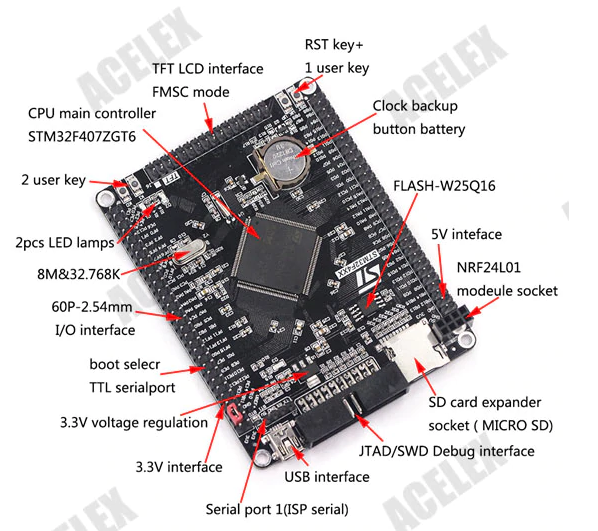
STM32F407ZGT6



Chip Features

Core: ARM® 32-bit Cortex® -M4 CPU with FPU, Adaptive real-time accelerator (ART Accelerator™) allowing 0-wait state execution from Flash memory, frequency up to 168 MHz, memory protection unit, 210 DMIPS/1.25 DMIPS/MHz (Dhrystone 2.1), and DSP instructions

Memories

Up to 1 Mbyte of Flash memory

Up to 192+4 Kbytes of SRAM including 64-Kbyte of CCM (core coupled memory) data RAM

Flexible static memory controller supporting Compact Flash, SRAM, PSRAM, NOR and NAND memories

LCD parallel interface, 8080/6800 modes

Clock, reset and supply management

1.8 V to 3.6 V application supply and I/Os

POR, PDR, PVD and BOR

4-to-26 MHz crystal oscillator

Internal 16 MHz factory-trimmed RC (1% accuracy)

32 kHz oscillator for RTC with calibration

Internal 32 kHz RC with calibration

Sleep, Stop and Standby modes

VBAT supply for RTC, 20×32 bit backup registers + optional 4 KB backup SRAM

3×12-bit, 2.4 MSPS A/D converters: up to 24 channels and 7.2 MSPS in triple interleaved mode

2×12-bit D/A converters

General-purpose DMA: 16-stream DMA controller with FIFOs and burst support

Up to 17 timers: up to twelve 16-bit and two 32-bit timers up to 168 MHz, each with up to 4 IC/OC/PWM or pulse counter and quadrature (incremental) encoder input

Debug mode

Serial wire debug (SWD) & JTAG interfaces

Cortex-M4 Embedded Trace Macrocell™

Up to 140 I/O ports with interrupt capability

Up to 136 fast I/Os up to 84 MHz

Up to 138 5 V-tolerant I/Os

Up to 15 communication interfaces

Up to 3 × I2 C interfaces (SMBus/PMBus)

Up to 4 USARTs/2 UARTs (10.5 Mbit/s, ISO 7816 interface, LIN, IrDA, modem control)

Up to 3 SPIs (42 Mbits/s), 2 with muxed full-duplex I2S to achieve audio class accuracy via internal audio PLL or external clock

2 × CAN interfaces (2.0B Active)

SDIO interface

Advanced connectivity

USB 2.0 full-speed device/host/OTG controller with on-chip PHY

USB 2.0 high-speed/full-speed device/host/OTG controller with dedicated DMA, on-chip full-speed PHY and ULPI

10/100 Ethernet MAC with dedicated DMA: supports IEEE 1588v2 hardware, MII/RMII

8- to 14-bit parallel camera interface up to 54 Mbytes/s

True random number generator

CRC calculation unit

96-bit unique ID

RTC: subsecond accuracy, hardware calendar

