VIVAVIS

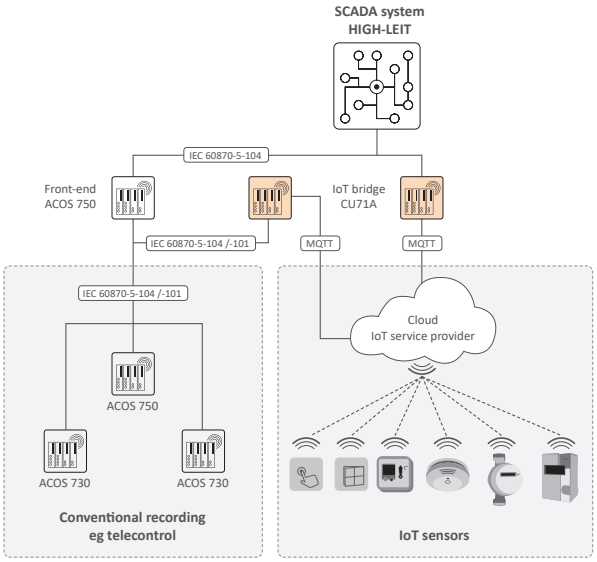
DECODING THE FUTURE

From internet to control station – VIVAVIS IoT bridge

The internet of things (IoT) is going to link many things in future and will thus provide an ever-growing amount of information. Less expensive IoT sensors are therefore increasingly favoured to capture data. But many operators of critical infrastructures still hesitate to connect IoT components directly to management infrastructures for reasons of security. However, with VIVAVIS IoT bridge as secure link between internet-based and conventional acquisition you do not have to be worried.

General features of IoT bridge

IoT bridge enables importing data captured via IoT sensors from a cloud into a control station in parallel with conventional acquisition technology. The protocol guarantees required IT security. The IoT protocol MQTT subscribes data from the cloud and converts this data into the common control station protocols IEC 60870-5-101 (serial) and IEC 60870-5-104 (TCP/IP). As the data structure of IoT sensors has not been standardized so far, IoT bridge also interprets the various sensor types of different manufacturers and provides these types in a library.



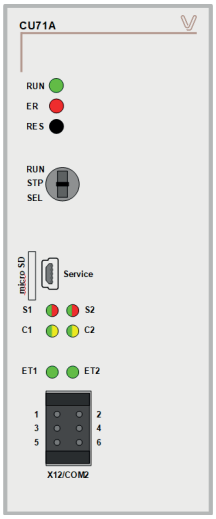
VIVAVIS IoT bridge

VIVAVIS IoT bridge is based on the high-performance **CU71A** module of our **ACOS 7 series**. **CU71A** features an integrated supply unit (24V DC). The module comes as device for DIN-rail mounting and is ready for immediate connection. As with every other device of the **ACOS 7 series**, you configure **CU71A** with the engineering tool **ACOS ET**.

Your benefits

- High level of IT security
- Network separation – physically and via protocol
- Hardened operating system
- Integrated firewall
- Encrypted connections (TLS, IPsec, OpenVPN,…)
- Integrated application server (data)
- Configuration via **ACOS ET**

All ISMS requirements published in Whitepaper 2.0 of the Federal Association of Energy and Water Industries (German: BDEW) are met.



Technical data – CU71A

CPU:	ARM Cortex-A9 processor
Memory:	1GB DDR3L RAM/1GB data/application flash
Memory extension:	microSD card, maximum 32GB (accessories)
Time source:	buffered real-time clock, backup time at least seven days
Integrated PLC:	PLC programming with CODESYS® V3.5 in compliance with IEC 61131-3 5MB program memory 128KB MRAM for persistent variables

Interfaces

Service:	mini USB 2.0 Type B (to connect ACOS ET)
Serial communication:	COM1: RS232/V.24, maximum 115kbps COM2: RS485, maximum 115kbps, front connector DFMC 1.5/ 3-ST-3.5 with nominal cross section 1.5mm²
Network communication:	ETH1/ETH2: Ethernet 10/100Base-TX, auto-MDI(X), automatic negotiation; ports provided via RJ45 jack, pluggable

Protocols

IoT service provider:	MQTT
Control station:	IEC 60870-5-101 Slave, IEC 60870-5-104 Server
Information security:	TLS encryption, OpenVPN, IPsec, integrated firewall
Data volume:	maximum 2,000 IoT data points
Indicators:	LEDs on the front, indicating device status, power supply and communication
Power supply:	integrated supply unit with nominal 24V DC (9...36V DC) 110...240V AC via external supply unit (accessories)
Power input:	3.24VA @24V DC

Environmental conditions

Operating temperature:	-20°C ... +70°C
Storage temperature:	-40°C ... +85°C
Humidity:	up to 95%, non-condensing

Housing

Dimensions (HxDxW):	127mm x 100mm x 52mm
Mounting:	Din-rail 35mm in compliance with IEC 60715

Article numbers

CU71A IoT bridge	160050900 for maximum 2,000 IoT data points

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