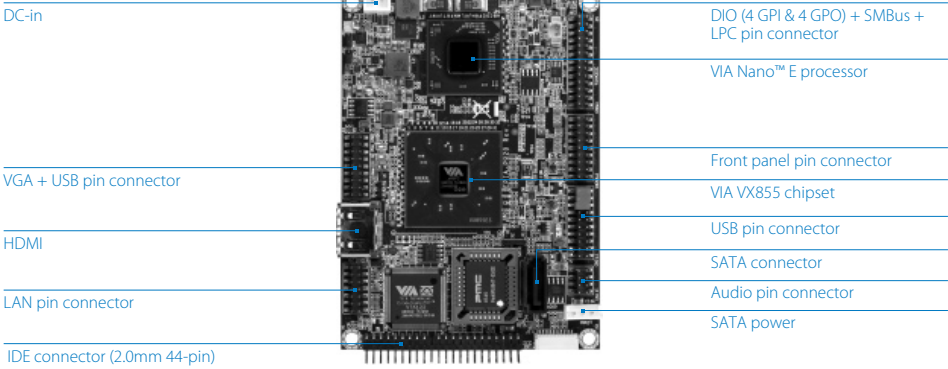## VIA
EPIA-P820

**Pico-ITX Nano™ E Board
with MPEG-2, WMV9, H.264,
LVDS, HDMI®, USB, SATA &
GigaLAN Support**

Features

- Integrated VIA Chrome9™ 3D/2D AGP graphics with MPEG-2, WMV9 & H.264 video decoding acceleration

- Supports DDR2 800/667 SDRAM (SODIMM)

- Supports one Gigabit Ethernet

- Supports one IDE and one SATA hard drive

- Supports six USB 2.0 ports

- Onboard LVDS support: One single-channel LVDS panel support

- Supports HD audio
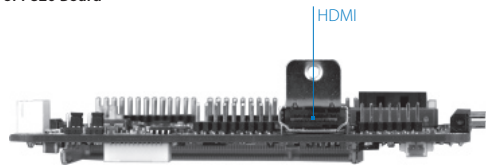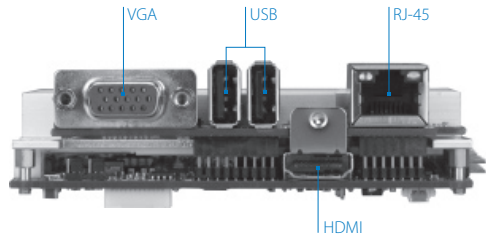
- Supports one HDMI port

Board Placement

DC-in

DIO (4 GPI & 4 GPO) + SMBus + LPC pin connector

VIA Nano™ E processor

VGA + USB pin connector

Front panel pin connector

VIA VX855 chipset

HDMI

USB pin connector

SATA connector

LAN pin connector

Audio pin connector

SATA power

IDE connector (2.0mm 44-pin)

Specifications

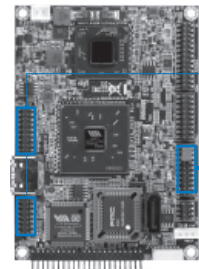| Model Name	EPIA-P820-12L
Processor	1.2 GHz VIA Nano™ E
Chipset	VIA VX855 Unified Digital Media IGP chipset
System Memory	1 x DDR2 800/667 SODIMM socket Up to 2GB memory size
VGA	Integrated VIA Chrome9™ 3D/2D AGP graphics with MPEG-2, WMV9 & H.264 video decoding acceleration
Onboard IDE	1 x IDE 2.0mm 44-pin pin header
Onboard Serial ATA	1 x SATA connector
Onboard LAN	1 x VIA VT6122 Gigabit Ethernet controller
Onboard Audio	1 x VIA VT1708S High Definition Audio Codec
Onboard I/O Connectors	1 x USB pin connector for 4 additional USB 2.0 ports 1 x LPC pin connector 1 x SMBus pin connector 1 x Front panel pin connector 1 x PS2 mouse/keyboard pin connector 1 x Fan pin connector: Sys FAN 1 x Single-channel LVDS pin connector (with backlight control) 1 x Audio pin connector for Line-in, Line-out, & Mic-in 1 x DIO pin connector (4GPI+4GPO) 2 x UART port pin-header/VCP 1 x SATA power connector 1 x DC-in power connector
Back Panel I/O	1 x HDMI port 1 x VGA port 1 x GigaLAN port 2 x USB 2.0 ports
BIOS	AMI BIOS 4Mbit LPC flash memory
Operating System	Windows XP, Windows Embedded CE, Windows Embedded Standard, Linux
System Monitoring & Management	Wake-on LAN, Keyboard Power-on, Timer Power-on System power management, AC power failure recovery Watch Dog Timer
Operating Temperature	0°C ~ 60°C
Operating Humidity	0% ~ 95% (relative humidity; non-condensing)
Form Factor	Pico-ITX 10 cm x 7.2 cm
Compliance	CE/FCC/BSMI/RoHS

CE FC

ROHS COMPLIANT

Back Panel I/O

IO of P820 Board

HDMI

IO of P820 Board with P720-A

VGA   USB   RJ-45

HDMI

Accessories

P720-A
VGA/GigaLAN/2 USB 2.0

WLAN USB Module
802.11b/g/n standards

Ordering Information

Model Name	CPU Frequency	Description
P820-12L	1.2 GHz Nano™ E	Pico-ITX Board with 1.2 GHz Nano™ E CPU, MPEG-2, WMV9, H.264, 1 x LVDS, 1 x HDMI, 6 x USB, 1 x IDE, 1 x SATA, 1 x GigaLAN, on-board DC-in

Block Diagram
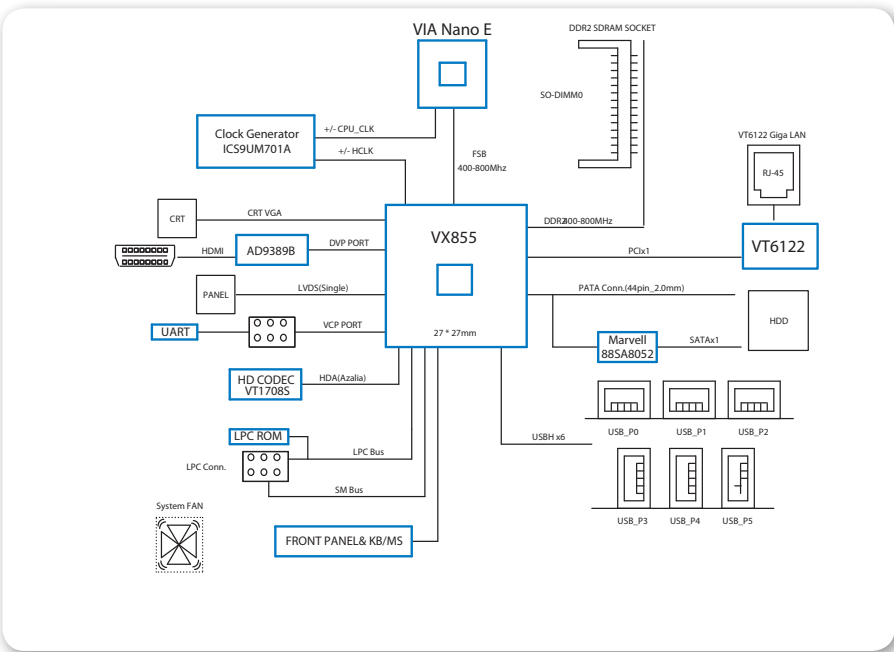
Packing List

Items
1 x P720–A I/O card (Pre-assembled)
1 x DC power cable
1 x SATA cable
1 x SATA power cable
1 x Driver CD