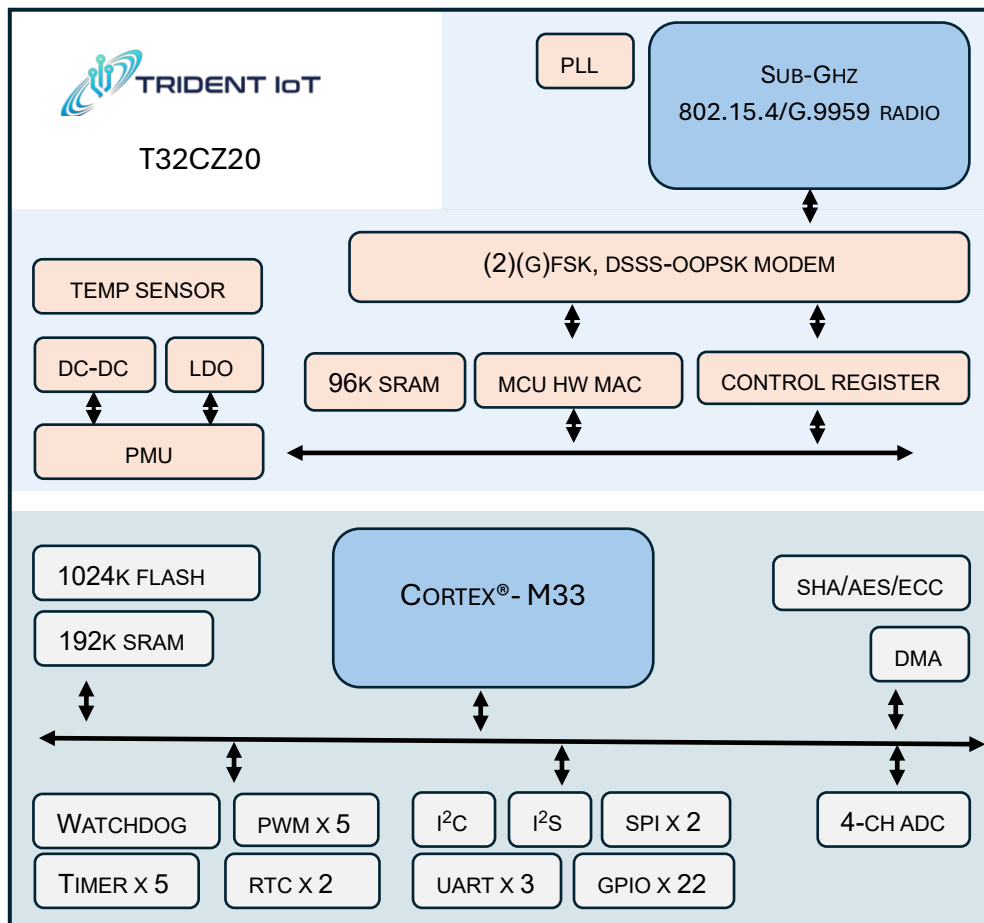


The T32CZ20 is a cutting edge ultra-low power, high performance, ARM® Cortex®-M33 based Sub-GHz RF System on Chip (SoC) supporting Z-Wave® and Z-Wave® Long Range solutions. The “CZ20” SoC is the ideal choice for developers seeking to integrate robust, reliable, and efficient RF communications into their products. Designed to meet the demands of any Z-Wave Plus version 2 or Z-Wave Long Range device, the CZ20 excels in robust and reliable RF performance as well as data and link management.

To cater to the growing needs of Home Security and Industrial control applications, the CZ20 offers 288kB of SRAM and 1MB of Flash. Moreover, its low sleep current in both active RF modes and power-down states ensures that battery-operated devices enjoy extended lifespans – providing up to 10 years on a single cell in sensor applications.

Incorporating the CZ20 into your project promises lower power consumption, extended range capabilities, and access to advanced features. Embrace the future of smart, robust, and energy-efficient solutions.



Protocols:

- Z-Wave®
- Z-Wave® Long Range

Radio Performance:

- +20dBm TX
- 908, 912, 916, 920 MHz
- -112dBm @9.6kps FSK
- -110dBm @ 40kbps FSK
- -107dBm @100kbps GFSK
- -108dBm @100kps OQPSK+DSSS
- RF offset cancellation loop
- Frequency hopping capability
- Programmable channel filter bandwidth

Modulation:

- (G)FSK with configurable shaping
- DSSS-OQPSK

Energy Consumption:

- +1.8V to +3.6Vdc
 - Power On Reset
 - Under Voltage Lockout
 - Integrated DC-DC and LDO Register
 - Power Management Unit
- 5.8mA RX
- 83mA @+20dBm TX
- 25mA @+14dBm TX
- 1.2uA Deep Sleep
- 0.5uA Deep Power-Down

MCU Specification:

- 32 Bit ARM® Cortex-M33
- Up to 64MHz
- 1024kB Flash program memory
- 192kB RAM data memory
- 32kB Boot ROM
- 2 pin Serial Wire Debug

Integrated Peripherals:

- 22 x GPIO
- DMA Controller
- 4 channel 12bit ADC
- 3 x UART
- I²S
- I²C master/slave
- 2 x SPI
- 5 x PWM (32bit)
- 5x 32-bit timers
- 2 x 32-bit Real Time Clock
- External 32MHz high frequency crystal
- Internal low frequency RC oscillator
- Watchdog Timer
- Internal Temperature Sensor

Security Features:

- TrustZone®
- Hardware Accelerator: AES/SHA/RSA
- Secure Debug
- Secure Boot
- True Random Number Generator

Environment:

- -40°C to 85°C
- ESD: HBM 2KV/CDM 300V; 150m Latch up
- Halogen-free/RoHS 2.0/Reach Annex 14/17

Package:

QFN40 5x5x 0.75 mm

Order number:

T32CZ20B20GQ40-AR - 2500/reel