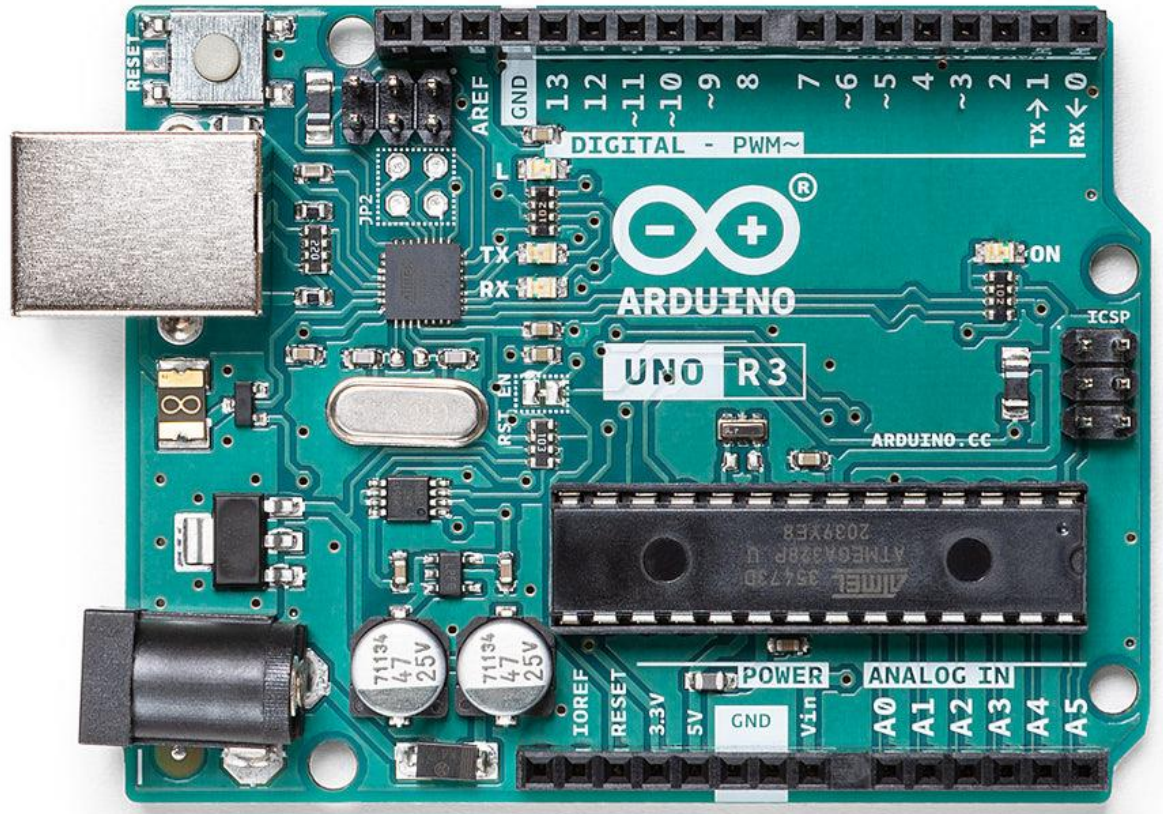
GÖMÜLÜ SİSTEMLER -6

ARDUINO UNO TANITIM

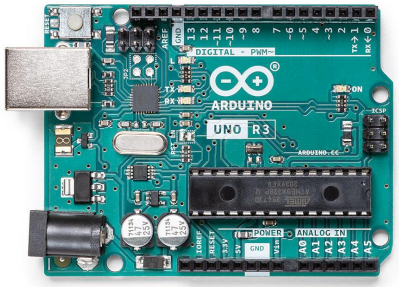
ARDUINO

ARDUINO UNO GELİŞTİRME KARTI (DEVELOPMENT BOARD)



[Arduino - Home]

ARDUINO UNO NEDİR?



- Arduino Uno üzerinde Atmega328p isimli mikrodenetleyicisi olan **yazılım (firmware) geliştirme kartı**dır.
- Arduino Uno direk USB kablosu ile bilgisayara bağlanıp çalıştırılabilir.
- Atmega328p ‘ye önceden yüklenmiş olan **BOOTLOADER** yazılımı sayesinde ek bir **Yükleme Cihazı (Debugger)** gerektirmez. Yani direk programlanabilir.
- UART, SPI, I2C, PWM, ADC gibi donanımsal özellikleri destekler.
- Yazılım geliştirme ortamı (IDE) Arduino IDE’dir.

ARDUINO UNO TEKNİK ÖZELLİKLER

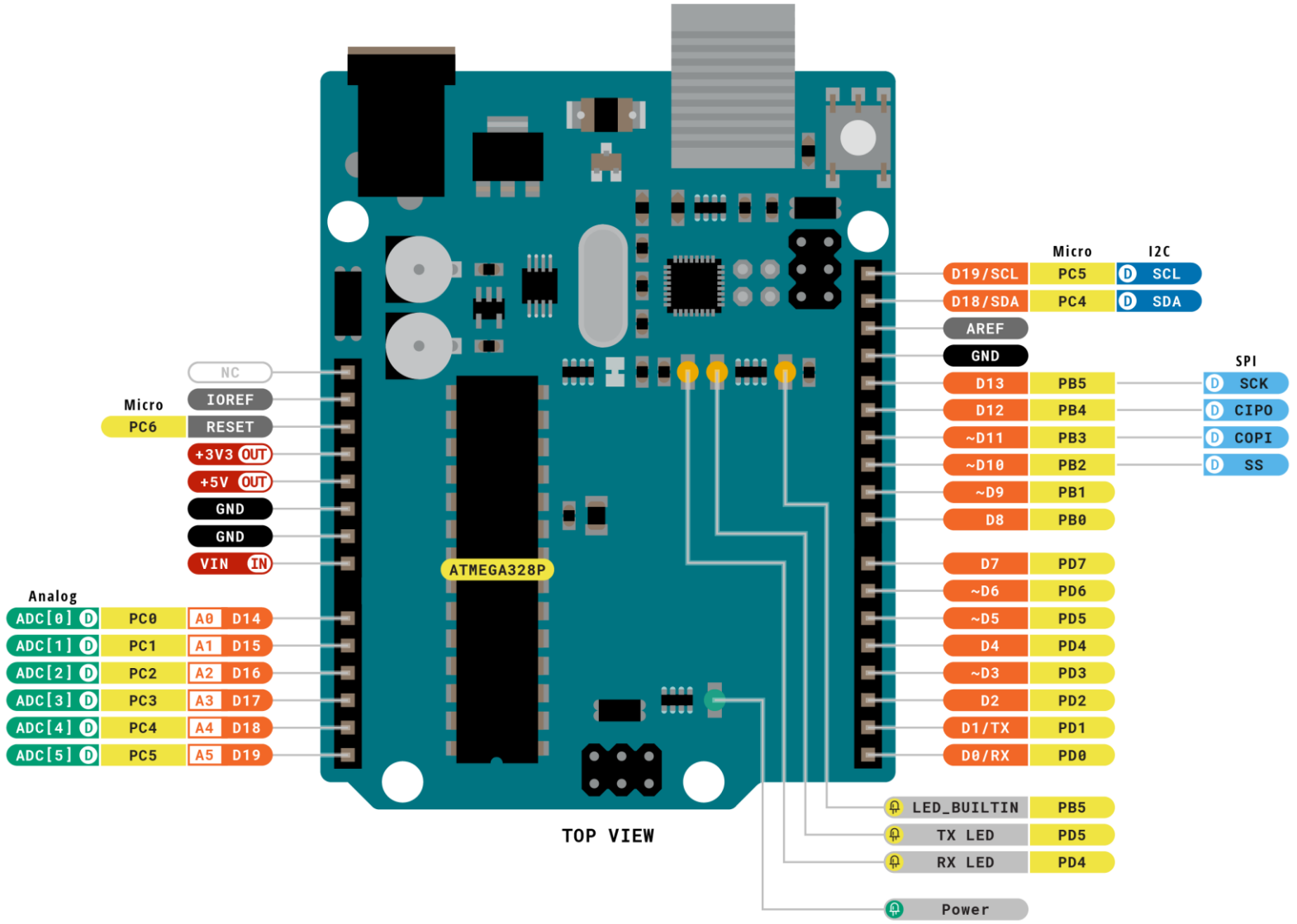
Mikrodenetleyici	ATmega328P
Çalışma Gerilimi	5V
Besleme Voltajı (Önerilen)	7-12V
Besleme Voltajı (limit)	6-20V
Digital I/O Pins	14 (of which 6 provide PWM output)
PWM Digital I/O Pins	6
Analog Input Pins	6
DC Current per I/O Pin	20 mA
DC Current for 3.3V Pin	50 mA
Flash Memory	32 KB (ATmega328P) of which 0.5 KB used by bootloader
SRAM	2 KB (ATmega328P)
EEPROM	1 KB (ATmega328P)
Clock Speed	16 MHz
LED_BUILTIN	13
Uzunluk	68.6 mm
Genişlik	53.4 mm
Ağırlık	25 g

Documentation

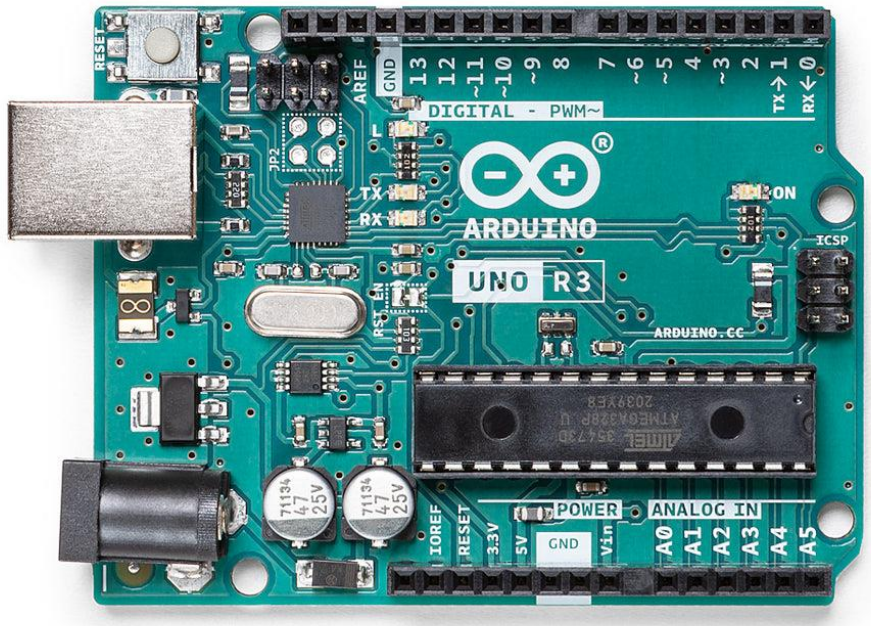
OSH: Schematics

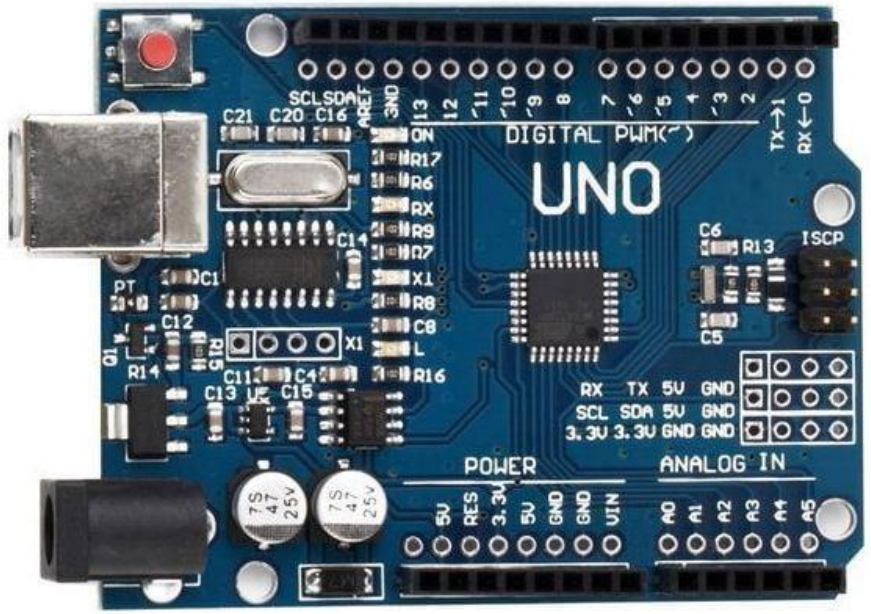
Arduino Uno is open-source hardware! You can build your own board using the following files:

ARDUINO UNO PIN BAĞLANTILARI (PINOUTS)



ORJİNAL & KLON ARDUINO UNO





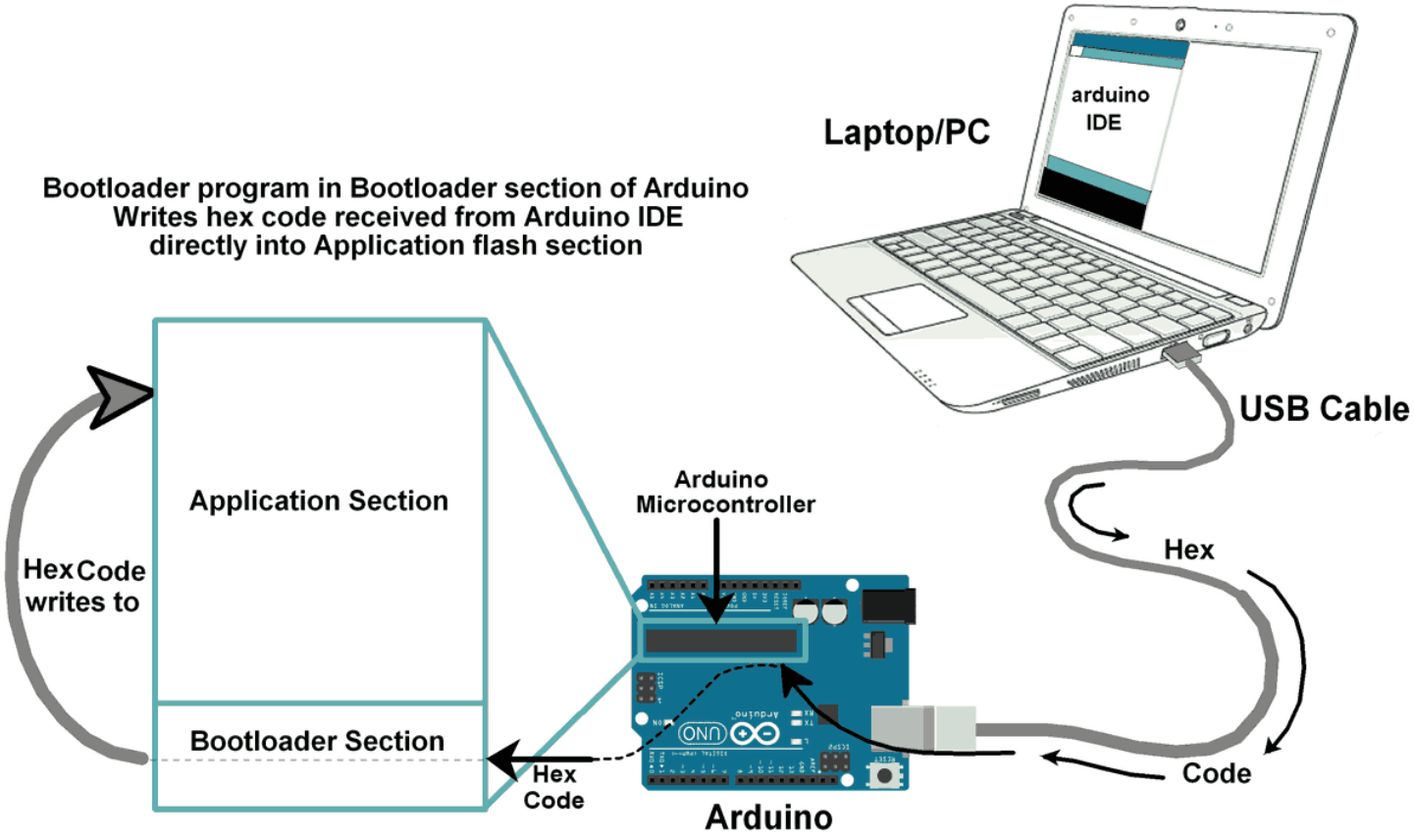
ORJİNAL

KLON

ARDUINO UNO BOOTLOADER

Bootloader : Bir yazılım parçasıdır. Bu yazılımın görevi bilgisayardan gönderilen yazılımı eskisinin üzerine yazmak yani yazılımı güncellemektir.

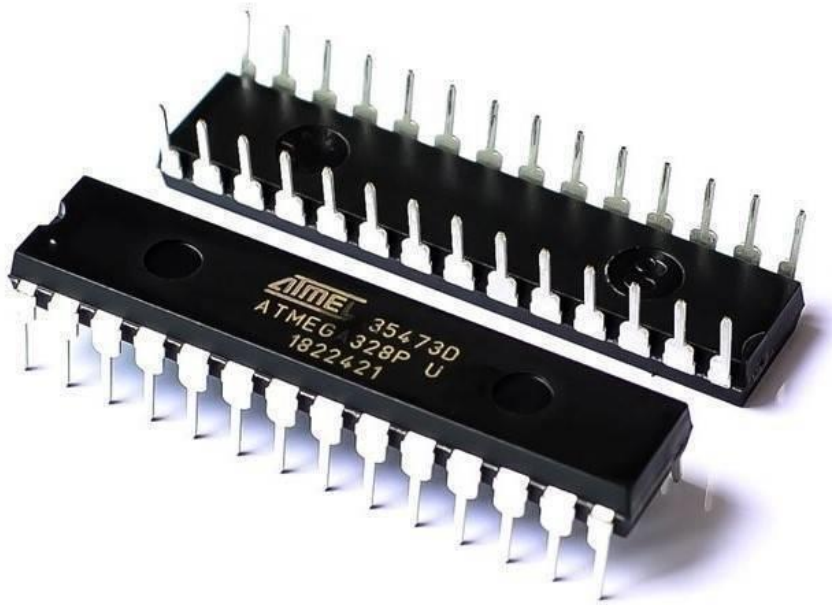
Yazılım güncelleyici yazılım diyebiliriz.



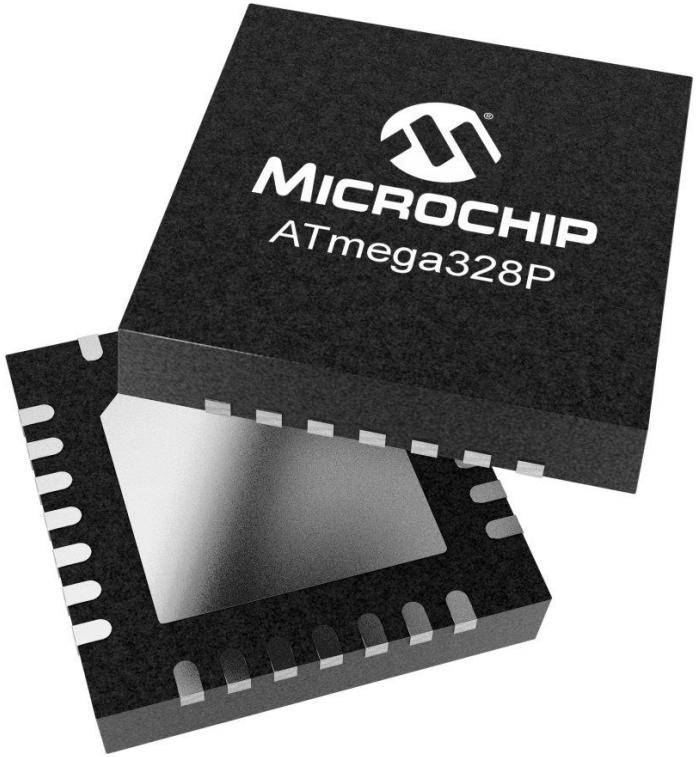
ATMEGA328P Mikrodenetleyicisi

Atmega328P : Arduino UNO kartında kullanılan mikrodenetleyicidir.

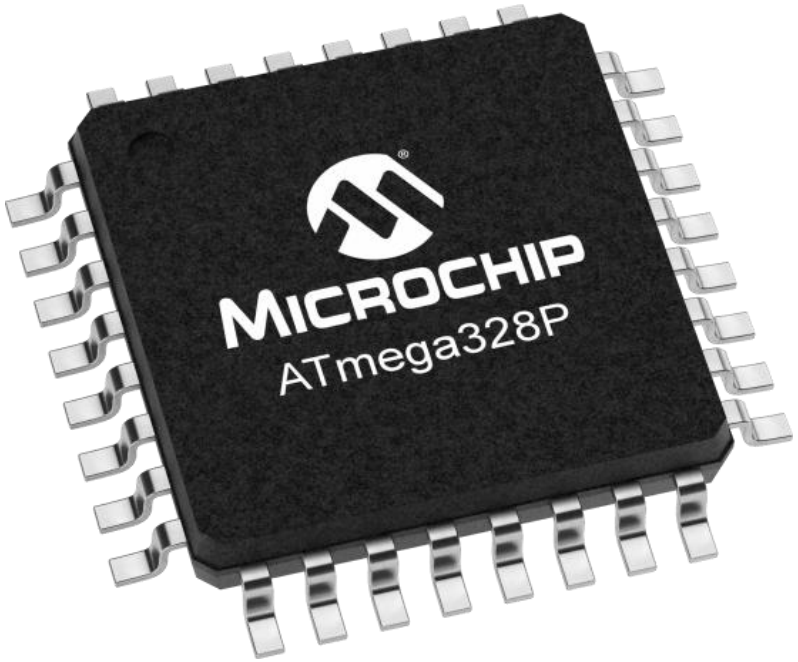
DIP Kılıfı



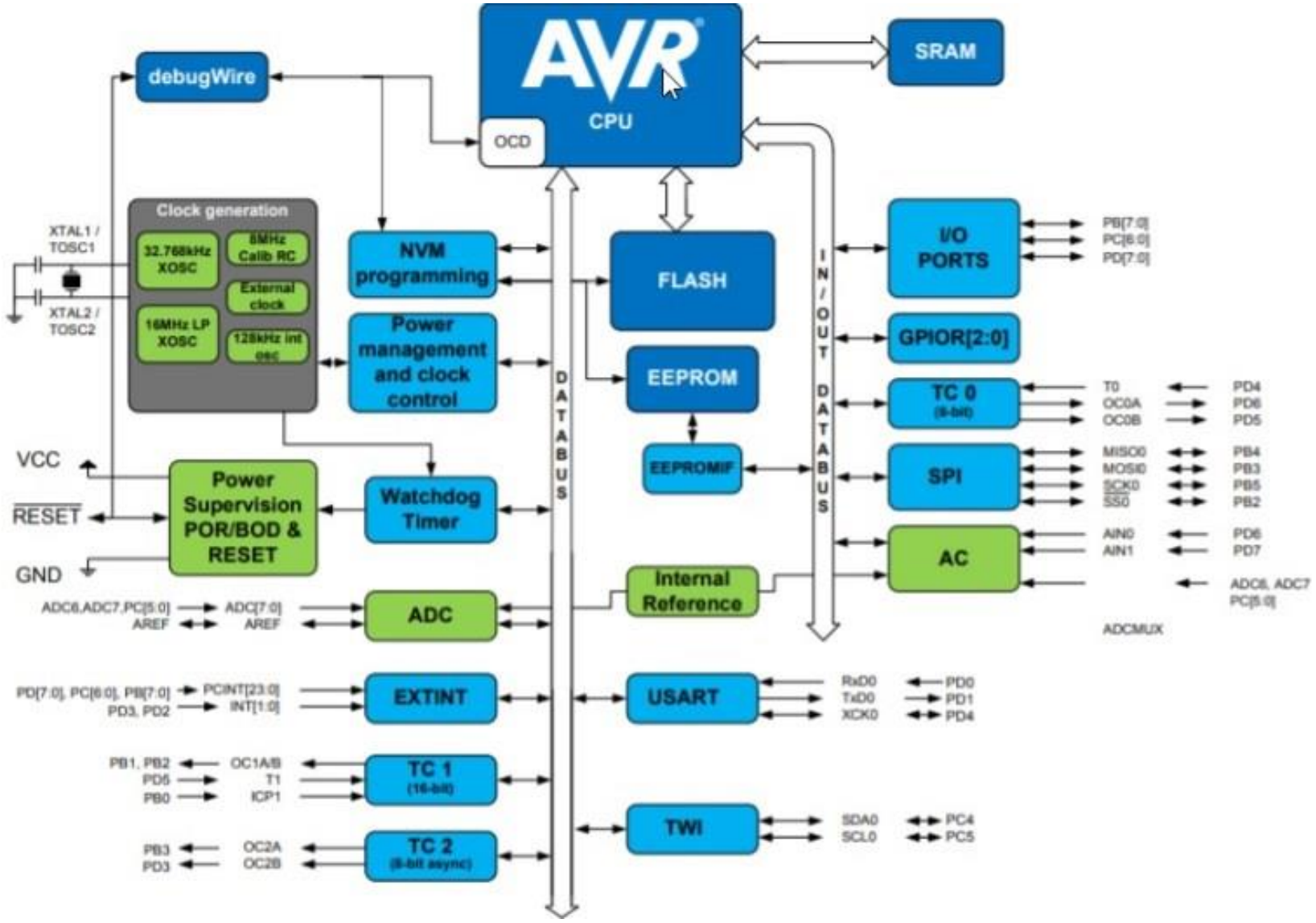
QFN Kılıfı



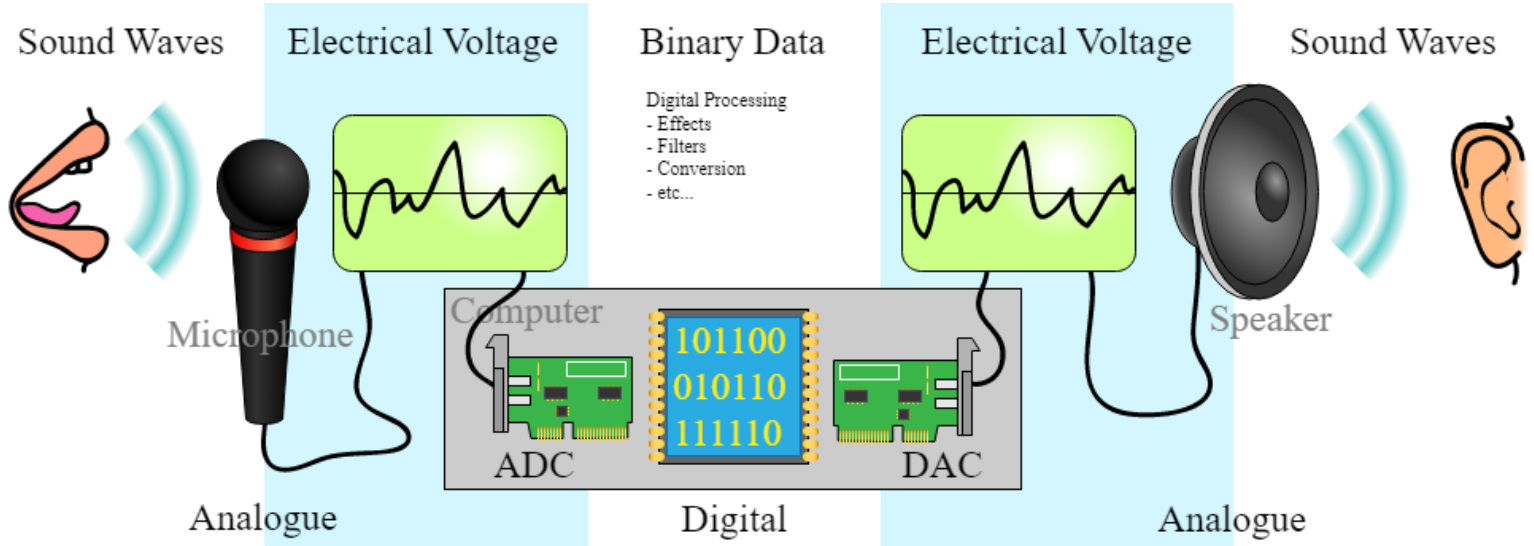
TQFP Kılıfı

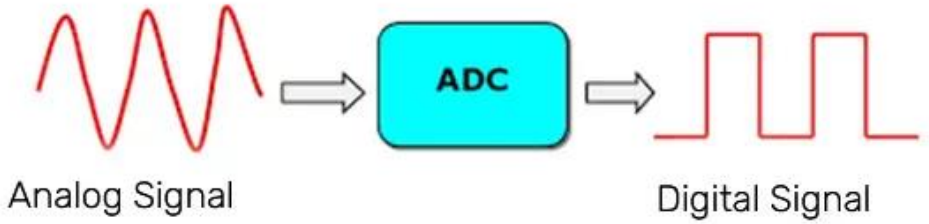


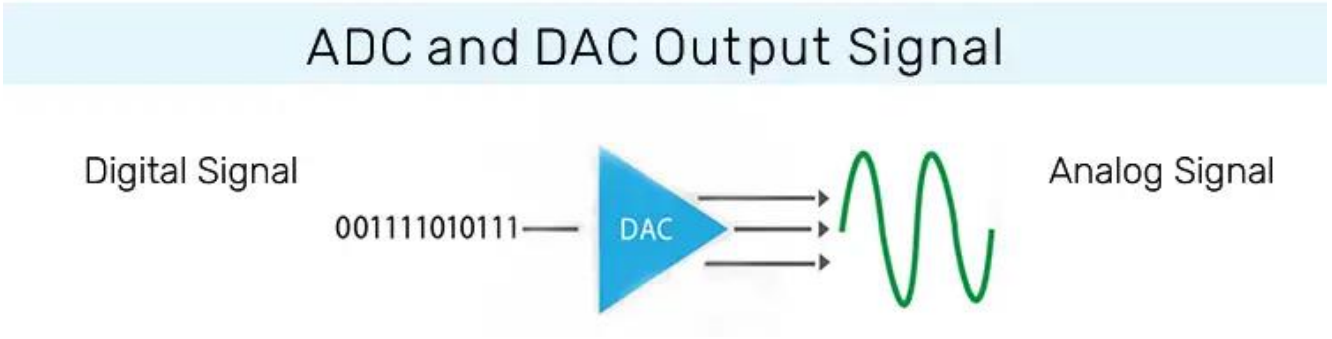
ATMEGA328P Mikrodenetleyicisi Blok Diagramı



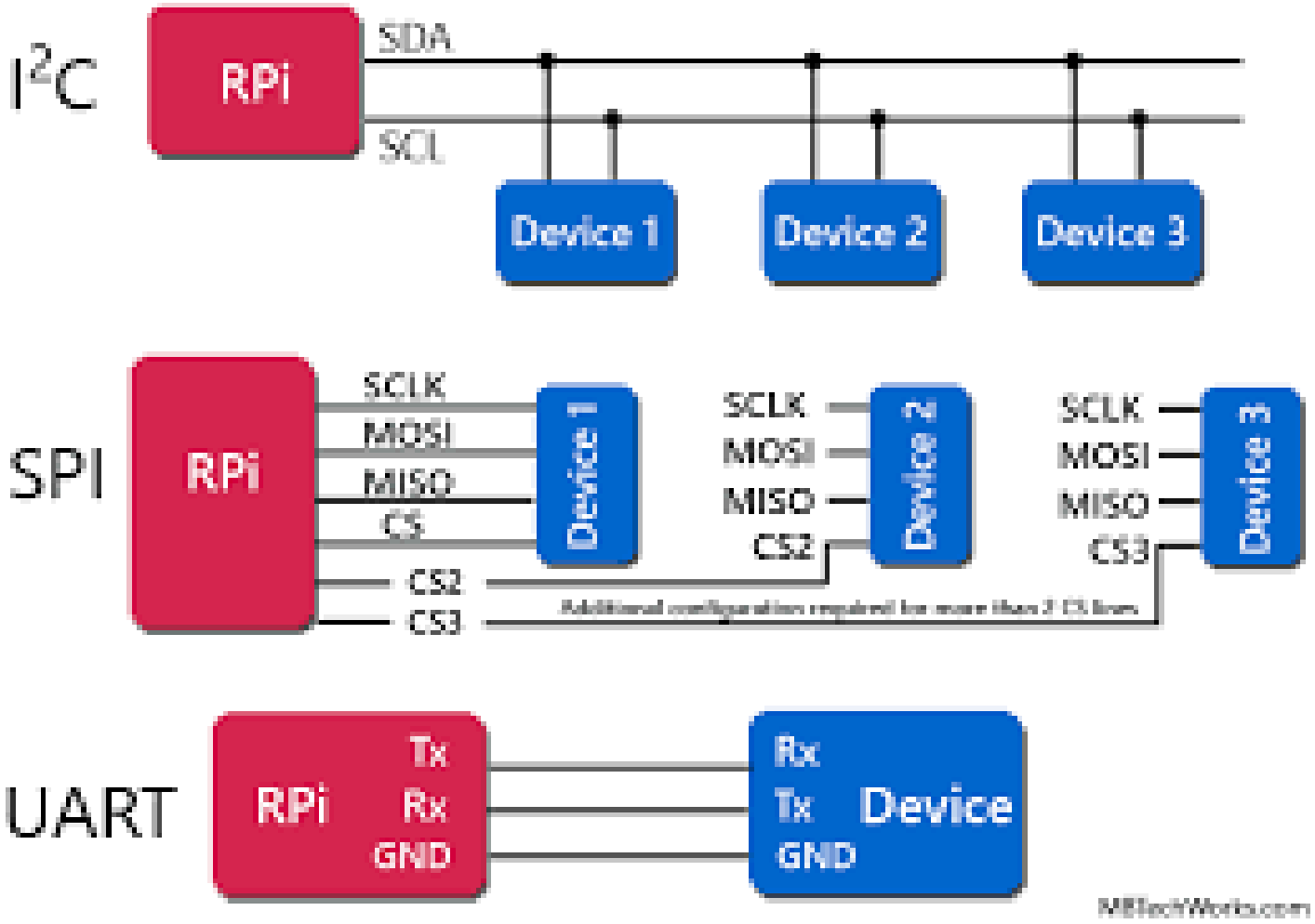
Bazı MCU Donanımları – ADC ve DAC



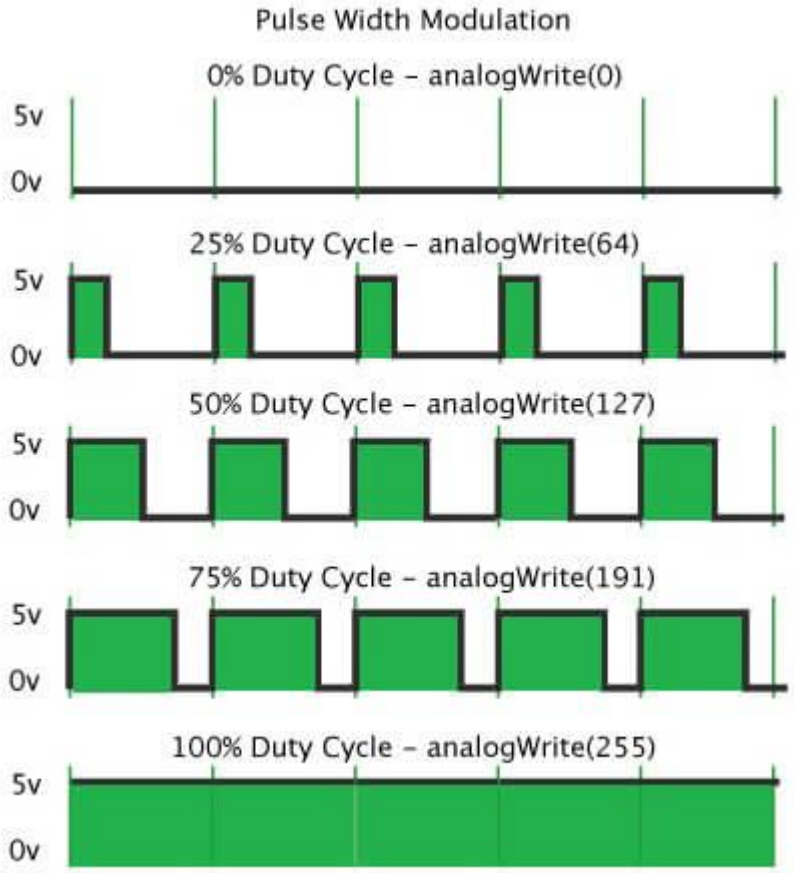


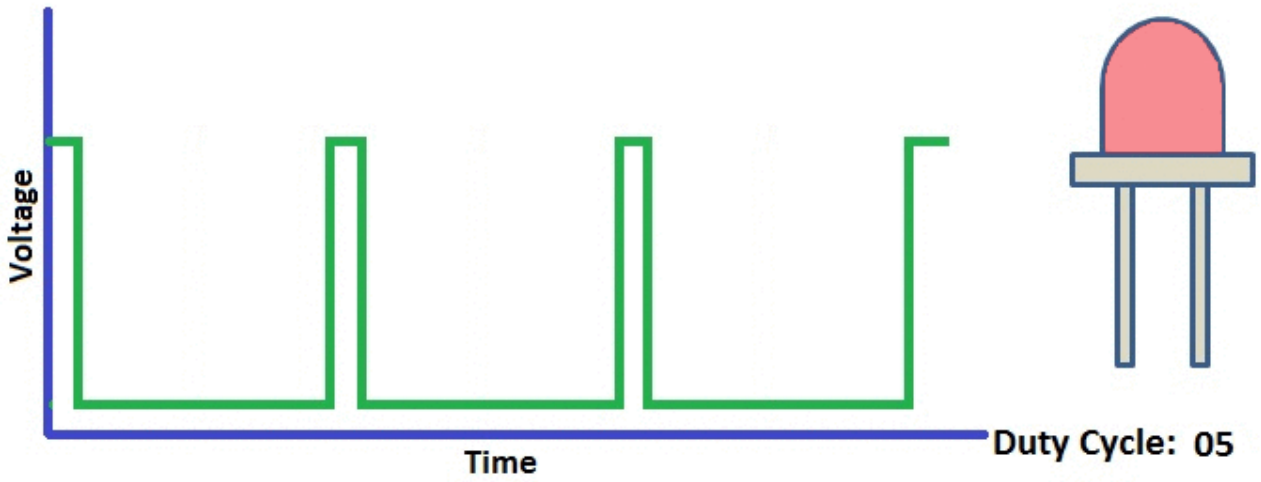


Bazı MCU Donanımları – UART, SPI, I2C



Bazı MCU Donanımları - PWM





Arduino IDE (Yazılım Geliştirme Ortamı)