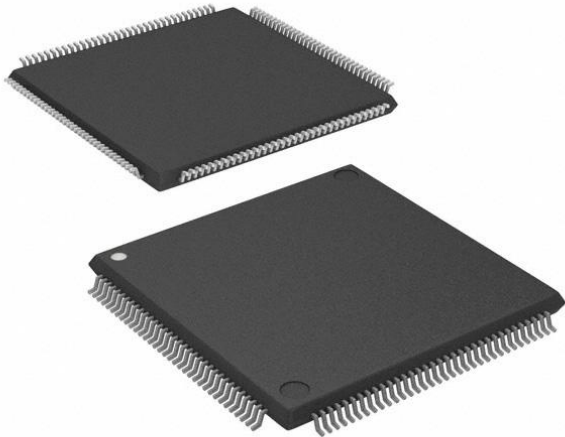


www.digi-electronics.com



SPC5743RK1MLQ5R Datasheet

DiGi Electronics Part Number	SPC5743RK1MLQ5R-DG
Manufacturer	NXP USA Inc.
Manufacturer Product Number	SPC5743RK1MLQ5R
Description	IC MCU 32BIT 2MB FLASH 144LQFP

<https://www.DiGi-Electronics.com>

Detailed Description e200z4 MPC57xx Microcontroller IC 32-Bit Dual-Core 200MHz 2MB (2M x 8) FLASH 144-LQFP (20x20)

This model SPC5743RK1MLQ5R is available at DiGi Electronics.

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RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

SPC5743RK1MLQ5R

Series:

MPC57xx

DiGi-Electronics Programmable:

Not Verified

Core Size:

32-Bit Dual-Core

Connectivity:

CANbus, Ethernet, I2C, LINbus, SCI, SPI, UART/USART

Program Memory Size:

2MB (2M x 8)

EEPROM Size:

-

Voltage - Supply (Vcc/Vdd):

3.5V ~ 5.5V

Oscillator Type:

Internal

Grade:

Automotive

Mounting Type:

Surface Mount

Package / Case:

Manufacturer:

NXP USA Inc.

Product Status:

Active

Core Processor:

e200z4

Speed:

200MHz

Peripherals:

DMA, LVD, POR, Zipwire

Program Memory Type:

FLASH

RAM Size:

128K x 8

Data Converters:

A/D 12b SAR, 16b Sigma-Delta

Operating Temperature:

-40°C ~ 125°C (TA)

Qualification:

AEC-Q100

Supplier Device Package:

144-LQFP (20x20)

Base Product Number:

MPC574xP Microcontroller

Power Architecture®-based MCU
for Automotive and Industrial Applications

Product One-Sheet

[Data Sheet](#)
[Tools](#)
[Buy](#)

Performance—2 x e200z4 cores in delayed lockstep operating up to 200 MHz, embedded floating point unit, 32-channel eDMA in delayed lockstep

High Reliability—AEC-Q100, automotive quality, up to 135°C ambient temperature

Abundant Features—FlexCAN, LINFlexD, DSPI, SENT, LFAST SIPI support, Dual-channel FlexRay™, Ethernet

Functional Safety—Built to support functional safety (ISO 26262/ASIL D and IEC 61508 SIL3), end-to-end ECC

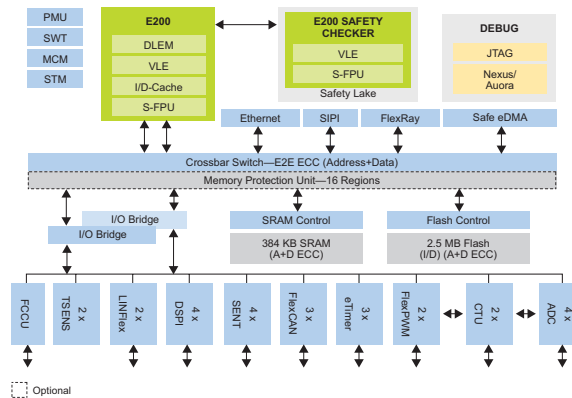
MPC574xP Specifications

Flash	Up to 2.5 MB	Timer/PWM	2 x FlexPWM w/ 4 x (2+1) ch.
RAM	Up to 384 KB	Other Timer	2 x eTimer w/ 6-ch., 1 x PIT / STM w/ 4-ch., SWT
Core	2 x e200z4 lockstep	Analog	4 x 12 bit ADC w/ 16-ch.
Speed	Up to 200 MHz	Comm	SENT, ADC, FlexCAN, FlexRay, LinFlex, DSPI, FlexPWM and SIPI/LFAST 3G IF
Package	144 LQFP/257 BGA		
Op Range	3.15 V to 5.5 V	Safety	Core/DMA lockstep, e2eECC, duplicate periphery, LBIST/MBIST, ADC self-test, FCCU
Temp	-40°C to up to 135°C		

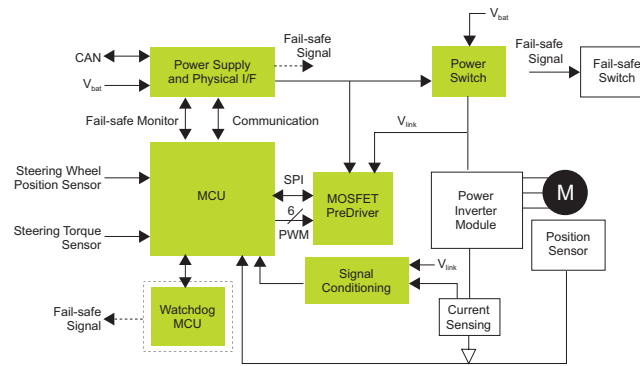
Orderable Samples

Part Number	Temp. Range	Flash	SRAM	Package
SPC5744P	-40°C to 125°C	2.5 MB	384 KB	144 LQFP/257 BGA
SPC5743P	-40°C to 125°C	2 MB	256 KB	144 LQFP/257 BGA
SPC5742P	-40°C to 125°C	1.5 MB	192 KB	144 LQFP/257 BGA
SPC5741P	-40°C to 125°C	1 MB	128 KB	144 LQFP/257 BGA

MPC574xP Block Diagram



Motor Control Application



Success Stories

- ▶ Electronic power steering
- ▶ Wireless charging
- ▶ Shock controller
- ▶ DC-DC converter

Target Applications

- ▶ Electric power steering (EPS)
- ▶ Airbag system
- ▶ Safety domain control
- ▶ Safety motor controller
- ▶ Active driver assistance system
- ▶ Adaptive cruise control
- ▶ Braking and stability control
- ▶ Active suspension

Enablement Tools

- ▶ Development hardware:
 - Mother evaluation board
 - Daughter adapter boards
- ▶ Runtime software:
 - Flash and EEPROM driver
- ▶ Compiler: Green Hills, Wind River
- ▶ Debugger: Lauterbach, iSystem, PLS



www.nxp.com/MPC574xP

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Document Number: MPC574xPFS REV 3



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