



## Embedded Computing

Rugged Platforms for Commercial and Industrial Applications







## Lanner's Fast Growing Selection of Embedded PCs

Over the last 10 years, Lanner has shipped more than 1 million network appliances. The strong preference demonstrated for our products is our reward for having committed ourselves to designing the highest quality hardware in the industry.

But although we have become the leading in network appliance hardware, it is in our embedded computing product division that we are experiencing our fastest growth. Building on our expertise in networking and reliable computing for telecom systems, our small form factor industrial PCs have quickly gained a good reputation in their field.

Over the last year we have grown the product selection extensively to meet the specific requirements of several vertical markets. You can now find products suited for digital signage, machine vision, industrial automation, and many more.

With our strong growth in our embedded computing product division, we are looking forward to adding 1 million industrial PCs to the 1 million network appliances in the near future.

A handwritten signature in black ink, appearing to read 'Spencer Chou'.

**Spencer Chou**

Senior Manager, Embedded Computing Product Division

# Why Lanner?

## Wide Selection of Embedded Systems

Lanner engineers have used their wealth of experience in creating a broad line of embedded systems that can be stand alone products in harsh industrial as well as commercial settings. The clever chassis design gives enough heat dissipation to cool most Lanner embedded systems, while the hinged bottom chassis and externally accessible CF sockets are often praised by our customers. With a wide selection of embedded systems, we have products for many niche applications, including: in-vehicle computing, surveillance gateway control, self-service ticket machine, industrial automation, machine vision, digital signage, DVRs, and many more.

## Strong Allies



### Intel

Lanner Electronics is an Associate Member of the Intel Intelligent Systems Alliance. This alliance is committed to developing modular standard driven solutions based on technologies, processors, products, and services from Intel. Intel provides standard Intel-based industry building blocks to help create better quality systems. These modular blocks allow members of the Alliance to produce products with enhanced performance, greater scalability, and maximum flexibility.

### Microsoft



As a Windows Embedded Partner, Lanner is given early access to product plans, Microsoft information events and the latest embedded developments. In 2011 and 2012, Lanner was awarded the Windows Embedded Partner of the Year.

### X2O



X2O Media is a full-service provider of software, network management services, and content services for professional digital signage and corporate communication applications. The company offers a wide variety of software solutions for digital signage and interactive networks of all sizes. X2O's award-winning Xpresenter™ provides an end-to-end platform for the creation, management, and distribution of content at broadcast quality, and at a fraction of the time of other solutions. In addition to technology, X2O offers content design, acquisition, management, distribution, and monitoring services for digital signage networks. More information about X2O Media is available at <http://www.x2omedia.com>

## High-Precision Laser Cutting in Switzerland

### Introduction

A leading manufacturer of laser cutting machinery in Switzerland was looking for a new computer system to install in their new product line. Their earlier product line were using full-sized industrial motherboards, which in addition to being too slow for the demanding calculations, were also difficult and costly to maintain.

### The Challenge

The system needed very high processing power to be able to control the laser cutter precisely and at a very high speed. The computer would also need to be small enough to fit into the machine's maintenance drawer, and not require much downtime for maintenance.

### The Solution

Through Lanner's distributor in Switzerland, the company found the LEC-2222, which is a customized version of LEC-2220 with two extra USB ports. Fitted with an 2.6 GHz Intel Core i7 (620M) CPU, processing power was no longer a problem. The compact design could also fit easily into the drawer on the machine, and the special fan design made maintenance possible without system down time. The LEC-2220 and LEC-2222 is fitted with a smart fan, which monitors the system temperature and only turns itself on when necessary. Any moving part is a maintenance part, so the system integrator could setup an alarm based on temperature and fan speed. If the temperature was so high that the fan should be running, but did not, an alarm would be triggered to notify the user that the fan needed replacement. The fan on LEC-2220 and this custom LEC-2222 model is detachable from the outside so that it can be replaced even while the system is running. So the laser cutter can keep working while the fan is replaced. Less downtime is always a great product feature.

### The Result

With the new machinery a success. The manufacturer are now implementing LEC-2222 in its other machines.

## A Platform for Reliable Digital Signage Systems

### Introduction

Before X2O grew to where it is today, they knew that they would not get involved with manufacturing their own hardware for the media players. They would instead focus on creating the best digital signage software in the industry. So a search for a partner with expertise in media player hardware was necessary.

### The Challenge

X2O media players are often installed in harsh environments, so with some of the first hardware they tested, failing hard drives and power supplies created up to 20% failure rates. This added significant replacement expenses to the network operation, and also seriously affected the network uptime. The new hardware had to be rugged enough to withstand the harsh environments, giving the lowest possible failure rates.

The limited space for installing the media players was also critical. The screens were often installed in ceilings, behind screens or in very inaccessible places, so the players had to be compact and easily installed.

X2O's player technology interacts with any 3rd party hardware or software systems. The 3rd party system triggers can be taken into the X2O Platform or the X2O Platform can send commands to 3rd Party Hardware or Software Systems from credit card readers, Microsoft Kinect cameras, infrared, RFID, Crestron, AMX, RS232, and more. A good example of how this is used is with the Intel Audience Impression Metrics Suite (AIM), which adds powerful data collection and audience measurement tools to digital signage networks.

### The Solution

Working with Lanner's Toronto office, X2O have used the LEC-7000 series to improve the reliability of their digital signage platform and to improve the media performance of their demanding software.

The LEC-7000 series features fanless design, industrial memory and hard drives that can thrive in environments that would be considered unbearable for normal commercial computing platforms. This managed to reduce the failure rates X2O were having in the operator network. The compact design allowed placement right behind screens, saving time during installation and money since they could avoid lengthy wiring and mounting. With an easily opened chassis, maintenance is also quick and convenient.

### The Result

Since Lanner's office could offer drop shipments directly to X2O customers, X2O could execute their strategy of focusing on creating the best digital signage platform software.

Systems are customized with X2O branding and sent straight from the Lanner warehouse to the customer, which make for quicker and less expensive installation and integration costs. The devices arrive ready for the network and are so reliable that they can stay there for many years.

# Introduction LEC-2 & LEC-7 Series

## LEC-2 Series

The LEC-2 Series embedded computers have rich expansion capability and are designed for wide deployment in application specific environments, such as industrial automation, vision control and other related applications. Our fanless or smart-fan embedded systems emphasize stability and longevity, and deliver an extremely reliable solution for your most remote locations.

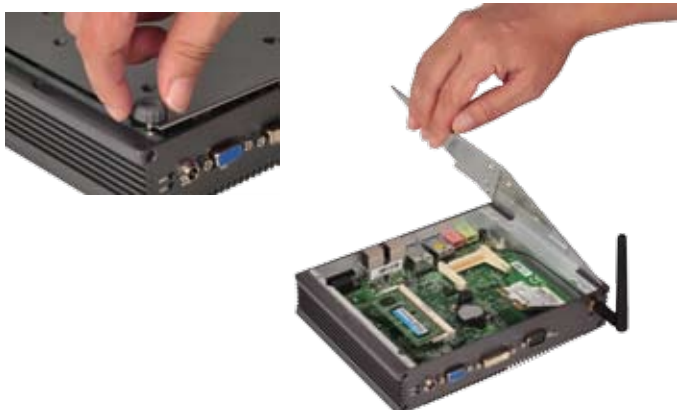
## LEC-7 Series

The LEC-7 Series embedded computers have multiple display output capability and are designed for wide deployment in video specific environments, such as digital content playback, physical security, video surveillance and other related applications. Our fanless embedded systems emphasize stability and longevity, and deliver an extremely reliable solution for most applications. These systems provide the perfect balance of size, price, performance and power consumption.

## Features

### Easily Opened Chassis with No Tool Required

The bottom covering can be simply opened by removing 4 screws- often found in the products footpads. This allows for easy installation or replacement of the internal CF, HDD, Memory and Mini-PCIe devices.



## Powered by New Intel Atom Processors

Using Intel leading-edge 32 nm process technology, the Intel Atom processor N2000 and D2000 Series offer dual-core, 64-bit processing, low power consumption and enhanced graphics capability.



## Multi-Screen Support

Some platforms with multiple video output ports, like the LEC-7105 are able to support separate video streams, clone or extension modes on dual screens.



## Various Mounting Options

The LEC-2 and LEC-7 Series provide various mounting options, including VESA mounting, wall mounting, rack mounting and DIN-rail mounting options.



# Features of LEC-2 & LEC-7 Series

## Wide Temperature Support

The LEC-2 Series is ruggedized to support a wider than usual range of temperatures. Outfitted with industrial components (HDD/SSD, CF, Memory) this appliance can thrive in harsh conditions.

## Compact Form Factor Design

Engineered for applications with limited space, the LEC-2 and LEC-7 Series has dimensions that permit deployment in small cabinets, machinery, and almost any place necessary.

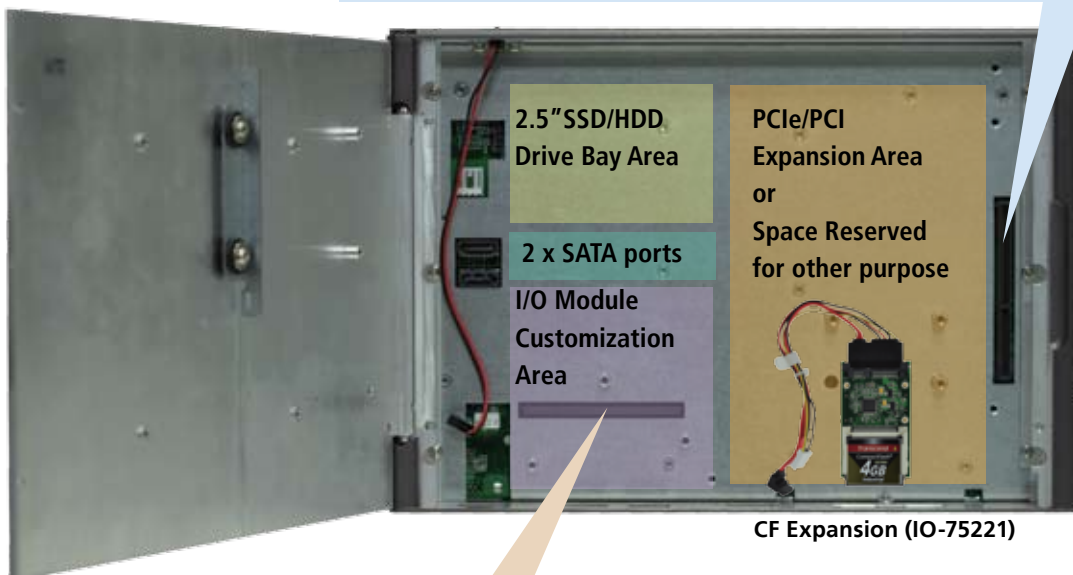
## Fanless Design with Corrugated Aluminum

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

## Multi I/O Expansion Layer

LEC-2270 has an unique Multi I/O (MIO) Expansion Layer that makes it easier to get the I/O configuration you need. The main board has a PCIe x16 port that via standard riser cards can be turned into a PCIe x1 or PCIe x8 port. And from the main board there is also an I/O connector that fits with a plug-in I/O card so you can together with Lanner create a custom unit with the required audio, DI/DO, serial, USB, LAN, and eSATA ports. There is also a drive bay area with SATA connectors for a 2.5" HDD or SSD. This connection can also be used to create an external CompactFlash socket.

## Multi I/O Expansion Layer



### MIO Signals

- 2x PCIe 1x
- 1x SATA 2.0
- 4x Serial
- 2x USB
- 1x Audio Codec
- DC +3.3/+5/+12V



**LEK-IOA2**  
(1x Audio I/O and 2x RS232/422/485) (Default)

### Customized Examples



**LEK-IOA3**  
(1x eSATA and DI / DO)



**LEK-IOA5**  
(2x LAN & 1x RS232/422/485)

# Multi-Purpose Embedded PCs



LEC 2 Series		LEC-2055	LEC-2110	LEC-2136	LEC-2220
Dimension (WxHxD)		198x42x145mm (7.80"x1.65"x5.71")	268x64x190mm (10.55"x2.52"x7.48")	198x42x145mm (7.80"x1.65"x5.71")	277x(67/89)x194mm 10.91"x(2.64/3.50)"x7.64"
Processor		Intel® Atom™ N270 1.6GHz	Intel® Atom™ D525 1.8GHz	Intel® Atom™ D525 1.8GHz	1st Gen Intel® Core i7/i5/ Celeron
Fanless		Yes	Yes	Yes	Smart Fan
Chipset		Intel® 945GSE + ICH7M	Intel® ICH8M	Intel® ICH8M	Intel® HM55
System Memory	Technology	DDR2 SODIMM x1	DDR3 SODIMM x1	DDR3 SODIMM x1	DDR3 SODIMM x2
	Max. Capacity	Up to 2GB	Up to 4GB	Up to 4GB	Up to 8GB
Storage	IDE	CF socket Type I/II x1	CF socket Type I/II x1	CF socket Type I/II x1	None
	SATA	2.5" HDD/SSD drive bay x1	2.5" HDD/SSD drive bay x1	2.5" HDD/SSD drive bay x1	2.5" HDD/SSD drive bay x1
Ethernet Controller		Realtek RTL8111 x2	Realtek RTL8111 x2	Intel® 82574L x1, Intel® 82583V x5	Intel® 82574L x2
Graphic Controller		Intel® GMA950	Intel® GMA3150	Intel® GMA3150	Intel® GMA HD Graphics
Audio Controller		None	Realtek ALC886	None	Realtek ALC886
IO	LAN	GbE RJ45 x2	GbE RJ45 x2	GbE RJ45 x6	GbE RJ45 x2
	Display	VGA x1	VGA x1, DVI-D x1	VGA x1	DVI-I x1, DVI-D x1
	Audio	None	Phone Jack x2 for Mic-in and Line-out	None	Phone Jack x2 for Mic-in and Line-out
	Serial I/O	RS232/422/485 x2, RS232 x1	RS232 x4, RS232/422/485 x2	RS232 x1	RS232 x4, RS232/422/485 x2
	Digital I/O	None	DB9 Female x1 for DI x4 (5V TTL) and DO x4	None	DB9 Female x1 for DI x4 (5V TTL) and DO x4
	USB 2.0	Type A x2	Type A x6	Type A x4	Type A x4
	Power Input	2-pin terminal block	2-pin terminal block	2-pin terminal block	2-pin terminal block
	Expansion	Mini-PClex1 with SIM card reader	Mini-PCIe x1, PCI x1 or PCIe x1	Mini-PClex1(USB signal only) with SIM card reader	Mini-PClex1 with SIM card reader ; LEC-2220P: PCI x1 or PCIe x1 ; LEC-2220P2: PCI x2
	Others	External: 2x SMA antenna holes, reset	External: power-on button, reset, power-on switch, 3x SMA antenna holes	External: Power-on button, 1x SMA antenna hole, reset	External: Power-on button, Power-on switch, reset
	Power Input		+12~36Vdc, ATX Mode	+9~30Vdc, ATX Mode	+18~36Vdc, ATX mode
AC Adapter		Ordering option	75W +19V @ 3.95A	Ordering option	75W +19V @ 3.95A
Hardware Monitor		Fintek F81865 integrated watchdog timer 1~255 level	Fintek F81865 integrated watchdog timer 1~255 level	Winbond W83627THG integrated watchdog timer 1~255 level	Fintek F81865 integrated watchdog timer 1~255 level
OS Support		Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded
Certifications		CE, FCC Class A, RoHS	CE, FCC Class A, RoHS	CE, FCC Class A, RoHS	CE, FCC Class A, RoHS
Operating Temperature Range with Industrial Components		-10~55°C / 14~131°F	-10~55°C / 14~131°F	0~40°C / 32~104°F	-10~55°C / 14~131°F
Operating Temperature Range with Commercial Components		-5~45°C / 23~113°F	-5~45°C / 23~113°F	0~40°C / 32~104°F	-5~45°C / 23~113°F
Ordering Information		LEC-2055	LEC-2110P, LEC-2110E	LEC-2136	LEC-2220P, LEC-2220P2





LEC-2250	LEC-2260	LEC-2270	LEC-2280
273.8x60x144mm (10.78"x2.36"x5.67")	277.65x59x175mm (10.93"x2.32"x6.89")	277x(67/89)x194mm 10.91"x(2.64/3.50)"x7.64"	277x(67/89)x194mm 10.91"x(2.64/3.50)"x7.64"
Intel® Dual Core Atom™ D2550 1.86GHz	Intel® Celeron® 807UE 1.0GHz	2nd Gen Intel® Core™ i5/i7, Celeron	3rd Gen Intel® Core™ i7/i5/i3
Yes	Yes	Yes	Yes
Intel® NM10	Intel® HM65	Intel® HM65	Intel® HM65
DDR3 SODIMM x1	DDR3 SODIMM x2	DDR3 SO-DIMM x2	DDR3 SO-DIMM x2
Up to 4GB	Up to 4GB	Up to 16GB	Up to 16GB
CF socket Type I/II x1	CF socket Type I/II x1	None	None
2.5" HDD/SSD drive bay x1	2.5" SSD/HDD drive bay x1	2.5" SSD/HDD drive bay x1	2.5" SSD/HDD drive bay x1
Intel® 82583V x2	Intel® 82583V x2	Intel® 82574L x2	Intel® 82574L x2
Intel® GMA3650	Intel® GMA HD Graphics	Intel® HD Graphics 3000	Intel® HD Graphics 4000
Realtek ALC886	Realtek ALC886	Realtek ALC886	Realtek ALC886
GbE RJ45 x2	GbE RJ45 x2	GbE RJ45 x2	GbE RJ45 x2
VGA x1, DVI-D x1	VGA x1, DVI-D x1	HDMI x1, DVI-D x1, VGA x1	HDMI x1, DVI-D x1, VGA x1
Phone Jack x2 for Mic-in and Line-out	None	Phone Jack x2 for Mic-In and Line-Out	Phone Jack x2 for Mic-In and Line-Out
RS232 x2, RS232/422/485 x2	RS-232 x2, RS232/422/485x2	RS232/422/485 x2	RS232/422/485 x2
None	DB9 Female x1 for DI x4 (5V TTL) and DO x4	None	None
Type A x6	Type A x4	Type A x6	Type A x6
2-pin terminal block	2-pin terminal block	2-pin terminal block	2-pin terminal block
Mini-PClex2: a half-sized socket and the other with SIM card reader (USB signal only).	Mini-PClex2: one with SIM card reader	Mini-PCle x2: one with SIM card reader; LEC-2270E: PCIe x1; LEC-2270P2: PCI x2	Mini-PCle x2: one with SIM card reader; LEC-2280E: PCIe x1; LEC-2280P2: PCI x2
External: 2x SMA antenna holes, reset	External: 2x SMA antenna holes, reset	External: Power-on button, Power-on switch, reset	External: Power-on button, Power-on switch, reset
+18~36Vdc, ATX Mode	+18~36Vdc, ATX Mode	+9~30Vdc, ATX Mode	+9~30Vdc, ATX Mode
Ordering option	Ordering option	75W + 19V @ 3.95A	75W + 19V @ 3.95A
Fintek F81865 integrated watchdog timer 1~255 level	Fintek F81865 integrated watchdog timer 1~255 level	Fintek F81865 integrated Watchdog Timer 1~255 level	Fintek F81865 integrated Watchdog Timer 1~255 level
Linux, Windows 7/7 Embedded/XP/XP Embedded (32bit OS only)	Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded
CE, FCC Class A, RoHS	CE, FCC Class A, RoHS	CE, FCC Class A, RoHS	CE, FCC Class A, RoHS
-20~55°C/-4~131°F	-20~55°C/-4~131°F	-10~55°C / 14~131°F	-10~55°C / 14~131°F
-5~45°C / 23~113°F	-20~45°C / -4~113°F	-5~45°C / 23~113°F	-5~45°C / 23~113°F
LEC-2250	LEC-2260	LEC-2270E-5A/CA/7A, LEC-2270P2-5A/CA/7A	LEC-2280E-5A/3A, LEC-2280P2-5A/3A

# Video Driven Embedded PCs



LEC 7 Series		LEC-7000	LEC-7020	LEC-7050	LEC-7100
Dimension (WxHxD)		190x36x140mm (7.48"x1.42"x5.51")	198x42x145mm (7.80"x1.65"x5.71")	198x42x145mm (7.80"x1.65"x5.71")	268x44x174mm (10.55"x1.73"x6.85")
Processor		Intel Atom N270 1.6GHz	Intel Atom N270 1.6GHz	Intel Atom N2800 1.8GHz	Intel Atom D510 1.66GHz
Fanless		Yes	Yes	Yes	Yes
Chipset		Intel 945GSE + ICH7M	Intel 945GSE + ICH7M	Intel NM10	Intel ICH8M
System Memory	Technology	512MB DDR2 on board, DDR2 SODIMM x1	DDR2 SODIMM x1	DDR3 SODIMM x1	DDR2 SODIMM x1
	Max. Capacity	Up to 2GB	Up to 2GB	Up to 4GB	Up to 2GB
Storage	IDE	CF socket Type III x1	CF socket Type III x1	CF socket Type III x1	CF socket Type III x1
	SATA	2.5" HDD/SSD drive bay x1	2.5" HDD/SSD drive bay x1	2.5" SSD/HDD drive bay x1	2.5" HDD/SSD drive bay x1
Ethernet Controller		Realtek RTL8111 x2	Realtek RTL8111 x2	Intel 82583V x2	Realtek RTL8111 x2
Graphic Controller		Intel GMA950	Intel GMA950	Intel GMA 3650	Intel GMA3150
Audio Controller		Realtek ALC886	Realtek ALC886	Realtek ALC886	Realtek ALC886
IO	LAN	GbE RJ45 x2	GbE RJ45 x2	GbE RJ45 x2	GbE RJ45 x2
	Display	VGA x1, DVI-D x1	VGA x1, DVI-D x1	VGA x1, DVI-D x1	VGA x1, DVI-D x1
	Audio	Phone jack x2 for Mic-in and Line-out	Phone jack x2 for Mic-in and Line-out	Phone Jack x2 for Mic-in and Line-Out	RCA x2 for right/left Line-out channels
	Serial I/O	RS232/422/485 x2	RS232 x1	RS232/422/485 x2	RS232 x1
	Digital I/O	None	1 x female DB9 for DI x4 and DO x4 (5V TTL)	None	1 x female DB9 for DI x4 (5V TTL) and DO x4
	USB 2.0	Type A x4	Type A x4	Type A x4	Type A x4
	Expansion	Mini-PCI x1	Mini-PCIe x1 with SIM card reader	Mini-PCIe x2: a half-sized socket and the other with SIM card reader(USB signal only).	Mini-PCIe x2: one with SIM card reader; Mini-PCI x1
Power Input		+12Vdc +/- 5%, ATX mode	+12Vdc +/- 5%, ATX mode	+24Vdc +/-5%, ATX Mode	+12Vdc +/- 5%, ATX mode
AC Adapter		60W +12V @ 5A	60W +12V @ 5A	60W +24V @ 2.5A	60W +12V @ 5A
OS Support		Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded (32 bit OS only)	Linux, Windows 7/7 Embedded/XP/XP Embedded
Certifications		CE, FCC Class A, RoHS	CE, FCC Class A, RoHS	CE, FCC Class A, RoHS	CE, FCC Class A, RoHS
Operating Temperature Range with Industrial Components		-10~55°C / 14~131°F	-10~55°C / 14~131°F	-20~55°C/-4~131°F	-5~45°C / 23~113°F
Operating Temperature Range with Commercial Components		-5~45°C / 23~113°F	-5~45°C / 23~113°F	-5~45°C / 23~113°F	-5~45°C / 23~113°F
Ordering Information		LEC-7000	LEC-7020D	LEC-7050B	LEC-7100



LEC-7105	LEC-7110	LEC-7920	LEC-7950
268x44x174mm (10.55"x1.73"x6.85")	268x44x174mm (10.55"x1.73"x6.85")	277x67x190mm (10.91"x2.64"x7.49")	277.65x59x175mm (10.93"x2.32"x6.89")
Intel Atom D525 1.8GHz	Intel Atom D2550 1.86GHz	1st Gen Intel i7/i5/Celeron	2nd Gen Intel Core i3, Celeron
Yes	Yes	Yes	Yes
Intel ICH8M	Intel NM10	HM55	HM65
DDR3 SODIMM x1	DDR3 SODIMM x1	DDR3 SODIMM x2	DDR3 SODIMM x2
Up to 4GB	Up to 4GB	Up to 8GB	Up to 16GB
CF socket Type I/II x1	None	None	CF socket Type I/II x1
2.5" HDD/SSD drive bay x1 eSATA with USB combo x1	2.5" SSD/HDD drive bay x1	2.5" HDD/SSD drive bay x1	2.5" HDD/SSD drive bay x1
Realtek RTL8111 x2	Intel 82583V x2	Intel 82574L x2	Intel 82583V x2
Intel GMA3150	Intel GMA3150	Intel® GMA HD Graphics	Intel® HD Graphics 3000
Realtek ALC886	Realtek ALC886	Realtek ALC886	Realtek ALC886
GbE RJ45 x2	GbE RJ45 x2	GbE RJ45 x2	GbE RJ45 x2
VGA x1, DVI-D x1	HDMI x1, VGA x1	DVI-I x1, DVI-D x1	HDMI x1, DVI-D x1, VGA x1
RCA x2 for right/left Line-out channels	Phone Jack x2 for Line-out and Mic-in	Phone jack x2 for Mic-in and Line-out	RCA x4 for right/left Line-in / Line-out channels
RS232 x1, RS232/422/485 x1	RS232 x1	RS232 x2	RS232/422/485 x2
2 x 5-pin terminal block for DI x4 (5V TTL) and DO x4	2x5 pin terminal block connector for DI x4 and DO x4 (5V TTL)	1 x female DB9 for DI x4 (5V TTL) and DO x4	1 x female DB9 for DI x4 and DO x4 (5V TTL)
Type A x4	Type A x4	Type A x4	Type A x4
Mini-PCIe x2: one with SIM card reader	Mini-PCIe socket x1 with SIM card reader	Mini-PCIe x1 with SIM card reader	Mini-PCIe x2: one with SIM card reader
+12Vdc +/- 5%, ATX mode	+12Vdc +/-5%, ATX Mode	+12Vdc +/-5%, ATX mode	+24Vdc +/-5%, ATX mode
60W +12V @ 5A	60W +12V @ 5A	75W +12V @ 6.2A	60W +24V@2.5A
Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded	Linux, Windows 7/7 Embedded/XP/XP Embedded
CE, FCC Class A, RoHS	CE, FCC Class A, RoHS	CE, FCC Class A, RoHS	CE, FCC Class A, RoHS
-5~45°C / 23~113°F	-10~55°C/14~131°F	0~45°C / 32~113°F	LEC-7950A:-20~55°C, LEC-7950B:-20~45°C
-5~45°C / 23~113°F	-5~45°C / 23~113°F	None	LEC-7950A:-5~45°C, LEC-7950B:-5~40°C
LEC-7105	LEC-7110	LEC-7920	LEC-7950A, LEC-7950B



Lanner is an Associate Member of the Intel® Intelligent Systems Alliance, a community of communications and embedded developers and solution providers committed to the development of modular, standards-based solutions on Intel technologies.

Intel® Intelligent Systems Alliance members provide original equipment manufacturers (OEMs) and developers with the advanced hardware, software, firmware, tools and systems integration they need to help get their designs to market faster. Alliance members get early access to roadmaps, test platforms, and design support. This helps us innovate with the latest technologies to give you first-in-market solutions you can use to stay ahead of your competition.

# Lanner

## Taiwan

Lanner Electronics Inc.  
7F, No.173, Sec.2, Datong Rd.  
XiZhi District,  
New Taipei City 221, Taiwan  
T: +886-2-8692-6060  
F: +886-2-8692-6101  
E: connect@lannerinc.com  
E: marketing@lannerinc.com

## USA

Lanner Electronics Inc.  
41920 Christy Street  
Fremont, CA 94538  
T: +1-510-979-0688  
F: +1-510-979-0689  
E: sales\_us@lannerinc.com

## China

立华科技  
北京市海淀区农大南路33号  
厢黄旗东路兴天海园一层  
T: +86 010-82795600  
F: +86 010-62963250  
E: service@ls-china.com.cn

## Canada

LEI Technology Canada Ltd  
6461 Northam Drive  
Mississauga, ON, L4V 1J2  
Toll\_free: +1 877-813-2132  
T: +1 905-362-2364  
F: +1 905-362-2369  
E: sales\_ca@lannerinc.com

[www.lannerinc.com](http://www.lannerinc.com)

Please verify specifications before quoting. All product specifications are subject to change without notice. No part of this publication may be reproduced in any form or by any means, electronic, photocopying or otherwise without prior written permission of Lanner Electronics Inc. All brand names and product names are the trademarks or registered trademarks of their respective companies.

© Lanner Electronics Inc., 2013