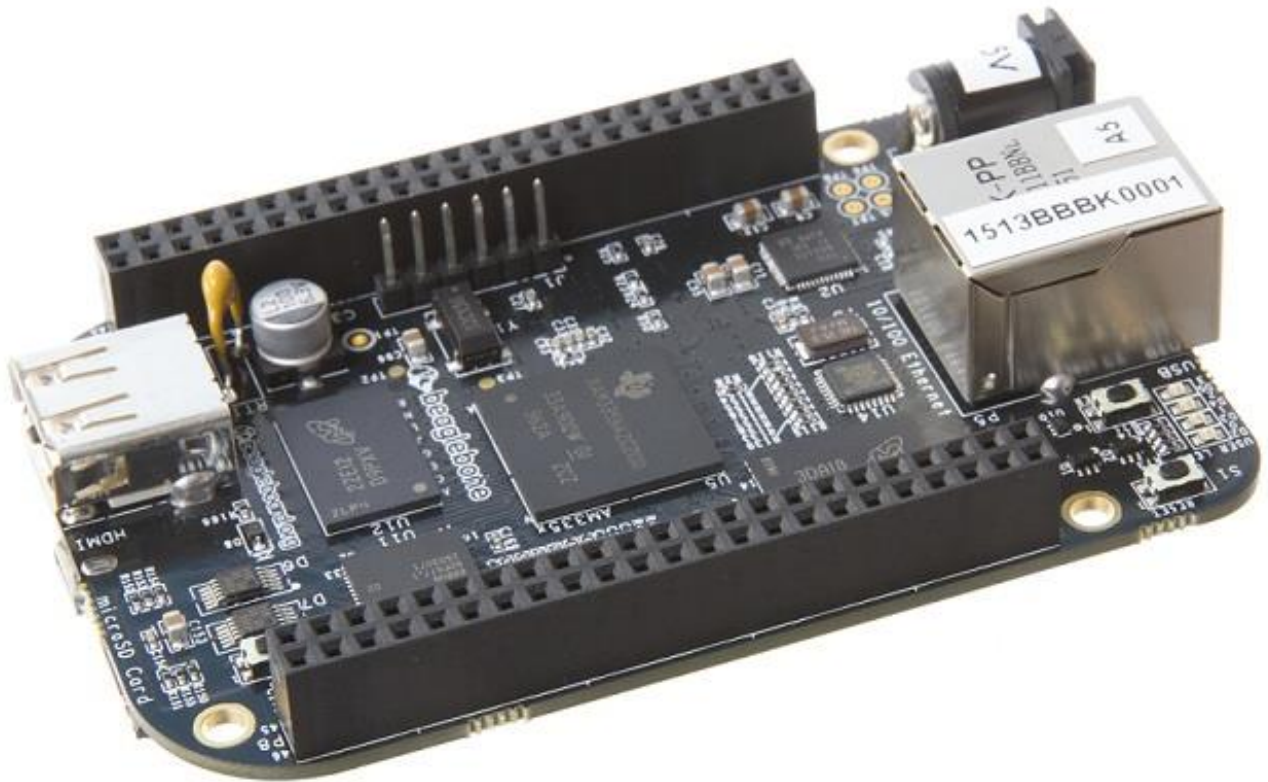


# BeagleBone Black Description



## BeagleBone Black Description

The BeagleBone Black is the newest member of the BeagleBoard family. It is a lower-cost, high-expansion focused BeagleBoard using a low cost Sitara XAM3359AZCZ100 Cortex A8 ARM processor from Texas Instruments. It is similar to the Beaglebone, but with some features removed and some features added. The table below gives the high points on the differences between the BeagleBone and BeagleBone Black.

	BeagleBone Black \$55	BeagleBone \$89
Processor	AM3358BZCZ100, 1GHZ	AM3359ZCZ72, 720MHz
Video Out	HDMI	None
DRAM	512MB DDR3L 800MHZ	256MB DDR2 400MHz
Flash	4GB eMMC, uSD	uSD
Onboard JTAG	Optional	Yes, over USB
Serial	Header	Via USB
PWR Exp Header	No	Yes
Power	210-460 mA@5V	300-500 mA@5V

### BeagleBone Black Features

The following table lists the key features of the BeagleBone Black.

	Feature
<b>Processor</b>	Sitara AM3358BZCZ100 1GHz, 2000 MIPS
<b>Graphics Engine</b>	SGX530 3D, 20M Polygons/S
<b>SDRAM Memory</b>	512MB DDR3L 800MHZ
<b>Onboard Flash</b>	4GB, 8bit Embedded MMC
<b>PMIC</b>	TPS65217C PMIC regulator and one additional LDO.
<b>Debug Support</b>	Optional Onboard 20-pin CTI JTAG, Serial Header
<b>Power Source</b>	miniUSB USB or DC Jack      5VDC External Via Expansion Header
<b>PCB</b>	3.4" x 2.1"      6 layers
<b>Indicators</b>	1-Power, 2-Ethernet, 4-User Controllable LEDs
<b>HS USB 2.0 Client Port</b>	Access to USB0, Client mode via miniUSB
<b>HS USB 2.0 Host Port</b>	Access to USB1, Type A Socket, 500mA LS/FS/HS
<b>Serial Port</b>	UART0 access via 6 pin 3.3V TTL Header. Header is populated
<b>Ethernet</b>	10/100, RJ45
<b>SD/MMC Connector</b>	microSD , 3.3V
<b>User Input</b>	Reset Button Boot Button Power Button
<b>Video Out</b>	16b HDMI, 1280x1024 (MAX) 1024x768, 1280x720, 1440x900, 1920x1080@24Hz w/EDID Support
<b>Audio</b>	Via HDMI Interface, Stereo
<b>Expansion Connectors</b>	Power 5V, 3.3V , VDD_ADC(1.8V) 3.3V I/O on all signals McASP0, SPI1, I2C, GPIO(69 max), LCD, GPMC, MMC1, MMC2, 7 AIN(1.8V MAX), 4 Timers, 4 Serial Ports, CAN0, EHRPWM(0,2), XDMA Interrupt, Power button, Expansion Board ID (Up to 4 can be stacked)
<b>Weight</b>	1.4 oz (39.68 grams)
<b>Power</b>	Refer to Section 6.1.7

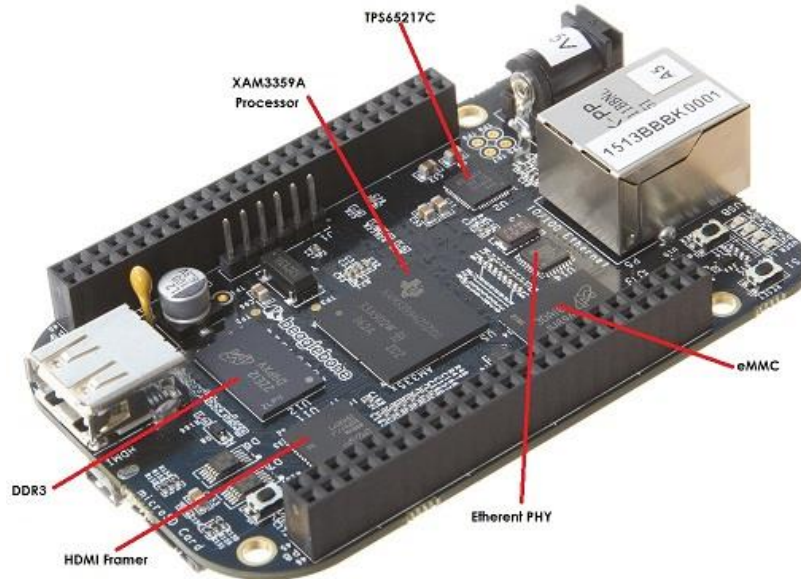
In the box is (1)BeagleBone Black board, (1)USB cable, and (1)card that should be read.

## BeagleBone Black Picture

Here is a picture of the Rev A5A board.

## BeagleBone Black Key Component Locations

Here are the locations of the key components on the Rev A5A.



## BeagleBone Black Connector and Switch Locations

Below is the location of the connectors and switches on the Rev A5A board.  
The Power Button and Battery Connections are new additions to the Rev A5A.

