MCU 32-bit ARM Cortex M4 RISC 512KB Flash 3.3V Automotive 208-Pin LQFP Tray

Manufacturer:	NXP Semiconductor
Package/Case:	QFP208
Product Type:	Embedded Processors & Controllers
RoHS:	RoHS Compliant/Lead free RoHS
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

The LPC407x is an Arm Cortex-M4 based digital signal controller for embedded applications requiring a high level of integration and low power dissipation. The Arm Cortex-M4 is a next generation core that offers system enhancements such as low power consumption, enhanced debug features, and a high level of support block integration. The Arm Cortex-M4 CPU incorporates a 3-stage pipeline, uses a Harvard architecture with separate local instruction and data buses as well as a third bus for peripherals, and includes an internal prefetch unit that supports speculative branching. The Arm Cortex-M4 supports single-cycle digital signal processing and SIMD instructions. A hardware floating-point processor is integrated in the core for several versions of the part. The LPC407x adds a specialized flash memory accelerator to accomplish optimal performance when executing code from flash. The LPC407x is targeted to operate at up to 120 MHz CPU frequency. The peripheral complement of the LPC407x includes up to 512 kB of flash program memory, up to 96 kB of SRAM data memory, up to 4032 byte of EEPROM data memory, External Memory controller (EMC), Ethernet, USB Device/Host/OTG, an SPI Flash Interface (SPIFI), a General Purpose DMA controller, five UARTs, three SSP controllers, three I2C-bus interfaces, a Quadrature Encoder Interface, four general purpose timers, two general purpose PWMs with six outputs each and one motor control PWM, an ultra-low power RTC with separate battery supply and event recorder, a windowed watchdog timer, a CRC calculation engine and up to 165 general purpose I/O pins. The analog peripherals include one eight-channel 12-bit ADC, two analog comparators, and a DAC. The pinout of LPC407x is intended to allow pin function compatibility with the LPC24xx/23xx as well as the LPC178x/7x families.

Key Features

32-bit ARM Cortex-M4 MCU; up to 512 kB flash, 96 kB SRAM; USB Device/Host/OTG; Ethernet; EMC; SPIFI

Application

Automotive

Industrial

Mobile

Smart Home

Recommended For You

LPC54114J256BD64QL

NXP Semiconductor

LQFP64

LPC54113J256BD64QL

NXP Semiconductor

LQFP64

LPC11U35FHI33/501

NXP Semiconductor

HVQFN32

LPC55S69JBD100K

NXP Semiconductor

HLQFP-100

LPC824M201JHI33Y

NXP Semiconductor

HVQFN32

LPC822M101JDH20J

NXP Semiconductor

TSSOP20

LPC824M201JDH20J

NXP Semiconductor

TSSOP20

LPC2294HBD144/01,5

NXP Semiconductor

144-LQFP20x20

LPC43S57JET256E

NXP Semiconductor

SMD

LPC54S005JET100E

NXP Semiconductor

TFBGA-100

LPC54S005JBD100E

NXP Semiconductor

LQFP100

LPC1224FBD48/101,1

NXP Semiconductor

LQFP48

LPC54S016JET100E

NXP Semiconductor

TFBGA100

LPC55S14JBD64E

NXP Semiconductor

DETAIL

MWCT1015SFVLLP

NXP Semiconductor

QFP100