

# Embedded PC

Intel® Celeron® 847E In-Vehicle Mobile NVR Computer, 4GB DDR3 Memory included, 2.5" Removable Drive Bay, Mini-PCIe x2 with two SIM card reader, Intel GbE x4 with PoE support, USB x4, COM x2, MIO, Audio, HDMI, DC Power input +9~36Vdc with Ignition, Suspension Kit included.



Model: LPC-V5X-A1

## Features

### Multiple PoE LAN ports to support Transport Surveillance

This mobile NVR with 8 PoE ports (IEEE 802.3af) is suitable for IP Video Surveillance and real time recording applications.

### Fanless Design with Corrugated Aluminum

The corrugated aluminum casing allow heat to dissipate off the top of the platform allowing for a fanless design.

### Vehicle Ignition Power Management

Detect the ignition on/off status and allow controlling delay time by flexible setting via software utility..

### Convenient DC output

LPC-V5X-A1 offers 12VDC regulated output (max 1A) for external devices, operational in concert with the Ignition Power Management feature.

### Key lock for Drive Bay

The system is with key lock for removable drive bay.

### Design for MIL-STD-810G with Extreme Vibration Resistance

LPC-V5X-A1 is in compliance with MIL-STD-810G vibration and shock standards and includes SSD storage and a Suspension Kit to further improve robustness.

### Modularized and customizable design

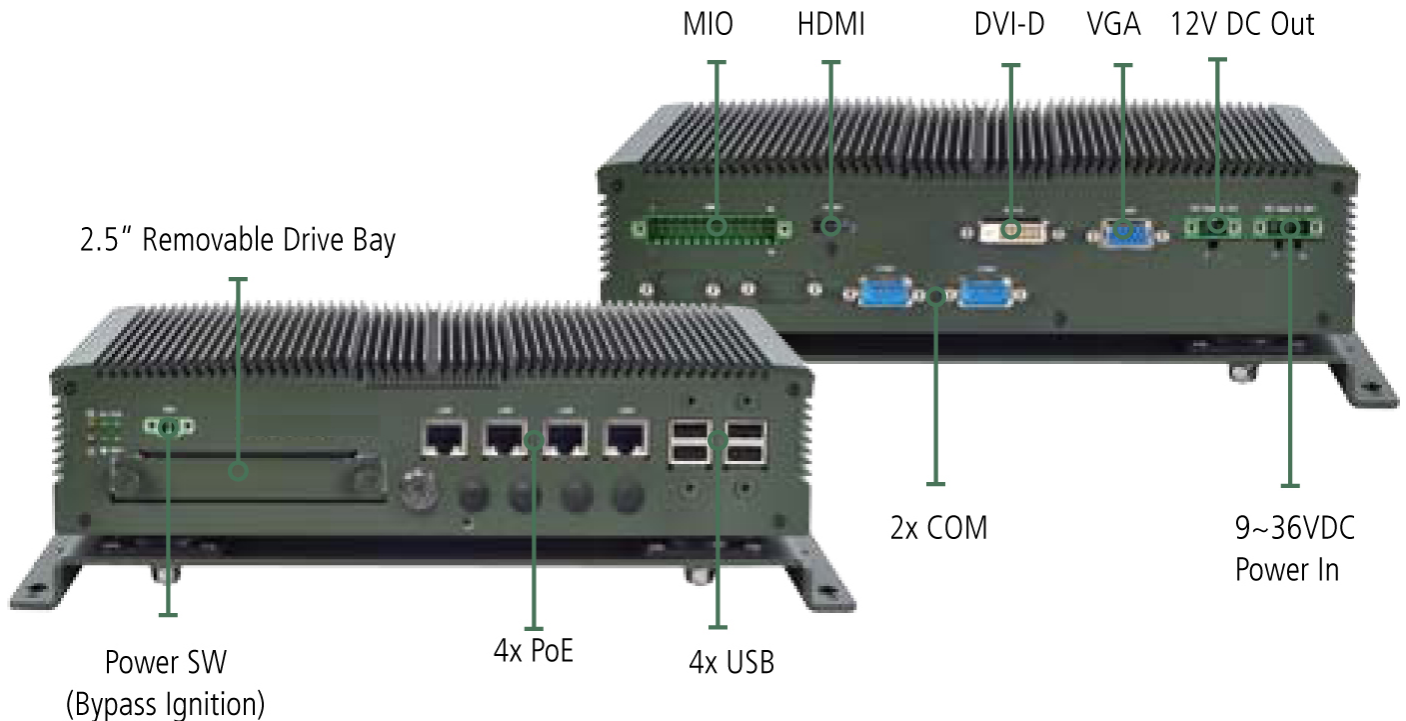
The LPC-V5X-A1 series design features the Lanner Proprietary Internal Multi-IO Interface, which carries signals for 2 USB ports, 4 x UART, 4 x Digital I/O, 2 x PCIe, and 1 x SATA 2.0. This allows for customized add-on modules for other features.

### Settings and Installation via the front panel

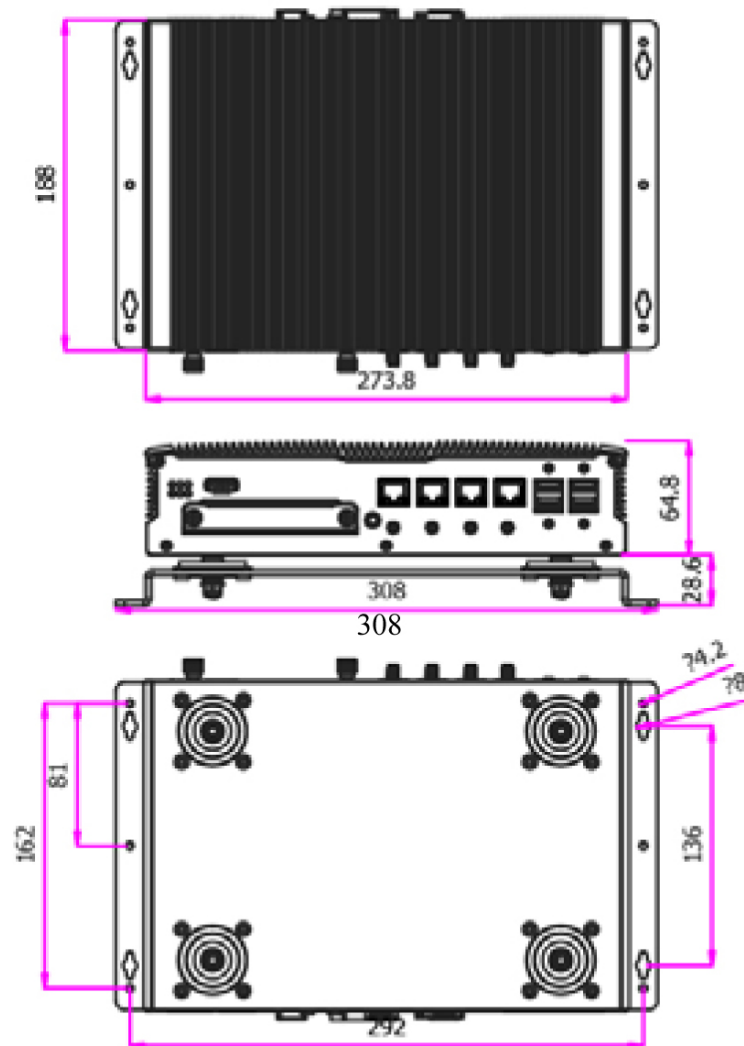
MCU setting and CF card and SIM card installation is easy to access simply by opening the front panel.

### Multi I/O

The MIO design includes 12V Level GPIO, audio, MCU TX/RX and also includes 2x DI (Digital Input from MCU) which can connect sensors to detect the environment. Once defined events occur, the LPC-V5X-A1 can be turned on automatically.



**Dimensions: 273.8 x 64.8 x 188 mm (10.78" x 2.55" x 7.4" )**



## Specifications

|                                    |               |                                                                                                                                                                                                                                              |
|------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dimensions (WxHxD)</b>          |               | 273.8 x 64.8 x 188 mm (10.78" x 2.55" x 7.4" )                                                                                                                                                                                               |
| <b>Processor</b>                   |               | Intel® Celeron® 847E Processors                                                                                                                                                                                                              |
| <b>Chipset</b>                     |               | Intel HM65                                                                                                                                                                                                                                   |
| <b>System Memory</b>               | Technology    | DDR3 SO-DIMM x1 ( Factory default: 4GB module pre-installed )                                                                                                                                                                                |
|                                    | Max. Capacity | Up to 8GB (user option)                                                                                                                                                                                                                      |
| <b>Storage</b>                     | SATA          | Removable 2.5" SSD/HDD drive bay x1 for LVC-5000N4, CF socket x1                                                                                                                                                                             |
| <b>Ethernet Controller</b>         |               | Intel 82583V x4                                                                                                                                                                                                                              |
| <b>Graphic Controller</b>          |               | Intel integrated HD graphic engine                                                                                                                                                                                                           |
| <b>Audio Controller</b>            |               | Realtek ALC886 HD codec                                                                                                                                                                                                                      |
| <b>IO</b>                          | LAN           | GbE RJ45 x4                                                                                                                                                                                                                                  |
|                                    | Display       | DVI-D, maximum resolution up to 1920x1200@75Hz<br>VGA, maximum resolution up to 2048x1536@60Hz<br>HDMI, maximum resolution up to 1920x1200@75Hz<br>Dual display function supports Independent, clone and extended mode.(VGA+DVI or VGA+HDMI) |
|                                    |               | Audio                                                                                                                                                                                                                                        |
|                                    | Serial I/O    | 1x RS-232 and 1x RS-232/422/485 both with RI/5V/12V                                                                                                                                                                                          |
|                                    | GPS           | Ublox NEO-6Q GPS receiver module                                                                                                                                                                                                             |
|                                    | G-sensor      | ADXL 345                                                                                                                                                                                                                                     |
|                                    | GPIO          | 4x DI ( 5V or 12V TTL selectable)<br>4x DO (12V TTL , Max. 100mA)<br>2x DO control Relay support 9~36V@max 2A each<br>2x DI to Ignition MCU as remote control ( 5V TTL)                                                                      |
|                                    |               | USB 2.0                                                                                                                                                                                                                                      |
|                                    | Power Input   | 3-pin terminal block (+, -, ignition)                                                                                                                                                                                                        |
|                                    | Power Output  | 12 VDC/1A                                                                                                                                                                                                                                    |
|                                    | Expansion     | Mini-PCIe x2 (Both with SIM card reader)                                                                                                                                                                                                     |
|                                    | PoE           | PoE x4, IEEE 802.3af, Standard PoE                                                                                                                                                                                                           |
|                                    | Others        | External: 4x SMA antenna hole, Remote Power switch<br>Internal: Lanner Proprietary MIO                                                                                                                                                       |
| <b>Power Input</b>                 |               | +9~36VDC input range, with ignition delay on/off control                                                                                                                                                                                     |
| <b>PoE Power Adapter</b>           |               | Internal integrated                                                                                                                                                                                                                          |
| <b>OS Support</b>                  |               | Linux: Redhat Enterprise 5/ Fedora 14. Linux Kernel 2.6.18 or later<br>Windows: XP embedded ; Win7 Pro FES/Embedded; Win8                                                                                                                    |
| <b>Certifications</b>              |               | CE, FCC Class A, E13, RoHS                                                                                                                                                                                                                   |
| <b>Compliance</b>                  |               | Vibration: MIL-STD-810G, Method 514.6<br>Shock:MIL-STD-810G, Method 516.6                                                                                                                                                                    |
| <b>Operating Temperature Range</b> | Extended      | With Selected Industrial Components<br>-20~55°C/-4~131°F                                                                                                                                                                                     |
|                                    | Standard      | With Commercial Components<br>-5~45°C / 23~113°F                                                                                                                                                                                             |