

# **EBV *Beagle***

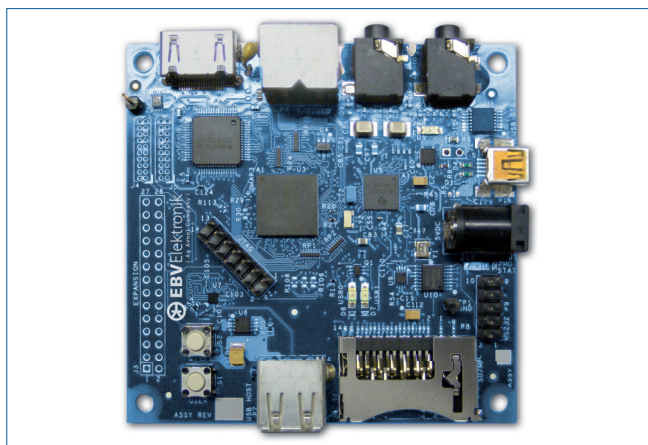
TI OMAP™35x Reference Platform presented by EBV Elektronik



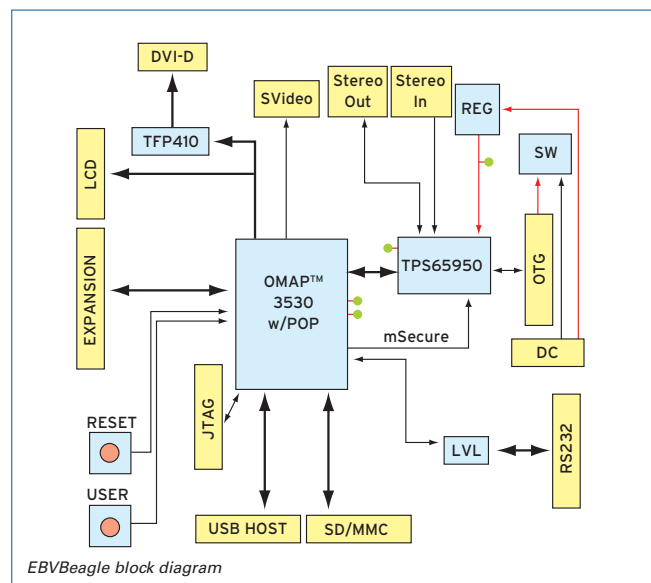
# EBV Beagle

TI OMAP™35x Reference Platform presented by EBV Elektronik

The *EBV Beagle* is an ultra-miniaturised single board computer featuring OMAP3530 processor, providing embedded processing, with the industry's best power/performance ratio in a single chip. With more than 4 x performance improvement over existing ARM9-based products in the market, the ARM Cortex-A8 core is combined with dedicated hardware capable of accelerating 2D/3D graphics and processing HD video, enabling more intuitive user interfaces as well as advanced graphics and multimedia applications. The *EBV Beagle* leverages OMAP3530 offering of right hardware, software and Open Source ecosystem to develop next-generation high performance embedded processing applications including portable infotainment and industrial devices, points of sale, digital signage, low-power medical devices and industrial automation.



## HARDWARE

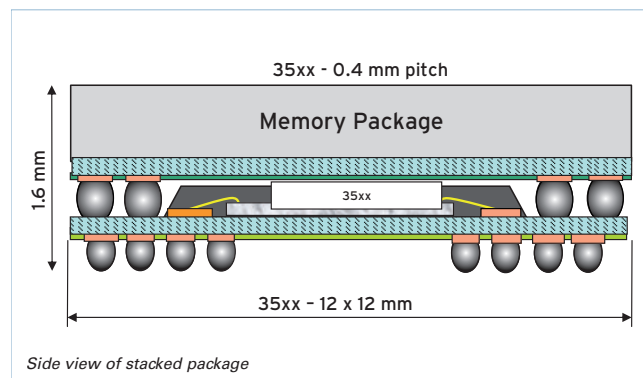


## EBV Beagle Board Features

	Feature
Processor	OMAP3530 ES3.1
POP Memory	2 Gb NAND , 2 Gb MDDR SDRAM
PMIC TPS6950	Power Regulators
	Audio CODEC
	Reset
	USB OTG PHY
Debug Support	14-pin JTAG
	UART
PCB	3.1" x 3.0" (78.74 x 76.2 mm)
Indicators	Power
	PMU
HS USB 2.0 OTG Port	Mini AB USB connector
	TPS65950 I/F
	MiniAB
HS USB Host Port	Single USB HS Port
Audio Connectors	3.5 mm
	L + R out
SD/MMC Connector	6 in 1 SD/MMC/SDIO
User Interface	1 user-defined button
Video	DVI-D
Power Connector	USB Power
Expansion	Power (5 V & 1.8 V)
Connector (Not Populated)	McBSP
	I <sup>2</sup> C
	MMC
2 LCD Connectors	Access to all of the LCD control signals plus I <sup>2</sup> C

## Background Information on the OMAP3530

The *EBV Beagle* board uses the OMAP3530, which comes in a 0.4 mm pitch POP package. POP (Package On Package) is a technique where the memory, NAND and SDRAM, are mounted on top of the OMAP3530. For this reason, when looking at the *EBV Beagle* board, you will not find an actual part labelled OMAP3530.



OMAP3530 high-performance application processor is designed to provide best-in-class multimedia, graphics and embedded processing sufficient to support the following:

- HD video streaming
- 2D/3D advanced graphics
- Floating point processing
- Up to 1200 DMIPS performance
- Scalability (pin-compatible) across all OMAP35x family

**The Device supports high-level Operating Systems (OSs), such as:**

- Linux
- Windows Embedded CE 6.0

This OMAP device includes state-of-the-art power-management techniques required for high-performance mobile products.

**The following Subsystems are Part of the Device:**

- Microprocessor subsystem based on the ARM Cortex™-A8 microprocessor
- IVA2.2 subsystem with a TMS320C64x+™ Digital Signal Processor (DSP) core
- POWERVR™ SGX subsystem for 2D and 3D graphics acceleration
- Camera Image Signal Processor (ISP) that supports multiple formats and interfacing options
- Display subsystem with a wide variety of features for multiple concurrent image manipulation, and a programmable interface supporting a wide variety of displays. The display subsystem also supports NTSC/PAL video out
- Level 3 (L3) and Level 4 (L4) interconnects that provide high-bandwidth data transfers for multiple initiators to the internal and external memory controllers and to on-chip peripherals

**The Device also offers:**

- A comprehensive power and clock-management scheme that enables high-performance, low-power operation, and ultra low-power standby features. The device also supports SmartReflex™ adaptive voltage control. This power management technique for automatic control of the operating voltage of a module reduces the active power consumption
- Memory stacking feature using the POP implementation (CBB and CBC packages only). A third package is available without POP support, but featuring Via channel array technology, providing 0.8 mm pitch designing and manufacturing rules, in a 0.65 mm pitch package

## PERIPHERALS

The EBVBeagle board communicates with the outside world via its various interfaces. Therefore, an SD/MMC+ card, stereo-out, stereo-in, RS-232 and USB 2.0 high-speed OTGs are placed above the plug connectors typically used in the sector for DVI-D and S-Video. Power for the entire high-performance board can be supplied via the USB port or a separate power socket. The interfaces routed out via separate JTAG, I<sup>2</sup>C, I<sup>2</sup>S, SPI and SD/MMC ports provide the board with extended flexibility or integration into an overall system.

## SOFTWARE

The board is shipped with U-Boot and X-Loader flashed onto the EBVBeagle board and a Linux BSP flashed on the MMC Card.

### More than just the Community

The EBVBeagle board leverages existing worldwide open source community, which also provides the board's entire design data as well as various compatible software packages free of charge. EBV provides comprehensive design expertise via our technical sales department and application specialists.

## PRICE AND AVAILABILITY

### All-inclusive

In addition to the fully equipped board, detailed documentation, external power supply, the DVI cable and 2 GB MM card containing a pre-installed Linux image, the 'EBVBeagle – out-of-the-box solution' also includes a USB-to-Ethernet stick allowing this low-power single-board computer to be controlled directly via the network and a USB hub that allow the direct connection of a mouse and keyboard. Part-No: EBVBeagle, price is € 179.

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## ABOUT EBV ELEKTRONIK

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