

Energy-Efficient High-Voltage, Low-Power 8-Bit CPU

FEATURES

- 1T-8051 8-bit Core
 - Maximum Operating Frequency: 9.6MHz
 - Integrated Interrupt controller
- Memory [1]
 - 32KB SRAM program memory
 - 4KB SRAM data memory
 - 8Kb Flash/OTP (Optional)
 - 32KB ROM (Optional)
 - 2kB SRAM (optional)
- Connectivity
 - I2C Bus interface
 - Serial interface UART
 - 1-wire interface
- Analog
 - 11-bit A/D Converter x 1
 - 8-bit D/A Converter x 2
 - Temperature Sensor
 - Internal CC-CV control for VIN regulation
 - Integrated VDD regulator
- Timers
 - Watchdog Timer
 - Interval Timer x 3
- 8 pins for general I/O Ports
 - Open drain, connectable to 3.3V, 1.8V, or other voltages.
 - Programmable internal pull-up
 - Interrupt input
- Operating Voltage
 - VIN Range: 5V to 22V
 - Max input Voltage (VIN_max): 22V
- Package
 - 48 -pin WQFN (7mm x 7mm, 0.75 mm pitch)

APPLICATIONS

- General purpose MCU core
- USB-C PD controller
- CC-CV controller
- IoT and Smart Devices
- Consumer Electronics

GENERAL DESCRIPTION

HT5380T is a general-purpose microcontroller designed based on the 1T-8051 core, which supports the main frequency of 9.6MHz system, and has the characteristics of wide input voltage range (VIN_max = 22V), low power consumption. HT5380T built-in 11-bit analog-to-digital conversion ADC, internal temperature sensor and integrated CC-CV control scheme for high voltage application, such as used in USB-C PD 3.1, or some other general purpose MCU applications

Remarks

[1] The HT5380T is available in various versions with different memory capacities. Version 1 features 32KB SRAM for program memory and 4KB for data memory. Version 2 provides options like 8KB Flash/OTP, 32KB ROM, and 2KB SRAM. Additional memory configurations can be discussed upon further requested.

BLOCK DIAGRAM

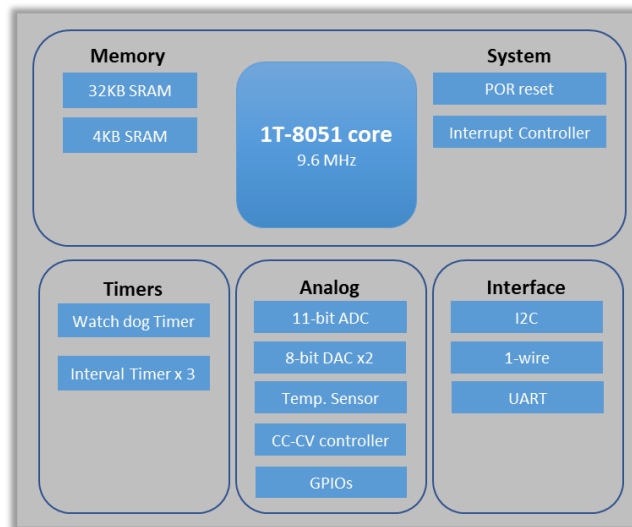


Figure 1. Block diagram of the MCU superset (*Version 1 memory*)



Hong Kong Office
Tel: (852) 36195375
Email: httadmin@hightt.com
URL: <https://www.hightt.com>
Address:
Unit 713, 7/F, 12W, 12 Science Park West Avenue,
Hong Kong Science Park, Shatin, Hong Kong