VIC-RB-05

Intelligent Vehicle Controller

A high-performance, highly integrated and reliable vehicle controller for video acquisition and edge computing. It supports AHD video input, 5G/4G, Wi-Fi, CAN and Ethernet, and transmits captured video and processing results to other devices or servers via Ethernet or 5G.
A comprehensive development environment supports applications including ADAS, vehicle control and autonomous driving, delivering safe, reliable solutions for intelligent transport, agriculture and construction vehicles.



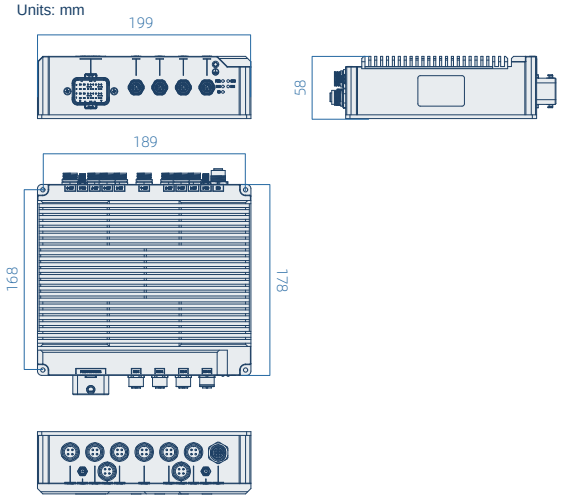


Product Features FEATURES

- AI performance: 6 TOPS (INT8)
- 8K P60 H.264/H.265 decoding
  8K P30 H.264/H.265 encoding
- 3 Gigabit Ethernet ports, M12 X-coded
- 5G wireless, onboard module
- Extensive peripheral interfaces
  AHD, CAN, Ethernet, 5G and Wi-Fi
- IP65 protection
  Highly integrated; desktop or wall mounting
- Low power consumption
  Efficient passive enclosure cooling for reliable operation

Dimensions DIMENSION

Units: mm



Technical Specifications SPECS

Hardware			
Processor	RK3588J ARM Cortex-A76 (4 cores) + Cortex-A55 (4 cores)		
Clock Speed	2.0GHz	AI Performance	6TOPS@INT8
Memory	16/8/4GB LPDDR4x	Storage	128/64/32GB eMMC
Video Encoding	8K@30fps (H.264/H.265)	Video Decoding	8K@60fps (H.264/H.265)
Watchdog	Supported	RTC	Supported
Software			
Operating System	Ubuntu20.04		
Deep Learning	RKNN-Toolkit provides easy-to-use, one-click model conversion for Caffe / TensorFlow / TF-Lite / ONNX / PyTorch / Keras / Darknet.		
Power			
CAN	2 x CAN FD, CAN 2.0 compatible (M12 A-coded, 5-pin)		
Ethernet	3 x 100/1000 Mbps Ethernet (M12 X-coded, 8-pin); one supports 2.5G		
Serial Ports	2×RS232 2×RS485	USB	2 x USB 3.0 (Type-A receptacles) 1 x USB 2.0 (M12 X-coded, 8-pin) 1 x DEBUG (Type-A receptacle)
GPIO	4 x GPIO (configurable)	SIM Card	1 x standard SIM card slot
DI	2×DI	DO	2 x DO (output capacity >=2 A)
Video Output	1 x HDMI (Type-A receptacle)	Video Input	8 x AHD (GX12 connector, 1080P)
Antennas	2 x GNSS antenna ports; optional SMA ports for Wi-Fi and 5G/4G antennas		
Expansion	1 x M.2 2280 for NVMe storage or AI card (choose one) 1 x miniPCIe for 4G/5G module		
Wireless Communications			
Cellular	Optional onboard SIMCom 5G (all networks); optional miniPCIe 4G/5G module		
WIFI	Onboard Wi-Fi 5 & Bluetooth module as standard	GPS	Optional RTK (single antenna) / IMU
Power			
Input Voltage	DC 24 V (wide input range: DC 9-36 V)	Power Draw	≤ 20W
General Specifications			
Weight	≤ 2kg	Mounting	Wall mounting
Operating Temp.	-40℃ ~ 85℃	Storage Temp.	-40℃ ~ 85℃
Cooling	Natural convection		

Ordering Information

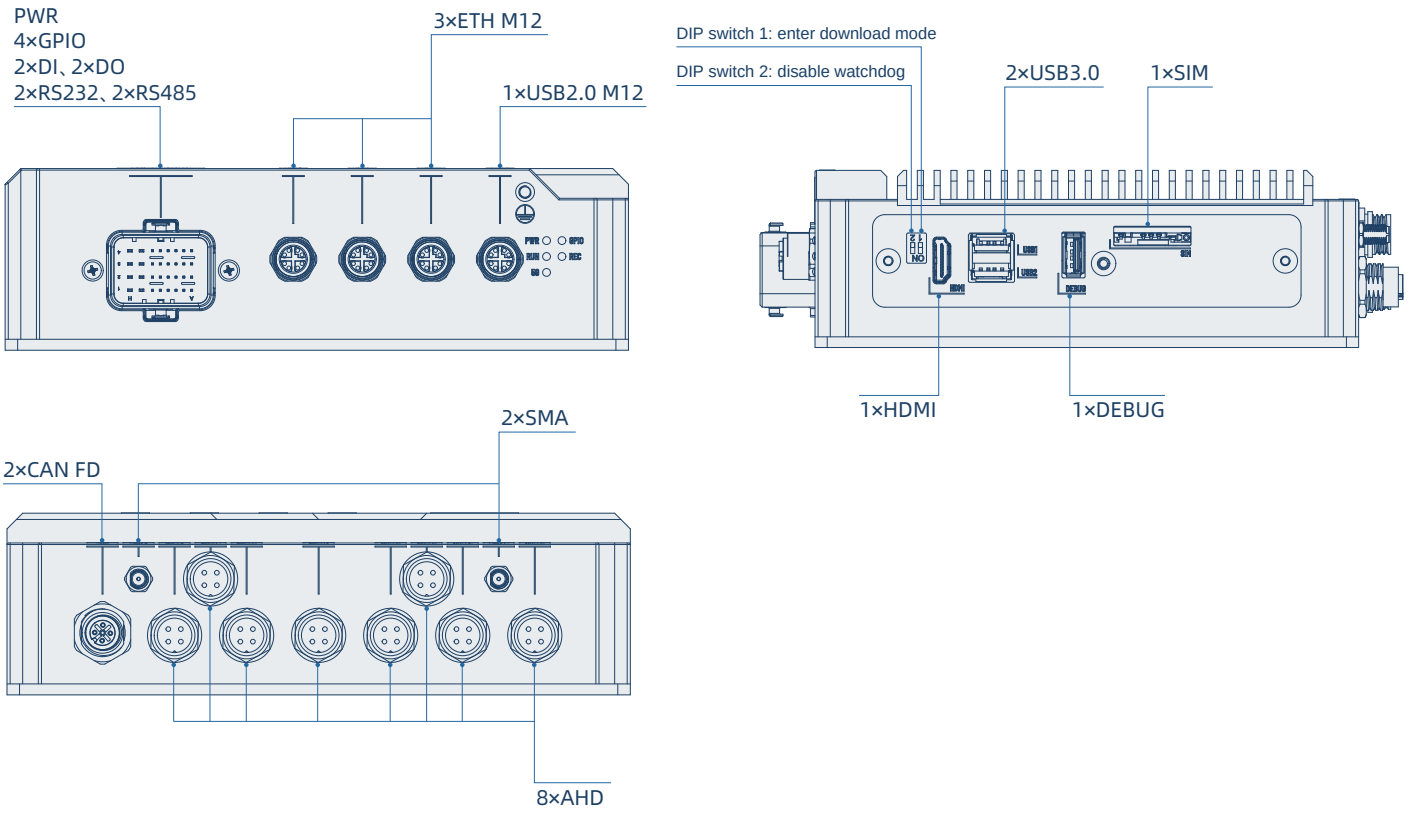
Model	Memory	Storage
VIC-RB-05H	16GB LPDDR4x	128GB eMMC

Contact the manufacturer for other configurations and functions.

超弦科技 Superstring Technology

This material is compiled and published by Hunan Superstring Technology Co., Ltd. ("Superstring"). Superstring or third parties may own intellectual property rights in the products, names, logos and designs herein. For reference only; products, functions and services are not guaranteed suitable for any particular application. All content is subject to change without notice.
Copyright © 2026, Hunan Superstring Technology Co., Ltd. All Rights Reserved. 11F, Bldg. B2, Xinchanghai Lugu Center, 627 Lugu Avenue, Changsha High-tech Zone, China. ZIP 410221. Tel: 0731-84826459. Email: contactus@superstring.com.cn

Interface Diagram



Optional Accessories

Accessory	Qty.	Specification
Automotive connector cable harness	1	0.5m
USB 2.0 to Type-A cable	1	0.5m
CAN M12 to flying-lead cable	1	0.5m

For reference only. Superstring reserves the right to make technical changes without prior notice. No information herein shall under any circumstances be construed as a guarantee or representation of any function, condition or quality of Superstring products, or of their fitness for a particular purpose.

Copyright © 2022, Hunan Superstring Technology Co., Ltd. All Rights Reserved. 11F, Bldg. B2, Xinchanghai Lugu Center, 627 Lugu Avenue, Changsha High-tech Zone, China. ZIP 410221. Tel: 0731-84826459. Fax: 0731-84535151