

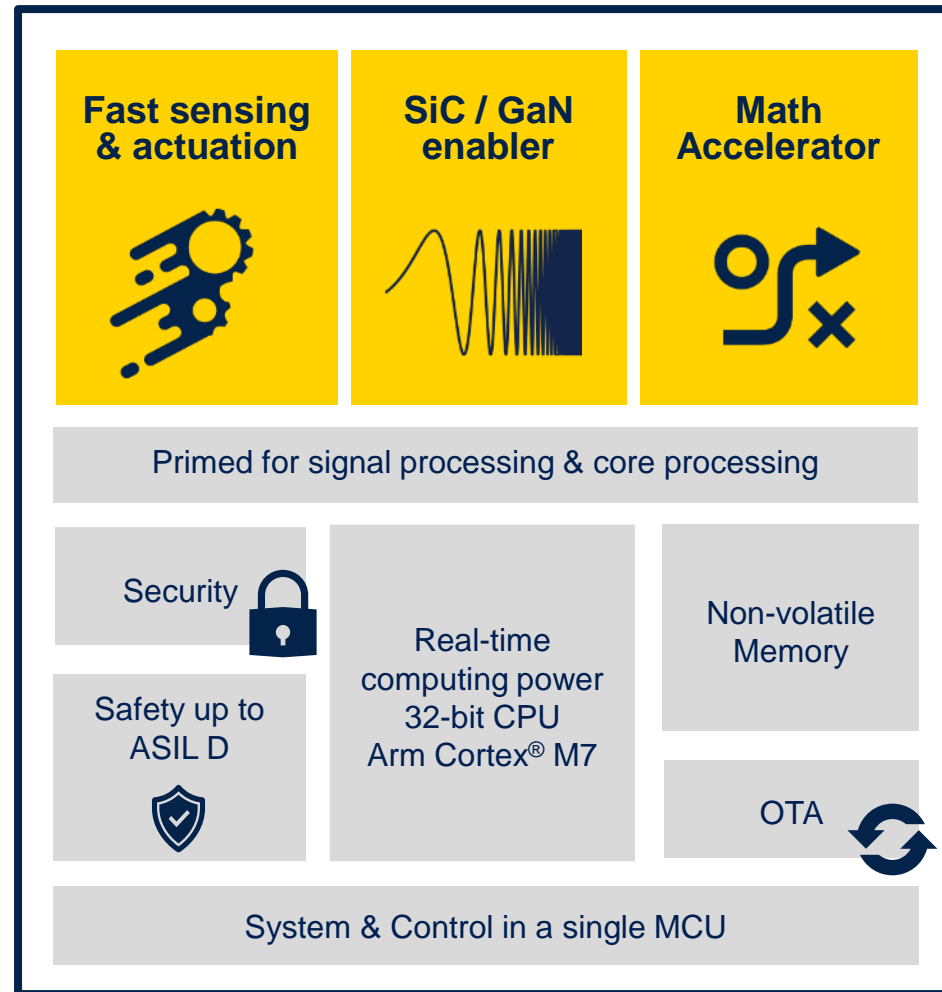


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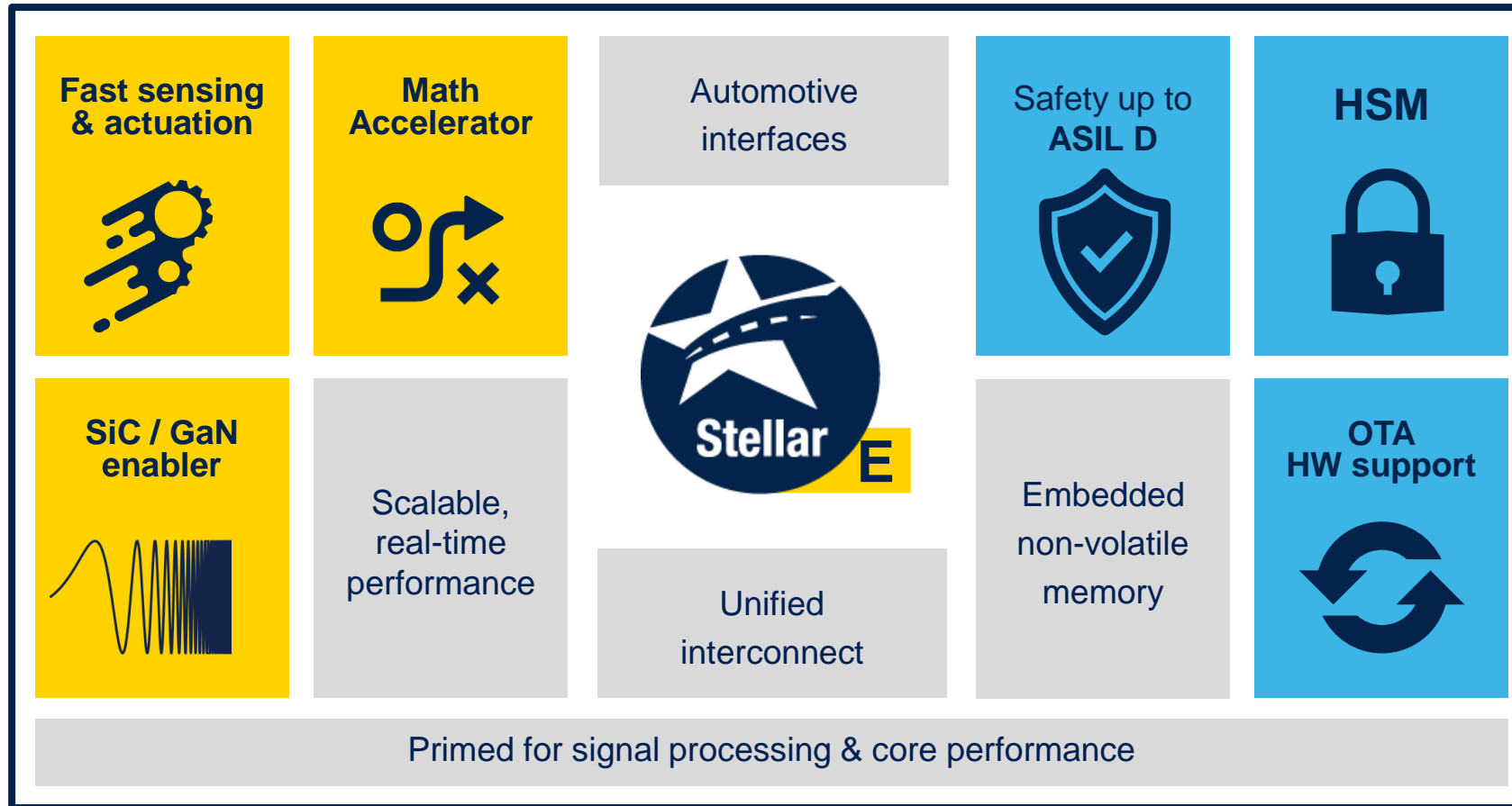
Stellar Studio and plug-in for running artificial intelligence at the edge



Stellar Electrification MCU



Stellar E series: the all-in-one microcontroller

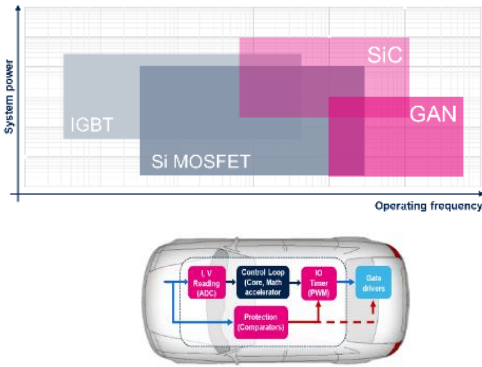


Stellar E series: Innovation with value

Designed for car electrification

FAST Acquisition
Actuation
Protection

For **SiC** and **GaN** wide band technology



SUSTAINABLE TECHNOLOGY

Entire system control in ONE MCU

HRTimer

SD-ADC

Analog Comp

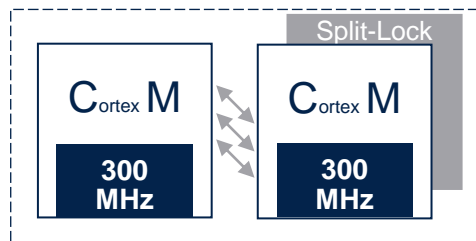


Tailored for

OBC
DC-DC

Traction Inverter

Unique scalable performance



ARM
Cortex

ARM Cortex-M

Split-Lock flexibility

ISO 26262 ready

Stellar **E** MCU

Electrification,
control & actuation

Safe and Secure

ASIL-D

Low-latency HSM

ISO 21434 ready

ISO/SAE 21434:2021 Road vehicles — Cybersecurity engineering



Stellar E ecosystem overview

Datasheet – I/O mapping –
Reference Manual –
Cybersecurity Manual –
FMEDA



Documentation
and Support



Eval Boards

Application Specific



SR5E1-EVBE7000P
SR5E1-EVBE7000S

Development
Boards

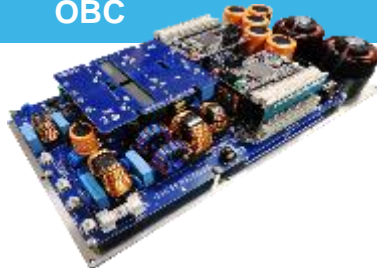
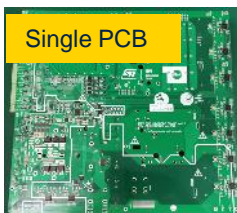
Reference Kit

Online Application/Technical Notes

OBC+DCDC

OBC

Traction



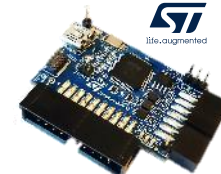
Software
Development

Software
Packages

Security
Safety
Autosar



Stellar Studio
IDE & SDK



StellarLink

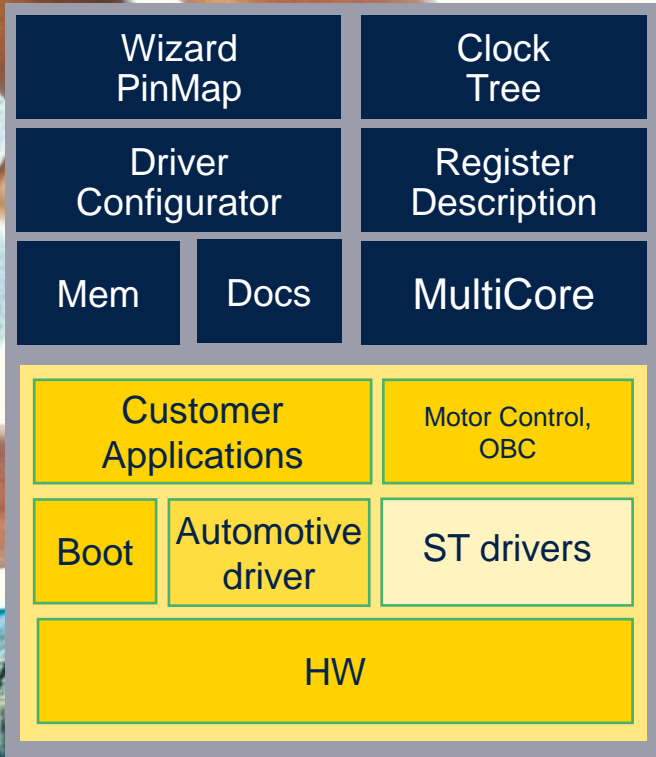




Stellar Studio / Stellar E SDK



All-in-one and ready to use IDE, SDK and toolchain

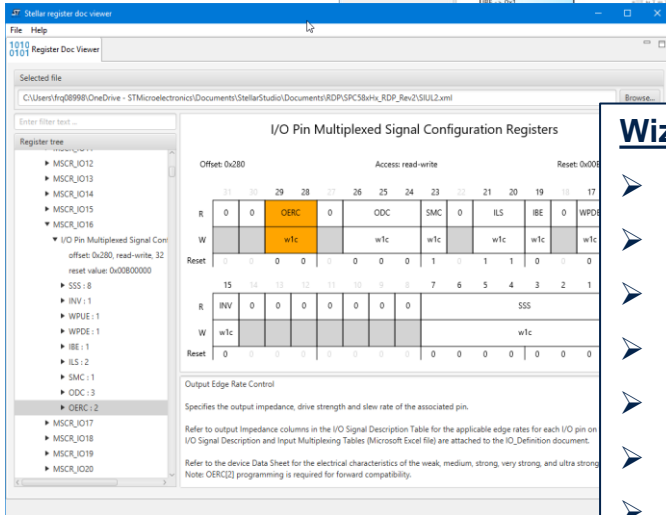
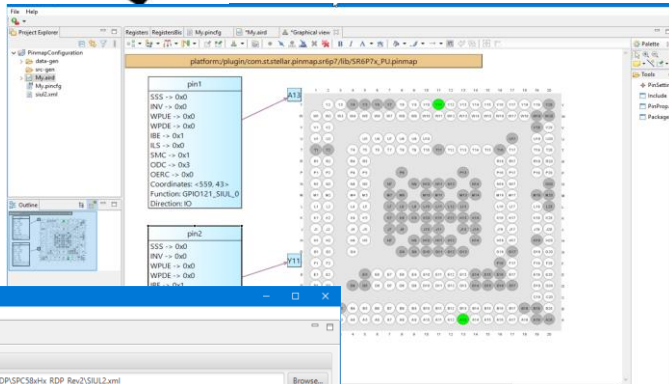


Eclipse-based development environment

Integrated free GNU Arm Embedded Toolchain with the GNU Compiler (GCC)

Extendible with third-party toolchains

- Pin Map and Clock Tree wizards
- Driver configurator
- Memory indicators and Register description
- Motor Control, OBC, BMS applications and more
- Multicore and Boot
- Developer and quality documentation



- Wizards and Tools:**
- Pin map wizard
 - Register description viewer
 - Clock tree wizard
 - NOC
 - Memory configurator
 - Power consumption
 - IRQ configurator

Stellar Studio



Scalable and modular solution for every developer's needs

User-friendly IDE build on Eclipse on top of Stellar SDK releases

Automatic code generation using Eclipse Modeling Framework (EMF)

Easy WYSIWYG evaluation & application start-up for developers

Multi-platform support (Windows, Linux, MacOS)



StellarLINK

fast prototyping for Stellar MCUs

ST programmer & debugger
for Automotive MCUs



Supporting Stellar P/G/E and SPC5 microcontrollers



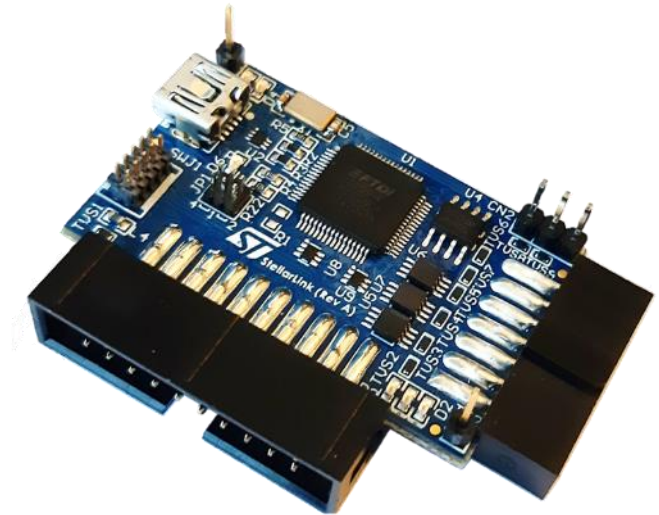
Plug & Play with evaluation boards



Extending Stellar & SPC5 ecosystem



Eco-friendly packing box





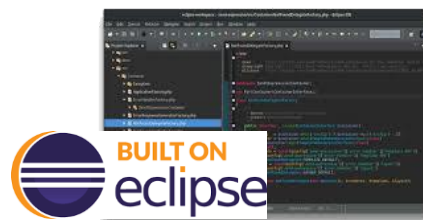
Edge AI plug-in for Stellar E series

Design



Design & pre-train
your neural network

Convert



Convert automatically
into optimized code library
Analytics included!

Inference



Process & analyze
Run your neural network on
STELLAR E MCUs

Get started quickly with
Stellar E evaluation boards



Edge AI plug-in for Stellar E series

The edge AI plug-in (STELLAR-STUDIO-AI) for the Stellar Studio IDE designed for Stellar E Electrification MCUs

- Automatically generates pre-trained neural networks
- Converts them into libraries to be run on Stellar E MCU
- Integrates widely used deep learning frameworks such as Keras, TensorFlow Lite, and ONNX
- Flexibility to import the generated library into more complex application-specific projects, thanks to a well-defined number of public APIs



Artificial Intelligence plug-in for Stellar E series

The artificial intelligence plug-in (STELLAR-STUDIO-AI) for the Stellar Studio IDE designed for Stellar E Electrification MCUs

Automatically generates pre-trained neural networks

Converts them into libraries to be run on Stellar E MCUs

Integrates widely used deep-learning frameworks including Keras, TensorFlow Lite, and ONNX

Flexibility to import the generated library into more complex application-specific projects, thanks to a well-defined short number of public APIs

Our technology starts with You



Find out more at www.st.com/stellar

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