INTELLIGENT
BUILDING
TECHNOLOGY

BUILDING
AUTOMATION
& ENERGY MANAGEMENT

Building technology, intelligently regulated

The freely programmable devices of the x2 series are you tools for building automation and energy management.

Thanks to the many possibilities to connect different components – from 24V actuators to cogeneration units – you'll be able to flexibly plan and optimize your projects. Individual visualisation and wide-range monitoring included.

Manufacturer-independent and
flexible control of all energy-related
components of building automation.

HEATING
» Requesting and regulation of heat generators
» Heat distribution / heating circuit control
» District heating transmission

COOLING
» Cooling circuit control
» Switching air conditioners
» Requesting heat pumps

VENTILATION
» Integration of ventilation systems
» Heat recovery
» Deactivate heating when windows are open

ENERGY MANAGEMENT
» Load management
» Depending on power surplus from PV or wind energy

SOLAR & PV
» Regulation of thermal solar systems
» PV surplus management
» Power-to-heat via heating pump or immersion heater

SHADING
» Control of rolling shutters and blinds
» depending on sun, global radiation and wind

LIGHTING

All examples of possible applications are depending on available

Interfaces and communication signals our controllers can work with.

The freely programmable x2 series

THE BASICS

All x2 devices can be interconnected via CAN-Bus to allow extension of more inputs, outputs, interfaces or operating units.

Additionally, our devices ship without programming, as our customers program devices to fit specific systems **using our free software "TAPPS2".**

The control and connectivity of building technology occurs using certain **signals** like 0-10V, PWM or 4-20mA, **pulses** or **interfaces** for Modbus, KNX or M-Bus.

CAN BUS

Our controllers communicate with one another using CAN bus. The CAN bus is a robust and reliable fieldbus system with linear topology and allows for **connection of up to 62 devices**.
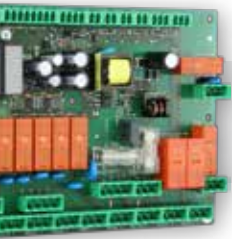
UVR16x2E-NP
circuit board
version

UVR16x2S
variant for control panels
& mounting rails

UVR610S

C.M.I.
Internet / LAN
Gateway

EXTENSIONS & INTERFACES

With up two 62 devices connected via CAN-Bus, any x2 device can be used as an extension to increase the number of inputs/outputs or interfaces as needed. For example, the CAN-I/O45 offers **additional inputs/outputs** or **Modbus**, **KNX and M-Bus** interfaces with the CAN bus converter CAN-BC2. Our **smart meter** CAN-EZ3 measured electricity and thermal energy.

Using our DL bus or our new CORA protocol, different extension modules in a compact casing can be integrated. This could be various sensory modules (differential pressure, flow etc.), but also signal converters or input/output extensions.

CORA

CORA is our newest development and connects sensors and actuators with controllers for smart home, wired or wireless.

Wired CORA is based on the DL bus.

DL BUS

The DL bus is our in-house-developed bus system, which allows a multitude of sensory equipment and signal converters to be utilized.

Analogue PWM converter
One of many extension modules in universal casing.

CONTROL AND REGULATION

Our devices allow you to realize an optimal regulation strategy for your project. Assume full control over all components of building technology, from switching valves to wood carburetors.

We supply the technology for your ideas.

MEASUREMENT

Be it temperature, wind, rain, pressure or fill levels, we have plenty of sensory equipment to offer. Using 0-10V signals, pulses, currents and resistances, our controllers and expansion modules offer many possibilities to measure different variables.

AUTOMATION

With over 40 function modules in the programming software TAPPS2, you define the individual logic of all devices.

This gives you the tools to make any system operate as energy-efficient as possible, without falling back to manual input.
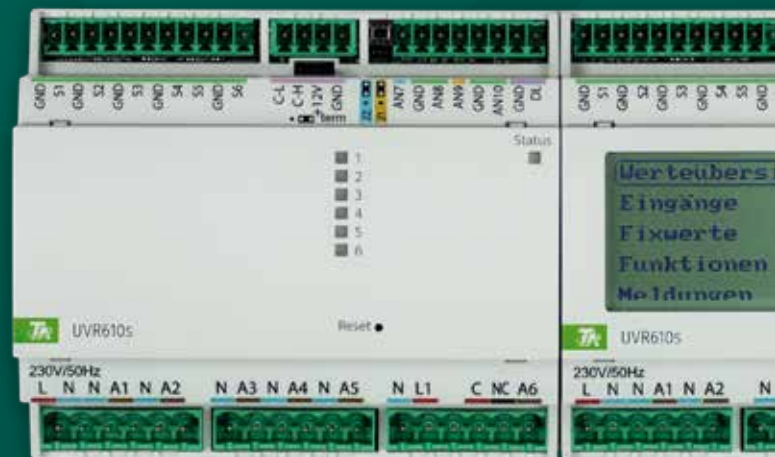
VISUALISATION

Depending on the system, customers or technicians need access to certain functionalities on-site.

Using different operation units in the CAN bus network, your PC or an app on your smartphone or tablet, you can allow operation of the system with differing rights for specific users and a customizable interface.

MONITORING

The systematic monitoring of all relevant system values is a requirement to find further potential to optimize.

But not just that, with the renowned technology for remote control, you will receive notifications when certain events occur or you can update firmware and programming of individual devices from afar.
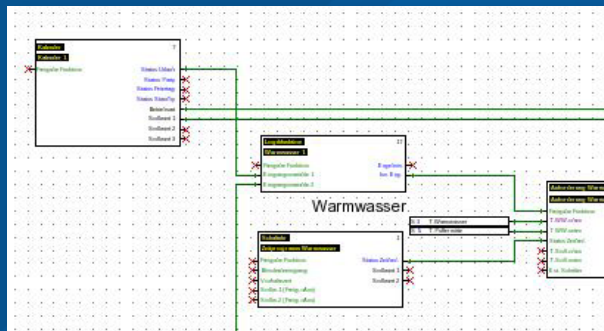
Free software package

THE BASICS
All x2-devices are delivered without any programming.

TAPPS2

This program lets you create your personalized **programming for all freely programmable devices**.

Link more than 40 function modules with one another, and with the inputs and outputs of your device to create the desired regulation strategy for your system. The programming can be simulated either directly in TAPPS2 or with the dedicated x2 simulator, both on your PC.

TA-DESIGNER
The TA-Designer is used to create visualizations for our operating units, but also for smartphones and tablets. Once created and saved as a template, visualizations for new projects are quickly assembled, all to suit your corporate design.

WINSOL
Logged values can be depicted in clearly arranged **trend curves or bar diagrams**. This makes finding potential for optimization or causes of problems as easy as can be.

PROGRAMMING & SIMULATION

VISUALISATION

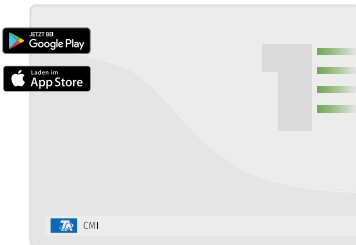DATA LOGGING

Remote access & visualisation

VISUALISATION

Create a **personalized visualisation** for your system to simplify operation for customers and technicians. In addition to the UVR16x2 itself, we offer CAN bus operating units with 4,3- or 9,7-inch touch displays.

Templates simplify the process of creating overviews for common installations like heating circuits or single rooms.

The "CAN-MTx2" is available with black or white housing.

The C.M.I. enables remote access, data logging and online visualizations.

THE "CONTROL & MONITORING INTERFACE"

The C.M.I. is a compact webserver that provides online visualizations and access via browser and app. The visualization is, once again, created using the free program TA-Designer.

But it can do so much more: it allows for remote access to the entire CAN bus via PC. Access using our web portal (internet connection required) is available (optional). This enables you to **update firmware and programming remotely**.

DATA LOGGING

Like all x2 devices with an SD card slot, the C.M.I., too, can log system values and store them on its SD card. A great advantage here is the possibility to load the data remotely and evaluate it using the program WINSOL. Find potential for optimization or causes of problems quicker.

THE WEB PORTAL

You can find our free web portal at https://cmi.ta.co.at.

Using this, your customers can allow you access to their systems. Many errors fixes or changes, but also updates, can be done remotely to save you unnecessary trips.

The controller's interface when accessed remotely is the same as on the device itself.

FREE COOLING FOR A
4-STAR CITY HOTEL

The "Wilhelmshof" is a four-star hotel in Vienna that focuses on sustainability. Since 2008, the hotel's DHW preparation has been supported by 156 m^2 of thermal solar panels – the biggest of all hotels in Vienna.

This hotel with 102 rooms has been reducing its energy demands through various measures over the years. Now, the gas heating system was to be replaced by a more sustainable option.

Due to the pandemic, the quick decision to begin with planned constructions sooner has been made, making the best of the unfortunate situation. The biggest source of energy is now ground water, used as a source of heat for the water-water heat pump, as well as the "free cooling" concept. Basis of this kind of room cooling is a free, natural "source of coldness" such as ground water. Fan coils are used for the decentralized cooling of rooms.

Three cold reservoirs with a capacity of 2,000 litres each serve as a buffer. In the sunny season, the solar thermal plant provides a majority of the required heat and is now supported by the new 140 kW ground water heat pump.

In total, six 1,000-liter cylinders, cooling and heating request, the solar plant and the regulation of the hotel rooms are controlled by 37 freely programmable controllers of the x2 series

Realised by:
Wintersperger GmbH, A-3331 Kematen/Ybbs
Lemp Energietechnik, A-3532 Rastenfeld
www.derwilhelmshof.com

AGRICULTURAL ESTATE

The heating concept of the agricultural site "Gut Hohen Luckow" has been continuously expanded and modernised over the past years. Initially, the farm house and surrounding buildings haven been heated using solely fossil fuels. However, energy demands grew with the expansion of a dairy farm. More energy was required for hot water preparation in multiple

places and pasteurising milk demanded high temperatures. At this point, the heating network stretches over 2,350 meters, where sources and consumers of heat had to be implemented in disadvantageous places.

To better fit present conditions, constant user interference and permanent manual adjustments of armatures and pumps became necessary.

With the documentation of the entire system and new, extensive flow chart, a step-by-step implementation begun. This soon uncovered the first necessary steps to reach more effective operation. It quickly became clear that many things could be improved upon with an intelligent controller.

One by one, the entire system with its many locations has been equipped with Technische Alternative control technology to better utilize existing technology.

The flow temperatures now remain optimal, even with fluctuating outputs of generators and demands of consumers. The daily workload of manual input and monitoring is practically gone.

Realised by:
GPD Agrar Service und Handels GmbH,
Malte Anderson
Energietechnik Satrup (www.ets-satrup.de)

SELF-SUSTAINING HOTEL

Along with the planned expansion of this hotel in 2018, the entire power supply system received an overhaul. As a result, the hotel is no longer connected to the power grid. In its stead, a wood carburetor, lots of PV panels and heat pumps have been put to work. Four cogeneration plants aid to avoid shortages and to bridge spikes in consumption. A 500-kWh storage battery, pools and large buffer cylinders serve as storage solutions for excess solar energy.

Besides the coordination of different heat generators, the energy household of the

80-room hotel must be distributed according to demands. This is carried out using several x2 devices in cooperation with the hotel's in-house software, for example a prognosis for weather and the degree of capacity utilization. Using this data, energy won't be wasted on unoccupied rooms, or won't even be generated for them to begin with.

Realised by: Stephan Janbeck
D-24395 Gelting, www.stephanjanbeck.de

www.haffhus.de

Support & Repair

TECH SUPPORT

Experienced and well-trained technicians are ready to help you with hardware and software alike, available Monday through Friday via telephone or e-mail.

CONTACT

support@ta.co.at oder www.ta.co.at/support
Tel: +43 (0)2862 53635-850

SEMINARS FOR PROFESSIONALS

Seminars for beginners, experts and for visualizations take place roughly 20 times a year, across Austria and Germany. These are held by the experienced technicians of our own Tech Support and R&D departments.

In these seminars, the handling of hardware is taught, but more importantly so, the creation of programming for controllers. In no more than three days you will learn all that's necessary to efficiently work with our freely programmable devices. Seminars in German only.

PROGRAMMING SERVICE

We offer an affordable programming service for the professional trade and system partners.

We merely need a schematic of hydraulics (hand drawn will suffice) via e-mail. We will get into contact with you to clear up any detailed questions on our behalf and then proceed to make you an offer over the programming plus requied hardware components.

This only leaves putting the hardware into service and setting up parameters to you.

REPAIRS INSTEAD OF DISPOSAL

For 30 years now, our repair service has been an important pillar of our corporate philosophy.

Repairs come at intentionally fair prices, making them a good option financially – even with 20- or 30-year-old devices.

The Technische Alternative

BUILDING TECHNOLOGY, INTELLIGENTLY REGULATED.

Thermal solar systems had their first spike in popularity in the late 80's. However, technicians and end users alike struggled with the usually overpriced and unreliable controllers.

Ing. Kurt Fichtenbauer faced this problem together with a colleague and began developing his own solar system controller, in his own garage at first. Reliable, easy to operate and at a good price-performance ratio, these controllers quickly gained popularity.

TECHNICIANS WITH HEART AND SOUL

Today, DI Andreas Schneider runs the Technische Alternative, together with founder Kurt Fichtenbauer. The principles of product development haven't changed. We develop reliable and universally deployable controllers, extensions and accessories for the entirety of building technology at fair prices.

DI Andreas Schneider

FROM AN IDEA TO SERIAL PRODUCTION

Every device is developed and produced in our company's site in northern Lower Austria, from an idea, to prototypes and finally to a finished product. All related software is also developed in-house, for programming and visualizations. Our own SMD assembly line guarantees high flexibility and quality from individual pieces up to serial production.

We sell our devices worldwide via specialist wholesalers, but also directly to expert technicians and OEM customers in different sectors, from heating to switch cabinet construction.

Ing. Kurt Fichtenbauer

Roughly 60 employees work at the company site in Amaliendorf, Austria

A part of our SMD assembly line

Support

+43 (0)2862 53635-850

support@ta.co.at

Mo bis Thu 7 am - 3 pm

Fr 7 am - 1 pm

Sales

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order@ta.co.at

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https://wiki.ta.co.at

SALES PARTNERS

We sell our devices to specialist wholesalers and expert technicians (heating/electrical engineering and plumbing).

As a private individual, please contact your trusted wholesaler. If questions arise, our free support lines are open.

Wir sind
Klimabündnis Betrieb

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