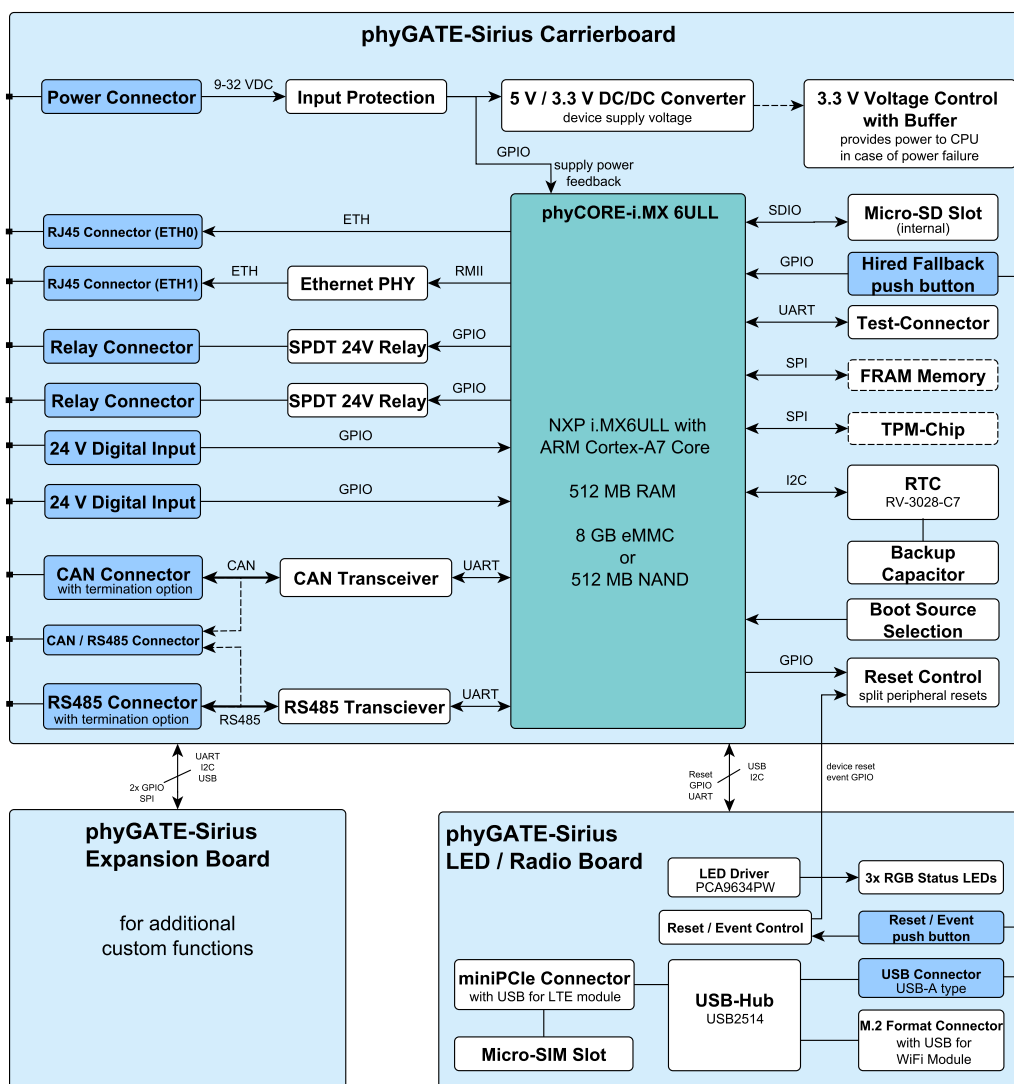# PHYTEC

phyGATE®-Sirius

Take your data to the cloud

The phyGATE-Sirius collects and processes data from sensors or entire machines and plants. For this purpose, it is equipped with interfaces such as RS-485 and CAN as well as a range of I/Os. The data can then be displayed on a connected HMI or transferred to a cloud. Optionally, the gateway is also available with Bluetooth 5.0 and can be expanded with LTE and Wi-Fi. Thanks to the installation housing which is in accordance with DIN 43880, the gateway fits into standard distribution board A high-performance Arm® Cortex®-A7 processor is used as the basis for the phyGATE-Sirius.

PLATINUM PARTNER
NXP

phySYS

phyGATE-Sirius Carrierboard

| Power Connector | 9-32 VDC | Input Protection | | 5 V / 3.3 V DC/DC Converter device supply voltage | | 3.3 V Voltage Control with Buffer provides power to CPU in case of power failure |

GPIO
supply power feedback

phyCORE-i.MX 6ULL

RJ45 Connector (ETH0)	ETH				SDIO	Micro-SD Slot (internal)
RJ45 Connector (ETH1)	ETH	Ethernet PHY	RMII		GPIO	Hired Fallback push button
Relay Connector		SPDT 24V Relay	GPIO		UART	Test-Connector
Relay Connector		SPDT 24V Relay	GPIO		SPI	FRAM Memory
24 V Digital Input	GPIO				SPI	TPM-Chip
24 V Digital Input	GPIO			NXP i.MX6ULL with ARM Cortex-A7 Core	I2C	RTC RV-3028-C7

512 MB RAM

8 GB eMMC
or
512 MB NAND

Backup Capacitor

CAN Connector with termination option	CAN	CAN Transceiver	UART			Boot Source Selection
CAN / RS485 Connector					GPIO	Reset Control split peripheral resets
RS485 Connector with termination option	RS485	RS485 Transciever	UART			

2x GPIO
SPI
UART
I2C
USB

Reset
GPIO
UART

USB
I2C

device reset
event GPIO

phyGATE-Sirius Expansion Board

for additional custom functions

phyGATE-Sirius LED / Radio Board

LED Driver PCA9634PW		3x RGB Status LEDs
Reset / Event Control		Reset / Event push button
miniPCIe Connector with USB for LTE module	USB-Hub USB2514	USB Connector USB-A type
Micro-SIM Slot		M.2 Format Connector with USB for WiFi Module

512 MB NAND Flash	512 MB DDR3
Cortex A7 i.MX 6ULL	Wi-Fi / BT
SD	USB 2.0
RS-485 CAN	SPI / I²C
Ethernet	

Module configuration | phyGATE-Sirius

Module	phyCORE-i.MX 6ULL
Processor	NXP i.MX 6ULL Y2
Architecture	Arm® Cortex®-A7
Clock frequency	792 MHz
MEMORY	
Flash	8 GB eMMC
RAM	512 MB DDR3
EEPROM	4 kB
FRAM	64 kB SPI FRAM
DEVICE	
Real Time Clock	buffered with goldcap
CPU power buffer	optional
User Button	event trigger / device reset
RGB-LEDs	event, power, status
Security	TPM Chip
Expansion PCB option	prearranged interface connector for additional custom board
SOFTWARE	
Operating system	Linux (Yocto based)

Interfaces

CAN	1x non isolated CAN, additional CAN/RS-485 connector (CAN default)
Ethernet	2x 10/100BASE-T
RS-485	1x RS-485
Digital Input	2x 24 V digital inputs
Relay	2x SPDT relay (24 VDC)
USB	1x USB host 2.0
MMC	1x SD card slot (internal)
WIRELESS	
Bluetooth 5 / BLE	nRF52840 (optional)
Mini PCIe connector	for LTE-module via USB (optional)

Physical Data

Dimensions	107.6 mm x 89.7 mm x 61 mm
Housing	Phoenix BC
Temperature grade	0 °C to +60 °C
Supply voltage	9 V –32 V DC, nom. 24 V DC

Further information on our IIoT products and services at:

www.phytec.eu/iot