

# PocketBeagle USB-Key-Fob Computer

PKTBEAGLE-SC-569

## Product Overview

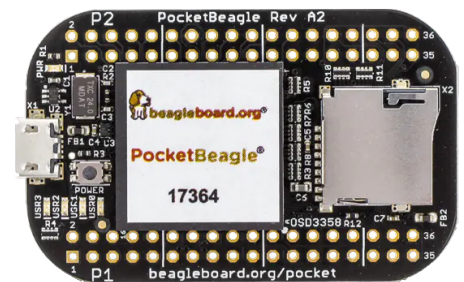
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## Description

BeagleBoard PocketBeagle USB-Key-Fob Computer is an ultra-tiny open-source development board ideal for beginners and professionals. This device is cost-effective, easy to use with high expansibility and a slick design.

The PocketBeagle USB-Key-Fob computer is based on new Octavo Systems OSD3358-SM 21mm x 21mm system-in-package that includes 512MB DDR3 RAM, 1-GHz ARM Cortex-A8 CPU, 2x 200-MHz PRUs, ARM Cortex-M3, 3D accelerator, power/battery management, and EEPROM. This device includes 72 expansion pin headers with power and battery I/Os, high-speed USB, 8 analog inputs, 44 digital I/Os, and numerous digital interface peripherals.



## Features

- **Texas Instruments Sitara™ AM3358 processor (Integrated in the OSD3358-SM):**
  - 1GHz Arm Cortex-A8 with NEON floating-point accelerator
  - SGX530 graphics accelerator
  - 2x Programmable Real-time Unit (PRU) 32-bit 200MHz microcontrollers with single-cycle I/O latency
  - Arm Cortex-M3 for power and security management functions
- **Memory:**
  - 512MB DDR3 800MHZ RAM (Integrated into the OSD3358-SM)
  - 4kB I<sup>2</sup>C EEPROM (Integrated into the OSD3358-SM)
  - SD/MMC connector for microSD
- **Software compatibility:**
  - Debian GNU/Linux images customized for BeagleBone
  - Cloud9 IDE on Node.js w/BoneScript library
  - Any BeagleBone Black software not needing access to unavailable expansion pins
- **Connectivity:**
  - High speed USB 2.0 OTG (host/client) micro-B connector (USB0)
  - Bootable microSD card slot (MMC0)

## Features

- **Power management:**
  - TPS65217C PMIC is used along with a separate LDO to provide power to the system (Integrated in the OSD3358) with integrated 1-cell LiPo battery support
- **Debug support:**
  - JTAG test points
  - gdb and other monitor-mode debug possible
- **Power source:**
  - microUSB connector
  - Expansion header (battery, VIN, or USB-VIN)
- **Expansion header:**
  - High speed USB 2.0 OTG (host/client) control signals (USB1)
  - 8 analog inputs with six at 1.8V and two at 3.3V along with 1.8V voltage references
  - 44 digital GPIOs accessible with 18 enabled by default including two shared with the 3.3V analog input pins
  - 3 UARTs accessible with 2 enabled by default (UART0, UART4)
  - 2 I2C buses enabled by default (I<sup>2</sup>C1, I<sup>2</sup>C2)
  - 2 SPI buses with single-chip selects enabled by default (SPI0, SPI1)
  - 4 PWM outputs accessible with two enabled by default (PWM0A, PWM1A)
  - 2 quadrature encoder inputs accessible
  - 2 CAN bus controllers accessible
  - 23 PRU 32-bit microcontroller I/O pins including options for the PRU UART and eCAP accessible with seven I/O pins enabled by default for PRU0 and one enabled by default for PRU1
  - 3 voltage inputs with one for battery, one shared with the USB connector, and one for power-line input
  - 2 voltage outputs, one with a 3.3V LDO and one with switch from voltage input
  - Power and reset button I/Os
- **User input/output:**
  - Power button with press detection interrupt via TPS65217C PMIC (hold for 10s to initiate hardware power cycle)
- 55mm x 35mm x 5mm dimensions
- Low-cost Linux computer with tremendous expansibility
- Opportunity to learn many programming aspects from educators on-line

## Mouser Part Number

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