

## Versatile functions designed for your demands: Powerful, universal applicable Linux PLC-, IoT- and Edge-Controller



G-FS-UniversalController KI EN\_240723.docx

- **Universal application**
- **Ready for cyber security requirements**
- **CODESYS as soft SPS**
- **Linux Yocto with RT extension**
- **Supports different OCI specification**
- **i.MX 8M Plus processor with integrated NPU for AI/ML**
- **Various interfaces**
- **Compact design**
- **Base for customer-specific adaptations**

Our new Universal Controller (UC) supports you in the implementation of embedded AI solutions. It is a fully-fledged and compact CODESYS PLC controller that can be used for various automation solutions thanks to its modern software architecture. Equipped with a high-performance CPU, the integrated NPU and GPU units, it already enables the realisation of future-oriented applications in the field of AI/ML and 2D/3D graphics processing. The integrated Linux Yocto operating system supports various OCI specifications, which enables direct containerisation at hardware level. Thanks to numerous interfaces, extensions can be connected directly.

The UC not only functions as a PLC but can also be expanded with AI functions or used as an IoT gateway or platform for AI/edge programmes. Control communication takes place via EtherCAT, for example.

As part of our modular system, the UC can be easily connected to our Web Panel or Smart Panel.

Wir entwickeln Ihren Erfolg!



## Universal Controller

### Technical data

<b>Device information</b>	
Power supply	24VDC +/- 20%
Temperature range	0 bis +40°C bei 100% CPU-Last 0 bis +60°C bei 50% CPU-Last
Dimension (B x H x T) [mm]	99 x 166 x 23
Installation	DIN rail mounting
LEDs	8 x status, programmable 3 x status for power supply and CPU
Cooling	Passive
<b>Processors</b>	
<b>Main processor (CPU)</b>	NXP i.MX 8M Plus
Processor cores	Cortex™-A53, 4 cores
CPU speed	bis zu 1.8 GHz
Graphics Processing Unit (GPU)	2D/3D graphics accelerator GC7000UL/ GC520L
Neural Processing Unit (NPU)	NN Accel up to 2.3 TOPS
<b>Memory</b>	
RAM	2 GB LPDDR4 (1-8 GB possible) <sup>1</sup>
eMMC	32 GB (8-128 GB possible) <sup>1</sup>
NVSRAM	128 kB
External additional memory (removable memory)	External additional memory (removable memory)
<b>Interfaces<sup>2</sup></b>	
Ethernet	2 x 10/100/1000 Mbps
EtherCAT	1 x 10/100 Mbps
USB typ A	1 x 3.0 Host and 4 x 2.0 Host
USB typ Mini B	1 x 2.0 Device port for debugging
COM-Interfaces	2 interfaces in various combinations of RS232/RS485/CAN/TPM
<b>Operating system and software<sup>2</sup></b>	
Operating system	Linux-Yocto with real-time extensions
SoftSPS	CODESYS <sup>2</sup>
Software	Containerisation supports various OCI runtime specifications
<b>Hardware<sup>2</sup></b>	
Power management	Up to 200ms complete bridging UPS backup for 10 s, for safe shutdown
Real-Time Clock	Available, battery life at least 10 years
<b>Compliance and certifications</b>	
EMC	EN 61000-6-2:2016-05 EN 61000-6-3:2017-04
Schock	IEC 60068-2-27:2010-02
Vibration	IEC 60068-2-6:2008-10
UL	UL 61010-1 UL 61010-2-201

<sup>1</sup> Memory expansion on request

<sup>2</sup> PROFINET, other PLC tools and other HW/SW options on demand

These information provide an overview of the most important features and characteristics of the product and do not represent any assurance of product specifications.

All information without guarantee, errors and modifications excepted.

Wir  
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Ihren Erfolg!