

eSys-SVCx Product Family

Up to Performance Level ASIL-C













eSys-SVCx Product Family

Powerful electronic control units for safety-related applications up to ASIL-C. A rugged construction facilitate an optimal use in mobile machines.

Key Features

-  **Scalable safety controllers up to ASIL-C (acc. to ISO 26262)**
-  **High performance 32-bit Dual-Core Microcontroller**
-  **4× CAN interface acc. to ISO 11898**
-  **1× LIN**
-  **Up to 74 IOs**
-  **AUTOSAR compliant**
-  **Robust aluminium housing with automotive connectors**
-  **Certificated acc. to ECE R10 (eSys-SVC3 xt)**

eSys-SVCx product family

The Safety ECU family consists of two different high-end safety modules with different configuration options. The wide range of applications offers numerous possibilities for use in mobile machines such as trucks and trailers, as well as construction, agricultural and special-purpose machines.

Interfaces and safety-certified up to ASIL-C

A powerful 32-bit dual-core microcontroller with 160 MHz, up to four CAN, one LIN interface and 74 IOs (including PWM current control) can be used for applications up to Automotive Safety Integrity Level C (ASIL-C). The risk classification is defined by the ISO standard 26262 for safety-relevant electrical/electronic systems in motor vehicles. The electronics are protected by a robust die-cast aluminium housing and robust automotive connectors facilitate the connection to the control unit.

AUTOSAR-compliant software

The safety controllers are available with various software packages. Starting with QM (quality management) based software up to ASIL-C and AUTOSAR compliant software, you can choose which software architecture is required for your application. This flexibility allows you to use it for

a wide range of applications and safety requirements. It always provides the customer with the optimum Safety-ECU – optimized for the individual application and the best possible cost-benefit ratio.

The AUTOSAR standard

AUTOSAR is an open and standardized software architecture for automotive ECUs (without infotainment). The architecture scales to different vehicle and platform variants, takes into account system availability and system safety requirements, and supports software transferability, sustainable use of natural resources, and ease of maintenance throughout the entire product life cycle.

Among other things you benefit from:

- Reduction of the number of ECUs in the vehicle by flexible assignment of ECU data with multiple functions
- Easier integration into the vehicle through a defined architecture
- Reusability of functions through fixed standards for important system functions and interfaces
- Easy scalability and expandability. This makes a functional development for smaller quantities interesting
- Function development possible, independent of the existing topology in specific vehicles

Technical Data

CPU	eSys-SVC3 xt	eSys-SVC4 xt
CPU	32-Bit microcontroller dual-core, 160 MHz	
RAM	128 KB internal	
Memory	1 MB internal	

Interfaces & Inputs/Outputs	eSys-SVC3 xt	eSys-SVC4 xt
CAN	3x CAN interface accord. to ISO 11898 & CAN 2.0 B	4x CAN interface accord. to ISO 11898 & CAN 2.0 B
LIN	1x (optional)	1x
Analog inputs, Pulldown 0–5 V and 0–32 V	9x (6x SAFE); 0–5 V and 0–32 V	20x (14x SAFE); 0–5 V and 0–32 V
Digital inputs or RPM inputs	2x (1x SAFE)	16x (1x SAFE)
Pulse inputs	2x	6x
PWM/HSS/LSS outputs	5x PWM (5x SAFE) current range 0 to 2.0 A 4x HSS current range 0 to 2.0 A 2x LSS current range 0 to 1.0 A	15x PWM current range 0 to 2.0 A 10x HSS current range 0 to 2.0 A 4x LSS current range 0 to 1.0 A
Fixed voltage output	2x 5 V, stabilized supply voltage, short-circuit proof	
Sensor voltage output	1x 12.7 V (optional)	1x 12.7 V
3D acceleration sensor	1x (optional)	1x

Housing	eSys-SVC3 xt	eSys-SVC4 xt
Plug	154-pin connector	
Housing	IP68 (opt. IP6K9K), die-cast aluminium	
Dimensions	approx. 170 mm × 214 mm × 34 mm	approx. 229 mm × 228 mm × 34 mm
Operating temperature	–40 °C up to +85 °C housing temperature	
Storage temperature	–40 °C up to +90 °C housing temperature	

Supply Voltage	eSys-SVC3 xt	eSys-SVC4 xt
Supply voltage	8–32 V (12 V or 24 V Board Version)	
Power consumption	Quiescent current approx. ca. 2.9 mA at 28.5 V, total current up to 41 A	Quiescent current approx. ca. 3 mA at 28.5 V, total current up to 80 A



Mobile Automation



Industrial Automation



Diagnostics



Connectivity

We are looking forward to your enquiry!

Sontheim Industrie Elektronik GmbH

Georg-Krug-Straße 2
D-87437 Kempten
Phone: +49 (0)831 575900-0
Fax: +49 (0)831 575900-72
Email: info@s-i-e.de

Sontheim Electronic Systems L.P.

201 West 2nd Street
Davenport, IA 52801, USA
Phone: +1 563 888 1471
Email: info@sontheim-esys.com

www.s-i-e.de