



Embedded Computing

Embedded Platforms for Industrial and Commercial Applications







Innovating Your Embedded Solutions

Over the past ten years, Lanner has dedicated itself in supplying the state-of-the-art hardware solutions for IoT applications and millions of Lanner hardware platforms have been deployed worldwide. The strong preference proves our dedication for committing ourselves to designing the highest quality hardware solutions for the IoT Era.

We have strengthened our embedded computing domain by building up our expertise in designing embedded x86 computing platforms that feature the latest networking, input/output and storage technologies, making a full range of embedded IPCs and rugged computing solutions available.

Over the recent years our extensive embedded solutions have met the various specifications and configurations required by the mainstream vertical markets. Today, we have comprehensive product lines designed and manufactured for IoT connectivity, video intelligence, factory automation and real-time surveillance applications.

With wide product lineups, Lanner's Embedded Computing division is expected to continue offering more reliable, high quality embedded platforms to help our customers and partners reduce development efforts and costs, while fulfilling the demand for more intelligent IoT-ready solutions.

Sidney Leu

Embedded Computing Division

Design & Manufacturing Services

Lanner's embedded box PCs are designed for wide deployment in application specific environments, offering stability, longevity, high availability and a perfect balance between size, cost, performance and power consumption.



Electronic Engineering

Choose from an array of board and platform level components to create the perfect appliance or solution based on your application requirements. Lanner's strategic partnerships allow us to incorporate the latest in industry technology to provide customers with a richer palette of options.



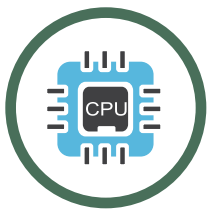
Mechanical Engineering

Lanner's engineers are well-versed in tackling the multitude of design issues faced on the board and mechanical level including ventilation, peripherals, and more. Rigorously tested, Lanner products operate within a broad range of environmental parameters to guarantee product robustness in an array of applications.



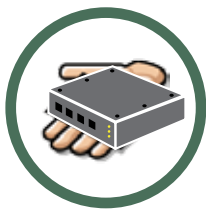
Software Engineering

Equip your platform with the necessary BIOS or firmware with the help of Lanner's software team. Our software development expertise extends from the circuit board up through the BIOS, firmware, drivers and API level, to ensure seamless communication between hardware and application software.



High-Performance CPU

Exceptional computing performance and outstanding energy efficiency made possible by Intel® Core™, Atom™ or Celeron® processors.



Compact Design

Simplifying deployments and maintenance at locations with limited and confined spaces.



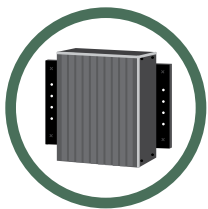
MIO Expansion Layer

Making available various PCIe ports, audio ports, DI/DO ports, serial ports, USB ports, LAN ports, PoE ports, HDD/SSD and mSATA sockets.



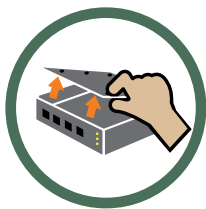
Fanless Design

Without the most frequently replaced part, the systems can be widely deployed in various environments.



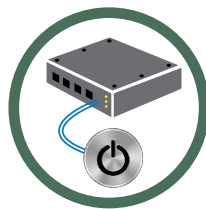
Mounting Options

Including VESA, wallmount, rackmount and DIN-Rail, making installation obstacles a non-issue.



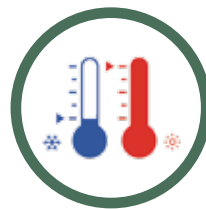
Easy-to-open Chassis

No tools required for installing and replacing internal CF, HDD, memory and mini-PCIe devices.



Easy Access to Power Switch

Allowing hassle-free access to power switches for booting up or shutting down devices housed in small spaces.



Wide Temperature Range

Withstanding and thriving in harsh conditions with temperatures as low as -40°C and as high as 70°C.



Manufacturing

Lanner owns and operates its own in-house state-of-the-art SMT, DIP, assembly and testing facilities. By maintaining control of the entire manufacturing process, we ensure the integrity of your end product through our tight production procedures, integrated quality assurance programs and rigorous design quality.



Quality Control

Lanner's strict and ISO 9001-certified quality testing procedures have been fine-tuned for over 30 years. Also, as part of our green management plan initiated in early 2006, all Lanner products currently meet RoHS certification requirements.



Technical Support

Lanner provides full RMA service and technical support to round off its customer service package. And for Intel®-based systems using chipsets and CPUs from the embedded group at Intel® we offer up to 7 years lifecycle support. Longer lifecycle support can also be arranged by jointly planned inventories.

Scenario Applications

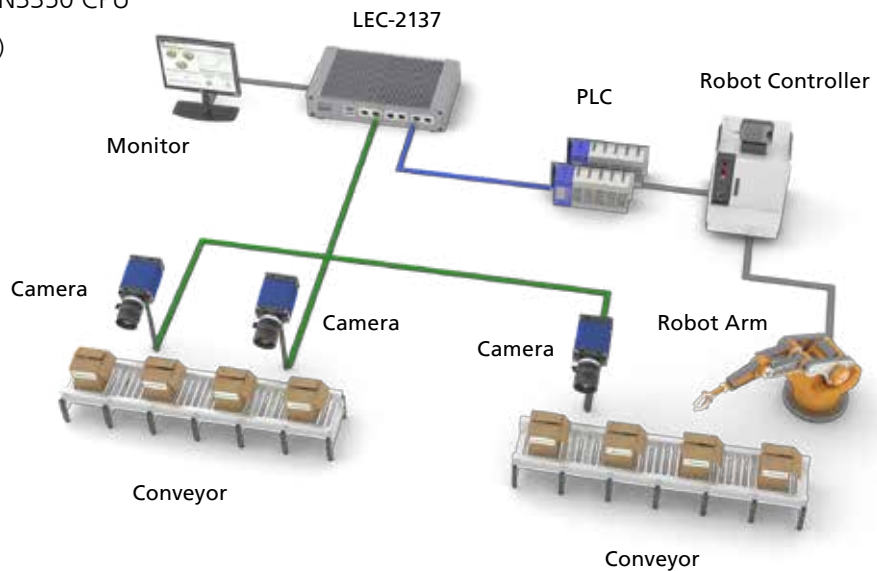
Machine Vision

Enabling Multi-vision Verification and Testing



LEC-2137

- Embedded Box PC for Machine Vision Applications
- Intel® Atom™ x7-E3950 or Celeron® N3350 CPU
- 6x LAN Ports (Including 4x PoE Option)
- 2x USB 3.0 & 2x USB 2.0 Ports
- 1x RS-232/422/485 Serial Ports



Machine Automation

Industrial Gateway for Manufacturing Precision and Quality

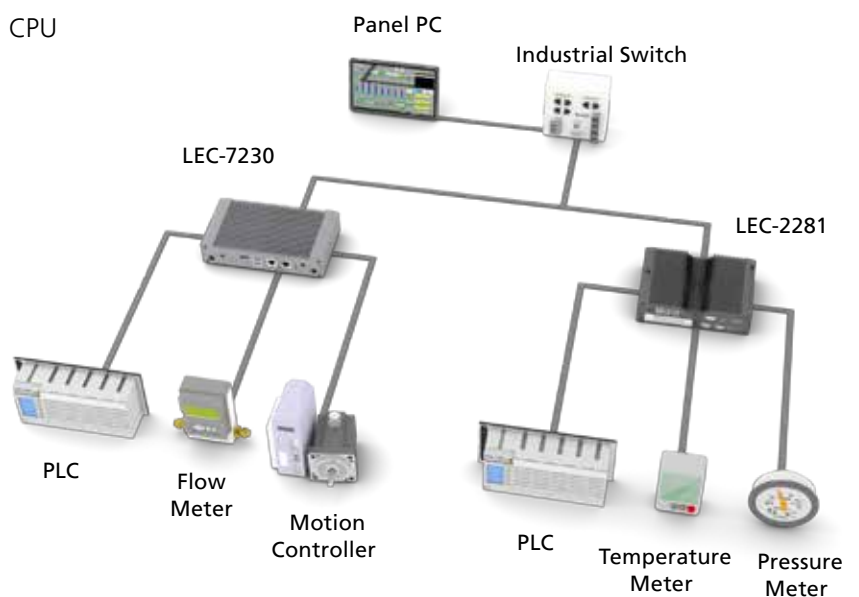


LEC-7230

- Intel® Celeron® J1900/N2930 or Atom™ E3845 CPU
- Fanless & Dust-proof Design
- Mini-PCIe for Wireless Communication
- 2x LAN Ports, 3x USB Ports, 2x RS-232/422/485 Serial Ports
- 2x DI, 2x DO with +5V TTL

LEC-2281

- Intel® Core™ i7/i5/i3 CPU with QM87 PCH
- Intel® HD Graphics 4600
- 1x HDMI, 1x VGA, 1x DVI-D
- 2x USB 3.0 & 4x USB 2.0 Ports
- 2x Mini-PCIe, 1x PCI, 1x PCI Express x16
- 2x 2.5" HDD/SSD Drive Bays with RAID 0/1



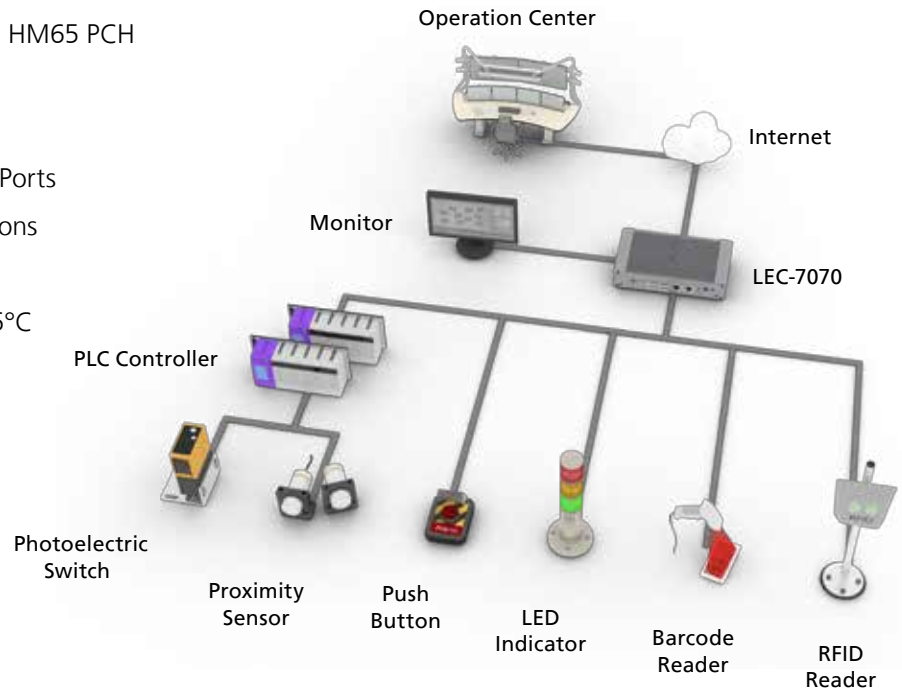
Manufacturing Execution System

Enabling Smart Manufacturing Execution System



LEC-7070

- Intel® Core™ i7/i3 or Celeron® CPU with HM65 PCH
- Fanless & Dust-proof Design
- Intel® HD Graphics, 1x VGA, 1x HDMI
- 2x LAN Ports, 2x Serial Ports, 4x USB 2.0 Ports
& 2x Mini-PCIe for Wireless Communications
- Integrated SIM Card Reader
- Wide Operating Temperatures -20°C ~ 55°C



Physical Security / Real-time Surveillance

Enhancing Enterprise Security and Personal Safety

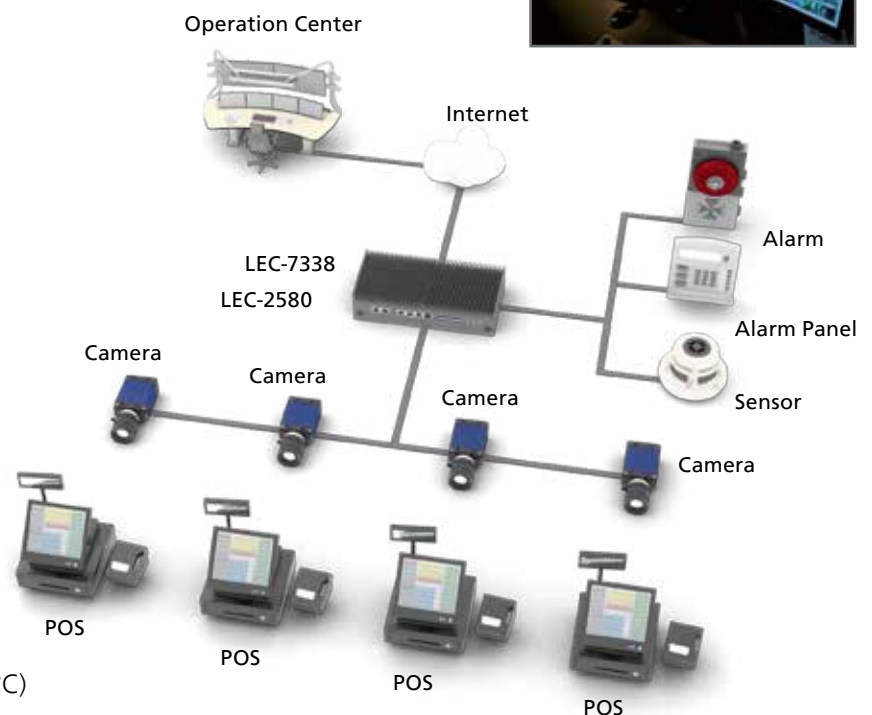


LEC-2580

- Intel® Core™ i7/i5/i3 CPU
- Intel® HD Graphics, 2x HDMI
- 6x LAN Ports (Including 4x PoE Option)
- 4x Serial Ports, 4x USB 3.0 & 2x USB 2.0 Ports
- 2x 2.5" HDD/SSD Drive Bays with RAID 0/1
- Wide Operating Temperatures 0°C ~ 60°C

LEC-7338

- Intel® Celeron® J1900 CPU
- 8x PoE GbE Switches
- 2x GbE Ports for Uplink & 2x Serial Ports
- 2x 3.5" HDD/SSD Removable Bays
- Wide Operating Temperature Range (-20°C~55°C)



Multi-Purpose Embedded PCs



Performance with
Expansion



Performance with
Expansion



Performance with
Expansion

Model Name		LEC-2281	LEC-2284	LEC-2280
Processor System	CPU	Intel® Core™ i7-4700EQ/i5-4400E/i3-4102E	Intel® Core™ i7-4700EQ/i5-4400E/i3-4102E	Intel® Core™ i7-3612QE/i7-3555LE/i5-3610ME/i3-3120ME
	Frequency	2.4 GHz/2.7 GHz/1.6 GHz	2.4 GHz/2.7 GHz/1.6 GHz	2.1 GHz/2.5 GHz/2.7 GHz/2.4 GHz
	Core Number	4C (i7)/2C (i5/i3)	4C (i7)/2C (i5/i3)	4C (i7-3612QE)/2C (i7-3555LE/i5/i3)
	Chipset	Intel® QM87	Intel® QM87	Intel® HM65
Fanless		Yes	Yes	Yes
Memory	Technology	DDR3L 1333/1600 MHz	DDR3L 1333/1600 MHz	DDR3/DDR3L 1333/1600 MHz
	Max. Capacity	16GB	16 GB	16GB
	Socket	2x 204-pin SODIMM	2x 204-pin SODIMM	2x 204-pin SODIMM
Graphic	Controller	Intel® HD Graphics 4600	Intel® HD Graphics 4600	Intel® HD Graphics 4000
	VGA	1x VGA, 1920 x 1080 @60Hz	1x VGA, 1920 x 1080 @60Hz	1x VGA, 1920 x 1080 @60Hz
	DVI-D	1x DVI-D, 1920 x 1200 @60Hz	1x DVI-D, 1920 x 1200 @60Hz	1x DVI-D, 1920 x 1200 @75Hz
	HDMI	1x HDMI, 3840 x 2160 @24Hz or 2560 x 1600 @60Hz	1x HDMI, 3840 x 2160 @24Hz or 2560 x 1600 @60Hz	1x HDMI, 1920 x 1200 @60Hz
Audio	Codec	Realtek ALC886	Realtek ALC886	Realtek ALC886
	Interface	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out
Ethernet	Controller	Intel® i217LM/i210AT	Intel® i217LM/i210AT	Intel® 82574L
	Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Interface	2x RJ45	2x RJ45	2x RJ45
Storage	Type	SATA III	SATA III	-
	Installation	1x mSATA Socket	1x mSATA Socket	-
	Type	SATA III	SATA III	SATA III
	Installation	2x 2.5" HDD/SSD Drive Bay (Raid 0/1)	2x 2.5" HDD/SSD Removable Drive Tray (Raid 0/1)	1x 2.5" HDD/SSD Drive Bay
I/O	Serial Port	2x RS-232/422/485, DB9 Male	2x RS-232/422/485, DB9 Male	2x RS-232/422/485, DB9 Male
	Digital I/O	-	-	-
	USB 2.0	4x Type A	4x Type A	6x Type A
	USB 3.0	2x Type A	2x Type A	-
	Power-On/Reset Button	1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset
	Remote	-	-	-
	LED	Power/HDD	Power/HDD	Power/HDD
	Antenna Hole	2x SMA Antenna Holes	2x SMA Antenna Holes	2x SMA Antenna Holes
Expansion Interface	Mini-PCIe	1x Full-sized Socket with SIM Card Reader/1x Full-sized Socket	1x Full-sized Socket with SIM Card Reader/1x Full-sized Socket	1x Full-sized Socket with SIM Card Reader/1x Full-sized Socket
	PCI	1(in the packing)	2 (in the packing)	2 (LEC-2280P2)
	PCI Express	1 x PCI Express x16 (default)	2 x PCI Express x8 (default)	1 x PCI Express x8 (LEC-2280E)
Watchdog Timer		Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable
Power	Power Type	ATX	ATX	ATX
	Power Supply Voltage	9 VDC~30 VDC	9 VDC~30 VDC	9 VDC~30 VDC
	Connector	2-pin Terminal Block	2-pin Terminal Block	2-pin Terminal Block
	Power Consumption (Idle)	25.5W	TBD	17.2W
	Power Consumption (Full Load)	36.2W	TBD	34W
	Power Adaptor	AC to DC, AC 90 to 240 VAC Input, DC 19VDC /4.74A 90W	AC to DC, AC 90 to 240 VAC Input, DC 19VDC /4.74A 90W	AC to DC, AC 90 to 240 VAC Input, DC 19VDC /4.74A 90W
Environment	Operating Temperature	-10°C~50°C (with Industrial-grade Components)	-10°C~50°C (with Industrial-grade Components)	-20°C~55°C (with Industrial-grade Components)
	Storage Temperature	-20°C~70°C	-20°C~70°C	-20°C~70°C
	Relative Humidity	5%~95%, Non-condensing	5%~95%, Non-condensing	5%~95%, Non-condensing
	Vibration	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis
Mechanical	Dimension (W x H x D)	277 x 78 x 195 mm	277 x 110 x 195 mm	277 x 67 x 190 mm (LEC-2280E) 277 x 89 x 190 mm (LEC-2280P2)
	Construction	Aluminum + SGCC	Aluminum + SGCC	Aluminum + SGCC
	Weight	3.8 kg	4.2 kg	3 kg
	Mounting	Rack, VESA, Wallmount	Rack, VESA, Wallmount	Rack, VESA, Wallmount
Driver Support	Microsoft Windows	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	ES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro
	Linux	Kernel 3.x	Kernel 3.x	Kernel 2.6.3x
Certification	EMC	CE,FCC Class A	CE,FCC Class A	CE,FCC Class A
Ordering Information		LEC-2281-711A/LEC-2281-511A/LEC-2281-311A	LEC-2284-711A/LEC-2284-511A/LEC-2284-311A	LEC-2280E-3A/5A/7A/7B,LEC-2280P2-3A/5A/7A/7B



Machine Vision



Low Power with Expansion



Machine Vision



Industrial Gateway

LEC-2280-7BN	LEC-2430	LEC-2580 NEW	LEC-2530
Intel® Core™ i7-3612QE	Intel® Celeron® J1900/N2930 or Intel® Atom™ E3845	Intel® Core™ i7-6600U/i5-6300U/i3-6100U	Intel® Atom™ E3825
2.1 GHz	2 GHz/1.83GHz/1.91GHz	2.6 GHz/2.4 GHz/2.3 GHz	1.33 GHz
4C	4C	2C	2C
Intel® HM65	SOC	SOC	SOC
Yes	Yes	Yes	Yes
DDR3 1333/1600 MHz	DDR3L 1333 MHz	DDR3L 1333/1600 MHz	DDR3L 1066 MHz
16GB	8GB	16GB	8GB
2x 204-pin SODIMM	1x 204-pin SODIMM	2x 204-pin SODIMM	1x 204-pin SODIMM
Intel® HD Graphic Engine 4000	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
1x VGA, 2048 x 1536 @60Hz	1x VGA, 1600 x 1200	-	1x VGA, 1600 x 1200
1x DVI-D, 1600 x 1200 @75Hz		-	-
1x HDMI, 1920 x1080 @60Hz	1x HDMI, 1920 x1080	2x HDMI, 3840 x 2160@24Hz or 2560 x 1600@60Hz	1x HDMI, 1920 x 1080
-	Realtek ALC886	Realtek ALC886	Realtek ALC886
-	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out
Intel® 82574L	Intel® i210	Intel® i219 and i211	Intel® i210
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
4/8 x RJ45	2x RJ45	6x RJ45 (Including 4 PoE Option)	2x RJ45
-	SATA II	SATA III	PATA
-	1x mSATA Socket	1x mSATA Socket	1x CF Type I/II Socket
SATA II	SATA II	SATA III	SATA II
2x 2.5" HDD/SSD Drive Bay	1x 2.5" HDD/SSD Drive Bay	2x 2.5" HDD/SSD Drive Bay (Raid 0/1)	1x 2.5" HDD/SSD Drive Bay
2x RS-232/422/485, DB9 Male	2x RS-232/422/485, DB9 Male	4x RS-232/422/485, DB9 Male	4x RS-232/422/485, DB9 Male
-		-	2x DI, 2x DO with +5V TTL
6 x Type A	4x Type A	2x Type A	4x Type A
-	1x Type A	4x Type A	1x Type A
1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset
-	-	Yes	Yes
Power/HDD	HDD/3G	Power/HDD/3G/Wifi	Power/HDD/3G
2x SMA Antenna Holes	1x SMA Antenna Hole	2x SMA Antenna Holes	2x SMA Antenna Holes
1x Full-sized Socket with SIM Card Reader / 1x Full-sized Socket	1x Full-sized Socket with SIM Card Reader	1x Full-sized Socket with SIM Card Reader/1x Half-sized Socket	1x Full-sized Socket with SIM Card Reader/1x Half-sized Socket
-	1(default)	-	-
1x PCI Express x8 (LEC-2280E-7BN4)	1 x PCI Express x1 (In The Packing)	-	-
Watchdog Timer 1 ~ 255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~256 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable
ATX	ATX	ATX	ATX
9 VDC~30 VDC	9 VDC~30 VDC	12 VDC~30 VDC	9 VDC~30 VDC
2-pin Terminal Block	2-pin Terminal Lock	2-pin Terminal Block	2-pin Terminal Block
34W	11.4W	TBD	8.42W
57W	17.5W	TBD	12.42W
AC to DC, AC 90 to 240 VAC Input, DC 19V/4.74A 90W	AC to DC, AC 90 to 240 VAC Input, DC 19VDC /3.95A 75W	AC to DC, AC 90 to 240 VAC Input, DC 24VDC /2.5A 60W/120W	-
-10°C~45°C (with Industrial-grade Components)	0°C~55°C (with Industrial-grade Components)	0°C~60°C (with Industrial-grade Components)	-20°C~55°C (with Industrial-grade Components)
-20°C~70°C	-20°C~70°C	-20°C~70°C	-20°C~70°C
5%~95%, Non-condensing	5%~95%, Non-condensing	5%~95%, Non-condensing	5%~95%, Non-condensing
IEC 60068-2-64, 0.5Grms, Random 5 ~500 Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis
276 x 67 x 194 mm (LEC-2280E) 276 x 89 x 194 mm (LEC-2280P2)	268 x 65.5 x 195 mm	210 x 60 x 143.8 mm	273.8 x 60 x 144 mm
Aluminum + SGCC	Aluminum + SGCC	Aluminum + SGCC	Aluminum + SGCC
2.7 kg	2.7 kg	TBD	2 kg
Rack, VESA, Wallmount	Rack, VESA, Wallmount	Rack, VESA, Wallmount, DIN-rail	Rack, VESA, Wallmount, DIN-rail
WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	Win 7/Win 10 Full	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro
Kernel 2.6.1x	Kernel 3.12	Linux	Kernel 3.12
CE,FCC Class A	CE,FCC Class A	CE,FCC Class A	CE,FCC Class A
LEC-2280E-7BN4/LEC-2280E-7BN8	LEC-2430-J11A/LEC-2430-N21A/LEC-2430-E51A	LEC-2580/LEC-2580P	LEC-2530

Embedded Compact PCs



Small Form Factor



Small Form Factor



Small Form Factor



Small Form Factor

Model Name		LEC-7233 NEW	LEC-7230L/LEC-7230M	LEC-7230	LEC-7070
Processor System	CPU	Intel® Celeron® N2807	Intel® Celeron® J1900	Intel® Celeron® J1900/N2930 or Intel® Atom™ E3845	Intel® Core™ i7-3517UE/i3-3217UE/ Celeron® 807UE
	Frequency	1.58 GHz	2 GHz	2 GHz/1.83 GHz/1.91 GHz	1.7 GHz/1.6 GHz/1.0 GHz
	Core Number	2C	4C	4C	2C (i7/i3)/1C (Celeron)
	Chipset	SOC	SOC	SOC	Intel® HM65
Fanless		Yes	Yes	Yes	Yes
Memory	Technology	DDR3L 1333 MHz	DDR3L 1333 MHz	DDR3L 1333 MHz	DDR3/DDR3L 1333/1066 MHz
	Max. Capacity	4GB	8GB	8GB	8GB (i7/i3)/ 4GB (Celeron)
	Socket	1x 204-pin SODIMM	1x 204-pin SODIMM	1x 204-pin SODIMM	1x 204-pin SODIMM
Graphic	Controller	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
	VGA	-	1x VGA, 1600 x 1200	1x VGA, 1600 x 1200	1x VGA, 2048 x 1536
	DVI	-	-	-	-
	HDMI	1x HDMI, 1920 x 1080	1x HDMI, 1920 x 1080	1x HDMI, 1920 x 1080	1x HDMI, 1920 x 1080
Audio	Codec	-	Realtek ALC662	Realtek ALC886	Realtek ALC886
	Interface	-	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out
Ethernet	Controller	Intel® i211	Intel® i211-AT	Intel® i210	Intel® 82583V
	Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Interface	3x RJ45	2x RJ45	2x RJ45	2x RJ45
Storage	Type	SATA II	PATA	PATA	SATA II
	Installation	1x mSATA Socket	1x CF Type I/II Socket	1x CF Type I/II Socket	1x CFast Socket
	Type	SATA II	SATA II	SATA II	SATA II
	Installation	1x SATA Connector (Reserved)	1x 2.5" HDD/SSD Drive Bay	1x 2.5" HDD/SSD Drive Bay	1x 2.5" HDD/SSD Drive Bay
I/O	Serial Port	2x RS-232/485, D-Sub9 Male	2x RS-232/422/485, DB9 Male	2x RS-232/422/485, DB9 Male	2x RS-232, DB9 Male
	Digital I/O	4x DI, 4x DO, 1x GND	-	2x DI, 2x DO with +5V TTL	4x DI or 4x DO with +5V TTL
	USB 2.0	2 x Type A	2x Type A	2x Type A	4x Type A
	USB 3.0	1 x Type A	1x Type A	1x Type A	-
	Power-On/Reset Button	1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset	1x Power On/Off	1x Power On/Off, 1x Reset
	Remote	-	-	Yes	Yes
	LED	Power/HDD/3G	Power/HDD/3G	Power/HDD/3G	Power/HDD/3G
	Antenna Hole	1x SMA Antenna Hole	1x SMA Antenna Hole	1x SMA Antenna Hole	2x SMA Antenna Holes
Expansion Interface	Mini-PCle	1x Full-sized socket with SIM Card Reader/1x Half-sized Socket	1x Full-sized Socket with SIM Card Reader	1x Full-sized Socket with SIM Card Reader	1x Full-sized Socket with SIM Card Reader/1x Half-sized Socket
Watchdog Timer		Watchdog Timer 1 ~ 255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1 ~ 255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1 ~ 255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1 ~ 255 Level Time Interval System Reset, Software Programmable
Power	Power Type	ATX	ATX	ATX	ATX
	Power Supply Voltage	12 VDC	12 VDC	12 VDC	12 VDC
	Connector	DC Jack With Lock	DC Jack With Lock	DC Jack With Lock	DC Jack With Lock
	Power Consumption (Idle)	TBD	7.36W	8W	15W
	Power Consumption (Full Load)	TBD	11.43W	12.5W	18W
	Power Adaptor	TBD	AC to DC, AC 90 to 240 VAC Input, DC 12VDC/3A 36W	AC to DC, AC 90 to 240 VAC Input, DC 12VDC/3A 36W	AC to DC, AC 90 to 240 VAC Input, DC 12VDC/5A 60W
Environment	Operating Temperature	0°C~50°C	LEC-7230L: 0°C~40°C LEC-7230M: 0°C~60°C	0°C~55°C (with Industrial-grade Components)	-20°C~55°C (with Industrial-grade Components)
	Storage Temperature	-20°C~70°C	-20°C~70°C	-20°C~70°C	-20°C~70°C
	Relative Humidity	5%~95%, Non-condensing	5%~95%, Non-condensing	5%~95%, Non-condensing	5%~95%, Non-condensing
	Vibration	IEC 60068-2-64, 0.5Grms, Random 5~500 Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500 Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500 Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500 Hz, 40 Mins/Axis
Mechanical	Dimension (W x H x D)	152 x 30 x 143 mm	LEC-7230L: 195.6 x 41 x 146.8 mm LEC-7230M: 198 x 41 x 143.8 mm	198 x 42 x 145 mm	198 x 42 x 145 mm
	Construction	SGCC	LEC-7230L: Plastic LEC-7230M: Aluminum + SGCC	Aluminum	Aluminum
	Weight	TBD	LEC-7230L: 0.9 kg LEC-7230M: 1.2 kg	1.07 kg	1.07 kg
	Mounting	VESA, Wallmount	Rack, VESA, DIN-Rail, Wallmount	Rack, VESA, DIN-Rail, Wallmount	Rack, VESA, DIN-Rail, Wallmount
Driver Support	Microsoft Windows	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro
	Linux	Kernel 3.12	Kernel 3.12	Kernel 3.12	Kernel 2.6.2x
Certification	EMC	CE,FCC Class A	CE,FCC Class A	CE,FCC Class A	CE,FCC Class A
Ordering Information		LEC-7233	LEC-7230L-J11A/LEC-7230M-J11A	LEC-7230-J11A/LEC-7230-N11A LEC-7230-E51A	LEC-7070/LEC-7070-111A/LEC-7070-311A



Small Form Factor



Machine Vision



Machine Vision

4K OPS
Signage Platform

LEC-7050	LEC-2137	LEC-7220	LEC-7388S
Intel® Cedarview N2800	Intel® Atom™ x7-E3950 or Celeron® N3350	Intel® Cedarview N2800	Intel® Core™ i5-4400E/ I3-4102E/Celeron® 2000E
1.86 GHz	2 GHz/1.8 GHz	1.86 GHz	2.7 GHz/2.2 GHz/1.6 GHz
2C	4C	2C	2C
Intel® NM10	SOC	Intel® NM10	Intel® QM87
Yes	Yes	Yes	-
DDR3 800/1066 MHz	DDR3L 1333/1600/1867 MHz	DDR3 800/1066 MHz	DDR3L 1333/1600 MHz
4GB	8GB	4GB	16GB
1x 204-pin SODIMM	1x 204-pin SODIMM	1x 204-pin SODIMM	2x 204-pin SODIMM
Intel® GMA 3650	Intel® HD Graphics	Intel® GMA 3650	Intel® HD Graphics 4600
1x VGA, 1920 x 1200	1x VGA, 1600 x 1200	1x VGA, 1920 x 1200	-
1xDVI-D, 1920 x 1200	-	-	1x Display Port, 3840 x 2160 @60Hz
-	1x HDMI, 3840 x 2160@30Hz	-	2x HDMI, 4096 x 2304 @24Hz
Realtek ALC886	-	-	Realtek AL886
2x Phone Jack for MIC-in and Line-out	-	-	2x Phone Jack for MIC-in and Line-out
Intel® 82754/82583V	Intel® i210	Intel® 82583V/AX88179	Intel® i217
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
2x RJ45	6x RJ45 (Including 4 PoE Option)	4/6 x RJ45	1x RJ45
PATA	SATA III	PATA	-
1x CF Type I/II Socket	1x mSATA Socket	1x CF type I/II Socket	-
SATA II	SATA III	SATA II	SATA II/III
1x 2.5" HDD/SSD Drive Bay	1x 2.5" HDD/SSD Drive Bay	1x 2.5" HDD/SSD Drive Bay	1x 2.5" HDD/SSD Drive Bay
2x RS-232/422/485, DB9 Male	1x RS-232/422/485, DB9 Male	-	-
-	-	-	2x5 Terminal Block Including Power_ON, Power_Detect, Power Status, UART,FAN
2x Type A	2x Type A	4 x Type A	2x Type A
-	2x Type A	-	3x Type A
1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset	Power-On	1x Power On/Off, 1x Reset
Yes	-	-	-
Power/HDD/3G	Power/HDD/3G	Power/HDD	-
2x SMA Antenna Holes	2x SMA Antenna Hole	2x SMA Antenna Hole	2x SMA Antenna Holes
1x Full-sized Socket with SIM Card Reader/1x Half-sized Socket	1x Half-sized Socket with SIM Card Reader/1x Full-sized Socket	1x Full-sized socket with SIM Card Reader	1x Full-sized Socket
Watchdog Timer 1 ~ 255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1 ~ 255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable
ATX	ATX	ATX	ATX
24 VDC	24 VDC	12 VDC	12 VDC
2-pin Terminal Block	2-pin Terminal Block	DC Jack With Lock	DC Jack With Lock
12.5W	TBD	27W	TBD
20W	TBD	32W	TBD
AC to DC, AC 90 to 240 V AC Input, DC 24VDC/2.5A 60W	AC to DC, AC 90 to 240 VAC Input, DC 24VDC/2.5A 60W /120W	AC to DC, AC 90 to 240 VAC Input, DC 12VDC/5A 60W	AC to DC, AC 90 to 240 VAC Input, DC 12VDC/5A 60W
-20°C~55°C (with Industrial-grade Components)	LEC-2137C/LEC-2137E: -20°C~55°C LEC-2137D/LEC-2137F: 0°C~50°C	-20°C~55°C (with Industrial-grade Components)	-5°C~45°C (with Industrial-grade Components)
-20°C~70°C	-20°C~70°C	-20°C~70°C	-20°C~80°C
5%~95%, Non-condensing	5%~95%, non-condensing	5%~95%, Non-condensing	5%~95%, Non-condensing
IEC 60068-2-64, 0.5Grms, Random 5~500 Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5 ~500 Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500 Hz, 40 Mins/Axis
198 x 42 x 145 mm	198 x 41 x 143.8 mm	198 x 42 x 145 mm	220 x 46 x 172 mm
Aluminum	Aluminum + SGCC	Aluminum + SGCC	SGCC
1.07 kg	TBD	1.07 kg	1.1 kg
Rack, VESA, DIN-Rail, Wallmount	Rack, VESA, Wallmount, DIN-rail	Rack, VESA, DIN-Rail, Wallmount	-
WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	Win 7/Win 10 Full	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro
Kernel 3.15	Linux	Kernel 3.1	Kernel 3.x
CE,FCC Class A	CE,FCC Class A	CE,FCC Class A	CE,FCC Class A
LEC-7050B	LEC-2137C/LEC-2137D/LEC-2137E/LEC-2137F	LEC-7220N4/LEC-7220N6	LEC-7388S-5A/3A/CA

Video Driven Embedded PCs



Surveillance
Platform



Surveillance
Platform



Surveillance
Platform



Wide Temperature
Platform



Model Name		LEC-7338	LEC-7331	LEC-7330	LEC-7480
Processor System	CPU	Intel® Celeron® J1900	Intel® Celeron® J1900/N2930 or Intel® Atom™ E3845	Intel® Celeron® J1900/N2930 or Intel® Atom™ E3845	Intel® Core™ i7-3517UE/i3-3217UE
	Frequency	2 GHz	2 GHz/1.83 GHz/1.91 GHz	2 GHz/1.83 GHz/1.91 GHz	1.7 GHz/1.6 GHz
	Core Number	4C	4C	4C	2C
	Chipset	SOC	SOC	SOC	Intel® HM65
Fanless		No	Yes	Yes	Yes
Memory	Technology	DDR3L 1333 MHz	DDR3L 1333 MHz	DDR3L 1333 MHz	DDR3/DDR3L-1333/1600 MHz
	Max. Capacity	8GB	8GB	8GB	8GB
	Socket	1x 204-pin SODIMM	1x 204-pin SODIMM	1x 204-pin SODIMM	1x 204-pin SODIMM
Graphic	Controller	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
	VGA	-	1x VGA, 1600 x 1200	1x VGA, 1600 x 1200	1x VGA, 1920 x 1080
	DVI	-	-	-	-
	HDMI	1x HDMI, 1920 x 1080	1x HDMI, 1920 x 1080	1x HDMI, 1920 x 1080	1x HDMI, 1920 x 1080
Audio	Codec	Realtek ALC886	Realtek ALC886	Realtek ALC886	Realtek ALC886
	Interface	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out	2x Phone Jack for MIC-in and Line-out
Ethernet	Controller	Intel® i210 x2	Intel® i210	Intel® i210	Intel® 82583V
	Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Interface	2x RJ45 + 8x RJ45 (PoE Ethernet Switch)	2x RJ45	2x RJ45	2x RJ45
Storage	Type	SATAII	PATA	PATA	SATA III
	Installation	1x mSATA (Mini-PCIe Slot)	1x CF Type I/II Socket	1x CF Type I/II Socket	1x CFast Socket
	Type	SATAII	SATA II	SATA II	SATA III
	Installation	2x 2.5" HDD/SSD Drive Bay (RAID 0/1)	1x 2.5" or 3.5" HDD/SSD Drive Bay	1x 2.5" or 3.5" HDD/SSD Drive Bay (Removable)	1x 2.5" HDD/SSD Drive Bay
I/O	Serial Port	2x RS-232/485, DB9 Male	2x RS-232/422/485, DB9 Male	2x RS-232/422/485, DB9 Male	2x RS-232/422/485, DB9 Male
	Digital I/O	8x DI, 8x DO with +5V TTL	2x DI, 2x DO with +5V TTL	2x DI, 2x DO with +5V TTL	2x DI, 2x DO with +5V TTL
	USB 2.0	2x Type A	2x Type A	2x Type A	4x Type A
	USB 3.0	1x Type A	1x Type A	1x Type A	-
	Power-On/Reset Button	1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset	1x Power On/Off, 1x Reset
	Remote	No	Yes	Yes	Yes
	LED	Power/HDD/3G	Power/HDD/3G	Power/HDD/3G	Power/HDD/3G
	Antenna Hole	-	2x SMA Antenna Holes	2x SMA Antenna Holes	2x SMA Antenna Holes
Expansion Interface	Mini-PCIe	1x Full-sized Socket with SIM Card Reader	1x Full-sized Socket with SIM Card Reader	1x Full-sized Socket with SIM Card Reader	1x Full-sized Socket with SIM Card Reader/1x Half-sized Socket
Watchdog Timer		Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable	Watchdog Timer 1~255 Level Time Interval System Reset, Software Programmable
Power	Power Type	ATX	ATX	ATX	ATX
	Power Supply Voltage	+48 VDC	12 VDC	12 VDC	12 VDC
	Connector	2-Pin Terminal Block	DC Jack With Lock	DC Jack With Lock	DC Jack With Lock
	Power Consumption (Idle)	TBD	12.3W	12.3W	17.5W
	Power Consumption (Full Load)	TBD	15.7W	15.7W	18.6W
	Power Adaptor	-	AC to DC, AC 90 to 240 VAC Input, DC 12VDC/5A 60W	AC to DC, AC 90 to 240 VAC Input, DC 12VDC/5A 60W	AC to DC, AC 90 to 240 VAC Input, DC 12VDC/5A 60W
Environment	Operating Temperature	0°C~50°C (with Industrial-grade Components)	0°C~55°C (with Industrial-grade Components)	0°C~55°C (with Industrial-grade Components)	-35°C~75°C (with Industrial-grade Components)
	Storage Temperature	-20°C~70°C	-20°C~70°C	-20°C~70°C	-45°C~85°C
	Relative Humidity	5%~95%, Non-condensing	5%~95%, Non-condensing	5%~95%, Non-condensing	5%~95%, Non-condensing
	Vibration	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500Hz, 40 Mins/Axis	IEC 60068-2-64, 0.5Grms, Random 5~500 Hz, 40 Mins/Axis
Mechanical	Dimension (W x H x D)	272 x 44 x 164.4 mm	200 x 70.4 x 143.8 mm	200 x 88.4 x 143.8 mm	143 x 195 x 67.7 mm
	Construction	SGCC	Aluminum + SGCC	Aluminum + SGCC	Aluminum + SGCC
	Weight	TBD	1.3 kg	1.8 kg	2.8 kg
	Mounting	Stand, VESA, Wallmount	Rack, VESA, DIN-Rail, Wallmount	Rack, VESA, DIN-Rail, Wallmount	Rack, VESA, DIN-Rail, Wallmount
Driver Support	Microsoft Windows	WES 7/Win 7 Pro FES/WE 8.1 Industry Pro/Win 10 IoT	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro	WES 7 E/Win 7 Pro FES/WE 8.1 Industry Pro
	Linux	Kernel 3.12	Kernel 3.12	Kernel 3.12	Kernel 2.6.2x
Certification	EMC	CE,FCC Class A	CE,FCC Class A	CE,FCC Class A	CE,FCC Class A
Ordering Information		LEC-7338-J11A	LEC-7331-J11A/LEC-7331-N11A LEC-7331-E51A	LEC-7330-J11A/LEC-7330-N11A LEC-7330-E51A	LEC-7480-711A/LEC-7480-311A

Lanner IoT-ready Solution

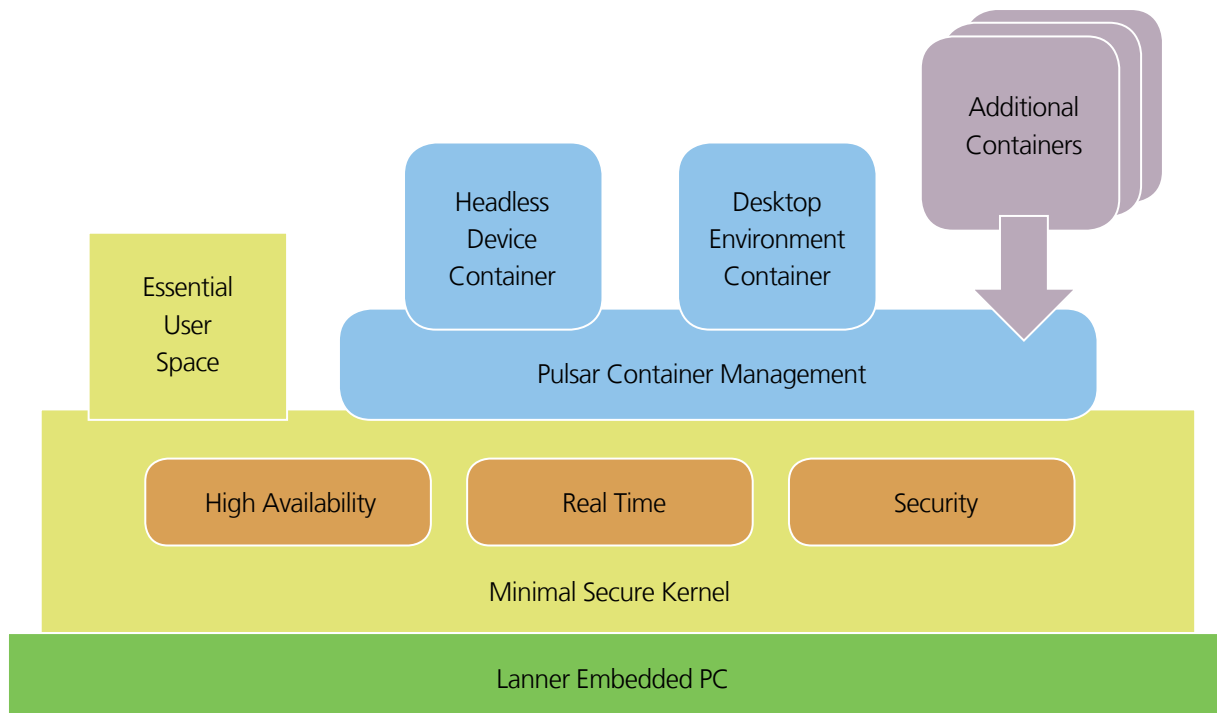
Accelerating your Time-to-market Deployment



LEC-2137 Industrial PC



The Lanner/Wind River alliance aims to offer optimized IoT-ready solutions pre-validated with Wind River® Pulsar™ Linux distribution, helping service providers accelerate time-to-market deployment. This partnership brought purpose-built hardware and powerful software together, with Lanner providing customized and optimized hardware solutions and Wind River® delivering ongoing security patches and critical Linux updates and therefore creating a development shortcut for value-added applications.



LEC-2137

- Intel® Atom™ E3950 or Celeron® N3350 CPU (Codename Apollo Lake)
- 6 RJ45 ports or 2 RJ45 ports + 4 PoE RJ45 ports
- 1x COM, 4x USB and HDMI/VGA ports
- 1x 2.5" HDD/SSD drive bay.

Pulsar Linux

- Binary distribution certified for board family
- Container-ready for deploying micro-services
- Extensible by adding packages at run-time

Accessories

3G Modules

0TAW0ZU200Z01



ublox ZU200

The ublox ZU200 PCI Express Mini Card with Integrated SIM holder slot offers high performance to the user on 3.75G with 6-band WCDMA (UMTS) and quad-band GSM/GPRS/EDGE networks.

- Coverage: 800/850/1700/1900/2100 MHz
- Interface: PCI Express
- Simple integration of u-blox GPS and A-GPS
- Form Factor: Mini PCIe Card Full Size

0TAW0ZU202Z01



ublox ZU202

The ublox Wireless ZU202 PCI Express Mini Card with Integrated SIM holder slot offers high performance to the user on 3.75G and Quad-band GSM/GPRS/EDGE/UMTS/HSPA/WCDMA(UMTS) networks.

- Coverage: 800/850/900/1700/1900/2100 MHz
- Interface: PCI Express
- Form Factor: Mini PCIe Card Full Size

Wi-Fi Modules

0TAW000026000



WPEA-152GN(BT)

Single band 802.11b/g/n Half Mini Card, Atheros AR9485 + AR3012, 1T1R with HMCE-101 (Mini PCIe half card extender)

- Up to 150Mbps data rate

0TAW000022000



WPEA-251N(BT)

Dual band 802.11a/b/g/n Half Mini Card, Atheros AR9462, 2T2R with HMCE-101 (Mini PCIe half card extender)

- Up to 300Mbps data rate

0TAWWPER12Z01



WPEA-121N

Dual band 802.11a/b/g/n Half Mini Card, Atheros AR9382, 2T2R with HMCE-101 (Mini PCIe half card extender)

- Up to 300Mbps data rate

0TAW000027000



WPEA-252NI

Dual band 802.11a/b/g/n Industrial-Grade Mini Card, Qualcomm Atheros AR9592-AR1B, 2T2R

- Up to 300Mbps data rate
- -40 ~ 80C

0TAW000025000



WPEA-352ACN

Dual band 802.11ac/b/g/n Mini Card, Qualcomm Atheros QCA9880-BR4A, 3T3R

- Up to 1.3Gbps data rate

External Antennas

0TZW000000039



Wi-Fi External Antenna

For both Mini-PCIe and Mini-PCI interface Wi-Fi modules:
External Antenna: RP-SMA FeMale Body FeMale Inner Contact, Passive

TBD

Wi-Fi External Antenna

WiFi EXTERNA ANTENNA, RP-SMA Female Body Female Inner Contact, Passive, 5dB

TBD

Wi-Fi External Antenna

WiFi EXTERNA ANTENNA, dual band, RP-SMA Female Body Female Inner Contact, Passive, 5dB

0TZW000000072



3G External Antenna

RP-SMA FeMale Body Male Inner Contact, Passive

0TZW000000108



GSM External Antenna (Length: 300 cm)

SMA FeMale Body Male Inner Contact, IP67 Rated, Active

Wallmount

098W000003000



Wallmount Bracket 3 (143 x 27 mm)

Compatible Lanner Products:
LEC-2050, LEC-2010, LEC-2110



098W000004000



Wallmount Bracket 4 (136 x 42 mm)

Compatible Lanner Products:
LEC-2220P, LEC-2220P2, LEC-2222, LEC-2223, LEC-2270, LEC-2270P2, LEC-2280, LEC-2280P2, LEC-2136, LEC-7220, LEC-7070, LEC-7230, LEC-7105, LEC-7106, LEC-7100, LEC-7110, LEC-7480, LEC-7230M, LEC-7330, LEC-7331, LEC-2281, LEC-2284, LEC-7233, LEC-2580, LEC-2137

098W000005000

Wallmount Bracket 5 (135.4 x 44 mm)

Compatible Lanner Products:
LEC-2250, LEC-2530



Rackmount

098W000006000



Rackmount Bracket (483x 195 x 44 mm)

Compatible Lanner Products:
LEC-2010, LEC-2050, LEC-2055, LEC-2026, LEC-2136, LEC-2250, LEC-7000, LEC-7020D, LEC-7050, LEC-7100, LEC-7105, LEC-7110, LEC-7070, LEC-7106, LEC-7230, LEC-2530, LEC-2580

VESA Mount

098W000009000



PC Side Bracket Display Side Bracket

VESA Mount Bracket (130 x 132 mm)

Compatible Lanner Products:
LEC-2010, LEC-2050, LEC-2055, LEC-2026, LEC-2110, LEC-2126, LEC-2136, LEC-2250, LEC-7000, LEC-7020D, LEC-7050, LEC-7100, LEC-7105, LEC-7110, LEC-7070, LEC-7900, LEC-7106, LEC-7230, LEC-2530, LEC-2580



DIN-Rail Mount

098W000007000



DIN-Rail Mount Bracket

Compatible Lanner Products:
LEC-2010, LEC-2050, LEC-2055, LEC-2026, LEC-2110, LEC-2126, LEC-2136, LEC-2250, LEC-7020, LEC-7050, LEC-7100, LEC-7105, LEC-7110, LEC-7070



Put DIN rail Mount Bracket on rear of the monitor VESA hole.



Slide the monitor into the DIN rail Mounting Track.



098W000008000

DIN-Rail Mount Accessory kit



Compatible Models: Wallmount Bracket 3 & 4

All wallmount kits have these three holes reserved for a DIN-Rail mount.



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Lanner

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IoT Solutions
Alliance