

COMPANY PRESENTATION KONTRON ELECTRONICS AG



FED Regionalveranstaltung

24.10.2019

KONTRON - MEMBER OF THE S&T GROUP

Founded
1959
by Dr. Branco Weiss

Management buyout
1999
from BMW

S&T Group revenues 2018
EUR 991 Mio.
2019 fc.: EUR 1.1 Bn.

Leader in
IoT/Industry 4.0
secure and connected



Employees worldwide
4,800
S&T Group

Engineers worldwide
2,900
S&T Group

Global presence in more than
30 countries
with multiple sales offices & partners

Headquarters
Linz/Augsburg
S&T/Kontron

S&T BUSINESS MODEL



IT Services Europe



Services EE



Services DACH

IoT Solutions Europe



Industrial



Transportation



Infotainment

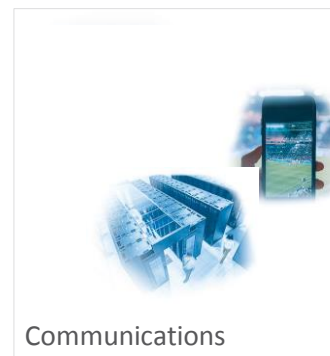


Medical

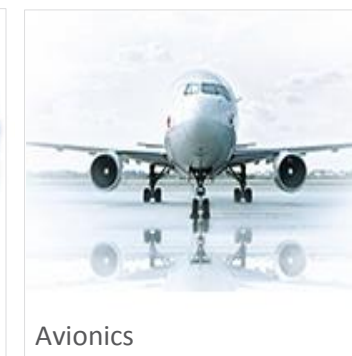


Smart Energy

IoT Solutions America



Communications



Avionics

Revenue plan 2019: EUR 450 Mio.*

► Growth target p.a.: 5%

Revenue plan 2019: EUR 570 Mio.*

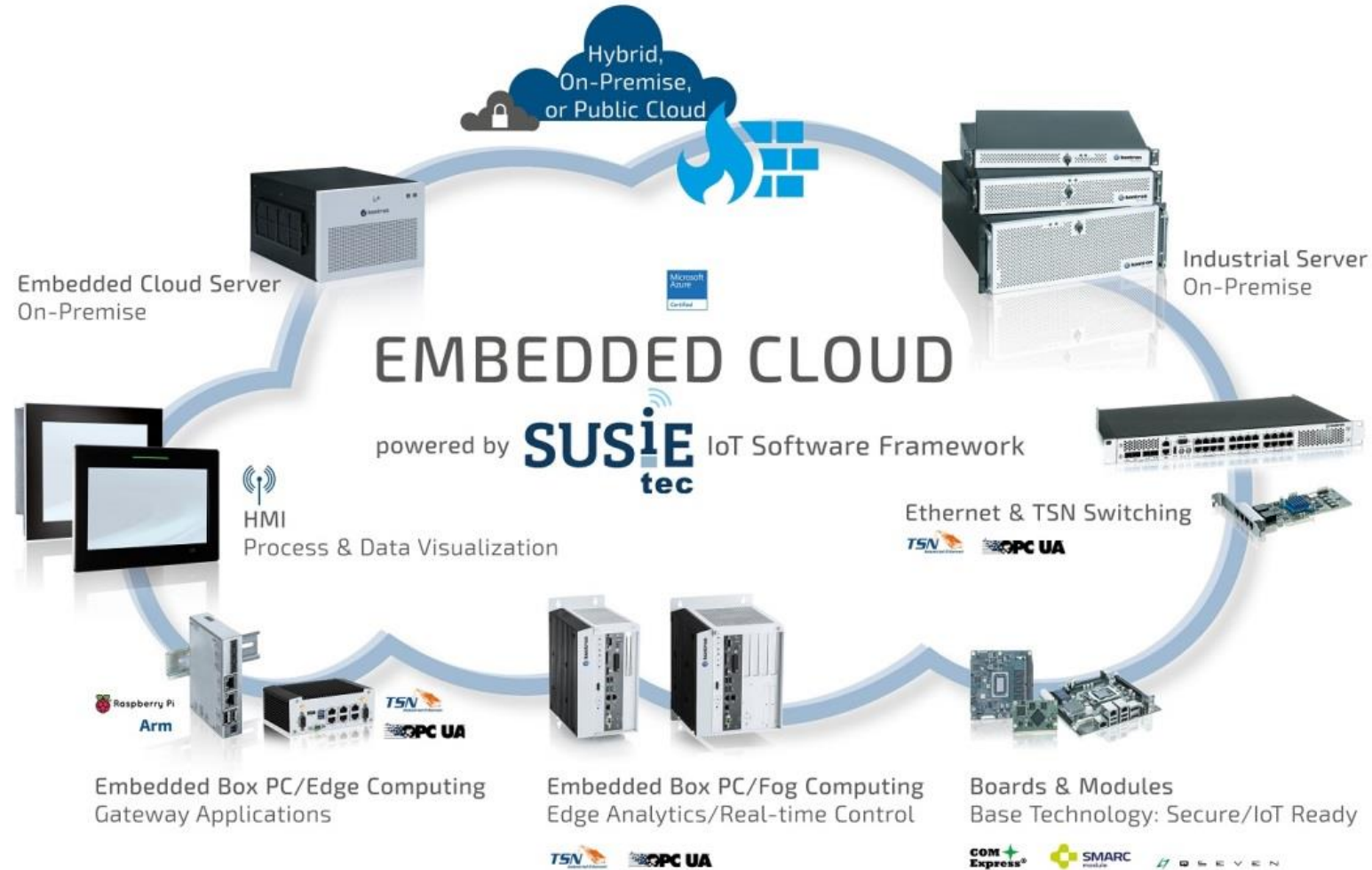
► Growth target p.a.: >12%

Revenue plan 2019: EUR 190 Mio.*

Growth target p.a.: 10%

Roll out of IoT technologies in America and Asia

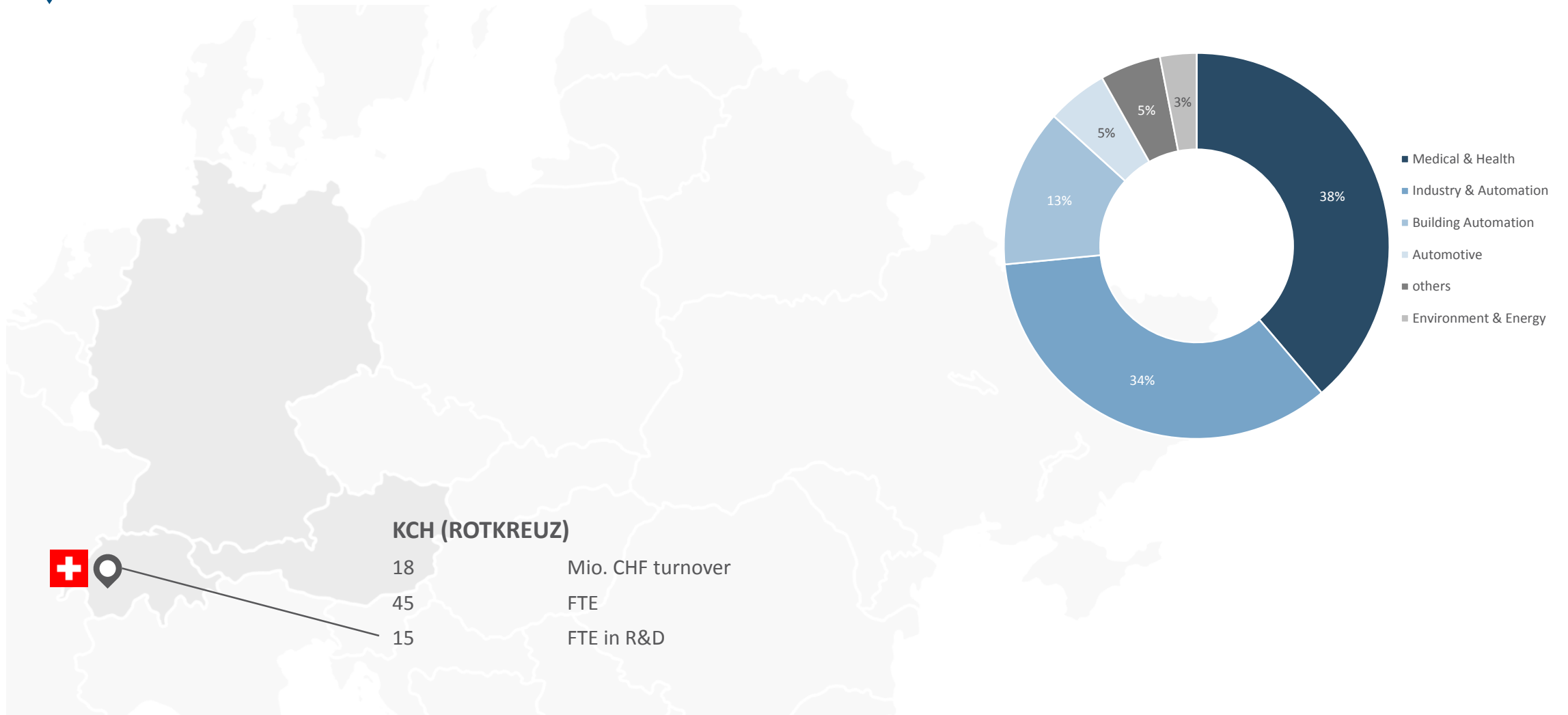
INDUSTRY 4.0 / SMART FACTORY



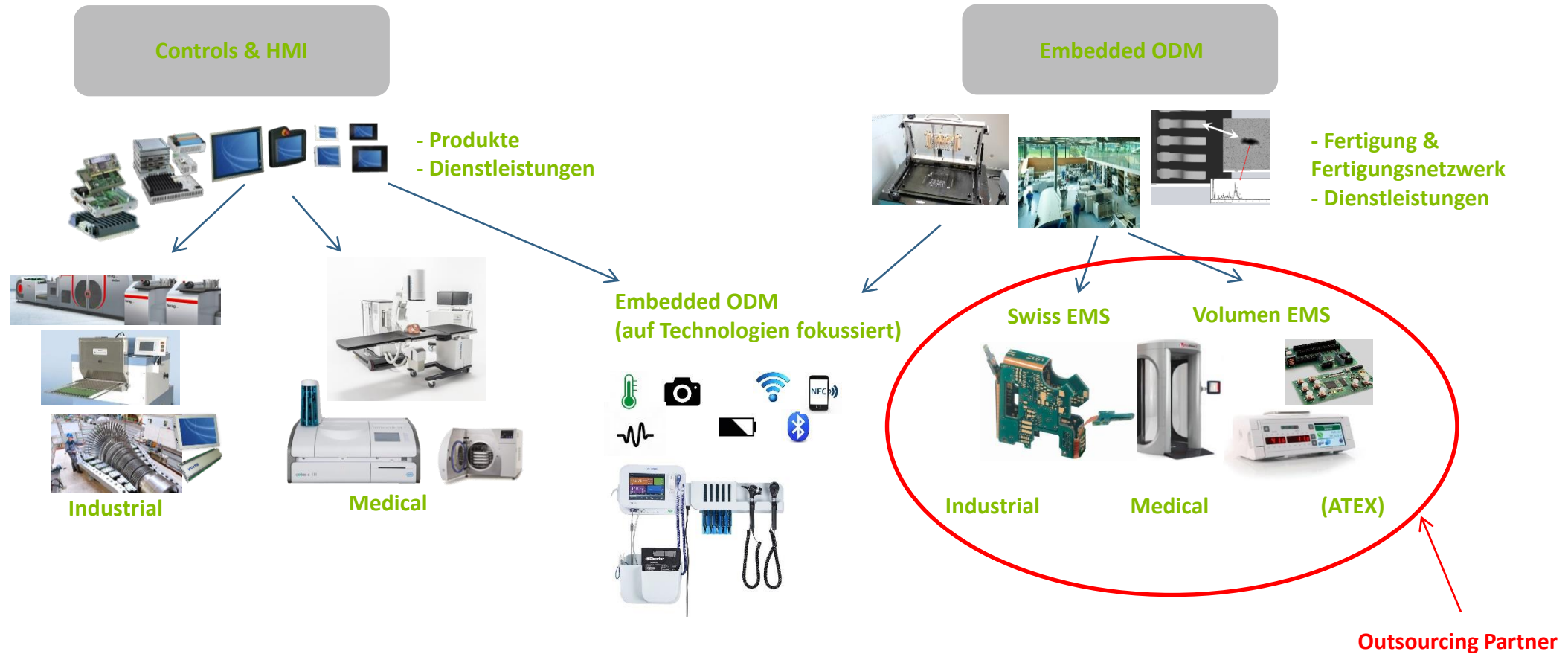
Time Sensitive Networking (TSN) & OPC UA enabled solutions from edge to cloud



KONTRON ELECTRONICS – NUMBERS 2018



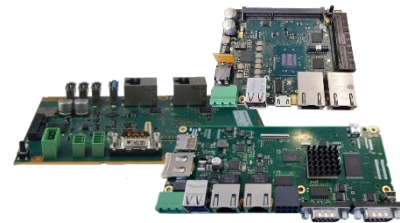
GESCHÄFTSFELDER KCH





CONTROL & HMI PRODUCTS

MODERN CONTROL & HMI PLATFORM



SBC (ARM & x86)



Control Panels CP



Web Panels

Platform concept

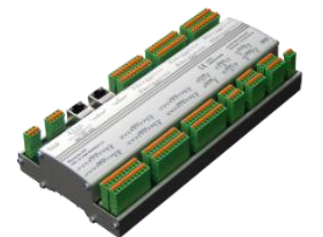
- Highly scalable automation portfolio
- Well tested building blocks
- Standard product & customized solutions based on a platform concept



Control Units CU



Touch Monitors



I/O moduls

WEB PANELS WP





MODERN WEB TECHNOLOGY BASED HMI SOLUTIONS

Web-Panels



Webserver with integrated HMI (HTML5)

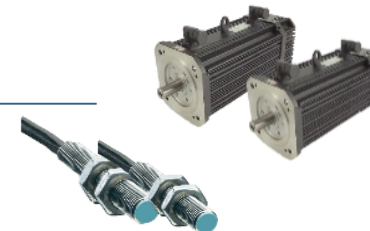


IOT Gateway



Fieldbus Level

Actuators, Sensors





MULTITOUCH WEB-PANELS 7... 15 INCH

SMART DESIGN



Features

- Standard sizes: 7" (1024 x 600) 10.1" (1280 x 800) 15.6" (1388 x 768)
- High-quality displays : same display types as the Control Panels
- Touch: Capacitive Multitouch PCAP
- Premium Design : same mechanical design as the Control Panels
Front : slim aluminum or stainless steel frame
Backside: robust stainless steel housing with pre-mounted clamping elements
- Controller: ARM processor i.MX6 family (single or dual Core), same as Control Panels
Built-in 2D/3D graphics engine for enhanced graphic performance
- Standard Interfaces: 1x Ethernet, 1-2 x USB, 1x microSD card slot
- Operating system: Embedded Linux



MULTITOUCH WEB-PANELS 7... 15 INCH

SMART DESIGN



Web Browser

- HTML5 Web Browser:
based on Chromium Browser
with optimized browser engine for enhanced performance
- Optional “Microbrowser” (from company «IniNet»)
advantage: requires very low performance and
fits perfectly also to CODESYS Webserver applications
- Convenient panel configuration with integrated webserver
either on panel itself or with browser on external device
- Wide range of configuration options
(network, browser appearance & behaviour , screen saver, keyboard layouts ...)
- Remark: Browser Performance
HTML5 Browser performance can strongly depend on the client's
web server application design and the web pages contents





MULTITOUCH WEB-PANELS 7... 15 INCH

SMART DESIGN



Customizing Options (same as Control Panel)

- OEM front design
 - Logo on front / OEM label
 - Colour of front frame
- Mechanical modifications
 - Other front materials e.g. stainless steel front
- HW Controller modifications
 - Other memory configuration (RAM , Flash)
 - Extended interfaces 2x ETH ; Serial RS232 /485 (as Control Panel)
 - e.g. for RFID or barcode scanner...
 - WiFi USB Dongle (Client or Access Point)



Guideline :
MOQ > 100 p.a.

Guideline :
Revenue > 100k p.a.

Additional modifications on project basis

- Customized mechanical design (housing, mounting concept , add. buttons etc) or special display options (e.g. anti glare, shock resistance , shatter protection ...)
- Special HW features e.g. 12V, 48V power supply, POE ...etc
- Special SW Features e.g. Browser features, OEM specific configuration menu's...etc

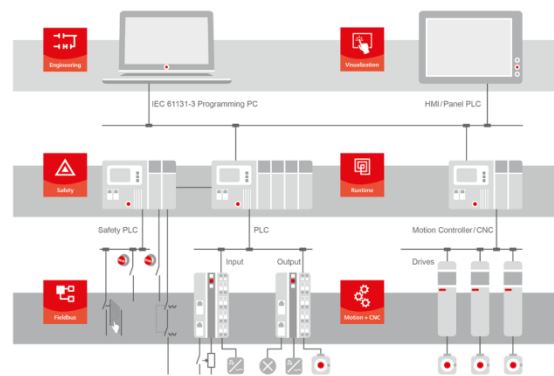
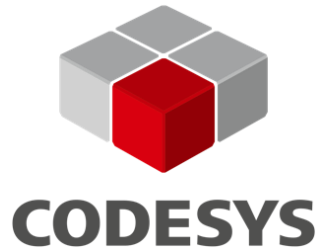
CONTROL PANELS CP





CODESYS

CODESYS IS THE LEADING MANUFACTURER-INDEPENDENT IEC 61131-3 AUTOMATION SOFTWARE FOR ENGINEERING CONTROL SYSTEMS



Fully integrated software development environment

- For all areas of automation (control, HMI, motion)
- Modern, efficient tools for analysis, programming and testing ...
- All programming languages according to IEC 61131-3 + PLC Open Standard
- Object-oriented programming for high reusability of the software
- Communication via EtherCAT, CANopen, Modbus, Ethernet IP, Profinet, OPC UA, MQTT...

Modern HMI development tools and WEB technologies

- For easy remote access & diagnostics
- An HMI application for target, remote and web visualization (via Web server)!

Complementary tools

- Version management, test automation, extensive libraries plus additional App Store!

=> Significant reduction in development times + costs!



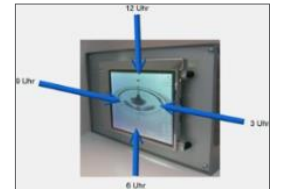
MULTITOUCH CONTROL-PANELS 7... 15 INCH

SMART DESIGN



Features

- Standard sizes 7 / 10.1 / 15.6 inches
- Powerfull and widely used processor i.MX6 Single or Dual Core
- x86 Intel Atom processor E38xx (1-4 Core) up to 1.9GHz
- Industrial connectors
 - D-Sub, Phoenix pluggable terminals
 - located behind the housing (space saving)
- Soft PLC (optional)
 - CODESYS PLC & VISU's (HMI tools for Target and WebVisu)
 - EtherCat, ProfiNet, Profibus, Modbus RTU & TCP, CAN, Ethernet IP ...



CONTROL UNITS CU





CONTROL-UNIT ARM I.MX6

MEDIUM POWER CONTROLLER



Features

- Stainless Steel housing, IP20
- Mountable flat or like a book on a DIN hatrail
- Powerfull and widely used processor i.MX6 Single or Dual Core
- Various and large memories
- Large connectivity
 - 2x 10/100 Ethernet (2x MAC), 2x USB, CAN, 2x RS232, RS485
- Operating system: Linux Yocto distribution
- Optional with CODESYS PLC & VISU's (includes HMI tools for WebVisu)
 - supporting EtherCAT, ProfiNet, Modbus RTU & TCP, CAN ...



CODESYS



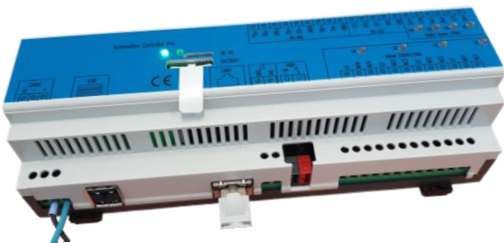


CONTROL-UNITS INTEL E3800 MODULAR

HIGH PERFORMANCE CONTROLLER



Customized versions:



Features

- Same Powerfull Intel Atom processor and various and large memories
- MiniSBC: perfect for customized solution due to it's modularity
- Base connectivity
 - 2x Giga-Ethernet (2x MAC), 2x USB, HDMI
- Customized fonctions/interfaces/IO's on extension board
- Stainless Steel housing, IP20
- Mountable flat or like a book on a DIN hatrail
- Optional with CODESYS PLC & VISU's (includes HMI tools for WebVisu)
 - supporting EtherCAT, ProfiNet, Profibus, Modbus RTU & TCP, CAN, Ethernet IP ...



CODESYS



REMOTE IO MODULES (RIO)

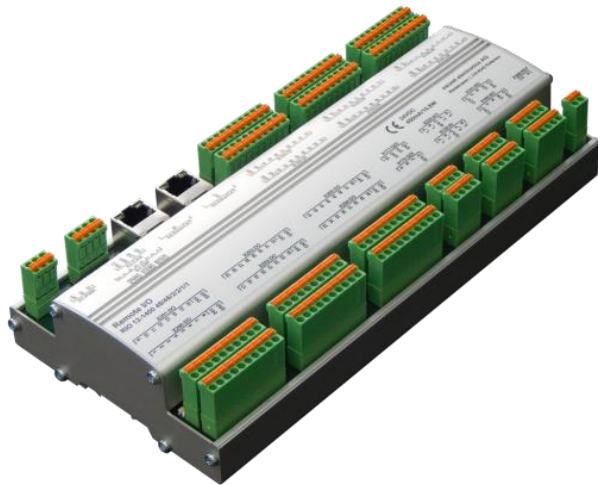




REMOTE I/O MODULES (RIO)



RIO 16/16/4/4/2/2



CANopen

EtherCAT

Features

- Different standard I/O configurations available (e.g RIO 16 / RIO 36 / RIO 48)
- Designed for custom-tailored, optimized I/O block module configurations which provides a clear cost benefit vs. typical “modular slice I/O’s”
- Typical applications:
Standard machines or devices with always identical I/O configurations and high volume/low variation => standardization !
- Example standard RIO 16/16/4/4/2/2
 - 16 digital inputs, 24V, optical isolation
 - 16 digital outputs, 24V, optical isolation, short-circuit protection
 - 4 analog inputs, 010V, 0 (4) 20mA, 12 Bit
 - 4 analog outputs, 010V, 12 Bit
 - 4 x temperature inputs (PT100 / PT1000)
 - 2 x encoder inputs (quadrature decoders)
 - 2 frequency counter inputs
 - Push-in connectors / removable terminal blocks
 - DIN Rail mounting
 - EtherCAT or CANopen / Ready for CODESYS



CODESYS



OUTLOOK





OUTLOOK

SMART DESIGN



Outlook planned extension of the platform

This year

- 12.1" Panel version => Q2/2020
- Enhanced cpu performance with:
 - 1st Step: Panels with x86 Intel Atom CPU => starting mid of 2019
 - 2nd Step: new ARM **i.MX8** CPU (1-4 core) => Q4/2019
- E3800 miniSBC in a small housing for DIN hatrail => Q2/2019
- Other standard products, driven by customer projects





MEDICAL APPLICATION

▼

MEDICAL DEVICES

Medical Diagnostic Devices

- Application:
Human Machine Interface for blood & Blut- & Urine Diagnostics
- Used products:
ARM CPU - Modules , customized 8 inch Touch Panel





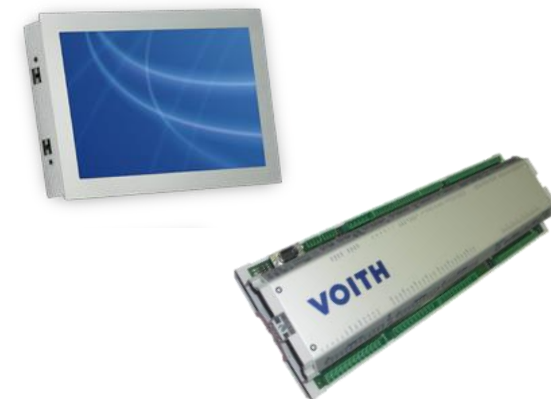
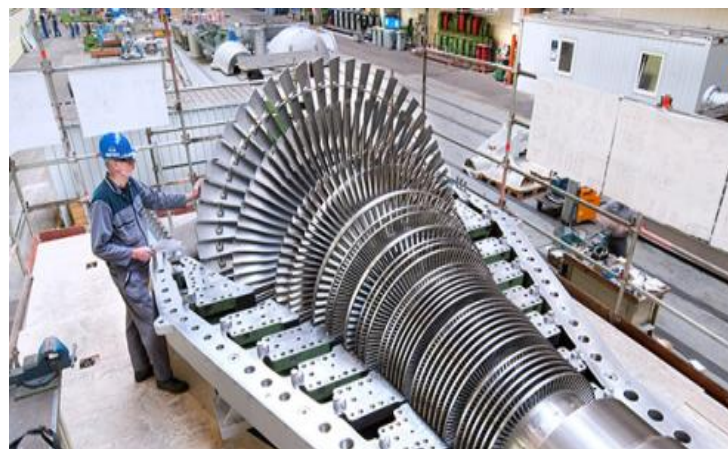
INDUSTRIAL APPLICATION

▼ POWER ENGINEERING

steam turbines

- Application: steam turbine controller
- Products used: Control Panel UCP-70 with Codesys
- Custom remote: I/O module with CANopen

VOITH





ENERGY APPLICATION

▼ PROCESS AUTOMATION

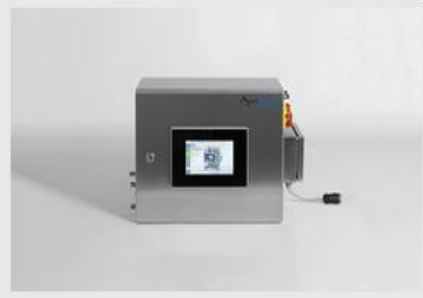
Gas analyzers



- Application: Gas analysis equipment for biogas plants / wastewater treatment plants
- Used products: Customized Control Panel CP-70
New x86 operator panel with 15-inch web panel



AWIECO



AWIFLEX



AWIFLEX XL





SINGLE BOARD REMOTE IO MODULES (RIO)



PRINTING INDUSTRY

Automation around printing machines



ferag...

- Application:
Printing machines for Newspaper
material transport, stock, commissioning, add brochures
- Our products:
PC/104 control system, Touchpanel, customized I/O-Module,
with CODESYS PLC & Human Interface

