

# Industrial Mother Board

## IM-P4ELA

Intel® Core™ 2 Duo Desktop Processor based mATX Industrial Motherboard with 1 ISA, 2 PCI, VGA, Dual Gigabit Ethernet, SATA, Audio, COM & USB



### Core Specifications

- Intel® Core 2 Quad / Core 2 Duo / Celeron® processor in an LGA775 Socket
- Intel® Q45 Chipset, 1333/1066/800 MHz FSB
- Dual-channel DDR3 Memory Architecture
- Integrated Intel® GMA X4500 Graphics
- Dual Gigabit Ethernet
- Six SATA 300 MB/s Ports, Raid 0,1,5,10
- Six COM Ports, 8 USB 2.0 ports
- One PCI-E x16, One ISA, Two PCI, One PCIe x4 Slots

### Specifications

System	
CPU	Intel® Core 2 Quad / Core 2 Duo / Celeron processor in the LGA775
FSB	1333/1066/800 MHz
BIOS	AMI BIOS with 8 Mb Flash EEPROM
System Chipset	Intel® Q45 + ICH 10DO
I/O Chip	Intel® 82801JDO with Winbond® W83627DHG
System Memory	4 x 240-pin DDR3 DIMM sockets Dual-channel DDR3 1066/800 SDRAM Max. up to 8 GB memory
Storage	1 x Parallel ATA IDE ports with UDMA 33, ATA-66/100 6 x Series ATA 300 ports
RAID	ICH10-DO Intel Raid 0,1,5,10
Watchdog Timer	Reset with internal timer for 1 min/s ~ 255min/s
H/W Status Monitor	Monitoring system temperature, voltage, and cooling fan status. Auto throttling control when CPU overheats
GPIO	Onboard programmable 8-bit Digital I/O interface
Expansion	1 x PCI Express x16, 1 x ISA 2 x PCI , 1 x PCIe x4/ PCIe x1 slots
MIO	
Internal I/O	1 x IrDA, 4 x RS-232, 1 x RS-232/422/485, 4 x USB 2.0, FDD, LPT
Back Panel I/O	1 x VGA, 1 x Audio, 2 x RJ-45, 1 x RS-232, 4 x USB 2.0, 1 x KB, 1 x Mouse
Display	
Graphics Controller	Intel® integrated GMA4500 Graphics
Display Memory	Up to 1024MB shared with system memory
Resolution	Analog display : up to 2048 x 1536 @ 75Hz (QXGA)
Display Interface	DSUB-15 connector for VGA output
DVI	None

Audio	
HDAC	Realtek® ALC880 7.1 + HD audio codec
Audio Interface	Mic in, Line in, CD Audio in, Line out, Rear out and Center/Subwoofer out
Ethernet	
Controller	Dual Intel® 82574L PCIe Gigabit LAN Ethernet controllers
Ethernet Interface	IEEE 802.3 10BASE-T/100BASE-TX/1000BASE-T
Mechanical & Environmental	
Power Requirement	+3.3 V @ 4.73 A, +5 V @ 0.96 A, +12 V @ 9.11 A, -12 V @ 0.01 A, 5 VSB @ 0.07A
Power Type	24-pin ATX power connector, 1 x 4-pin ATX 12V power connector
FAN connector	1 x CPU, 2 x system with DC 12V
Operating Temperature	0~60°C
Operating Humidity	10%~90% relative humidity, noncondensing
Size (L x W)	244 mm x 244 mm
Weight	1.44 lb (650 g)

### Ordering Information

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