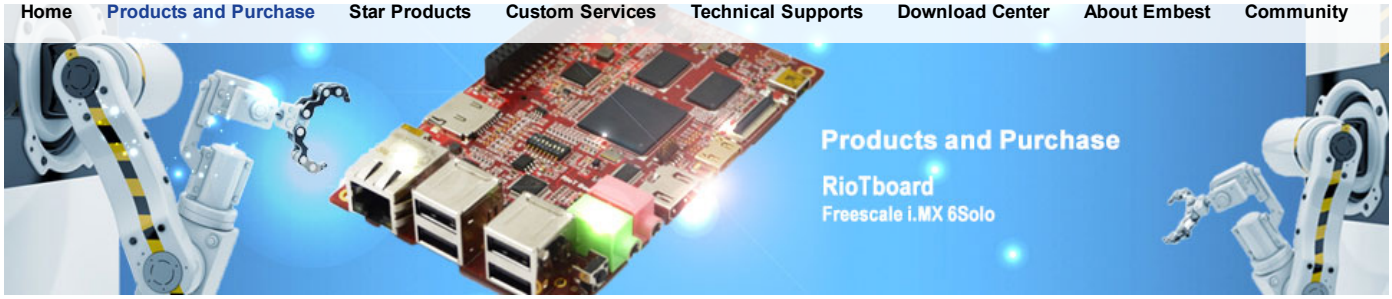



Products and Purchase

- Evaluation Boards
- Single-Board Computers
- CPU Modules
- Modules for Raspberry Pi
- Application Platforms
- Expansion Modules/Accessories
- Development Tools
- CooCox
- EmbestUniversity®
- AVID Series

Search here Search result：0 Results Sort by： --Select--

**Manufacturers**

Raspberry Pi, Freescale, Texas Instruments, Atmel, Altera, STMicroelectronics, NXP, Broadcom, Nuvoton, Samsung, AMD, CYPRESS, BBC

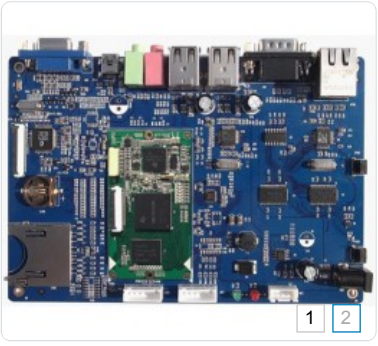
**Cores**

Cortex-A9, Cortex-A7, Cortex-A53, Cortex-A8, Cortex-A5, ARM 11, ARM 9, ARM7, Cortex-M4, Cortex-M3, Cortex-M0, SoC FPGA, X86

Search

Home > Products > Single-Board Computers > SBC8140 single board computer

# SBC8140 single board computer




**Accept ODM/OEM**

**LeadTime:** 2 weeks

Part No: 6010244 6010245 6010246

Item: SBC8140 Single Board Computer

Quantity: 1

Price: $226.00

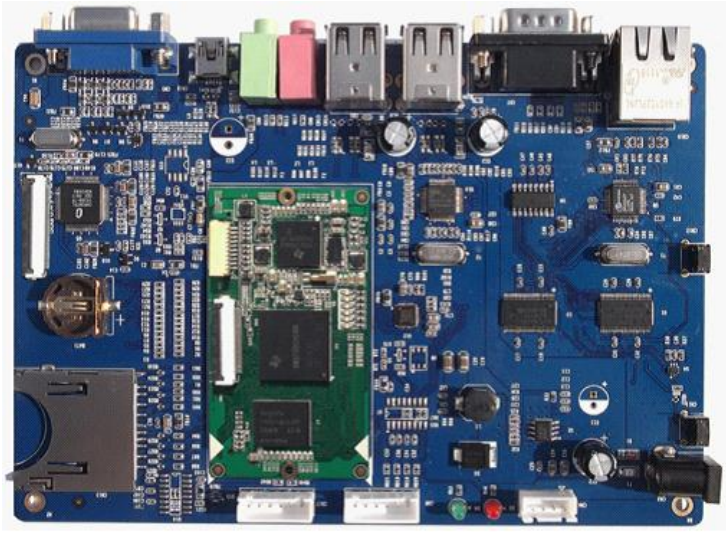
Delivery Wt: 2.21 lb

**Buy in bulk, please contact: globalsales@embest-tech.com**

Share Add to Cart

Overview **Purchase** **Inquiry** **Download**

The SBC8140 is another Single Board Computer designed by Embest using Mini8510 CPU Module as the CPU CPU Module. The board is specially targeting those applications request high definition video or large-scale data processing *such as* 2D/3D game console products, portable devices, high-end industrial equipment, medical devices, and intelligent home systems and so on.



The CPU Module Mini8510 has the DM3730 microcontroller, 256MByte DDR SDRAM, 512MByte NAND Flash, RTC, LEDs, one Camera interface as well as a 10-pin JTAG interface on board. It is connected with the SBC8140 expansion board through two 1.27mm space 2*45-pin dip connectors. The SBC8140 expansion board has exposed many of other features of the DM3730 through headers and connectors including serial ports, USB Host, OTG, Ethernet, Audio In/Out, Keyboard, LCD/Touch Screen interface, VGA, SD card and etc.

Embest offers a complete software development package to customers. The board supports for Linux 2.6.21 and WindowsCE 6.0 operating systems and is provided with complete basic drivers which enable a quick channel to evaluate the TI DM3730 processor and customize application software.

Embest also offers various modules for the SBC8140 which greatly extends the functions of the board and would be flexible for customer selection to meet their own needs.

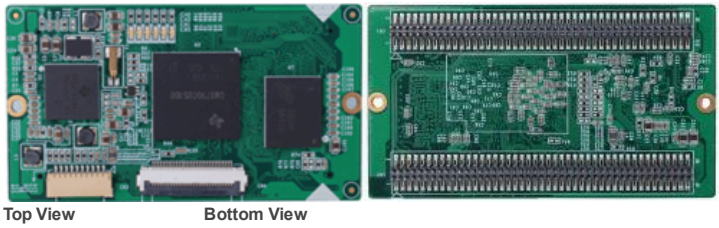
| Module | Description | Interface to Board | Linux | WinCE |
|---|---|---|---|---|
| **WF8000-U** | WiFi Module | USB Host | Support* | Support# |
| **LVDS8000** | LVDS Module | LCD | Support* | Support* |
| **CAM8100-U** | Digital Camera Module | USB Host | Support* | Support# |
| **CDMA8000-U** | 3G Module (CDMA2000 standard) | USB Host | Support* | Support# |
| **WCDMA8000-U** | 3G Module (WCDMA standard) | USB Host | Support* | Support# |

*** = Provided with Source Code**
**# = Not Provided with Source Code**

The Texas Instruments' DM3730 DaVinci™ digital media processor is powered by up to 1-GHz (also supports 300, 600, and 800-MHz operation) ARM Cortex-A8 and 800-MHz (also supports 250, 520 and 660-MHz operation) C64x+ DSP core, and has integrated 3D graphics processor, imaging and video accelerator (IVA), USB 2.0, MMC/SD memory card, UART and many more. DaVinci DM3730 video processor is pin-to-pin compatible with Sitara AM37x devices and software compatible with the OMAP35x processors. The C64x+ DSP and hardware video accelerator enable audio and HD 720p video decoding and encoding independent of the ARM processor. The programmable DSP engine allows multiple signal processing tasks such as image processing and analysis, digital filtering, and math functions. DaVinci DM3730 video processor is suitable for 720p HD (High Definition) video applications which require large amount of data processing.

The SBC8140 Single Board Computer is based on DM3730 processor and designed with a tiny CPU Module Mini8510 mounted directly onto an expansion board. The board is characterized as follows:

CPU Board Mini8510



**Top View** **Bottom View**

### Hardware Features

**Mechanical Parameters**

- Dimensions: 67 mm x 37 mm
- Power Consumption: 1A @ 3.3V
- Temperature Range: 0 ~ 70 Celsius
- Temperature Range: 20% ~ 90%

**Processor**

- **TI DM3730** DaVinci Digital Media Processor, 1GHz ARM Cortex-A8 Core, 800-MHz TMS320C64x+™ DSP Core (pin-to-pin compatible with **TI AM3715**)

**Memory**

- 256MByte DDR SDRAM, 166MHz
- 512MByte NAND Flash, 16bit

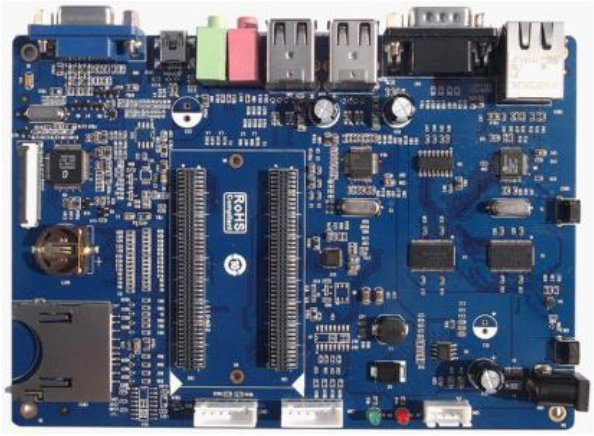
**Input Interface**

- 12-bit Camera interface (30-pin FPC connector, support CCD or CMOS camera)
- 1-channal 4-wire JTAG interface (10-pin 1.0mm pitch connector)
- 6 LEDs (programmable status LEDs)
- 2-channel SPI
- GPMC bus (16-bit data bus, 10-bit address bus, 4 chip-selection signals and several

control signals)

- 3-channel 5-wire UARTs
- 1-channel ULPI (USB1 HS)
- Audio in/out
- 1-channel I2C
- 2-channel McBSP (McBSP1 and McBSP3, McBSP3 is multiplex with UART2)
- 2-channel SD/MMC: MMC1 (8-wire), MMC2 (4-wire)
- 24-bit DSS interface

**Expansion Board of SBC8140**



**Mechanical Parameters**

- Dimensions: 165.00 mm x 115.00 mm
- Input Voltage: +5V
- Temperature Range: 0 ~ 70 Celsius
- Humidity Range: 20% ~ 90%

**Audio/Video Interfaces**

- An Audio input interface
- A two-channel Audio output interface
- A TFT LCD interface, resolution supporting up to 2048*2048
- 4 line Touch Screen
- A standard VGA interface, resolution supporting up to 1024*768

**Data Transfer Interface**

- Serial port:
  - 1 x 5 line Debug serial port, RS232 voltage (UART1, via DB9 connector)
  - 1 x 3 line serial port, TTL voltage (UART2, via 6-pin connector)

  - 1 x 5 line serial port, RS232 voltage (UART3, via 6-pin connector)

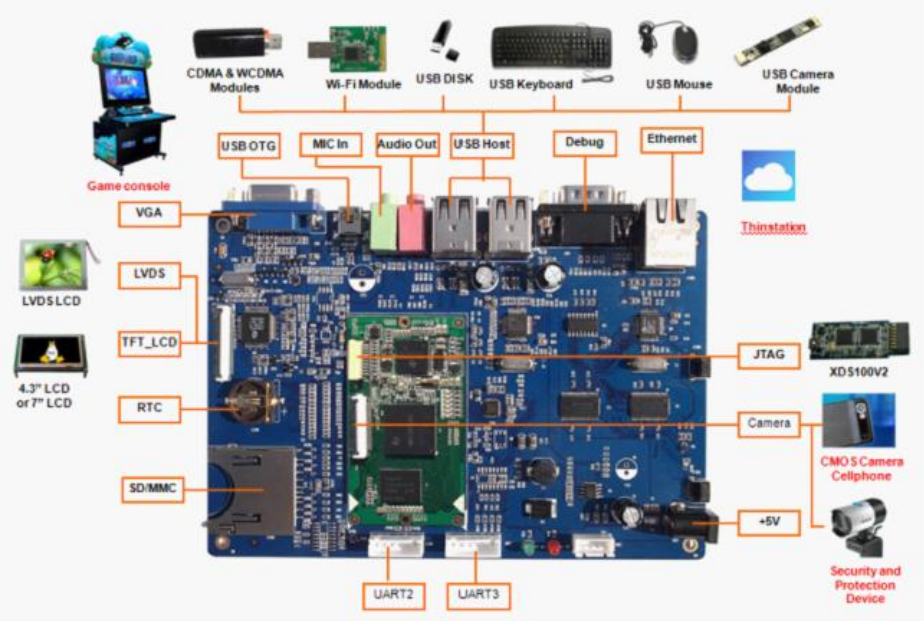
- USB port:
  - 1 x USB2.0 OTG, High-speed, 480Mbps (Mini-USB connector)
  - 4 x USB2.0 Host, High-speed, 480Mbps (USB A Type)

- SD card slot
- Ethernet: 10/100Mbps, RJ45 connector

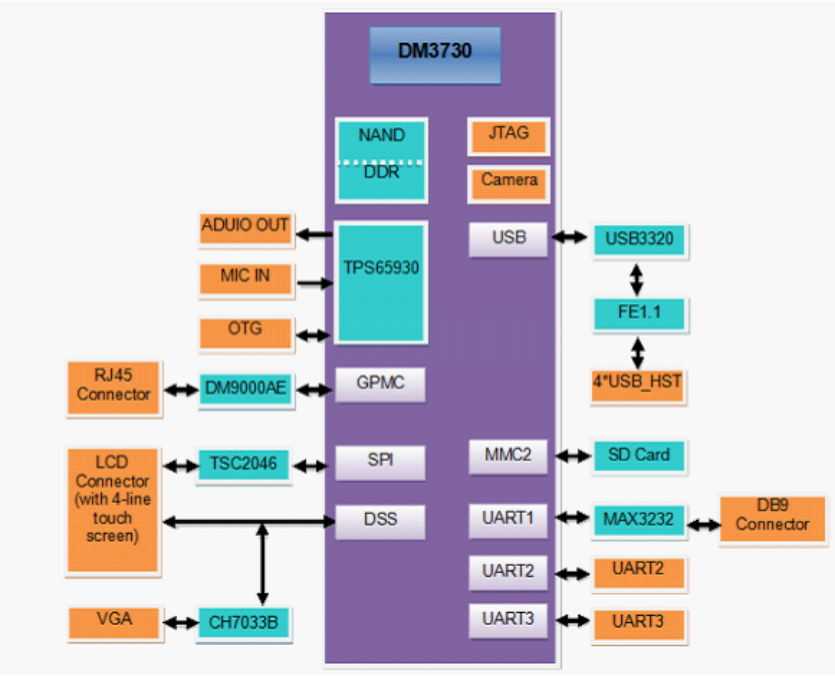
**Input Interface**

- One BOOT button
- One RESET button
- Two USER buttons
- One Power indicator

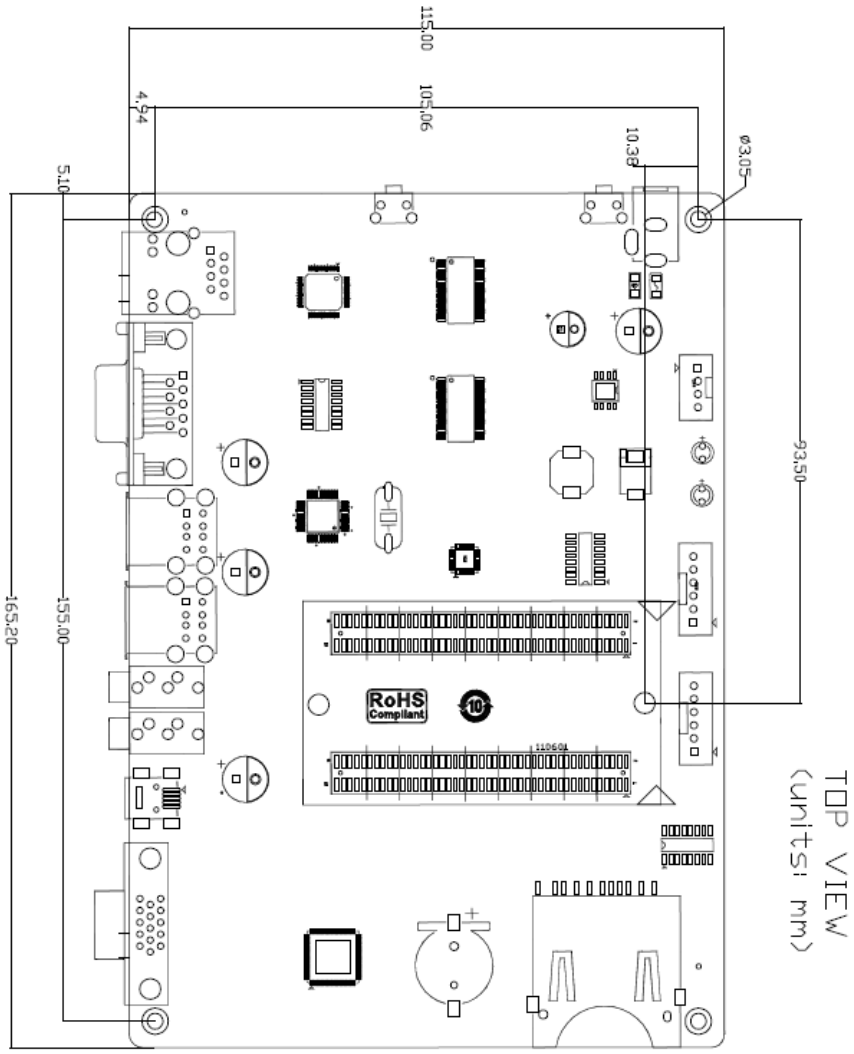
**Interface Introduction**




**Function Block Diagram**




**Dimensions**




**Software**

The SBC8140 Single Board Computer is provided with Window CE 6.0.net BSP and Linux 2.6.32 BSP with steady-going drivers, many of which are all in source code. Please refer to below table.

| OS | Item | Feature | Description |
|---|---|---|---|
| Linux | Boot | Version | X-loader-1.41 U-boot 1.3.3 |
| | | Boot Mode | Boot Linux from SD card, NAND Flash or Ethernet |
| | | Image update | Support updating image from SD card or Ethernet |
| | | Logo update | Support updating logo |
| | Kernel and drivers | Version | Linux 2.6.32 |
| | | File System Format | ROM/CRAM/EXT2/EXT3/FAT/NFS/ JFFS2/UBIFS |
| | | Driver | Serial, RTC, Net, Flash, LCD, Touch screen, VGA, Audio In/Out, SD, USB Host, USB OTG, Key, LED, 2D/3D, Power Management (backlight) |
| | File System | File System Format | Ramdisk File System, UBI File System |
| | | function | Provided Lib (ALSA -lib, tslib, glibc), udev support |
| | Boot | Version | x-load-1.41, eboot |
| | | Boot Mode | Boot WINCE from SD card or NAND Flash or Ethernet |
| | | Image update | Support updating image from SD card or Ethernet |

| | | | |
|---|---|---|---|
| WinCE | System | Characteristics | KITL kernel debug, Reboot, Watchdog, RTC |
| | | Driver | Serial, RTC, Net, Flash, LCD, Touch screen, VGA, Audio In/Out, SD, USB Host, USB OTG, Key, LED, 2D/3D, Power Management (backlight, PWM, ADC) |
| | | Application module | Flash Player plug-in and Flash player |
| | | | MP3/MPEG4/H264 DSP hardware decoder |

**Related Products**


SBC8530 Single Board Computer


DevKit8500D Evaluation Kit


SBC2416G single board computer

Contact Us

**Tel:** 0755-33190868-833/863/866/650

**Fax:** 0755-25616057

**Sales:** globalsales@embest-tech.com

**Support:** support@embest-tech.com

Tel: +86-(0)755-33190868-863/865/866/650

Emails: globalsales@embest-tech.com



## About Embest

Embest Technology Co. Ltd, (part of element14/Premier Farnell Group ) is a leading provider of embedded system solutions including hardware and software development tools and design services. With over 15 year experience in embedded solutions, Embest's expertise allows customers to implement Innovative technologies and products across a wide range of application areas, including automotive, consumer, industrial, wired and wireless networking. By offering a wide range of inexpensive hardware platforms for ARM-based controllers and software solutions for Android, Linux and Wince, we help customers quickly develop embedded applications, saving cost and getting faster to market.