

# LEC-228 I

4th Gen Intel® Core™ i7/i5/i3 Platform  
with Rich I/O and Expansion



## ■ Features

- Intel® Core™ i7/i5/i3 CPU with QM87 PCH
- Intel® HD Graphics 4600
- HDMI/VGA/DVI-D & 3 Independent Display Ports
- 2x USB 3.0 Ports & 4x USB 2.0 Ports
- Mini-PCI-E Slots / 1x PCI or 1x PCI-E x16
- 2x 2.5" HDD/SSD Bays with RAID 0/1

## ■ Specifications

### Processor System

CPU	Intel® Core™ i7-4700EQ/i5-4400E/i3-4102E
Frequency	2.4GHz/2.7GHz/1.6GHz
Core Number	4C(i7)/2C(i5/i3)
BIOS	AMI 128Mbit SPI Flash BIOS
Chipset	Intel® QM87
Fanless	Yes

### Memory

Technology	DDR3L 1333/1600MHz
Max. Capacity	16 GB
Socket	2x 204-pin SODIMM

### Graphic

Controller	Intel® HD Graphics 4600
VGA	1x VGA, 1920 x 1200
DVI-D	1x DVI-D, 1920 x 1200
HDMI	1x HDMI, 3840 x 2160 @24Hz or 2560 x 1600 @60Hz

### Audio

Codec	Realtek ALC886
Interface	2x Phone Jack for MIC-in and Line-out

### Ethernet

Controller	Intel® i217LM and i210AT
Speed	10/100/1000 Mbps
Interface	2x RJ45

### Storage

Type	SATA III
Installation	1x mSATA Socket
Type	SATA III
Installation	2x 2.5" HDD/SSD Drive Bay

### I/O

Serial Port	2x RS-232/422/485, DB9 Male
Digital I/O	-
USB 2.0	4x Type A
USB 3.0	2x Type A

Power-On/Reset Button	1x Power On/Off, 1x Reset
Remote Power Switch	-
LED	Power/Storage Access
Antenna Hole	2 x SMA Antenna Holes

### Expansion Interface

Mini-PCIe	1x Full-sized Socket with SIM Card Reader/1x Full-sized Socket
PCI	1 (Included in the packing)
PCI Express x16	1 (Default)

### Watchdog Timer

Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable

### Power

Power Type	ATX
Power Supply Voltage	9Vdc - 30Vdc
Connector	2-pin Terminal Block
Power Consumption (Idle)	25.42W
Power Consumption (Full Load)	36.22W
Power Adaptor	AC to DC, AC 90 to 240 Vac Input, DC 19V/3.95A 75W

### Environment

Operating Temperature	-10°C~50°C (with SSD) -10°C~45°C (with HDD)
Storage Temperature	-20°C~70°C
Relative Humidity	5%~95% (Non-condensing)
Vibration	IEC 60068-2-64, 0.5Grms, Random 5 ~500 Hz, 40 Mins/Axis

### Mechanical

Dimension (W x H x D)	277 x 78 x 195 mm (10.9" x 3.07" x 7.68")
Construction	Aluminum + SGCC
Weight	3.8kg
Mounting	Wall/VESA/Rack-mount

### Driver Support

Microsoft Windows	WES 7 E, Win 7 Pro FES, WE 8.1 Industry Pro
Linux	Kernal 3.x

### Certification

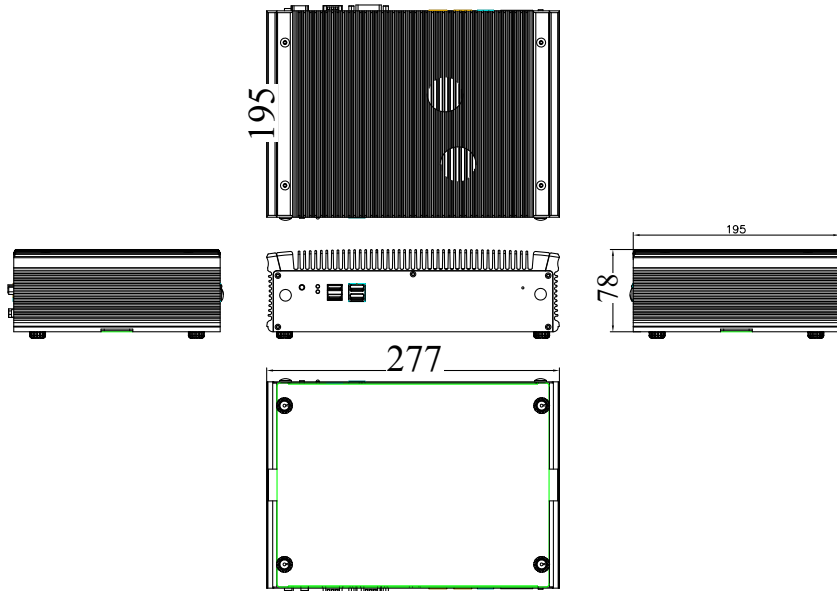
EMC	CE/FCC, Class A
Safety	None

## ■ Product I/O View



- |                       |                  |                       |                |                   |
|-----------------------|------------------|-----------------------|----------------|-------------------|
| <b>A</b> Power On/Off | <b>D</b> USB 2.0 | <b>G</b> PCI or PCI-E | <b>J</b> DVI-D | <b>M</b> COM      |
| <b>B</b> Status LEDs  | <b>E</b> Reset   | <b>H</b> USB 2.0      | <b>K</b> HDMI  | <b>N</b> Line_out |
| <b>C</b> USB 3.0      | <b>F</b> DC-IN   | <b>I</b> LAN          | <b>L</b> VGA   | <b>O</b> Mic_in   |

## ■ Dimensions (W x H x D) 277 x 78 x 195 mm (10.9" x 3.07" x 7.68")



## ■ Ordering Information

- |               |   |
|---------------|---|
| LEC-2281-711A | Fanless Industrial PC with Intel® Core™ i7-4700EQ CPU |
| LEC-2281-511A | Fanless Industrial PC with Intel® Core™ i5-4400E CPU  |
| LEC-2281-311A | Fanless Industrial PC with Intel® Core™ i3-4102E CPU  |

## ■ Standard Accessories

- |               |                               |
|---------------|-------------------------------|
| 080W1N0002001 | SATA SSD/HDD Cable with Power |
| 098W000004000 | Metal Brkt Black Wallmount-4  |
| 0P0W075190001 | 75W 19V/3.95A Power Adapter   |

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