

# 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

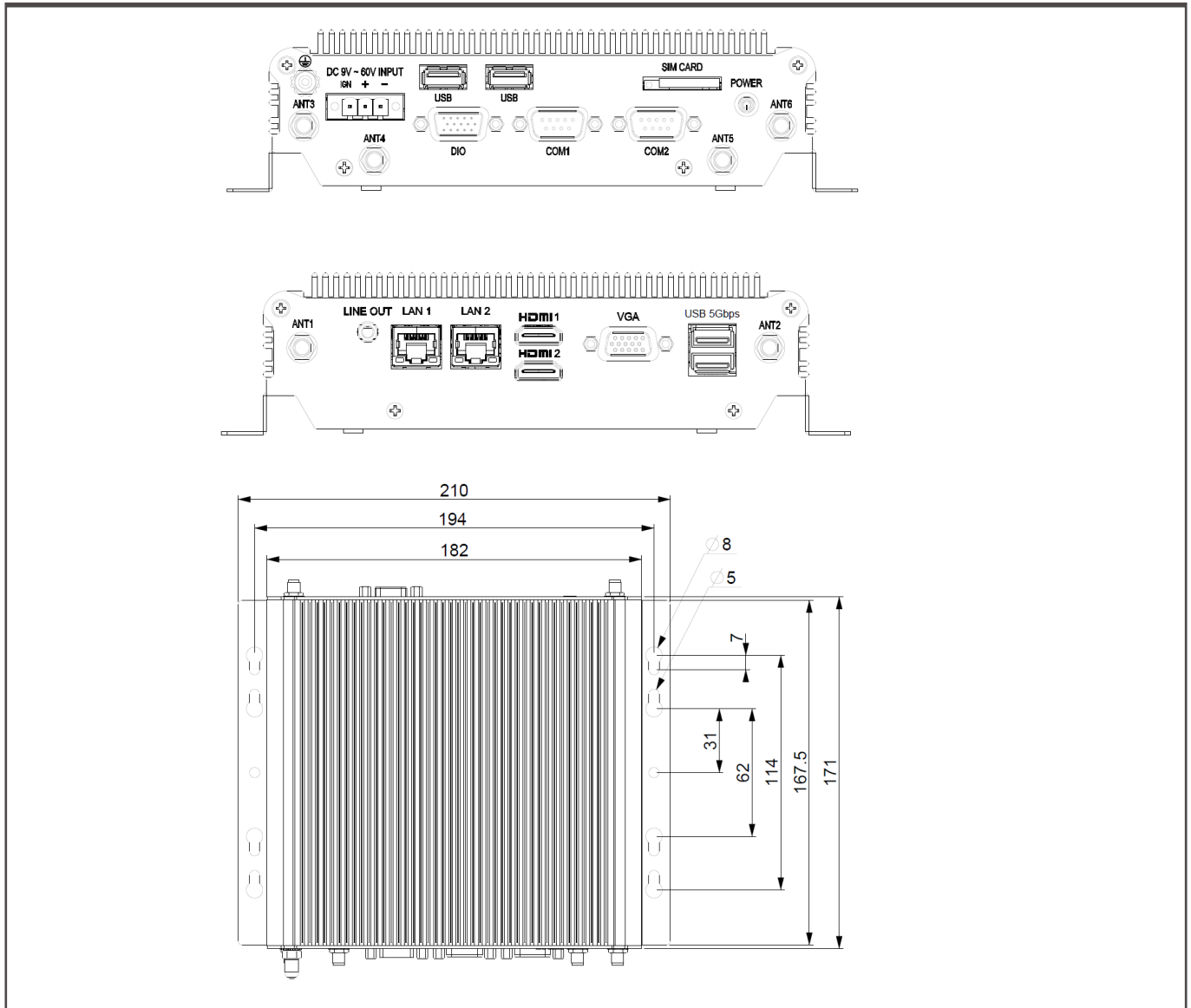
The VBOX-3121-NX is powered by Intel Gen 6 processor with HD Graphic 520 /2 x LAN/2 x HDMI/VGA with 2 x RS-232/ DC 9-60V Input, and up to 16GB DDR4 SO-DIMM In-Vehicle Computer. It provides high-performing, yet cost-effective, multi-purpose devices for public transportation, police patrol and railway 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		Environmental	
CPU	Intel® Core™ i3-6100U 2.3GHz Intel® Celeron® Processor 3955U 2.0GHz	Operating Temp.	-40 ~ 70°C (w/ SSD), ambient w/ 0.6m/s airflow
Memory	1 x DDR4 SO-DIMM up to 16GB	Storage Temp.	-40 ~ 80°C
Graphics	Intel HD 520 Graphics for i3	Relative Humidity	10% RH – 90% RH (non-condensing)
Storage	2 x SATA ports with 6Gb/s Transfer Rate	Vibration (with SSD)	IEC60068-2-64, random, 2.5G@5~500Hz, 1hr/axis MIL-STD-810G, Method 514.6, Procedure I, Cat.4, Operating
Ethernet	1 x Intel® I210-AT Gigabit Ethernet (LAN 1) 1 x Intel® I219-LM Gigabit Ethernet (LAN 2)	Shock	Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD
Security	TPM 2.0	Certifications	CE, FCC Class A, E-Mark, ECE R118
Watchdog	1 ~ 255 level reset	Storage	
I/O		Type	2 x 6Gb/s SATA connectors 1 x 2.5" storage installation space
Serial Port	2 x COM for RS-232/422/485 (The 3rd COM for option)	Power Requirement	
USB Port	2 x USB 3.0, 2 x USB 2.0 ports	Power Input	9V - 60V DC Power Input
LAN Port	2 x RJ-45 ports for GbE	Power Mgmt.	Vehicle Power Ignition for Variety Vehicle
Video Port	2 x HDMI, 1 x VGA	Power Off Control	Power off Delay Time Setting by BIOS and Software
GPIO Port	4 DI, 4 DO (5V / 100mA), 2 x Analog Input (0~60V with 0.5V step)	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
Audio	MIC-in/Line-out	Mechanical	
Expansion Bus	3 x mPCIe slots (2 x USB interface only, one for SIM card slot) 1 x M.2 2230 Key E slot	Construction	Aluminum Alloy
Antenna Hole	6 x SMA-type antenna holes for WLAN / Bluetooth/ WWAN / GPS expansions	Mounting	Wall-mounting (VESA mounting is option)
SIM Card Slot	1 x SIM card slot for the mPCIe slot on the VIB (USB Interface)	Weight	1430g
Software		Dimensions	210 mm x 171 mm x 54 mm (Mounting kit is included)
Operating System	Windows 10 IoT 64-bit, Ubuntu 20.04 LTSC 64-bit		

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