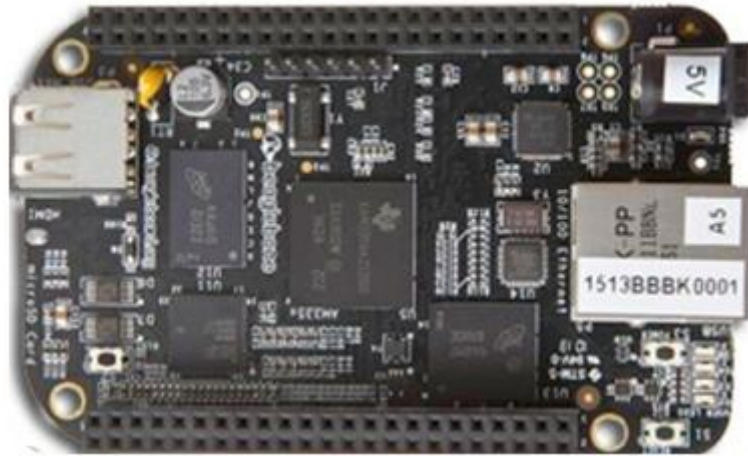


# BeagleBone Black

## Introduction



element14 BeagleBone Black(Rev C) is a development kit based on an AM3358 processor which integrates an ARM Cortex™-A8 core operating at up to 1GHz and has abundant peripheral devices. element14 BeagleBone Black(Rev C) provides lots of expansion interfaces such as Ethernet, USB host and OTG, TF card, serial, JTAG (no connector by default), HDMI D type, Emmc, ADC, I2C, SPI, PWM and LCD. element14 BeagleBone Black(Rev C) is designed to satisfy the different requirements of various fields including game devices, home and industrial automation, consumer medical devices, printers, intelligent tolling systems, weighing systems of intelligent vending machine, educational terminals and high-end toys.

### **Hardware Features of element14 BeagleBone Black(Rev C)**

- **General Specifications:**
  - Dimensions: 86.36 mm×54.61mm
  - Operation Temperature: 0 ~ 70°C
  - Operating Humidity: 20% ~ 90% (Non-Condensing)
  - Power Supply: 5V/0.35A
- **AM3358 Processor:**
  - Integrating 1GHz ARM Cortex™-A8 core
  - Integrating NEON™ SIMD coprocessor
  - Integrating SGX530 graphics engine
  - Integrating programmable real-time unit subsystem
  - Integrating 32KB instruction buffer and 32KB data buffer with single-error detection (parity)
    - Integrating 256KB L2 cache with error-check code
- **On-Board Memories:**
  - 4GB 8-bit eMMC on-board flash storage (rev. 3)
  - 512MB DDR3 SDRAM
- **On-Board Interfaces:**
  - 1 HDMI D type interface (16-bit color with audio output)
  - 1 LCD interface (24-bit output, extended by P8 interface)

- 1 10/100M Ethernet (RJ45 connector)
- 1 high-speed USB 2.0 OTG interface with PHY (Mini USB type-B connector)
- 1 high-speed USB 2.0 HOST interface with PHY (USB type-A connector)
- 1 TF card slot (SD/MMC)
- 1 3-line debugging serial interface (6-pin 2.54-pitch connector)
- 1 HDMI type-D interface
- 1 expansion interface for LCD, UART, eMMC, ADC, I2C, SPI and PWM
- 1 JTAG interface (optional item, 20-pin standard interface, no connector mounted by default)

- **Buttons & LEDs:**

- 1 boot device selection button
- 1 power button
- 1 reset button
- 1 LED power indicator
- 4 user custom indicators