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Automotive SPC5 MCUs

Safety & Performance



Contents

- 3 ISO 26262 Functional safety
- 4 Performance MCUs
Safety-oriented portfolio
- 7 SPC5 Performance Safe MCUs
Scalable features, memory
and security options
 - 7 SPC58 N Line
 - 8 SPC58 E Line
 - 9 SPC57 K Line
 - 10 SPC56 L Line
 - 11 SPC57 4S Line
 - 12 SPC57 0S Line

ISO 26262

Functional safety

Vehicles are evolving with addition of more and more functions to increase driver and passenger safety and comfort, paving the way to autonomous driving.

The exponential increase in electronics and their complexity brings more challenges to ensuring the vehicle's reliability and safety.

It is essential to make certain that both device hardware and software operate safely, and bring the system into a safe mode in case of failure.

ISO 26262 STANDARD

Adaptation of the functional safety standard IEC 61508 for automotive electric/electronic systems

ISO 26262 defines functional safety for automotive equipment and addresses possible hazards caused by the malfunctioning of electronic and electrical systems in passenger vehicles.

Compliance with ISO 26262 is addressed by car manufacturers and system suppliers, leveraging the capabilities of system components to support the standard.

Functional safety standards are important to ensure the development of safe vehicles.

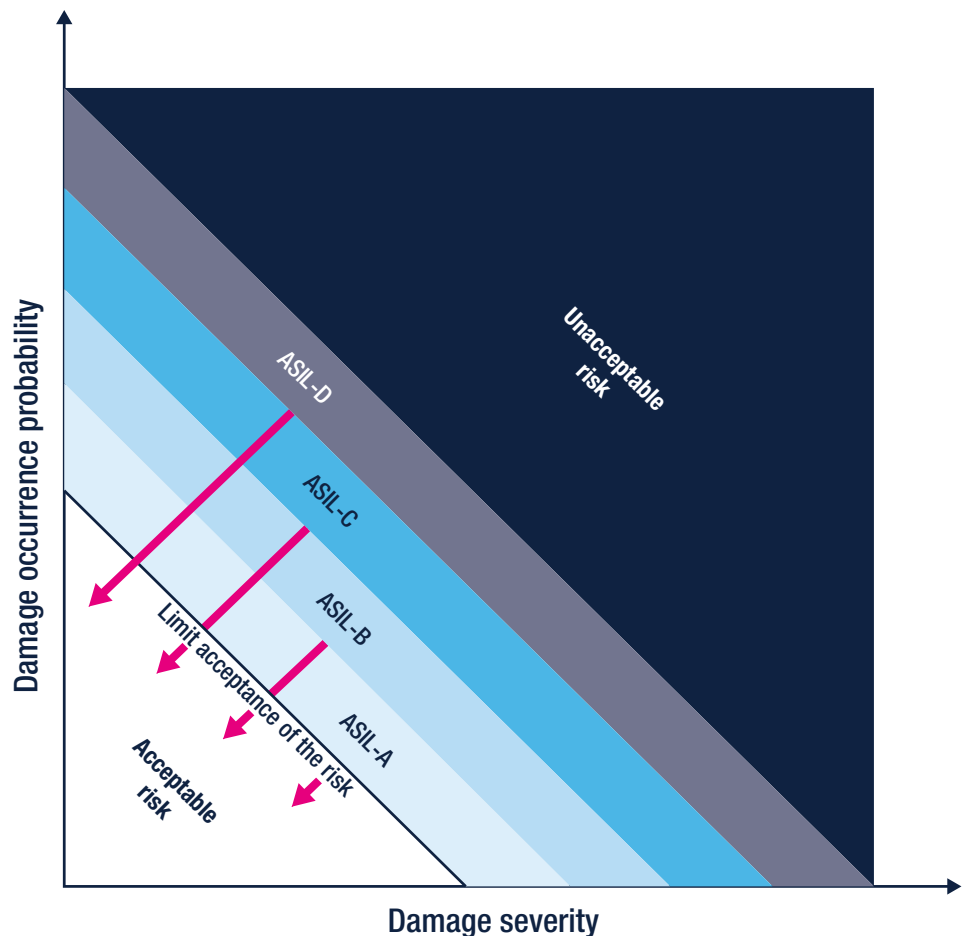
The ISO 26262 automotive functional safety standard defines four Automotive Safety Integrity Levels (ASIL).

They represent the level of risk reduction required for system to reach an acceptable level in case of malfunctioning of a specific vehicle function.

ASIL-D is the most stringent level.

The assigned ASIL specifies the necessary requirements according to the ISO 26262 standard and the safety measures to be applied for avoiding an unreasonable residual risk.

A given integrity level is achieved by applying specific processes from the device design flow through the entire development chain, including the integration of specific hardware and software architectures.

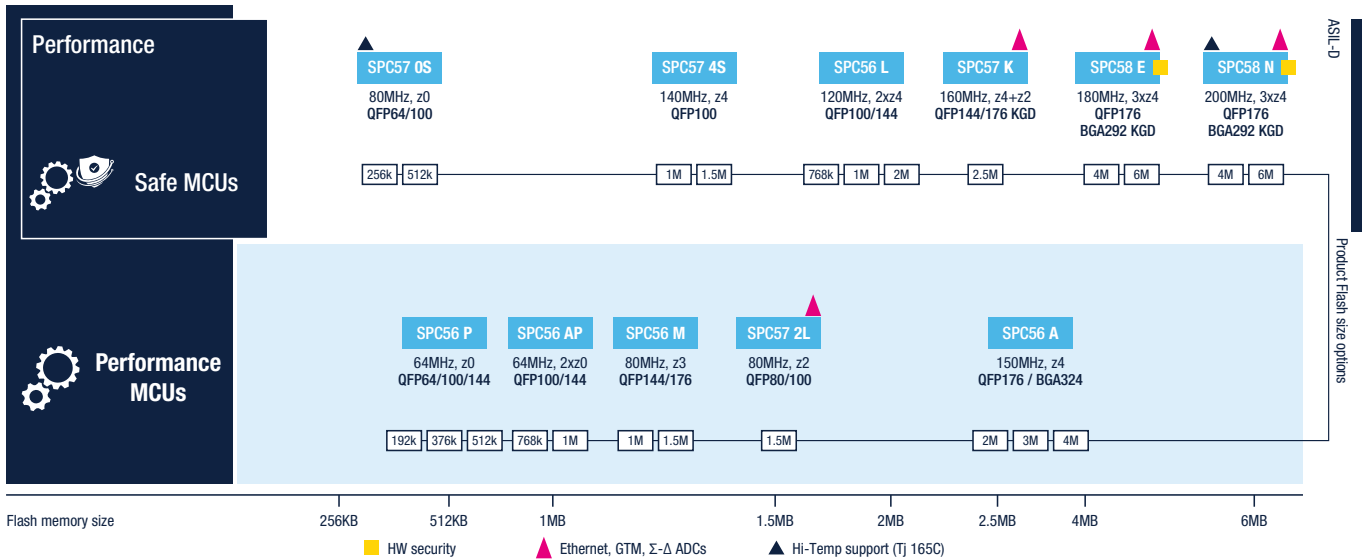


Performance MCUs

Safety-oriented portfolio

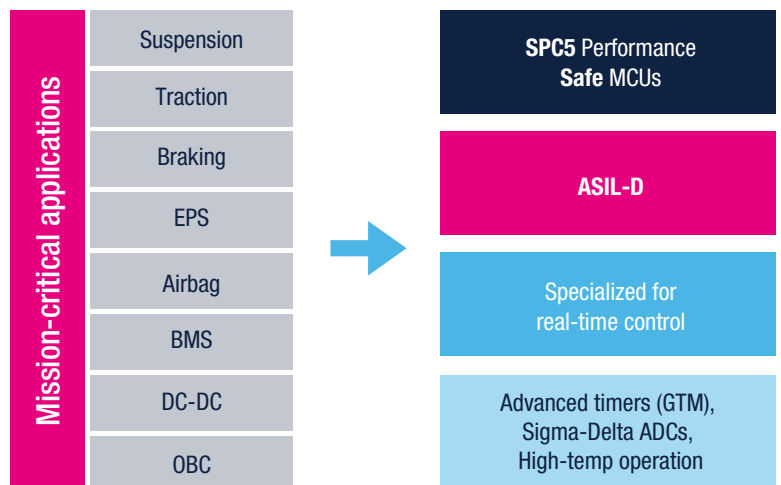
The SPC5 Performance automotive microcontroller family, built on Power Architecture® technology, provides a wide range of products addressing all automotive applications where real-time control and performance is needed, such as for chassis and powertrain applications.

Specific SPC5 Performance **Safe** MCUs are available to support **ASIL-D**, ensuring the maximum ISO 26262 functional safety level for mission-critical applications.



DESIGNED FOR MISSION-CRITICAL APPLICATIONS

A scalable class of high-performance automotive microcontrollers with multiple cores, memory sizes, timers and ADCs as well as a wide range of peripherals and package options: SPC5 Performance Safe MCUs are a perfect solution to optimize system cost and performance, while maintaining system safety as a main priority.



SPC5 PERFORMANCE SAFE MCUs

Offering developers a scalable selection of features, memory sizes and security options to ensure a cost-effective fit for their designs, SPC5 Performance Safe MCUs address the full range of low- to high-end mission-critical applications.

	SPC58 N Line	SPC58 E Line	SPC57 K Line	SPC56 L Line	SPC57 4S Line	SPC57 0S Line
Core (e200 Power architecture)	Triple z4d @ 200 MHz	Triple z4d @ 180 MHz	z4 @ 160 MHz + z2 @ 80 MHz	Dual z4d @ 120 MHz	z4d @ 140 MHz	z0h @ 80MHz
Embedded Flash memory size	4 to 6 Mbytes	4 to 6 Mbytes	2.5 Mbytes	768 Kbytes to 2 Mbytes	1.5 Mbytes	256 to 512 Kbytes
Timers	GTM3	GTM3	GTM1	eTimers FlexPWM	eTimers FlexPWM	eTimers
Advanced networking	8x CAN-FD FlexRay 1x Ethernet	8x CAN-FD FlexRay 2x Ethernet	2x CAN-FD 1x CAN FlexRay Ethernet	3x FlexCAN FlexRay	2 x CAN FD	2x CAN
Security	HSM Medium	HSM Medium	Software		Software	Software
ADC	5x 12-bit (SAR) 2x 10-bit (SAR) 6x 16-bit (sigma-delta)	5x 12-bit (SAR) 3x 10-bit (SAR) 6x 16-bit (sigma-delta)	5x 12-bit (SAR) 2x 16-bit (sigma-delta)	2x 12-bit	8x 12-bit	2x 12-bit
High-temperature support (T_j 165°C)	Qualified					Qualified
Safety	ASIL-D	ASIL-D	ASIL-D	ASIL-D	ASIL-D	ASIL-D



SAFETY-DRIVEN HARDWARE DESIGN

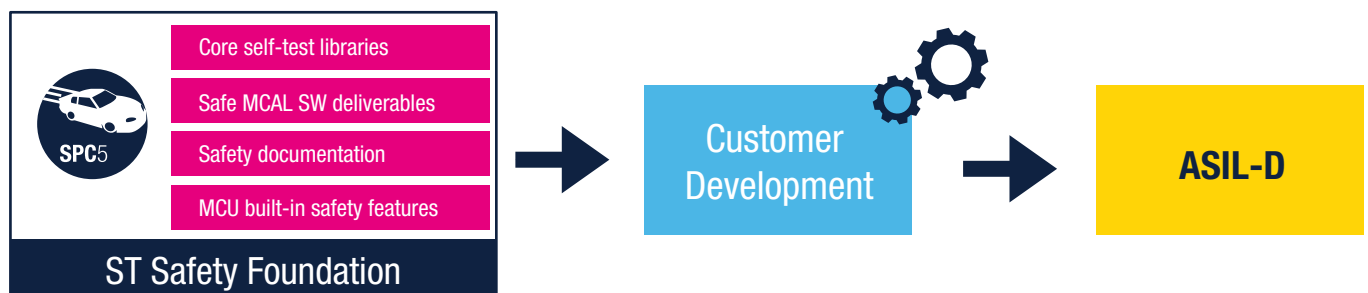
SPC5 Performance Safe MCUs deliver robust hardware features to ensure that a high level of safety is built into the chip right from the start.

Built-in hardware safety features

Built-in HW features	SPC58 N Line	SPC58 E Line	SPC57 K Line	SPC56 L Line	SPC57 4S Line	SPC57 OS Line
Safety monitors to detect internal failure	•	•	•	•	•	•
Protection of the safety monitors	•	•	•	•	•	•
Fault collector system: system react and failure report	•	•	•	•	•	•
Automatic HW control of safety-critical pins upon a fault	•	•	•	•	•	•
Safe mode with safe RCOSC clock	•	•	•	•	•	•
Lockstep for safety-related bus masters (cores, DMA)	•	•	•	•	•	•
Dedicated monitors for clock & power, generation & distribution	•	•	•	•	•	•
Temperature monitoring	•	•	•	•	•	•
I/O redundancy	•	•	•	•	•	•
Interconnect safety resources	•	•	•	•	•	•
Memory ECC and additional safety measures	•	•	•	•	•	•
End-to-end ECC data path to storage & peripherals with address encoding	•	•	•	•	•	•
ECC error logging in dedicated tables	•	•	•	•	•	•
Memory protection unit	•	•	•	•	•	•
Register access protections	•	•	•	•	•	•
Protection of safety-critical registers	•	•	•	•	•	•
Protection of safety-critical DCF clients	•	•	•	•	•	•
Error reaction path test (by software)	•	•	•	•	•	•
Dedicated test features for safety-critical IPs	•	•	•	•	•	•
Availability of CRC modules	•	•	•	•	•	•
Protection of test modes	•	•	•	•	•	•
Protection against CCFs (Common Cause Failures)	•	•	•	•	•	•
System configuration protection (by software)	•	•	•	•	•	•

REDUCE TIME AND COST TO BUILD YOUR SYSTEM WITH SPC5

With its Functional Safety Package based on robust built-in safety features, ST provides a comprehensive set of software libraries and documentation for manufacturers to significantly reduce development efforts, time and cost to achieve ASIL qualification of target applications up to the most stringent ASIL-D.



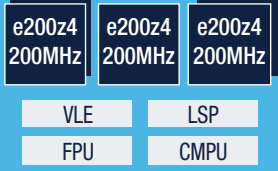
SPC5 Performance Safe MCUs

Scalable features, memory and security options

SPC58 N Line

SPC58 N line performance MCUs, based on Power Architecture® technology, are designed for mission-critical automotive applications where the most stringent safety standards and real-time performance really matters.

SPC58 N Line performance MCUs are tailored for applications requiring high performance and even faster signal processing with minimum-to-no CPU load.

Cores PowerPC architecture 	System Crossbar switch Memory protection unit 1x 64 channels DMA 1x 32 channels DMA Calibration interface	Connectivity 1x ETH 10/100Mbps 8x CAN FD 7x LIN 1x FlexRay 8x DSPI 1x I2C 2x PSI-5 1x PSI-5S 15x SENT
6 MB Flash memory 512 KB SRAM	Analog 4x 12-bit ADC 6x 16-bit Σ - Δ ADC 2x 10-bit ADC 1x 12-bit supervisor ADC	Power supply GTM 8x PIT 4x STM RTC/API
Security HSM EVITA Medium	T_j up to 165°C	
Safety 2x CPU channels in lockstep FCCU / MEMU 2x CRC	Power supply 1.2V, 3.3V, 5V	
Debug JTAG, Nexus		

High performance in harsh environments

SPC58 N line automotive microcontrollers offer outstanding performance with up to 3 cores and 6 Mbytes of embedded Flash memory as well as separate Successive Approximation Register (SAR) and sigma-delta ADCs ensuring speed, accuracy and high-resolution sensing. These MCUs support high operating temperatures and ensure augmented connectivity capabilities through a rich set of communication interfaces including Ethernet, FlexRay, CAN FD, LIN, and SENT.

An embedded Hardware Security Module (HSM) ensures robust in-vehicle network protection and secure over-the-air software updates against cyberattacks, supporting the EVITA Medium profile.

The Generic Timer Module (GTM) enables real-time control loops supporting advanced engine management and transmission applications.

KEY FEATURES & BENEFITS

- 3 cores @ 200 MHz each
- 6 Mbytes of Flash memory
- 512 Kbytes of RAM
- 200-MHz Generic Timer Module (GTM)
- Embedded Hardware Security Module (HSM)
- 12-bit ADCs, 16-bit Σ - Δ ADCs

KEY APPLICATIONS

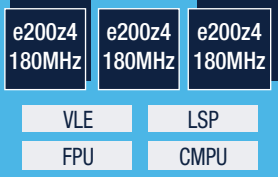
High-performance motor control:

- Advanced powertrain applications
- Hybrid Electric Vehicles (HEV) / Electric Vehicles (EV) motor drives, on-board chargers, and DC-DC converters
- Electric power steering
- Active suspension applications
- Anti-lock braking
- Advanced Driving Assistance Systems (ADAS)

SPC58 E Line

SPC58 E line performance MCUs, based on Power Architecture® technology, are designed for mission-critical automotive applications where the most stringent safety standards and real-time performance really matters.

Ideal for electric vehicle applications including battery management systems, the SPC58 E Line ensures high performance and large RAM size combined with 6 Mbytes of embedded Flash.

Cores	System	Connectivity
PowerPC architecture 	Crossbar switch Memory protection unit 1x 64 channels DMA 1x 32 channels DMA Calibration interface	2x ETH 10/100Mbps 8x CAN FD 18x LIN 1x FlexRay 10x DSPI 1x I2C 2x PSI-5 1x PSI-5S 15x SENT
6 MB Flash memory 768 KB SRAM	Analog 3 x 10-bit ADC 4x 12-bit ADC 6 x 16-bit Σ - Δ ADC 1x 12-bit supervisor ADC	Debug JTAG , Nexus
Security HSM EVITA Medium	Safety 2x CPU channels in lockstep FCCU / MEMU 2x CRC	Power supply 1.2V, 3.3V, 5V Low-power modes
Timers GTM 8x PIT 4x CRC RTC/API		
T_J up to 150°C		

High performance with more RAM

With its 3 cores at 180 MHz, 6 Mbytes of Flash memory and Generic Timer Module (GTM), SPC58 E Line performance MCUs address applications requiring high performance combined with up to 768 Kbytes of RAM.

Separate Successive Approximation Register (SAR) and sigma-delta ADCs ensure speed, accuracy and high-resolution sensing.

Developers can benefit from extensive connectivity capabilities through a rich set of communication interfaces including Ethernet, FlexRay, CAN FD, LIN, and SENT.

An embedded Hardware Security Module (HSM) ensures robust in-vehicle network protection and secure over-the-air software updates against cyberattacks, supporting the EVITA Medium profile.

The Generic Timer Module (GTM) enables real-time control loops supporting advanced engine management and transmission applications.

KEY FEATURES & BENEFITS

- 3 cores @ 180 MHz each
- 6 Mbytes of Flash memory
- 768 Kbytes of RAM
- Generic Timer Module (GTM)
- 16-bit Σ - Δ ADCs

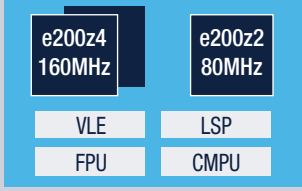
KEY APPLICATIONS

High-performance motor control:

- Advanced powertrain applications
- Hybrid Electric Vehicles (HEV) / Electric Vehicles (EV) motor drives, on-board chargers, and DC-DC converters
- Electric power steering
- Active suspension applications
- Anti-lock braking
- Advanced Driving Assistance Systems (ADAS)

SPC57 K Line

SPC57 K Line MCUs deliver a flexible architecture ideal for balancing performance and power dissipation in a wide range of powertrain and chassis applications including EV/HEV required to meet the most stringent automotive safety standards.

Cores	System	Connectivity
PowerPC architecture 	Crossbar switch Memory protection unit 1x 32 channels DMA Calibration interface	1x ETH 10/100Mbps 2x CAN FD 1x CAN 5x LIN 1x FlexRay
2.5 MB Flash memory 176 KB SRAM	Analog 4(+1) x 12-bit ADC 2x 16-bit Σ - Δ ADC	5x DSPI 1x I2C 6x SENT
Safety 2x CPU channels in lockstep FCCU / MEMU 2x CRC	Timers GTM 6x PIT 2x STM	Power supply 3.3V, 5V, 1.2V on-chip Low-power modes
Debug JTAG, Nexus		

High performance and system flexibility

SPC57 K Line 32-bit MCUs increase system performance by using an optimized multicore MCU architecture based on a main processor core (e200z4) running in lockstep and an I/O processor core (e200z2).

The architecture ensures a perfect management of performance, power dissipation and safety requirements.

Its multicore architecture improves system flexibility as tasks can be split among cores. For instance, one core can take care of computing engine requirements, while another core can be dedicated to running safety-critical tasks. While a third core is available to manage peripherals and signal preprocessing.

With numerous timers and a wide set of connectivity options including Ethernet, these fault-tolerant microcontrollers offer a scalable solution across mid- and high-end applications.

Separate Successive Approximation Register (SAR) and sigma-delta ADCs ensure speed, accuracy and high-resolution sensing.

KEY FEATURES & BENEFITS

- 1 core @ 160 MHz with checker core + 1 core @80 MHz
- 2.5 Mbytes of Flash memory
- 176 Kbytes of RAM
- Generic Timer Module (GTM)
- 16-bit Σ - Δ ADCs


KEY APPLICATIONS

- Chassis control
- Motor control
- Transmission control
- Steering and braking applications, as well as low-end hybrid applications
- Hybrid Electric Vehicles (HEV) /EV drive control
- Powertrain controller applications for four-cylinder engines

SPC56 L Line

The SPC56 L Line, built on Power Architecture® technology, includes additional instruction support for digital signal processing (DSP) and floating-point unit (FPU) capabilities.

These MCUs address a wide variety of applications with demanding safety requirements including electric power steering (EPS), battery management systems, DC-DC converters, as well as park assist and ADAS applications.

Cores	System	Connectivity
PowerPC architecture  VLE SPE SIMD (FPU + DSP)	Crossbar switch Memory protection unit Power management unit 2x 16-channel DMA	3x FlexCAN 2x LIN 1x FlexRay 3x DSPI
2 MB Flash memory 192 KB SRAM	Analog & timers 2x 12-bit ADC 1x PIT 1x STM 3x eTimers 2x FlexPWM	Power supply 3V to 3.6V supply Analog reference 3.3 to 5V Low-power modes
Safety 2x CPU channels in lockstep FCCU / MEMU 1x CRC		Debug JTAG, Nexus

Performance, safety and scalability

SPC56 L Line automotive MCUs feature a high-performance dual-core e200z4d architecture working at 120 MHz, with Variable Length Encoding (VLE), a Memory Management Unit (MMU), and a Signal Processing Engine (SPE).

The line embeds the key functions required to achieve automotive integrity level ASIL-D with a single MCU including two fully independent cores, replication of key components (such as cores in lockstep mode, crossbar, eDMA, MPU, and temperature sensors), a centralized fault collection and control unit, built-in logic and memory self-test features including cyclic redundancy check (CRC), ECC protected memories as well as voltage and clock-failure detection functions.

Different memory size options allow maximum scalability for flexible designs.

An optimized peripheral set for safety and motor-control applications is able to support two brushless 3-phase motors.

KEY FEATURES & BENEFITS


- 1 core @ 120 MHz and a checker core or 2 cores @ 120MHz each
- Up to 2 Mbytes of Flash memory
- Up to 192 Kbytes of RAM
- eTimers
- FlexPWM

KEY APPLICATIONS

- Advanced powertrain applications
- Motor control
- Hybrid Electric Vehicles (HEV) / Electric Vehicles (EV) motor drives, on-board chargers, and DC-DC converters
- Battery management systems
- Electric power steering
- Active suspension applications
- Anti-lock braking
- Advanced driving assistance systems (ADAS)

SPC57 4S Line

The SPC57 4S Line of automotive Power Architecture® microcontrollers is designed to meet the challenges of mission-critical applications for entry- and mid-level vehicles for which safety really matters, such as motor control, anti-lock braking (ABS) and airbags as well as emerging electrification applications such as battery management systems and brushless DC electric motors.

Cores	System	Connectivity
PowerPC architecture  e200z4 140MHz 1x core + checker VLE LSP FPU CMPU	Crossbar switch Memory protection unit 1 x 32-channel DMA	2 x CAN FD 4x LIN 1x FlexRay 4x DSPI 2x SENT
1.5 MB Flash memory 128 KB SRAM	Analog & timers 8x 12-bit ADC 2x 4-channel FlexPWM 2x 2-channel FlexPWM 4x eTimers 1x PIT 1x STM	Debug JTAG, Nexus
Safety Checker core FCCU / MEMU 1x CRC		Power supply & Temp 3.3V, 5V, 1.2V on-chip T _j up to 150°C

Performance, safety and connectivity

Operating at speeds up to 140 MHz with an embedded 1.5-Mbyte Flash memory, the e200z4d dual-core SPC57 4S Line features eTimers and FlexPWM and offers a wide set of connectivity options such as CAN-FD, FlexRay, and LIN interfaces as well as flexible ADCs.

Designed to meet ASIL-D, the highest functional safety level in compliance with ISO 26262, the SPC57 4S Line provides high performance processing with low power consumption.

Available in a 100-pin TQFP package.

KEY FEATURES & BENEFITS

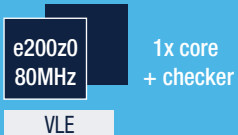
- 1 core @ 140 MHz and a checker core
- 1.5 Mbytes of Flash memory
- 128 Kbytes of RAM
- eTimers
- 2- and 4-channel PWMs

KEY APPLICATIONS

- Motor control
- Advanced powertrain applications
- Hybrid Electric Vehicles (HEV) / Electric Vehicles (EV) motor drives
- Battery management systems
- Electric power steering
- Active suspension applications
- Anti-lock braking

SPC57 0S Line

SPC57 0S Line is designed to meet the challenges of current and next generation entry-level vehicle safety-critical applications, including anti-lock braking (ABS) and airbags.

Cores PowerPC architecture  e200z0 80MHz VLE 1x core + checker	System Crossbar switch Memory protection unit 1x 16-channel DMA	Connectivity 2x FlexCAN 2x LIN 3x DSPI
512 KB Flash memory 48 KB SRAM	Analog 2x 12-bit ADC	Safety Checker core FCCU / MEMU 1x CRC
Power supply & Temp 3.3V, 5V, 1.2V on-chip T _j up to 150°C, 165 °C option	Timers 4x eTimers 1x PIT 1x STM	Debug JTAG, Nexus

Small and safe with high-performance

The SPC57 0S Line microcontrollers operate at speeds up to 80 MHz delivering high-performance processing with low power consumption.

Featuring eTimers and ADCs, it offers the maximum safety even in harsh conditions, with an optional junction temperature support up to 165°C.

The smallest device of the SPC5 Performance Safe MCUs series, the SPC57 0S Line of automotive MCUs offers full scalability to address the full range of chassis and safety solutions as well as the emerging needs of EV/HEV applications.

KEY FEATURES & BENEFITS

- 1 core @ 80 MHz with checker core
- 512 Kbytes of Flash memory
- 48 Kbytes of RAM
- eTimers
- ADCs

KEY APPLICATIONS

- Motor control
- Powertrain and chassis applications
- Hybrid Electric Vehicles (HEV) / Electric Vehicles (EV) motor drives
- Battery management systems and cell management
- Electric power steering
- Active suspension applications
- Anti-lock braking
- LED driver controller

SPC5 PERFORMANCE SAFE MCU PORTFOLIO AND PACKAGES AT A GLANCE

Memory and package options for design flexibility

Lines	SPC57 0S	SPC57 4S	SPC56 L	SPC57 K	SPC58 E	SPC58 N		
Flash memory size	6 MB				SPC58NE84	SPC58NN84		
	4 MB				SPC58NE80	SPC58NN80		
	2.5 MB			SPC574K72				
	2 MB		SPC564L70 / SPC56EL70					
	1.5 MB		SPC574S64					
	1 MB		SPC574S60	SPC564L60 / SPC56EL60				
	768 KB			SPC564L54				
	512 KB	SPC570S50						
	256 KB	SPC570S40						
Packages	eLQFP64	●					10 x 10 x 1.0 mm / 0.5	
	eTQFP100	●	●	● *			14 x 14 x 1.0 mm / 0.5	
	eTQFP144			● *	●		20 x 20 x 1.0 mm / 0.5	
	eLQFP176				●	●	●	24 x 24 x 1.4 mm / 0.5
	FPBGA292					●	●	17 x 17 x 1.8 mm / 0.8

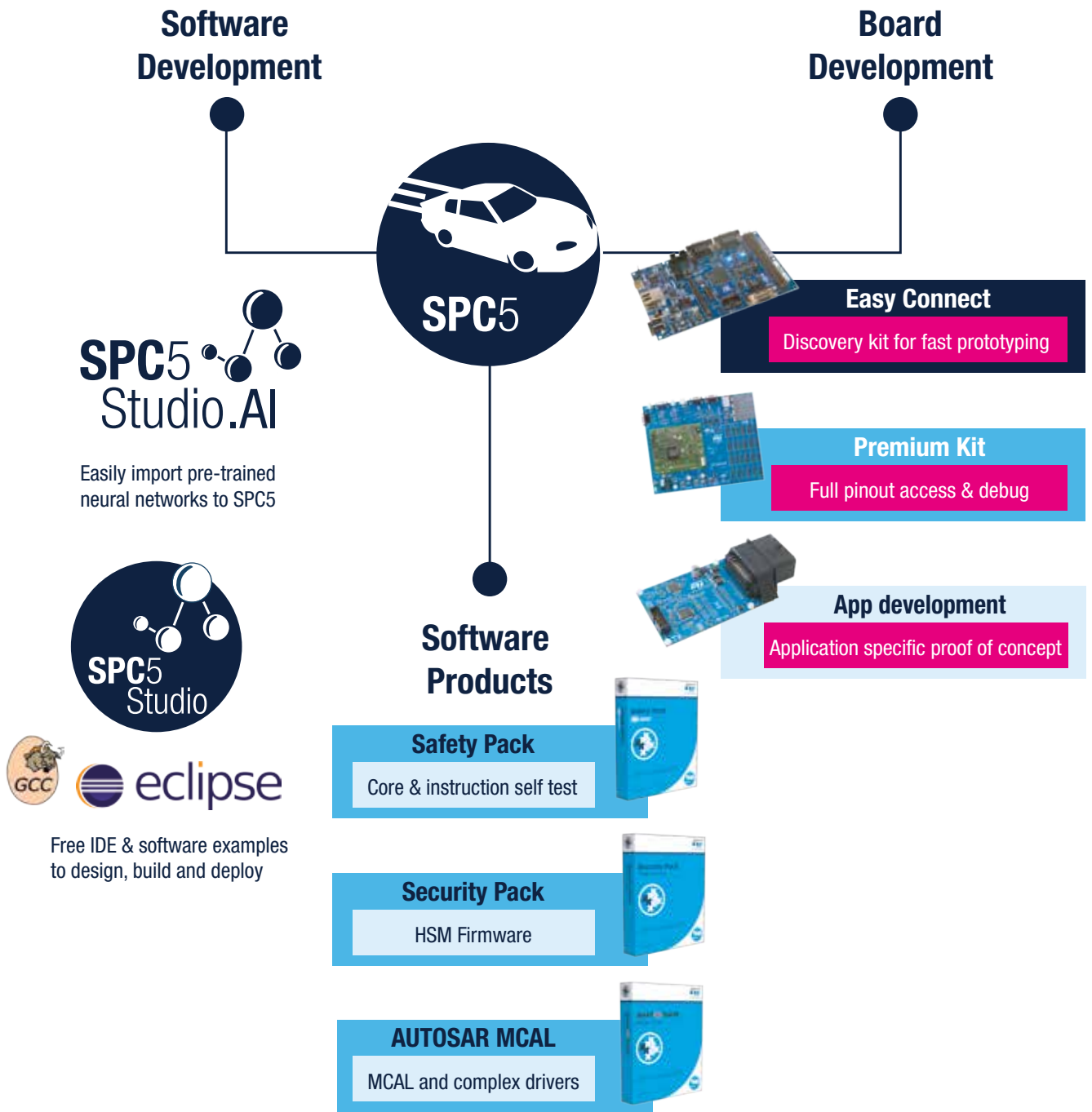
*LQFP (height 1.4 mm)

COMPREHENSIVE SPC5 AUTOMOTIVE MCU DEVELOPMENT ECOSYSTEM

A rich ecosystem with a full set of hardware and software tools allows developers to save time, simplify implementation, quickly prototype their application and benefit from example code. ST offers a wide set of hardware kits ranging from quick evaluation tools to modular and professional boards for developing final proofs-of-concept.

Together with free downloadable SPC5Studio Integrated Development Environments, engineers can easily set up application projects in a short time. SPC5Studio contains a wide selection of example code for starting projects. Additionally, ST offers a set of licensed software packs addressing Safety, Security and AUTOSAR MCAL components.

ST's network of 3rd parties and partners complement the offer with hardware, such as debugger probes, and software tools including compilers and other services.




HARDWARE TOOLS

Easy Connect

Discovery kit for fast prototyping


Quick and easy hands-on tools to explore the device and accelerate development

512KB **0S**




SPC570S-DISP
eTQFP64

1.5MB **4S**




SPC574S-DISP
eTQFP100

2.5MB **K**



SPC574K-DISP
eTQFP144

2MB **L**



SPC56EL70L5DISP
LQFP144



1. SPC5-UDESTK-EVAL
SPC-UDEDEBG (perpetual)

Debugger
SPC5-UDESTK-EVAL
(dongle + demo license)
Multiple license schemes available:
SPC5-UDEDEBG-TL¹ (1 Year)
SPC5-UDEDEBG¹ (perpetual)

Debugger included
(demo license)

Full pinout accessibility & debugging

For professional evaluation and prototypes, with tracing capability. Modular approach with multiple package options and various automotive grade connectors to interface with existing systems.



Motherboard
SPC58XXMB / SPC56XXMB



Daughterboard
For package adaption
& clip-on package



Samples
(not included
in daughterboard)

Premium Kit

Family	Package	Board Part Number
SPC58 N Line	eLQFP176	SPC58XXADPT176S
	FPBGA292	SPC58XXADPT292S
SPC58 E Line	eTQFP144	SPC58XXADPT144S
	eLQFP176	SPC58XXADPT176S
	FPBGA292	SPC58XXADPT292S
SPC57 K Line	eTQFP144	SPC574KADPT144S
SPC57 4S Line	eTQFP100	SPC574SADPT100S
SPC57 0S Line	eTQFP64	SPC570SADPT64S
	eTQFP100	SPC570SADPT100S
SPC56 L Line	LQFP144	SPC56EADPT144S

With Nexus debug interface



Available on selected products from:

Package	Emulation boards Part Number
SPC58 N Line	SPC58NEMU
SPC58 E Line	SPC58EEMU
SPC57 K Line	SPC57KEMU



SOFTWARE TOOLS



SPC5Studio is a built-on Eclipse plug-in development environment offering a very intuitive and customizable framework to build and deploy embedded applications for SPC5 Power architecture 32-bit microcontrollers.

Integrating software development tools, device configuration tools and examples, SPC5Studio is a complete solution to speed up project development.

Available free for download on the [st.com](https://www.st.com) website.



SPC5Studio includes **SPC5Studio.AI**, a plug-in for Artificial intelligence-based applications: a seamless way to generate, execute and validate pre-trained NN models on automotive MCUs.

Pre-trained neural networks can be automatically generated into an efficient “ANSI C” library that can be compiled, installed and executed.

Pre-trained neural networks can be easily imported by SPC5Studio.AI from the most widely used deep learning frameworks, such as Keras, TensorFlow Lite, Lasagne, Caffe, ConvNetJS, and ONNX.

SOFTWARE PRODUCTS



SPC5 Security Pack provide basic capabilities to support root-of-trust (RoT) where private encryption keys are kept secret during the microcontroller lifetime using a dedicated location inside the OTP space. To further ensure application security, encryption and decryption functionalities are fully executed on the HSM core.



SPC5 Safety Pack is a comprehensive software package rigorously developed according to an ISO 26262-compliant development process, and helps developers achieve the required safety target, up to the most rigorous ASIL-D level. It includes a Safety kit for the Microcontroller Abstraction Layer (MCAL) as well as Core self-test programs that implement safety counter-measures to ensure compliance with MCU ASIL level requirements.



SPC5 AUTOSAR MCAL Driver offers a full set of Microcontroller Abstraction Layer software components in addition to Complex Device Drivers (CDD) to support specific hardware peripherals. MCAL software components are developed in house, through an ISO 26262-certified development process. ST’s CDD and MCAL drivers are integrated by 3rd party partners with all the components required for the AUTOSAR architecture including basic software layer and OS, offering a complete off-the-shelf AUTOSAR solution.

ST Security Pack, Safety Pack and AUTOSAR MCAL Pack are licensed products.

FIND INFORMATION AND SUPPORT

Visit www.st.com for valuable online information and support on our products to bring your project to life.

Access SPC5 online documentation and development ecosystem from any desktop or mobile device.



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Order code: **BRSPC5MCU1121**

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