epic NANO-GM45A

EPIC SBC supports Intel® 45nm mobile Core™ 2 Duo processor with Intel® GM45 & ICH9M platform

NEW

Dual Channel DDR2 800/667 MHz support up to 4GB

Socket P 65/45nm CPU support up to 1066MHz FSB

Support HDMI IEEE1394a

HD Audio

SATAII

2 x IEEE1394a

PCIe Mini Card   4 x RS232   HDTV   18/24bit dual-channel LVDS

VGA   HDMI   Dual PCIe GbE   4 x USB

CB-IEEE1394-RS Included

FSB**1066**   DDR2**800**
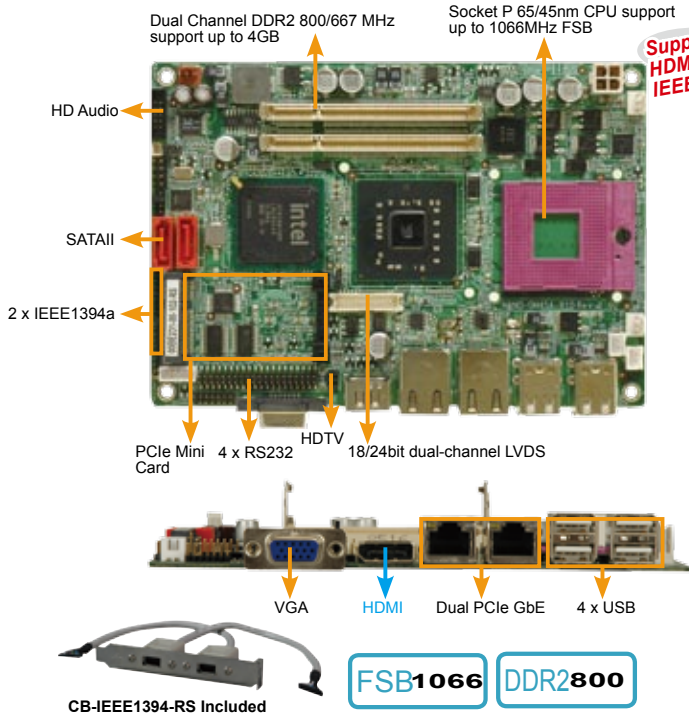
High-Definition Multimedia Interface

The High-Definition Multimedia Interface (HDMI) is a compact audio/video interface for transmitting uncompressed digital data. It represents a digital alternative to consumer analog standards such as Radio Frequency (RF) coaxial cable, composite video, S-Video, SCART, component video, D-Terminal, and VGA. HDMI connects digital audio/video sources such as set-top boxes, Blu-ray Disc players, personal computers, video game consoles, and AV receivers to compatible digital audio devices, computer monitors, and digital televisions.

DVI-HDMI Adapter   HDMI-DVI Adapter

Features of HDMI

- **Higher Speed - 10.2 Gbps**
  increases its single-link bandwidth from 165 MHz (4.95 Gbps) to 340 MHz (10.2 Gbps) to support the demands of future high definition display devices
- **New Lossless Audio Formats**
  support for new, lossless compressed digital audio formats Dolby® TrueHD and DTS-HD Master Audio™ for theater-like, professional sound quality.
- **Lip Sync**
  HDMI incorporates an automatic audio/video syncing capability that allows devices to perform this synchronization automatically with accuracy.
- **New Mini Connector**
  With small portable devices such as HD camcorders and still cameras demanding seamless connectivity to HDTVs
- **Deep Color**
  HDMI supports 30-bit, 36-bit and 48-bit (RGB or YCbCr) color depths, up from the 24-bit depths in previous versions of the HDMI specification.
  • Lets HDTVs and other displays go from millions of colors to billions of colors
  • Eliminates on-screen color banding, for smooth tonal transitions and subtle gradations between colors
  • Enables increased contrast ratio
  • Can represent many times more shades of gray between black and white.

Color banding is perceptible to the human eye with standard color displays
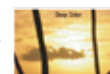
Using billions of colors, Deep Color virtually eliminates color banding

- **Broader Color Space:**
  -The next generation "xvYCC" color space can display virtually the entire gamut of colors viewable by the human eye
  -Next-generation "xvYCC" color space supports 1.8 times as many colors as existing HDTV signals
  -Lets HDTVs display colors more accurately
  -Enables displays with more natural and vivid colors

RGB   xvYCC

Specifications

- ◆ CPU
  Socket P Intel® Core™ Duo Processor with 1066/800 MHz FSB
  Socket P Intel® Celeron® M Processor with 667 MHz FSB
- ◆ System Chipset
  Intel® GM45/ICH9M
- ◆ BIOS
  AMI BIOS
- ◆ System Memory
  Two 200-pin 800/667MHz DDR2 SDRAM SO-DIMM supported (system max. 4GB)
- ◆ Ethernet Chipset
  Dual Realtek 8111CP GbE Chipset
- ◆ I/O Interface
  4 x USB2.0
  2 x SATAII
  4 x RS-232
  2 x IEEE 1394a
- ◆ Expansions
  PCIe mini card
- ◆ Super I/O
  Fintek F81216D
- ◆ Audio
  Realtek ALC888 HD Audio
- ◆ Display Interface
  Mobile Intel® Graphics Media Accelerator 4500MHD
  Analog CRT / 18/24-bit dual channel LVDS / HDTV-out
  HDMI supports up to 1080p
- ◆ Watchdog Timer
  Software programmable supports 1 ~255 sec. system reset
- ◆ Power Supply
  12V only, AT/ATX supported
- ◆ Power Consumption
  12V@3.74A (Intel® Core™2 Duo T9600 2.8GHz, 2GB DDR2 800 MHz)
- ◆ Temperature
  Operation: 0°C~ 60°C (32°F~ 140°F)
- ◆ Humidity
  Operation: 5% ~95 non-condensing
- ◆ Dimensions
  165 mm x 115 mm
- ◆ Weight
  GW: 700g, NW 350g

Features

1. Intel® 45nm mobile Core™ 2 Duo processor(Penryn) supported
2. High quality media MPEG-2 decoding, WMV9 (VC-1) and H.264 (AVC DX10) supported
3. DDR2 800/667 MHz dual channel SDRAM supported up to 4GB
4. 18/24-bit dual channel LVDS / Analog CRT / HDTV output/HDMI supported
5. Support 4x COM, 4x USB, 2x SATAII, 2x IEEE1394a

Packing List

1 x NANO-GM45A single board computer
1 x Mini jumper pack
1 x Power cable (P/N: 32100-087100-RS)
2 x SATA cable (P/N:32000-062800-RS)
1 x Audio cable (P/N: 32000-072100-RS)
1 x Dual Port IEEE1394 cable (P/N: CB-IEEE1394-RS)
1x Four RS-232 cable (P/N:32200-025401-RS)
1 x Utility CD
1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
NANO-GM45A-R10	EPIC SBC supports Intel® 45nm mobile Core™2 Duo processor with Intel® GM45 & ICH9M platform, DDR2, dual GbE, LVDS/CRT/HDTV-out, SATAII, USB2.0
CPU Cooler	CF-479B-RS
32000-083702-RS	HDTV cable set with S-Video, composite and component Interfaces
32100-088600-RS	SATA power cable
32000-114000-RS	SATA 5V power output cable Kit for NANO series
32100-043403-RS	ATX power cable