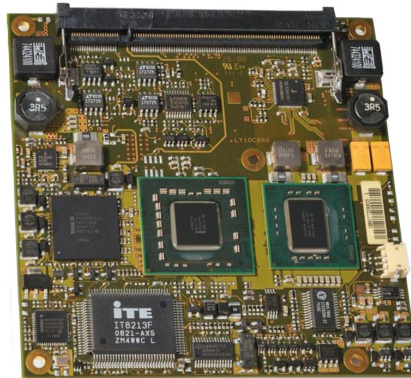


The H6312 COM Express module is based on Intel's 45nm dual core CPU technology enabling you to boost your embedded application to highest performance levels. Besides an extensive set of interfaces and features, the H6312 offers hardware and BIOS based security compliant to the requirements of TCG (Trusted Computing Group). The H6312 combines low voltage high performance processors and a compact Micro COM Express form factor, and is ideal for computing intensive, space constrained applications, with requirements for low power consumption and minimal heat dissipation. H6312 based on a selection of CPUs is available for extended temperature.



## Features

- Four CPU options qualified:
  - Intel® ULV Celeron 722 (1,20GHz)
  - Intel® Core™ 2 Duo ULV SU9300 (2x1.20GHz)
  - Intel® Core™ 2 Duo LV SL9400 (2x1.86GHz)
  - Intel® Core™ 2 Duo SV SP9300 (2x2,26GHz)
  - Contact Hectronic for information on other CPU options
- Intel® GS45 Chipset with integrated Mobile Intel® Graphics Media Accelerator 4500MHD and Intel® Clear Video Technology
- PCI Express™x16 (PEG) support
- Up to 4GB DDR2 SDRAM
- Four SATA-300 mass storage interfaces
- One Enhanced IDE port
- 10/100/1000 Base-TX Ethernet interface
- LVDS interface (24 Bit, dual channel)
- CRT interface
- Resolution up to 2.048 x 1.536
- Dual Independent Display supported
- Five PCI Express™ x1 lanes
- Eight USB 2.0 interfaces
- HD audio interface
- TPM 1.2
- Phoenix SecureCoreBIOS
- System monitoring, watchdog
- ACPI power management
- Fully COM Express™ Type 2 compliant
- "Compact" form factor (95 x 95 mm)
- Windows Vista, XP (embedded) and Linux supported

# H6312 - Technical Specifications

<b>Core Logic and Memory</b>		<b>Miscellaneous</b>	
<b>CPU</b>	<ul style="list-style-type: none"> <li>Intel® ULV Celeron 722, 1.20GHz, 5.5W TDP (Ext. temp. opt.)*</li> <li>Core™ 2 Duo ULV SU9300, 2x1.20GHz, 10W TDP (Ext.temp. opt.)*</li> <li>Core™ 2 Duo LV SL9400, 2x1.86GHz, 17W TDP (Ext. temp. opt.)*</li> <li>Core™ 2 Duo SV SP9300, 2x2.26GHz, 25W TDP</li> </ul> <p>Intel® Technologies: AMT 4.0 , Intel® 64 , Intel®Virtualization Technology** , VT-d Virtualized I/O Support** , Intel® Trusted Execution Technology** (* not on Celeron 722 model)</p>	<b>Watchdog Timer</b>	Initiates system reset (programmable, 0.4s ... 10min)
<b>Chipset</b>	Intel® GS45, ICH9M (both in small form factor)	<b>Fan Supply</b>	3-pin header (12V)
<b>Memory</b>	200-pin SO-DIMM socket for up to 4GB PC2-6400 (800MHz) DDR2 SDRAM	<b>Battery</b>	External
<b>Drives</b>		<b>System Monitoring</b>	Temperature, CPU Fan
<b>SATA</b>	4x SATA-2 channels (up to 300MB/s)	<b>LAN Interface</b>	
<b>EIDE</b>	1x Enhanced IDE port (ATA/UDMA166)	<b>Ethernet</b>	10/100/1000Base-TX (integrated in Intel® GS45 chipset)
<b>Standard Interfaces</b>		<b>Sound Interface</b>	
<b>USB</b>	8x USB 2.0	HD audio	
<b>Bus Interfaces</b>		<b>Security Device</b>	
<b>COM Express</b>	Type 2 interface, fully compliant	Trusted Platform Module 1.2	
<b>PCI Express</b>	Six channels PCI Express x1 (one channel reserved for GbitEthernet) , one PCI Express Graphic (PEG) x 16	<b>BIOS</b>	
<b>PCI Bus</b>	32 Bit, 33MHz standard interface (PCI 2.3)	Phoenix SecureCore	
<b>LPC</b>	Low Pin Count bus for legacy interfaces	<b>Boot Options</b>	Quick Boot, MultiBootXP (HD, CD, LAN, USB), Boot without keyboard, LAN Boot via PXE (RPL optional), Wake on LAN supported
<b>Flat Panel/ CRT Interface</b>		<b>Security</b>	TPM 1.2 support, Secure Boot Technology
<b>Graphics Ctrl.</b>	Mobile Intel® Graphics Media Accelerator 4500MHD and Intel® Clear Video Technology (integrated in Intel® GS45), DirectX 10 and OpenGL 2.0 supported	<b>Power Managem.</b>	ACPI (S3, S4, S5 supported), Enhanced Intel SpeedStep® technology, CPU fan control
<b>Video Memory</b>	UMA, up to 384MB	<b>USB</b>	USB legacy support (keyboard, mouse, storage)
<b>LCD Interface</b>	LVDS 18/24 Bit, dual channel	<b>Video</b>	Video BIOS with flat panel extensions (EPI)
<b>CRT Interface</b>	Resolution up to 2048 x 1536	<b>Setup</b>	CMOS configuration backup in EEPROM
		<b>HW Progr. I/F</b>	UspEpc(Universal board support package for embedded PCs)
		<b>Power Supply</b>	
		<b>Power</b>	+12V +/-10%, 5V Standby optional
		<b>Power Cons.</b>	9W (typ.) up to 30 W (typ.)
		<b>Environment</b>	
		<b>Ambient</b>	0°... 60°C (operating)
		<b>Temp.</b>	-25°... 70°C (operating)* * Applicable for a selection of CPUs -25°... 85°C (storage)
		<b>Humidity</b>	5 ... 95% (operating, non-condensing) 5 ... 95% (storage, non-condensing)
		<b>Mechanical</b>	
		<b>Size</b>	95mm x 95mm x13mm

COM Express® is a registered trademark of the PCI Industrial Computer Manufacturers Group