1x key E 2230
Optional Expansion	
Expansion I/O	Optional 1x PCIe x8 + 1x PCIe4
Power Requirements	
DC Input	9 - 36VDC
AC Input	Optional 160W 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