IN-VEHICLE Computing   Version 2023-11-27

VBOX-3121-NX

PATENT No.
M447854
BUILT-IN BATTERY

Features

- Intel® Core™ i3-6100U Processor
- 3 x mPCIe Slots for WWAN, GPS, and CAN Bus Expansion
- 1 x M.2 2230 Slot for Wi-Fi and Bluetooth Expansions
- 4 x USB Ports for Device Connections
- 9V - 60V DC Power Input with Smart Power Management for Vehicle
- 2 x COM for RS-232/422/485
- 1 x DB-15 for 4 x DI / 4 x DO (5V / 100mA) / 2 x Analog Input (0~60V with 0.5V accuracy)
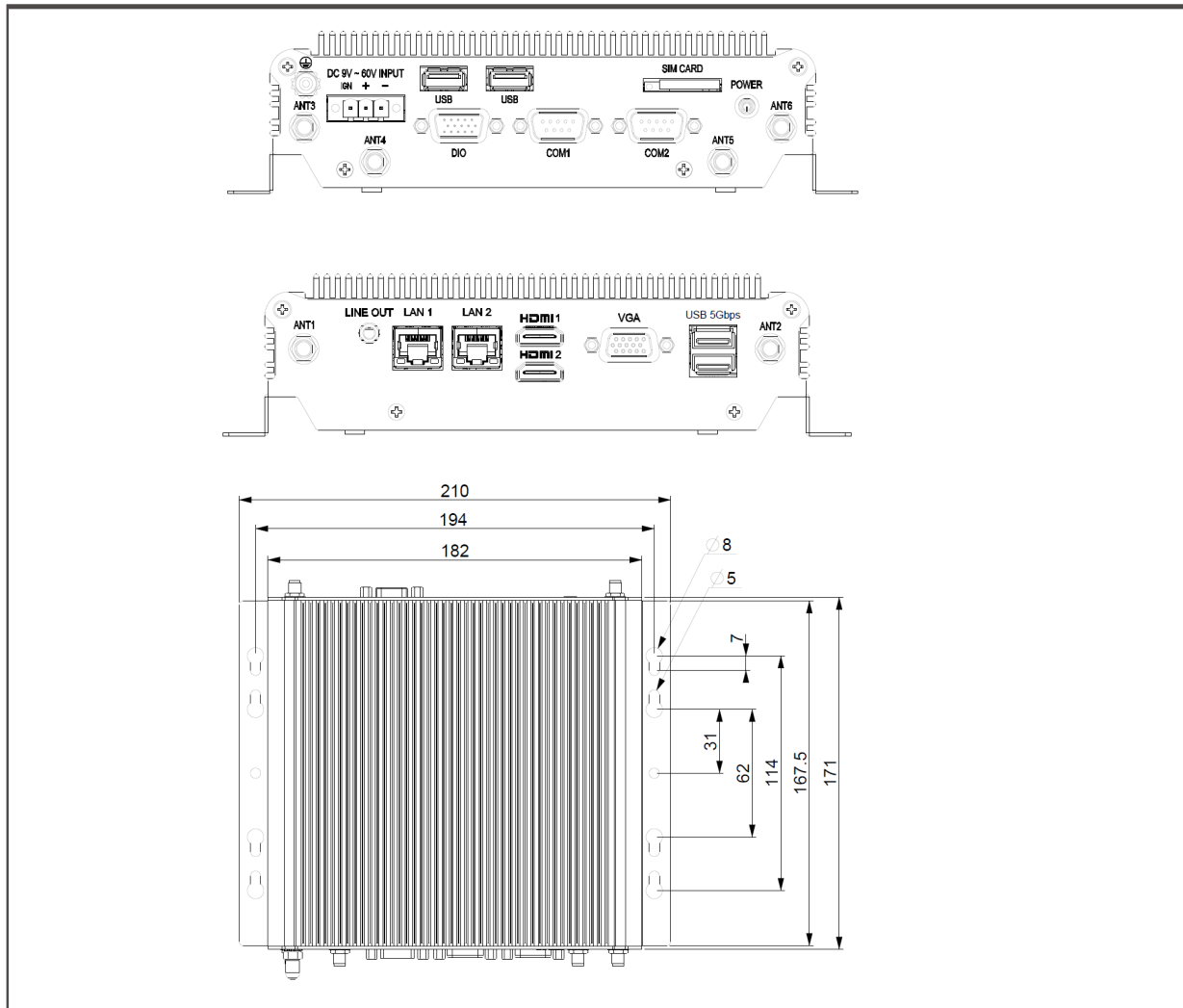
Introduction

The VBOX-3121-NX is powered by Intel Gen 6 processor with HD Graphic 520 /2 x LAN/2 x HDMI/VGA with 2 x RS-232/ DC 9-60V Input, and up to 16GB DDR4 SO-DIMM In-Vehicle Computer. It provides high-performing, yet cost-effective, multi-purpose devices for public transportation, police patrol and railway management. Additionally, VBOX-3121-NX is designed for fleet management, mobile DVR, driver behavior record and in-vehicle digital signage. It can effectively support vehicles in bad weather and extreme working conditions, such as snowplow, train, and stacker operations.

Specifications

System

CPU	Intel® Core™ i3-6100U 2.3GHz Intel® Celeron® Processor 3955U 2.0GHz
Memory	1 x DDR4 SO-DIMM up to 16GB
Graphics	Intel HD 520 Graphics for i3
Storage	2 x SATA ports with 6Gb/s Transfer Rate
Ethernet	1 x Intel® I210-AT Gigabit Ethernet (LAN 1)
	1 x Intel® I219-LM Gigabit Ethernet (LAN 2)
Security	TPM 2.0
Watchdog	1 ~ 255 level reset

I/O

Serial Port	2 x COM for RS-232/422/485 (The 3rd COM for option)
USB Port	2 x USB 3.0, 2 x USB 2.0 ports
LAN Port	2 x RJ-45 ports for GbE
Video Port	2 x HDMI, 1 x VGA
GPIO Port	4 DI, 4 DO (5V / 100mA), 2 x Analog Input (0~60V with 0.5V step)
Audio	MIC-in/Line-out
Expansion Bus	3 x mPCIe slots (2 x USB interface only, one for SIM card slot) 1 x M.2 2230 Key E slot
Antenna Hole	6 x SMA-type antenna holes for WLAN / Bluetooth/ WWAN / GPS expansions
SIM Card Slot	1 x SIM card slot for the mPCIe slot on the VIB (USB Interface)

Software

Operating System	Windows 10 IoT 64-bit, Ubuntu 20.04 LTSC 64-bit

Environmental

Operating Temp.	-40 ~ 70°C (w/ SSD), ambient w/ 0.6m/s airflow
Storage Temp.	-40 ~ 80°C
Relative Humidity	10% RH – 90% RH (non-condensing)
Vibration (with SSD)	IEC60068-2-64, random, 2.5G@5~500Hz, 1hr/axis
	MIL-STD-810G, Method 514.6, Procedure I, Cat.4, Operating
Shock	Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD
Certifications	CE, FCC Class A, E-Mark, ECE R118

Storage

Type	2 x 6Gb/s SATA connectors
	1 x 2.5" storage installation space

Power Requirement

Power Input	9V - 60V DC Power Input
Power Mgmt.	Vehicle Power Ignition for Variety Vehicle
Power Off Control	Power off Delay Time Setting by BIOS and Software
Battery (UPS)	Internal Battery Kit for 10 Mins Operating (Optional) *UPS backup time varies depending on actual overall system power consumption. Patent No. : M447854 - Build-in Battery

Mechanical

Construction	Aluminum Alloy
Mounting	Wall-mounting (VESA mounting is option)
Weight	1430g
Dimensions	210 mm x 171 mm x 54 mm (Mounting kit is included)

All specifications are subject to change without notice.

Dimensions

Ordering Information

Part Number	VBOX-3121-NX-i3, VBOX-3121-NX-C1
Description	Intel® Core™ i3-6100U with HD Graphic 520 / 2 x LAN/ 2 x HDMI/ VGA with 2 x RS-232/ DC 9-60V Input In-Vehicle Computer
State of Origin	Made in Taiwan

Optional Accessories

DRAM	SO-DIMM max.DDR4-2133,4GB~16GB,0~70°C/-40~85°C
SATA SSD	2.5inch MLC/TLC 64GB~1TB 0~70°C/-40~85°C
Wi-Fi	M.2 2230 Key A-E Wi-Fi and bluetooth module
CAN	mPCIe CAN bus module
Modem	mPCIe WWAN kit
GPS	mPCIe GPS kit
UPS	BAT-3000 kit, 1150mAH 3S1P Battery kit (0~60°C)
Power Adapter	12V/5A 60W

All specifications are subject to change without notice.

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660