

High Integration Power Management Controller

1 Features

- Input voltage range: 2.5V to 5.5V
- Integrated 32bit 36MHz MCU core, 8KB SRAM, 128KB Flash(NU1520),64KB Flash(NU1521)
- 144MHz clock for 2 pairs of precise phase shift PWM control
- 36MHz clock for 4 Basic PWMs
- 11 channels low-speed 1MHz ADC
- 1 channel high-speed 4MHz ADC
- Integrated 1.5V LDO for digital power supply
- Robust PVD (programmable voltage detector) and thermal shut down protection
- 5 enhanced captures
- 4 timers
- 23 GPIOs and 7 GPINs.
- Support 2 x I²C module: one I²C master and one I²C slave
- Support 2 x UART interface
- Up to 2 pairs of CC
- Up to 3 pairs of D+/D- interface
- Support Type-C DRP and PD 3.1 with PPS
- Support BC1.2,UFGS, QC 3.0, FCP/SCP,AFC charging sink and source protocols
- 4.5mmx4.5mm 36 pin QFN Package

2 Applications

- Wireless power transmitter controller
- Power bank power management
- Wired protocol controller

3 Descriptions

NU1520/NU1521 integrate 32bit 36MHz MCU core, SRAM and Flash which contains Application ROM, Security Protection ROM. NU1520/NU1521 integrate programmable system clock source which supports 8/16/24MHz external crystal input or 8 MHz internal oscillator.

NU1520/NU1521 support 64 kHz internal low-power oscillator for Watchdog Timer and idle wake-up. 6 pins of NU1520/NU1521 can be configured as interrupt source with edge detection, 4 I/O pins have wakeup function. NU1520/NU1521 provide 4 channels 32-bit timers with one 5-bit pre-scalar independent clock source for each timer. NU1520/NU1521 provide continuous capture function which can continuously capture rising, falling, both rising and falling edge on one signal. NU1520/NU1521 provide 144MHz clock for precise phase shift PWM control which integrates FSK and dither function. NU1520/NU1521 provide 1 high speed ADC channel, which is 13-bit ADC with 4MSPS (maximum) and 1 sign bit,12-bit ENOB.NU1520/NU1521 provide 11 low speed ADC channel, which are 13-bit ADC with 1MSPS and 1 sign bit,12-bit ENOB.

Part Number	package	Package size
NU1520	QFN36	4.5mm×4.5mm
NU1521	QFN36	4.5mm×4.5mm

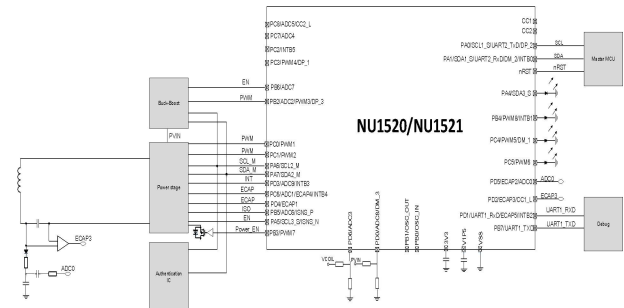


Figure 1 Simplified application diagram for wireless power transmitter controller