IN-VEHICLE Computing Version. 2023-09-18

VBOX-3630R-M12X

Intel® 11th Gen Core™ i7-1185G7E CPU with 4 x LAN In-Vehicle Computer

Features

- Intel® 11th Gen Core™ i7-1185G7E
- 3 x M.2, 2 x mPCle Slots for Wi-Fi / Dual WWAN / GPS / CAN Expansion
- 1 x 2.5GbE + 3 x GbE LAN Ports with M12 X-coded Connector
- Supports 4 Independent Display Outputs: 2 x HDMI, 1 x DP, 1 x DVI-D
- \bullet Isolated DC Input 24 $^{\sim}$ 110VDC for Rolling Stock Applications
- Supports Optional Battery Backup Kit
- EN50155 Certified



















Introduction

VBOX-3630R-M12X is a fanless in-vehicle computer with 5G connectivity. It utilizes Intel® 11th Gen Core™ i7-1185G7E CPU up to 4.4GHz. It features an ultra-compact design measuring 365 x 165 x 55 mm, which can easily fit into restricted spaces. The system can select Dual 5G / LTE, GPS, and Wi-Fi / Bluetooth as robust connectivity by M.2 modules. It is a building-in four independent display outputs, audio line-out, and microphone-in. It is the perfect solution for fleet management, in-vehicle digital signage, and mobile DVR. Furthermore, it features Smarter Vehicle Power Ignition and wireless remote control in various vehicles. VBOX-3630R-M12X can effectively support cars in extreme weather and operating conditions.

Specifications

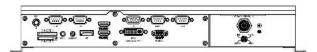
System	
CPU	Intel® 11th Gen Core™ i7-1185G7E 1.8GHz up to 4.4 GHz Intel® 11th Gen Core™ i5-1145G7E 1.5GHz up to 4.1 GHz Intel® 11th Gen Core™ i3-1115G4E 2.2GHz up to 3.9 GHz Intel® Celeron® 6305E up to 1.8GHz
Memory	2x DDR4-3200 SO-DIMM Up to 64 GB
LAN	1 x Intel® 2.5GbE Supports 10/100/1000/2500BASE-T Supports vPro and PXE LAN Boot ROM (i5/i7 SKU) 3 x Intel® Gigabit Ethernet
Watchdog	Watchdog Timer Support, Offer 1 – 255 Step
TPM Version	2.0
I/O	
USB	2 x USB 3.2 Gen 2 (10 Gbps)
LAN	2 x USB 2.0 4 x M12 X-coded (1 x 2.5GbE, 3 x GbE) 60W PoE Power Budget
DIO	6 x DI (5~60V) and 4 x DO (5V/100mA) 2 x DC Output (12V/1A)
Audio	1 x LINE-Out and 1 x MIC-In (1 x LINE-In for Option)
Video	2 x HDMI, 1 x DP, 1 x DVI-D* (Supports 4 Independent Display) *Single Link cable only
Expansion Bus	2 x mPCle *One is shared with M.2 Key B
-	1 x M.2 2230 Key E, 2 x M.2 3042/52 Key B
Antenna	10 x Pre-cut Holes for External SMA Antenna
SIM Card Socket	2 x SIM Card Sockets Supported Onboard with Eject
Serial Port	4 x RS-232/422/485 (Auto Direction Control)
Storage	
Туре	$2\times2.5"$ Drive Bay for SATA Type HDD/SSD Support RAID 0, 1 $1\times$ M.2 2280 Key M for NVMe SSD
Software	
Operating System	Windows 10 IoT LTSC (64-bit), Windows 11 IoT (64-bit) Linux Ubuntu 20.04.6 LTS (64-bit), 22.04 LTS (64-bit)

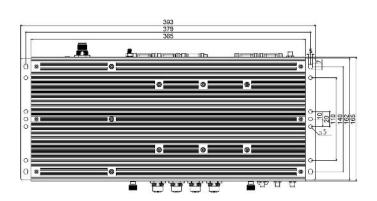
Graphics		
Graphics	Intel® Iris® Xe Graphics / Intel® UHD Graphics	
Resolution	Max Resolution (HDMI 2.0b) : 4096 x 2304@60Hz	
	Max Resolution (DP): 4096 x 2304@60Hz	
Environmental		
Operating Temp.	-40 ~ 70°C, ambient w/ 0.6m/s airflow Patent No. M448011-Thermal Cooling	
Storage Temp.	-40 ~ 85°C	
Relative Humidity	10% ~ 90% RH (non-condensing)	
Vibration	IEC60068-2-64, random, 2.5G@5~500Hz, 1hr/axis	
(with SSD)	MIL-STD-810G, Method 514.6, Procedure I, Cat.4, Operating	
Shock	Operating: MIL-STD-810G, Method 514.6, Procedure I, Trucks and semi-trailers 15G (11ms with SSD)	
Certifications	CE, FCC Class A, EN50155, EN45545-2 (R25)	
Power Requirement		
Power Input	Isolated DC Input 24-110VDC for Rolling Stock	
Power Protection	Automatics Recovery Short Circuit Protection	
Power Mgmt.	Power Ignition for Vehicles	
Power Off Control	Power Off Delay Time Setting by Software	
UPS	Internal Battery Kit for 10 Mins Operating (Optional, Discharge Temp20-55°C) *UPS backup time varies depending on actual overall system power consumption. Patent No.: M447854 - Build-in Battery	
Mechanical		
Construction	Aluminum Alloy	
Mounting	Wall-mount	
Weight	3,800g (Barebone)	
Dimensions	365(L) x 165(W) x 55(H) mm	

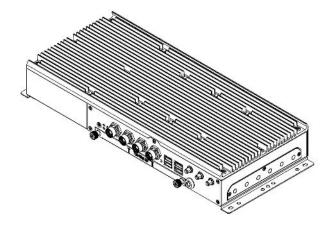
All specifications are subject to change without notice.

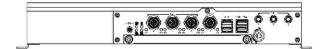
Dimensions

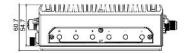
Unit: mm











Ordering Information

Part Number	VBOX-3630Rx-M12X-zz (x=P=w/PoE, PoE Only Available for i7 and i5 Models) (zz=i7=i7-1185G7E, zz=i5=i5-1145G7E, zz=i3=i3-1115G4E, zz=C1=6305E)
Description	11th Gen Intel® Core™ Processor i7-1185G7E CPU with 4 x LAN On-Board Computer
State of Origin	Made in Taiwan

Optional Accessories

DRAM	DDR4 SO-DIMM 3200 8GB~32GB (-40~85°C)
SSD	2.5 inch SATA SSD TLC 64GB~1TB (-40~85°C) M.2 2280 NVMe 256GB~1TB TLC (-40~85°C)
Wi-Fi Module	M.2 2230 Wi-Fi 6 + Bluetooth 5.2 Module
WWAN Modem	M.2 3042/52 5G / LTE Modem
GPS	mPCle GPS Module
CAN Bus	mPCle CAN Bus Module
Battery Backup Kit	BAT-3630 Kit, 2,350mAh 3S1P Battery Kit (-20~55°C for Discharge)

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