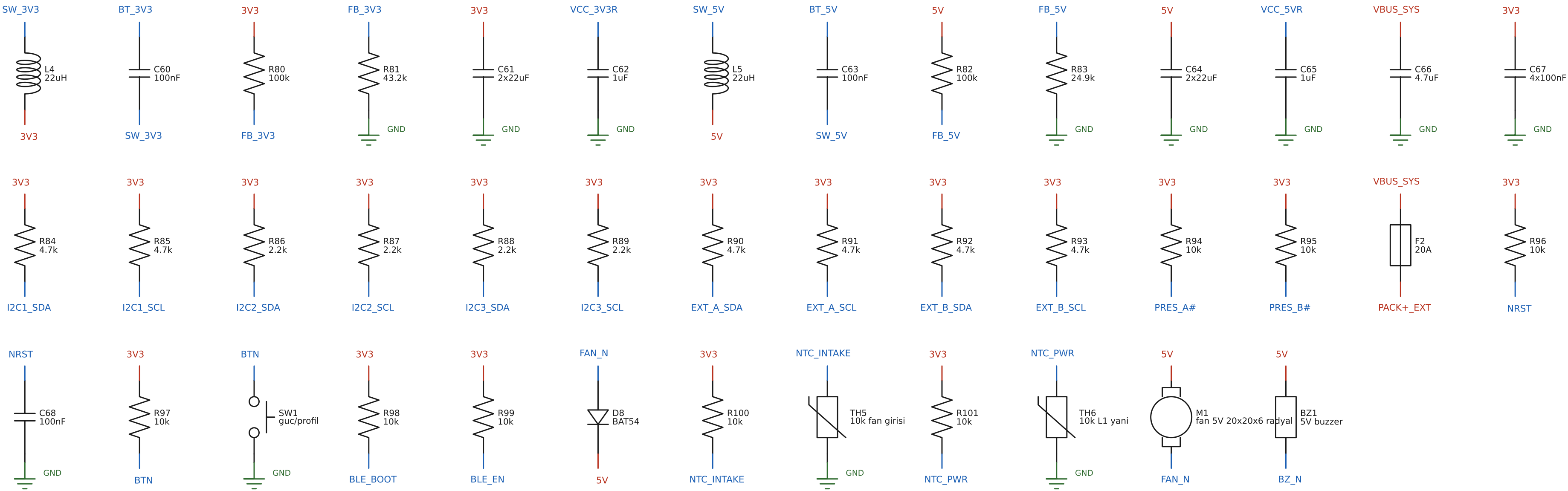
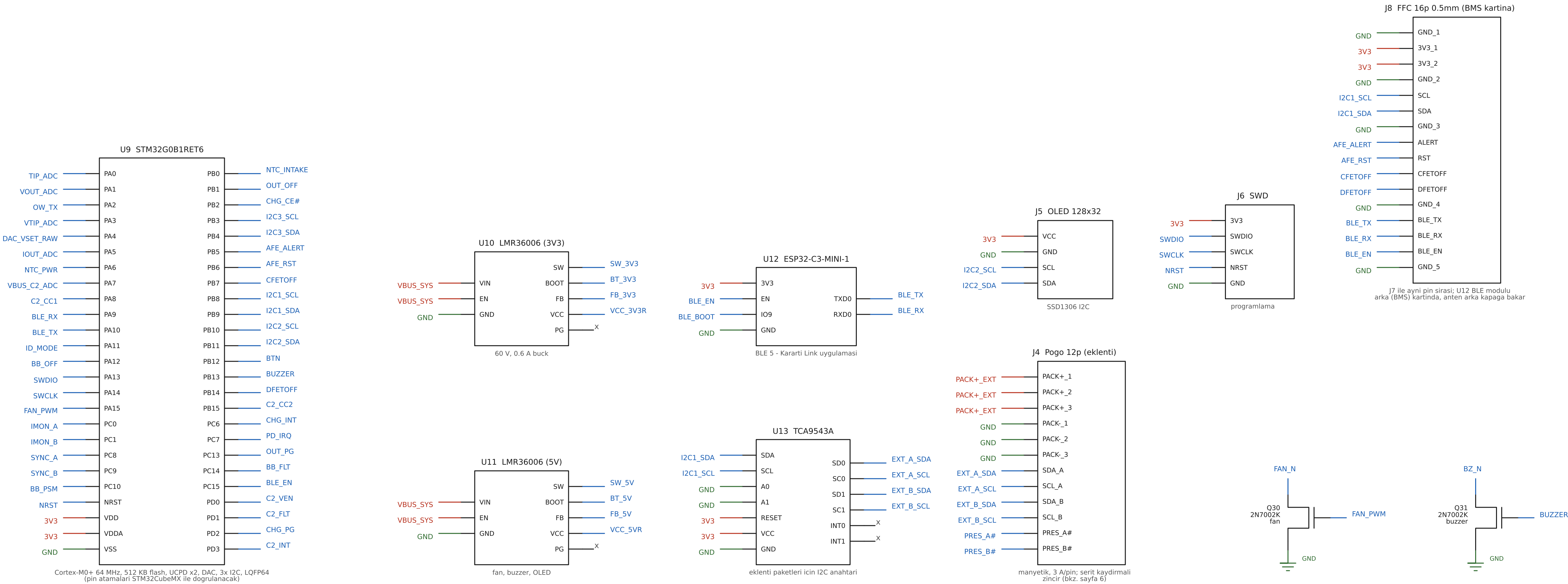




I2C1: AFE (0x08) + TCA9543A (0x70) -> eklenti A/B | I2C2: TPS26750, TPL0102, TPS552892, OLED | I2C3: BQ25756 (özel hat).
Kritik koruma sinyalleri (CFETOFF/DFETOFF, OUT_OFF, BB_OFF) doğrudan GPIO: firmware kilitletense de AFE ve donanım korumaları çalışır.
Bağımsız watchdog (IWDG) 500 ms; ESP32-C3 güvenlik zincirinde değildir (sadece telemetri/ayar).