BECKHOFF New Automation Technology

PC-based Control:
Media and control technology
on a single platform.

Discover the fascinating world of PC-based control from Beckhoff.

Industrial Building

Factory Automation

Hotel

Stadium

Commercial Building

Collaboration/Conference

Building Automation

Beckhoff implements open automation systems based on PC control technology.

One control platform for all automation tasks

New thinking brings about new technological demands: whereas multimedia applications, building automation and entertainment concepts were previously implemented separately, all disciplines must now interconnect intelligently. This stems from the complexity of the applications and the comfort standards now demanded in buildings of all kinds. As a platform for centralised control, PC-based control from Beckhoff provides the answer. From audio and video control to control of show effects and device management, as well as newer concepts such as condition monitoring – all

Wind Energy

Cruise Liners

Water Treatment

Museum

Theatre/Cinema

Entertainment Technology

Education/Government

Infrastructure

disciplines are directly linked with the integrated building automation system. The benefits become immediately clear: all system information is available to the user on one platform due to the inherent continuity and flexibility provided by PC-based control. Operation is simplified, comfort levels are increased and costs can be reduced.

The modular automation concepts from Beckhoff are based on a broad range of powerful Industrial PCs, I/O components for a large variety of signals, the high-speed EtherCAT communication system, universal TwinCAT automation software, along with highly dynamic drive technology components. Control solutions that span

numerous application areas – from industrial and machine automation to wind farm networking through to building automation and media control – can be implemented effectively and economically. References from all around the world validate the reliability of the control components and the expertise of Beckhoff in countless industries and applications.

Performance level scalability, modularity, reliability and long-term availability of components make PC-based automation technology from Beckhoff the ideal toolbox to implement leading-edge media technology applications.

**Your benefits
with PC-based control:**

- Economic efficiency – from investment, to implementation, to use
- Future-proof – with technologies available today for the demands of tomorrow
- Simple networking – all information is available in one universal system
- Flexibility – to respond and adapt to individual user needs
- High availability – through broad compliance with accepted communications standards

One central platform for both:
Media and building automation.
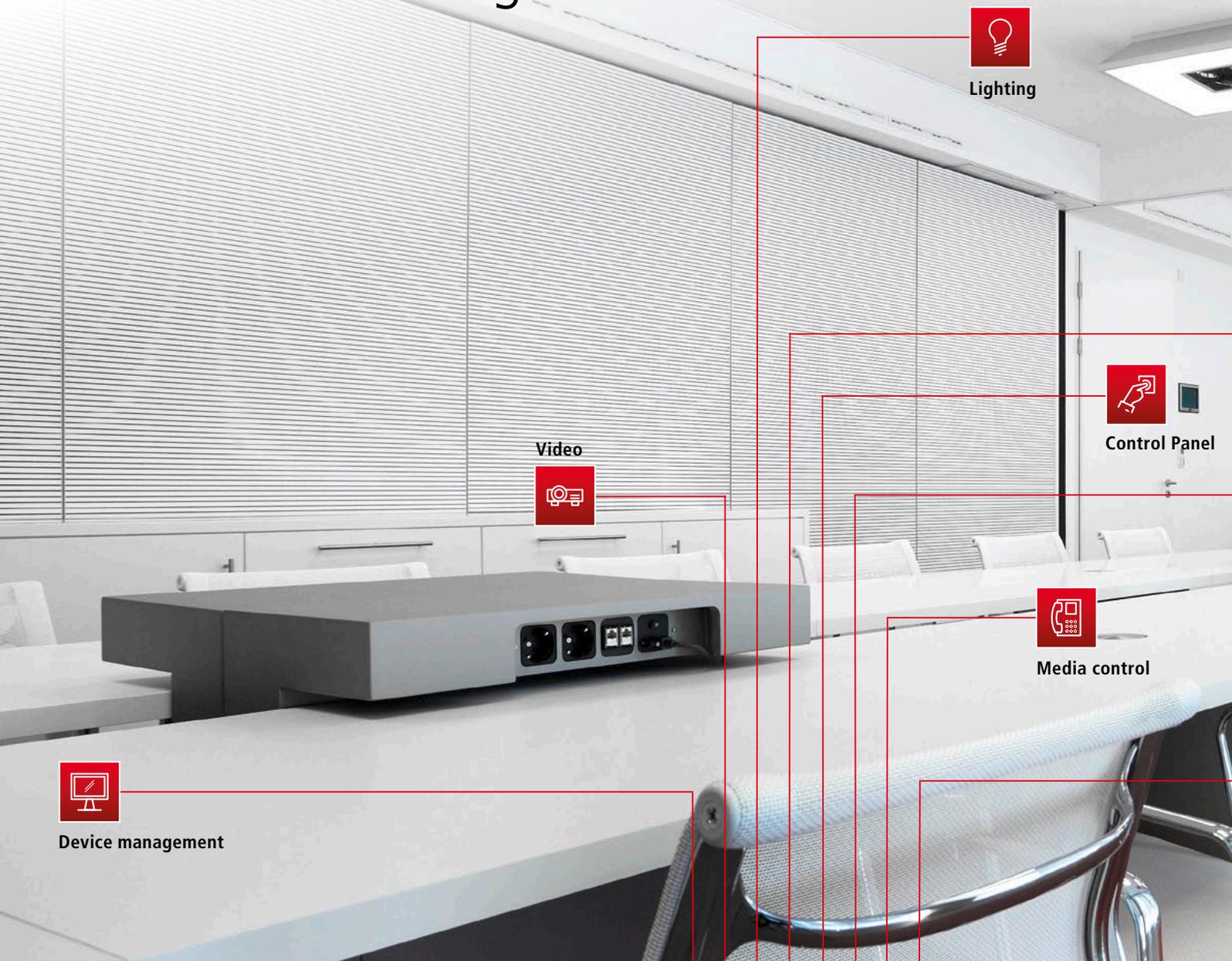
Lighting

Control Panel

Video

Media control

Device management

The universal and open control platform for the most diverse applications

Audio

Facade

HVAC

Media technology and building automation integrated into one control platform

At the heart of the Beckhoff control platform, robust Industrial PCs or embedded controllers using TwinCAT as the universal automation software integrate PLC, visualisation, motion control, safety technology and measurement technology tasks. Beckhoff I/O systems can be used to connect the whole range of sensors and actuators. This includes devices used for day-light-dependent lighting and facade control to control of heating, ventilation and air conditioning through to show lighting, sound and projection

control. EtherCAT, the real-time-enabled fieldbus system, provides the necessary communication speeds. Through the integration of all communication protocols typically found in the areas of A/V, multimedia, building automation and show technology into the PC control platform, all devices from a wide range of manufacturers can be connected and controlled. Because the system is modular throughout, its functionality can be easily extended, for example, by adding an I/O terminal that supports the required signal.

The various hardware components and their functionalities are programmed and configured in uniform software using TwinCAT.

Your built-in benefits for media technology with PC-based control:

- Continuity – one control platform for all trades
- Openness – interfaces for all popular communication standards in the area of media, building and stage technology
- Scalability – in terms of performance, design and price
- Modularity of components – for flexible control design
- Extensive connectivity – from horizontal communication to cloud integration
- Excellent price-performance ratio

Applications

Collaboration and Conference

Technology for the perfect meeting.
- Boardroom
- Conference room/Think tank
- Open space office/
  Collaborative workspace
- School/University

Control Room

The reliable system for your infrastructure.
- Emergency and rescue
- Coordination centre
- Data centre
- Infrastructure control room
- Grid control
- Broadcast/Production

Building Automation

For your smart, future-proof building.
- Commercial building
- Educational/Government
- Industrial building
- Infrastructure

Entertainment Technology

The system that enables your creativity.
- Stadium
- Entertainment and theme park
- Art installation
- Cinema/Theatre
- Museum
- Church

Systems

Audio and Video Control

Beckhoff control components for:
- Media control
- Audio installation
- Video installation
- Show control

Page 28

Integrated Automation

Beckhoff control components for:
- Lighting
- HVAC
- Energy measurement
- Facade

Page 30

Digital Signage Control

Beckhoff control components for:
- Point of Information (PoI)
- Point of Sale (PoS)
- Device monitoring

Page 32

Operating and Monitoring

Beckhoff control components for:
- Device management
- Cloud-based services
- Condition monitoring

Page 34

Audio and Video Control

Beckhoff control components for:
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Operating and Monitoring

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Integration across all systems: for diverse applications.

DMX

DALI

LON

EIB/KNX

BACnet

SMI

MP-Bus

M-Bus

EnOcean

sACN

SMPTE Timecode

Art-Net™

AES70 (OCA)

PosiStageNet

PJLink

Cloud

Automation   IPC   I/O

Management/ Control Level

Field Level
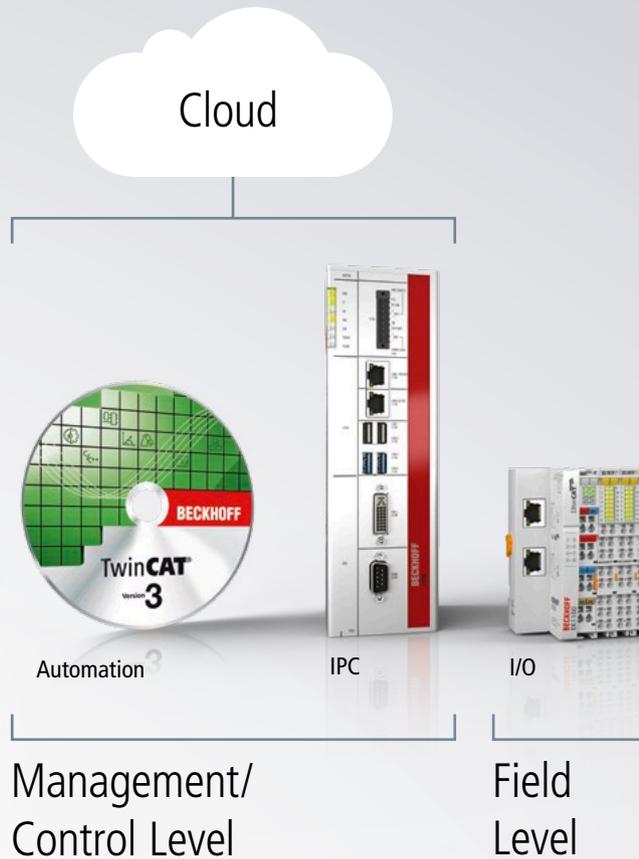
The open communication platform from Beckhoff

The powerful PC-based automation platform handles control, data processing, connectivity, visualisation and remote maintenance. With open software and hardware interfaces, it is ideal either for centralised or decentralised control of all applications in the fields of conferences, control centres, building and entertainment technology, such as audio and video, integrated automation, digital signage as well as operation and monitoring. In addition to integrating building technology standards such as DMX, DALI, LON, EIB/KNX, BACnet, SMI, MP-Bus, M-Bus, EnOcean, RS232/RS485, Modbus and TCP/IP, system integrators also have the most popular interfaces at their disposal for integrating AV and multimedia systems. With sACN, SMPTE Timecode, Art-Net™, AES70 (OCA), PosiStageNet and PJLink, Beckhoff masters all relevant languages in these industries. As a result, the most varied application areas in media, monitoring, building and show technology can be implemented on the basis of standard control components.

Collaboration
and Conference

Control Room

Building Automation

Entertainment
Technology

Motion

From 1
to 36 cores

DALI, LON
BACnet, SMI
EnOcean
DMX, Art-Net™
sACN, PJLink
AES70 (OCA)
SMPTE Timecode

Benefits that Beckhoff provides for you.

Maximum scalability

Control solutions from Beckhoff are up to the task at hand: all product lines in the areas of Industrial PCs, I/Os, drive technology and automation software can be scaled optimally to suit the application. The range of Industrial PCs thus extends from the ultra-compact C6015 IPC with dimensions of 82 x 82 x 40 mm to the many-core Industrial Server with up to 36 cores.

Comprehensive connectivity

PC-based control speaks all networking languages: all customary communication standards and fieldbus systems – and all protocols typically used in media and building automation – are supported, permitting the easy integration of all systems and devices.


Distance between Industrial PC and Control Panel: up to 100 metres
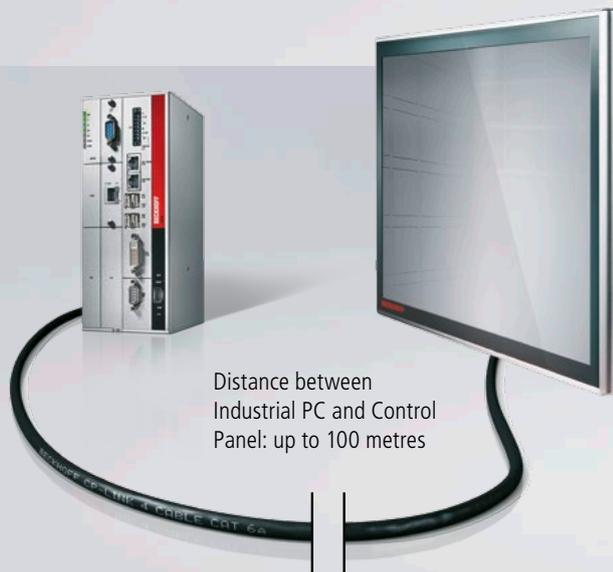
Secure your technological lead with Beckhoff.

Simple panel display integration in the field using CP-Link 4

CP-Link 4, the one cable solution for transmitting video signals, USB 2.0 and power supply using a commercially available Cat.6A cable, allows a Control Panel to be installed remotely from the PC at a distance of up to 100 metres. This significantly reduces cabling and installation costs.

Optimised graphics functionality with DisplayPort

DisplayPort monitors with a resolution of up to 2560 x 1600 @ 60 Hz can be connected using the DisplayPort option for the CX5130, CX5140 and CX20x0 Embedded PCs from Beckhoff.
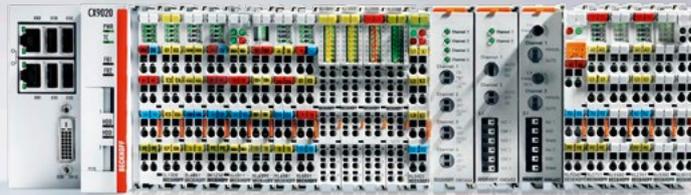
Long-term availability

When you choose Beckhoff, you choose industry-proven, reliable and long-term available control technology "Made in Germany".

Modular and flexible

The Beckhoff I/O portfolio includes over 400 signal types and 36 fieldbus systems, and is ideal for controlling the full range of sensors and actuators. Together with the modular TwinCAT automation software, users have optimum flexibility when configuring their application-specific controls and for extending functionality over time.

Custom user interfaces on any screen: with TwinCAT HMI

Integrated in Visual Studio®, TwinCAT HMI software offers a WYSIWYG editor for HTML 5 as well as straightforward configuration using drag-and-drop for all browsers, operating systems and devices, including mobile.

"Plug and Cloud": using Beckhoff IoT products

Connection to popular cloud systems can be performed either from the controller via the IoT protocol standards AMQP, MQTT and OPC UA, or directly using the IoT Bus Coupler from Beckhoff. This coupler enables simple and standardised integration of I/O data with cloud-based communication and data services via configuration, without the need for any special control program.

Collaboration and Conference:
Technology for your perfect meeting.

School

Conference room

Boardroom

Think tank

The universal and open control platform for the most diverse applications

Audio and Video Control

Beckhoff control components for:
- Media control
- Audio installations
- Video installations

Integrated Automation

Beckhoff control components for:
- Lighting
- HVAC
- Energy measurement
- Facade

Digital Signage Control

Beckhoff control components for:
- Device monitoring

Operating and Monitoring

Beckhoff control components for:
- Device management
- Cloud-based monitoring
- Condition monitoring

University

Data centre

Open space office/
Coworking space

Collaboration and Conference References

Miele adminstration building, Gütersloh, Germany

Zayed University, Abu Dhabi, UAE

References for Collaboration and Conference, selection

Conference room/Think tank
- Design Center Linz, Austria
- Ferry Porsche Congress Center, Zell am See, Austria
- Karolkowa Business Park, Warsaw, Poland
- Microsoft, Cologne, Germany
- Nardini, Bassano, Italy
- One BKC, Mumbai, India
- Schüco Technology Center, Bielefeld, Germany
- Sky Tower, Bukarest, Romania
- Tampere Hall, Tampere, Finland
- Tower 185, Frankfurt a. M., Germany

Open space office/Coworking space
- Campus Dornbirn, Austria
- Diamant Software, Bielefeld, Germany
- Europlaza, Vienna, Austria
- Fraunhofer IAO, Center for Virtual Engineering, Stuttgart, Germany
- Internorm, Traun, Austria
- Miele adminstration building, Gütersloh, Germany
- Zukunftsmeile Fürstenallee, Paderborn, Germany

School/University
- Anton Bruckner Privatuniversität, Linz, Austria
- Collegio San Giuseppe Istituto De Merode, Rome, Italy
- KEA – Copenhagen School of Design and Technology, Denmark
- Leuphana University Lüneburg, Germany
- Limtec+, Diepenbeek, Belgium
- Stelzhamer School, Linz, Austria
- Unipark Nonntal, University of Salzburg, Austria
- University of Antwerp, Belgium
- Zayed University, Abu Dabhi, UAE

Limtec+, Diepenbeek, Belgium

Microsoft, Cologne, Germany

Control Room:
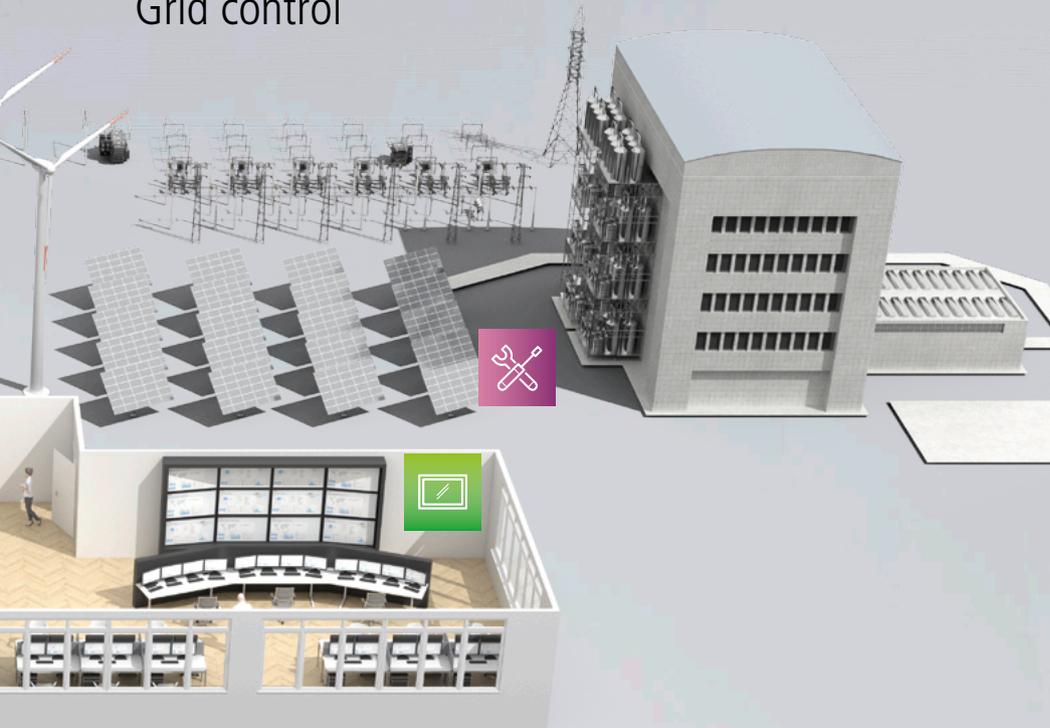# The reliable system for your infrastructure.

Infrastructure

Data centre

Broadcast/Production

The universal and open control platform for the most diverse applications

BECKHOFF New Automation Technology

We reserve the right to make technical changes.

Grid control

Control room

Emergency and rescue
coordination centre

Audio and Video Control

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Integrated Automation

Beckhoff control components for:
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- Energy measurement
- Facade

Digital Signage Control

Beckhoff control components for:
- Device monitoring

Operating and Monitoring

Beckhoff control components for:
- Device management
- Cloud-based monitoring
- Condition monitoring

Control Room
References

Marmaray tunnel, Istanbul, Turkey

Frankfurt Airport, Germany

©Fraport AG

Bank of Communication, Shanghai, China

Nordtangente Basel, Switzerland
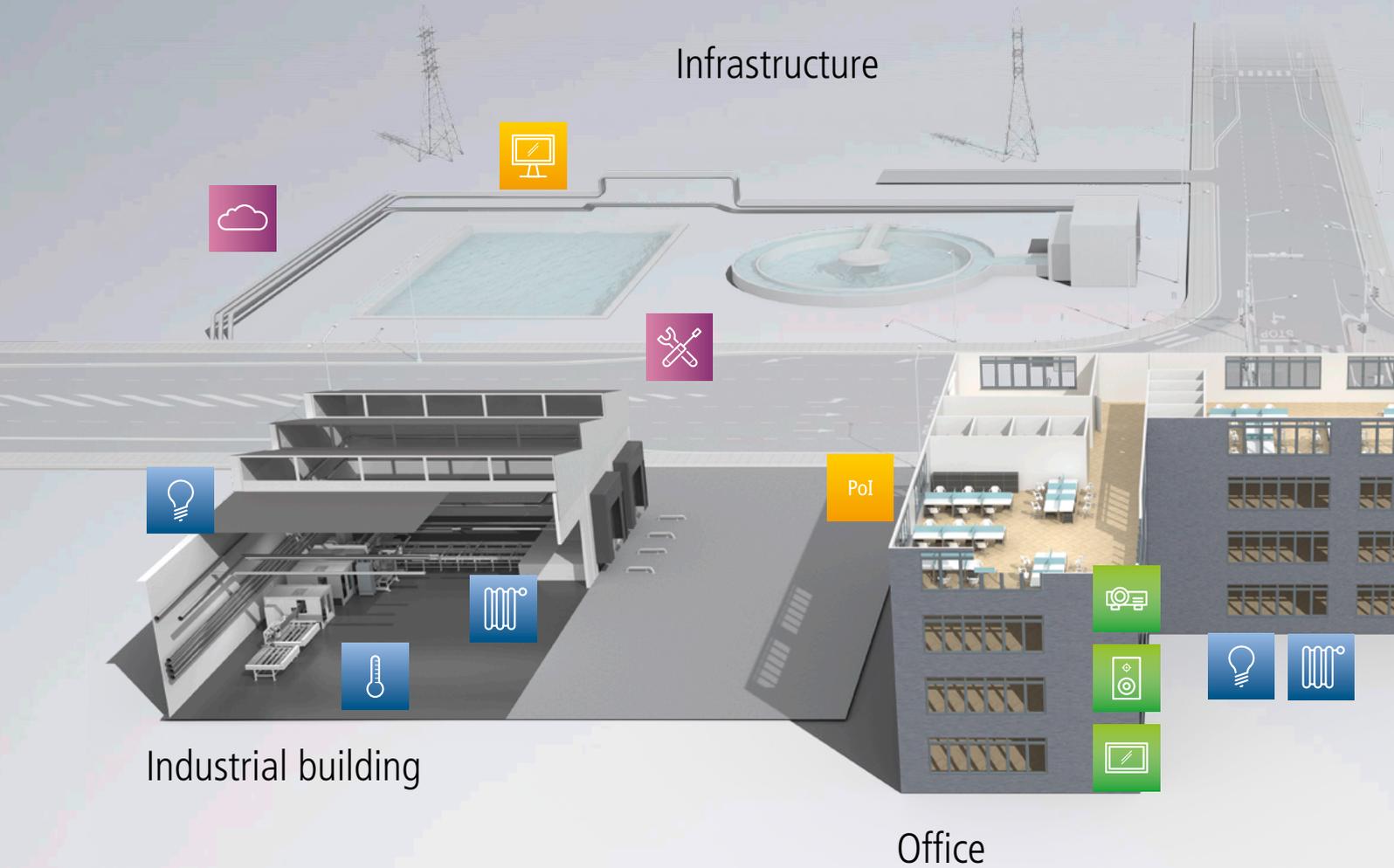
Building Automation:
For your smart, future-proof building.

Infrastructure

Industrial building

PoI

Office

The universal and open control platform for the most diverse applications

BECKHOFF New Automation Technology

Audio and Video Control

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Digital Signage Control

Beckhoff control components for:

- Point of Information (PoI)
- Point of Sale (PoS)
- Device monitoring

Operating and Monitoring

Beckhoff control components for:

- Device management
- Cloud-based monitoring
- Condition monitoring

Transportation

PoI

Hotel

PoS

Commercial building

Building Automation References

Park Hotel Vitznau, Switzerland

Tower 185, Frankfurt a. M., Germany

We reserve the right to make technical changes.

Palais Hansen Kempinski Vienna, Vienna, Austria

Afrycarium, Zoo Wroslaw, Poland

References for Building Automation, selection

Commercial/Residential building
- CitizenM Hotel, Amsterdam, Netherlands
- Cosmopolitan Twarda, Warsaw, Poland
- Dolder Grand Hotel, Zürich, Switzerland
- Eurotheum, Frankfurt, Germany
- Grand Tirolia, Kitzbühel, Austria
- Holiday Inn, Lodz, Poland
- Holiday Inn, Samara, Russia
- Hotel Aurelio, Lech, Austria
- Hotel Grischa, Davos, Switzerland
- Karolkowa Business Park, Warsaw, Poland
- KölnTriangle, Germany
- Leonardo Royal Hotel, Munich, Germany
- Microsoft, Cologne, Germany
- Miele administration building, Gütersloh, Germany
- One BKC Radius, Mumbai, India
- Palais Hansen Kempinski Vienna, Vienna, Austria
- Park Hotel Vitznau, Switzerland
- Quality Pond Hotel, Sandnes, Norway
- Queen Mary II, Cunard Cruises Line, U.K.
- Sky Tower, Bukarest, Romania
- Tower 185, Frankfurt a. M., Germany
- Vestlia Resort, Geilo, Norway

Industrial building
- AEC Pole Division, Italy
- Algorab, Lavis, Italy
  - Eurospin Grocery Stores, Italy
- AMAG Automotive, Buch, Switzerland
- Broschek Druck, Hamburg, Germany
- Carheal+, Støvring, Denmark
- Cummins India Ltd., Pune, India
- Daimler, Stuttgart, Germany
- dSPACE, Paderborn, Germany
- F-eins, Vienna, Austria
- Heroal, Verl, Germany
- Liebherr, Nenzig, Austria
- nobilia-Werke, Verl, Germany
- Philip Morris International, Lausanne, Switzerland
- Pirelli, Breuberg, Germany
- Sensirion, Stäfa, Switzerland
- Tekloth GmbH, Bocholt, Germany

Infrastructure
- Afrykarium, Zoo Wroclaw, Poland
- Armonea retirement home, Mechelen, Belgium
- Frankfurt Airport, Germany
- Gatwick Airport, London, U.K.
- Grundfos Kollegiet Aarhus, Denmark
- KLIA 2 Control Tower, Sepang, Malaysia
- Marmaray tunnel, Istanbul, Turkey
- Metro M2, Lausanne, Switzerland
- Nürnberg Messe, Hall 3A, Germany
- Oslo City Hall, Norway
- Regio IT, Aachen, Germany
- State Fire Academy in Würzburg, Germany
- Therme Wien, Austria

Entertainment Technology:
The system that enables your creativity.

Stadium

PoS
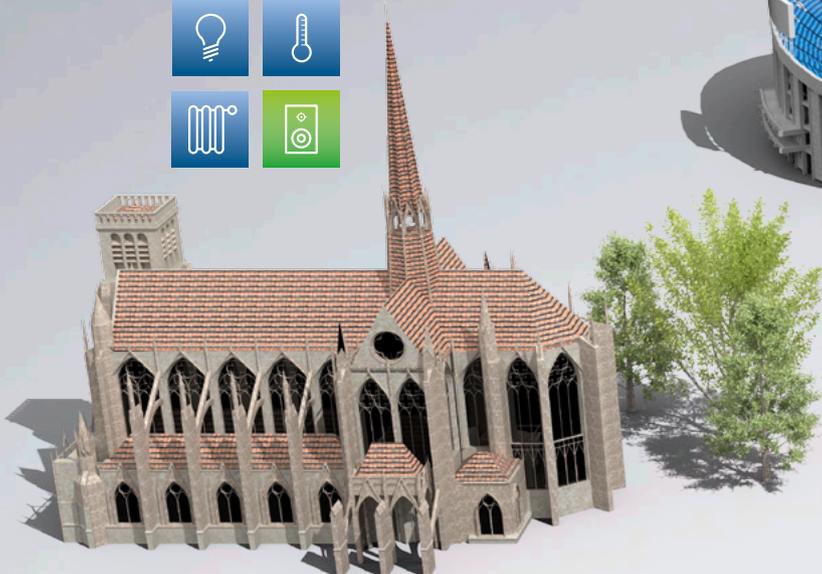
Church
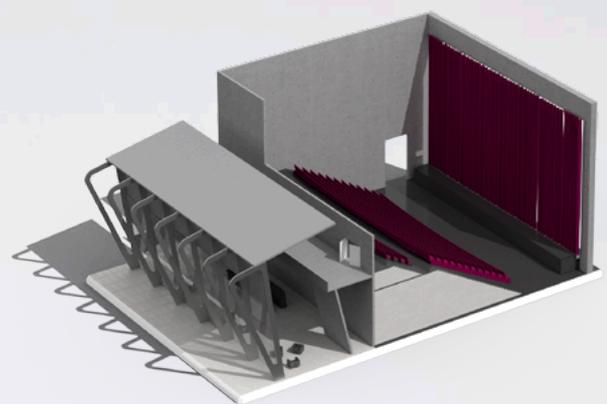
Cinema
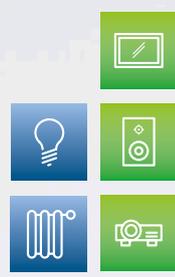
The universal and open control platform for the most diverse applications

Audio and Video Control

Beckhoff control components for:

- Media control
- Audio installations
- Video installations
- Show control

Integrated Automation

Beckhoff control components for:

- Lighting
- HVAC
- Energy measurement
- Facade

Digital Signage Control

Beckhoff control components for:

- Point of Sale (PoS)
- Device monitoring

Operating and Monitoring

Beckhoff control components for:

- Device management
- Condition monitoring

Theatre

Entertainment park

Entertainment Technology References

Alterface Projects S.A., Wavre, Belgium

People's Grand Theatre, Jilin City, China

© Bregenzer Festspiele/Karl Forster

Bregenzer Seebühne, Austria

ATELIER-BRÜCKNER/Michael Jungblut

Staatliches Museum für Archäologie Chemnitz, Germany

References for Entertainment Technology, selection

Stadium
- Allianz Arena, Munich, Germany
- Tönnies-Arena, Rheda-Wiedenbrück, Germany
- VIP-Loge ESPRIT arena, Düsseldorf, Germany
- Veltins-Arena auf Schalke, Gelsenkirchen, Germany

Entertainment park
- Walt Disney Imagineering (WDI), Burbank, USA
- Hytechnology Inc., Shenzhen, China
  - Songs of birds, Wuhu Fantawild
  - Nuwa patches up the sky, Jinan Fantawild
- K. D. Decoratives Ltd., Huddersfield, U. K.
- Xesa Systems – Full Motion Technology, Italy

Art installation
- AquaDom, sea water aquarium, Berlin, Germany
- Frenckel Clock Tower, Tampere, Finland
- GTG GmbH/Böckstiegel Automation, Germany
  - Digital Tower, Changi Airport Singapore
  - Super Bowl, MetLife Stadium New York, USA
- LightHive, London, U.K.
- Magical Production, Dubai, UAE
- MKT AG, Munich, Germany
  - "Zeitdynamisches Sachsenmodell", SMAC, Chemnitz, Germany
  - "Kinetic Rain", Changi Airport, Singapore
- MKT AG/HB-Laserkomponenten GmbH, Germany
  - 3D KineMatrix
- Scandinavian Design Group, Oslo, Norway
  - "Breaking the Surface", Lundin, Norway
- Utinam, horloge monumentale, Besancon, France
- Zigong City Tower, Zigong, China

Cinema
- Alterface Projects S.A., Wavre, Belgium
- People's Grand Theatre, Jilin City, China

Museum
- Deutsches Museum, Munich, Germany
- Charlottenburg Palace, Berlin, Germany
- Hagia Sophia, Istanbul, Turkey
- Serlachius Museum, Gösta, Finland
- Sisi Museum in the Vienna Hofburg, Austria
- Staatliches Museum für Archäologie Chemnitz, Germany
- Stadtmuseum Dresden, Germany

Church
- Church St. Anna, Verl, Germany
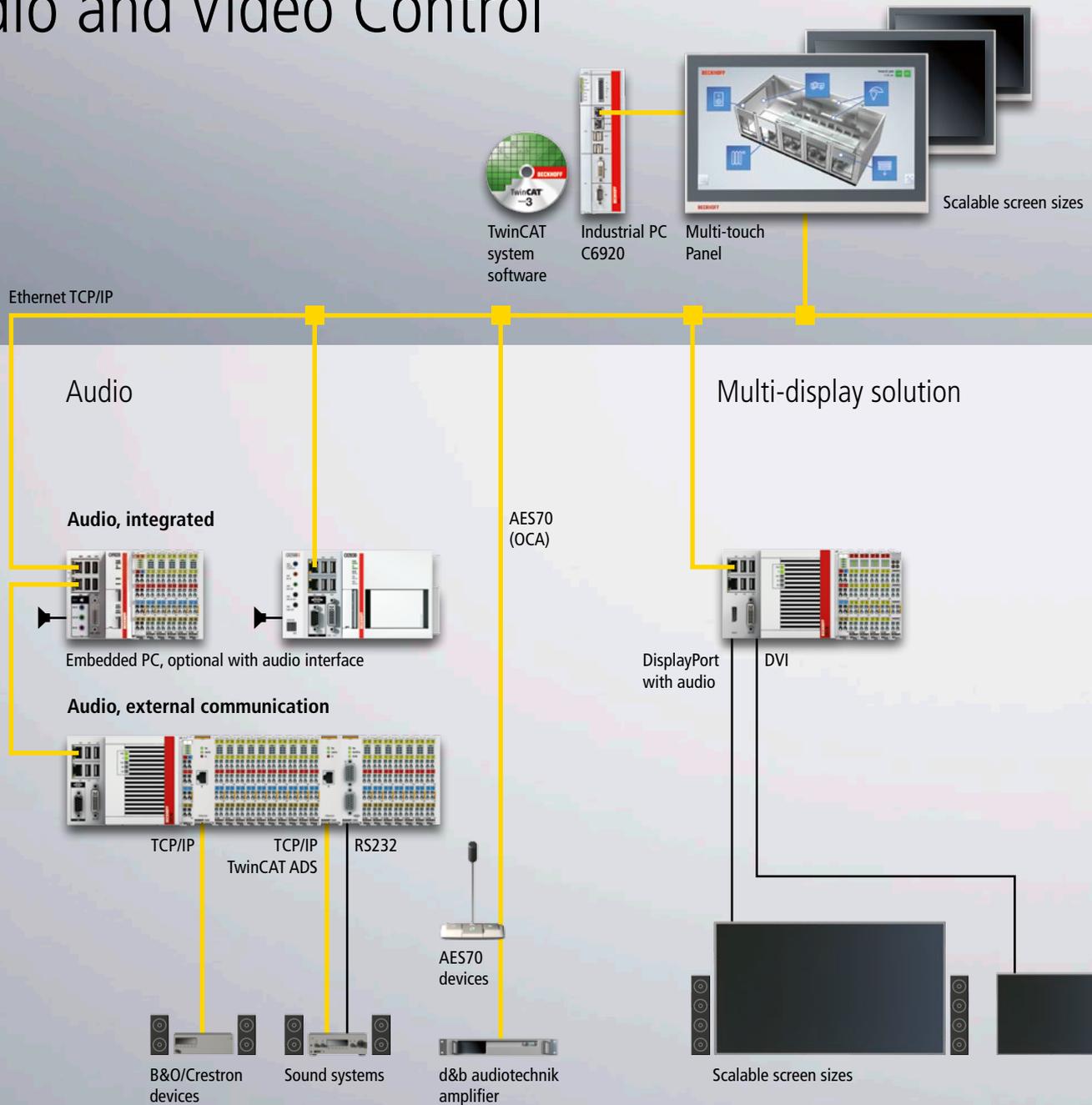- Überwasserkirche, Münster, Germany
- Church of Lomma, Sweden

Theatre
- Bregenzer Seebühne, Austria
- Hudson Scenic Studios, Yonkers, NY, USA
  - Various Broadway shows
- Scala di Milano, Italy

Audio and Video Control

TwinCAT system software

Industrial PC C6920

Multi-touch Panel

Scalable screen sizes

Field/Control Level

Ethernet TCP/IP

Audio

Audio, integrated

Embedded PC, optional with audio interface

Audio, external communication

TCP/IP

TCP/IP TwinCAT ADS

RS232

B&O/Crestron devices

Sound systems

d&b audiotechnik amplifier

AES70 (OCA)

AES70 devices

Multi-display solution

DisplayPort with audio

DVI

Scalable screen sizes

Technical functional drawing

CX Embedded Controller series with DisplayPort option

A universal platform for all audio/video equipment, IP networks and cloud services

In addition to Ethernet TCP/IP, serial protocols and OPC UA, the Beckhoff control platform supports all relevant protocols in the area of media technology. This includes Open Control Architecture (AES70 standard), PJLink, SMPTE Timecode, Crestron, Bang & Olufsen, Art-Net™ and Streaming ACN (sACN), among others. Vendor-independent control of the widest range of media technology equipment enables the seamless operation of audio and video systems, display devices, multimedia servers

OPC UA
AMQP
MQTT

TwinCAT ADS
Modbus
BACnet
sACN
PosiStageNet
Art-Net™
Ethernet TCP/IP
AES70 (OCA)

19" slide-in Industrial PC
C5240

Video

Multimedia

Embedded PC   SMPTE   RS232
             Time-
             code

Industrial PC   EtherCAT
C6930   Terminals

PoE

TCP/IP

USB

PJLink™

Camera

SMPTE Timecode
master

Projector   Projection   Smart TV
               systems

IP
phone

Kinect sensor

Wearables
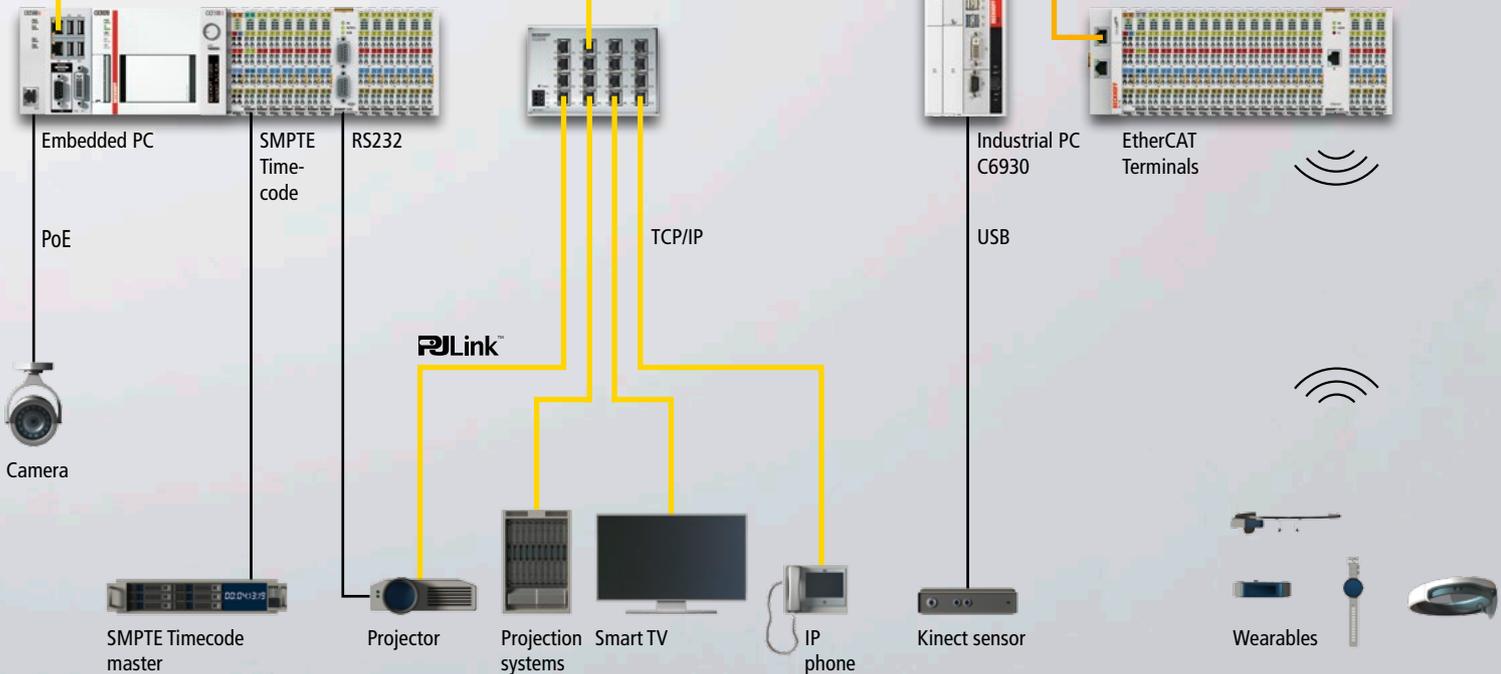
and streaming services – in one network and on the same platform. The advantage for users is clear: they are not restricted in their choice of media technology equipment and are free from manufacturer-specific protocol considerations. The Beckhoff platform serves as a "multi-language gateway", ensuring flexible communication among devices, as well as optimum usability.

Through the scalability and modularity of the software and hardware components from Beckhoff, users can tailor their control system precisely to the scope of the control tasks at hand. Users can achieve significant performance improvements and cost reductions, but also

optimise available installation space. The CX2000 Embedded PC, for example, represents an extremely powerful and modular control solution based on multi-core processors from Intel®, helping to combine audio, PoE, DisplayPort and DVI on one universal platform.

Audio and Video Control

Integrated Automation

Ethernet TCP/IP

TwinCAT system software

Industrial PC C6930

Multi-touch Panel

Scalable screen sizes

Field/Control Level

Operating and Monitoring

HVAC

Embedded PC, EtherCAT Terminals

Bus Terminals

Embedded PC, Bus Terminals

EtherCAT

Remote control

Control panel

Weather forecast

Manual operating

Ventilation

Cooling

Heating

Air quality

Temper- ature

Energy saving (EN50001 ready)

Increased comfort and reduced energy consumption: building automation for all systems

By supporting all communication standards for building automation – from operating and monitoring, lighting, HVAC and facade control through to energy data collection – all functions can be integrated into the automation platform from Beckhoff. The universal, coordinated control system increases comfort levels for building users. In addition, the system-integrated nature of the platform delivers energy savings and reductions in investment and operating costs.

Technical functional drawing

With the eXtendable Room Box, Beckhoff further minimises engineering effort.

19" slide-in Industrial PC
C5240

OPC UA
AMQP
MQTT

TwinCAT ADS
Modbus
BACnet
Ethernet TCP/IP

Lighting

Facade

Embedded PC,
Bus Terminals

LON
DALI
DMX

DALI

Lighting

Emer-
gency
lighting

Switchable
power
outlets

Occupancy
sensor

Room Controller

Embedded PC,
EtherCAT Terminals

Bus
Terminals

Access
control

Shading

Sun position
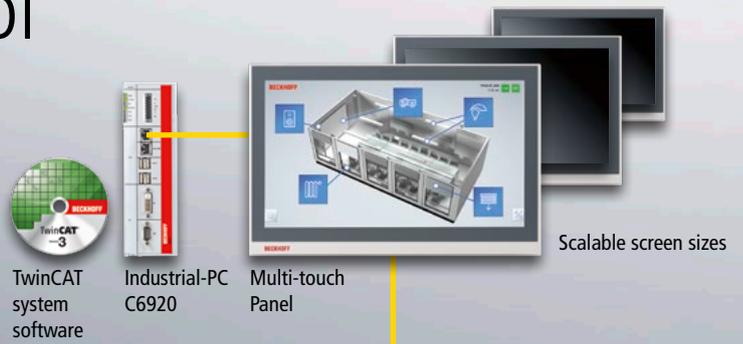calculation

EtherCAT P

Integrated Automation

TwinCAT function blocks for building automation enable the automation of shade control, lighting, ventilation, in addition to heating and cooling according to the time of day and presence of occupants. This enables energy-saving room automation and enhanced comfort at the same time. Therefore, lighting correlates directly with facade control. An effective interconnection of the two disciplines is the optimal way to reduce energy consumption of lighting. The end goal is to use as much natural daylight as possible without glare, while still providing constant light intensity.

A building can be regulated on a time-dependent basis via integrated room automation in a variety of different operating modes. This especially reduces heating and cooling energy consumption during longer periods of absence. Nevertheless, the system must reach a comfortable temperature quickly during core occupancy hours and ensure good air quality at the same time.
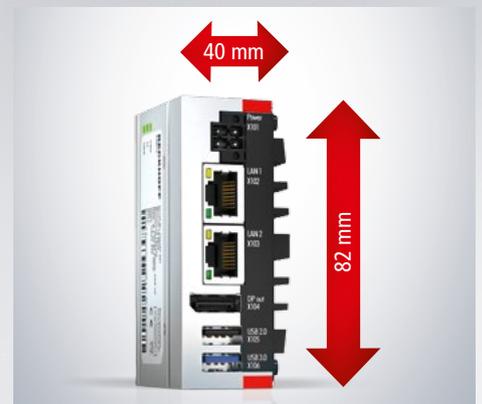
Digital Signage Control

Management Level

Field/Control Level

Ethernet TCP/IP

TwinCAT system software

Industrial-PC C6920

Multi-touch Panel

Scalable screen sizes

Operating

7"

24"

7"

24"

Control Panel

Operating, external

Crestron devices

AMX devices

B&O devices

Multi-screen

Industrial-PC C6920

Ethernet TCP/IP

Monitor/Media wall

Ultra-compact IPC C6015

Technical functional drawing

40 mm

82 mm
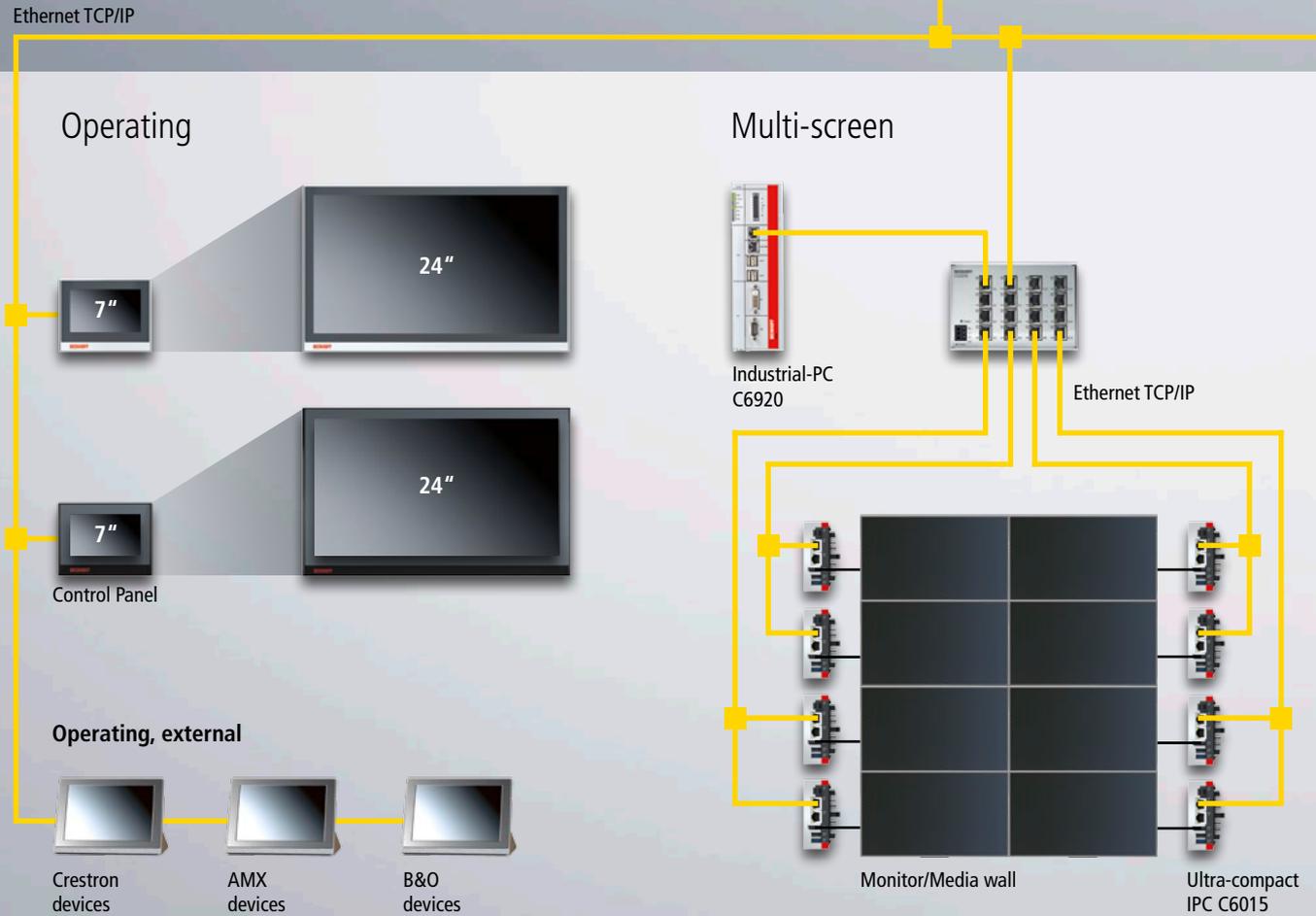
With minimised dimensions the C6015 IPC opens up new fields of application.

We reserve the right to make technical changes.

19" slide-in Industrial PC
C5240

MaaS (Media as a Service)
CaaS (Control as a Service)

OPC UA
AMQP
MQTT

TwinCAT ADS
Modbus
BACnet®
sACN
Art-Net™
PosiStageNet
Ethernet TCP/IP

Point of Sale

Point of Information

Cloud connect and content stream

EtherCAT.

Ultra-compact
IPC C6015

DisplayPort

Ultra-compact
IPC C6015

Display-
Port

Display-
Port

EtherCAT. P

Temper-
ature

Energy

kWh

Remote
control

DisplayPort

Display-
Port

Temper-
ature

Energy

kWh

Condition
Monitoring

Monitor wall

Display/Screen

Display/Screen

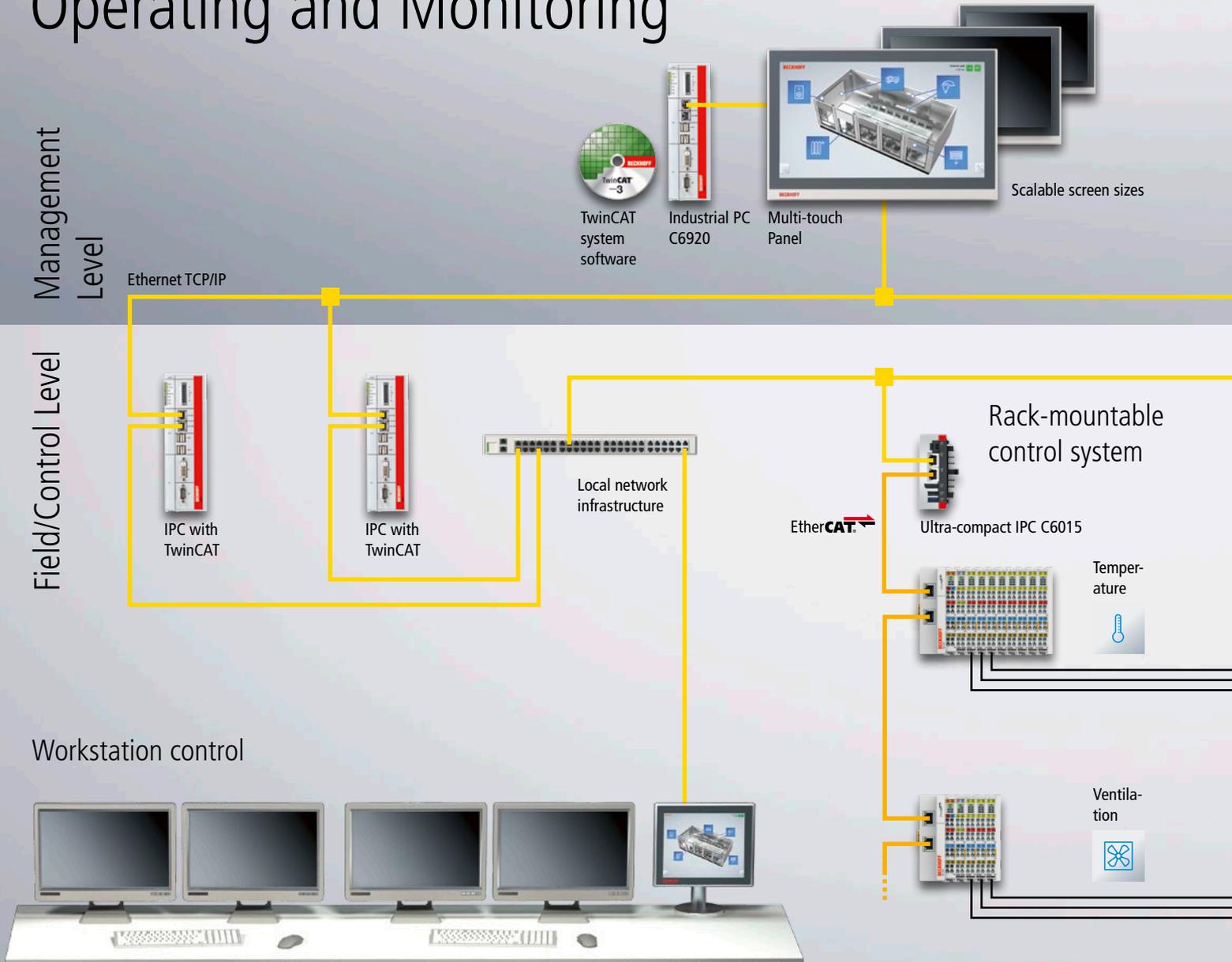**Robust, reliable and easily expandable:
the PC platform**

Used for displaying information or for advertising purposes, large digital screens are no longer a rarity at airports, in control centres, public spaces, shopping centres or in office buildings. It is now common for 100 displays or more to be controlled reliably 24/7. The robust, fanless and ultra-compact IPC C6015 is ideal here, for example, due to its minimal footprint, flexible installation and low costs. Beckhoff Industrial PCs come as standard with the interfaces needed to transmit electrical signals, IP, image and sound signals. The possibility to operate different media play-

ers on one universal platform allows users to independently choose their software with a large degree of flexibility.
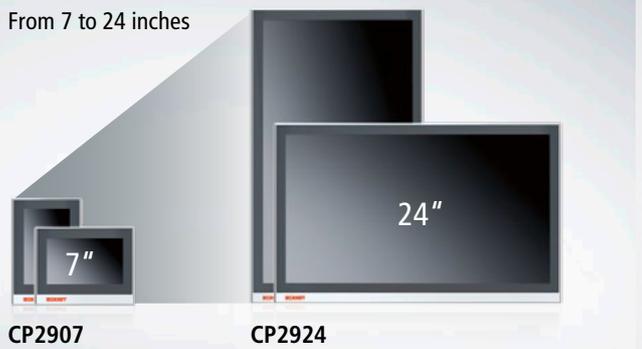
Monitors with a resolution of up to 2560 x 1600 @ 60 Hz can be connected using the DisplayPort option, which is available on the CX5130, CX5140 and CX20x0 Embedded PCs. A second monitor can be controlled in each case by means of the DVI interface. The excellent scalability of the control platform and its flexible expandability is yet another benefit. For example, the system can be extended at any time by incorporating device monitoring solutions – with feedback on the device status, temperature or energy consumption – for the data to be retrieved locally or globally.

Digital Signage Control

BECKHOFF New Automation Technology

Operating and Monitoring

TwinCAT system software

Industrial PC C6920

Multi-touch Panel

Scalable screen sizes

Ethernet TCP/IP

Field/Control Level

IPC with TwinCAT

IPC with TwinCAT

Local network infrastructure

EtherCAT.

Rack-mountable control system

Ultra-compact IPC C6015

Temperature

Ventilation

Workstation control

From 7 to 24 inches

24"

7"

CP2907

CP2924

Technical functional drawing

The Beckhoff panel series with industry standard multi-touch display offers a feature-laden solution for any application.

OPC UA
AMQP
MQTT

TwinCAT ADS
Modbus
BACnet®
EAP
Ethernet TCP/IP
EtherNet/IP™

19" slide-in Industrial PC
C5240

Control room

Energy

kWh

Control

Condition
Monitoring

Access
control

Server racks

Server racks

Monitor/media wall

Digital
video
signal

Digital
video
signal
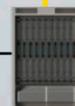
Ethernet
TCP/IP

Ethernet
TCP/IP

KVM matrix systems

KVM matrix systems

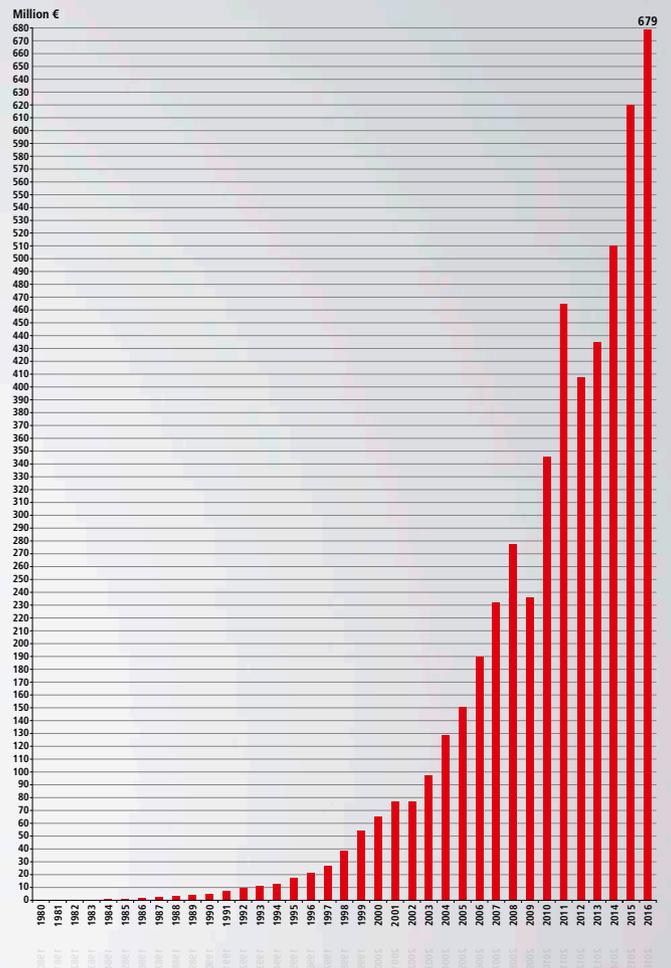### Control, operation and monitoring on one multitasking platform

The ability to monitor the status of equipment and access control systems – anytime and anywhere in the world if desired – is becoming more important with each passing day. In this way, operators or service engineers in a control centre can check anytime whether devices installed in the field are operating properly. The support for standard interfaces as well as all vendor-specific protocols of relevance for a specific industry makes the Beckhoff control system an open platform that offers users maximum flexibility to configure their applications. A single platform can be used to monitor the status of various third-party systems, for example, an array of monitors or various different physical parameters. The Beckhoff control system can be flexibly expanded because of its inherent modularity. If the monitoring functions are to be extended, this can be solved with the addition of a corresponding I/O terminal to the network and a simple software update, for example. Beckhoff also offers a wide variety of elegantly designed multi-touch Control Panels and Panel PCs for operator interface and monitoring. Display sizes ranging from 7 to 24 inches allow users to choose the ideal device for their application.

Operating and Monitoring

Globally available:
the Beckhoff automation expertise.

Beckhoff – New Automation Technology
Beckhoff implements open automation systems based on PC Control technology for more than 35 years. The product range covers Industrial PCs, I/O and Fieldbus Components, Drive Technology and automation software. For all areas of application, product series are available that can be used as separate components or integrated into a complete and seamless control system.

Legend:
- ■ Headquarters
- ● Subsidiary
- ■ Headquarters distributor
- ● Subsidiary distributor

NORTH AMERICA
SOUTH AMERICA
AFRICA

Sales development

Cities on map	
Novosibirsk	

ASIA

Shenyang
Tianjin
Beijing
Zhengzhou
Jinan
Xi'an
Qingdao
Seoul
Yokohama
Nagoya
Nanjing
Suzhou
Hefei
Shanghai
Chengdu
Wuxi
Ningbo
Chongqing
Wuhan
Hangzhou
Kunming
Changsha
Guangzhou
Taipei
Shenzhen

Bangkok

Penang
Kuala Lumpur
Singapore

Jakarta

AUSTRALIA

Sydney
Melbourne
Auckland

Million €

679

The Beckhoff "New Automation Technology" philosophy represents innovative control and automation solutions that are used worldwide in a wide variety of different applications and industries, ranging from CNC-controlled machine tools and wind turbines to intelligent building automation.

Worldwide presence on all continents
The worldwide presence of Beckhoff in more than 75 countries ensures fast service and support for globally operating customers in their local language. Moreover, geographical proximity helps us develop an in-depth understanding of the technical challenges our customers are faced with around the world.
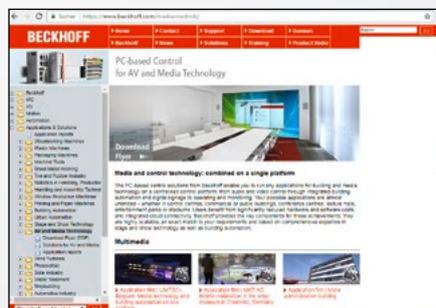
Beckhoff at a glance
- Headquarters Verl, Germany
- Sales 2016: 679 Mio. € (+9,5 %)
- Staff worldwide: over 3,850
- Sales/Technical Offices Germany: 20
- Subsidiaries/Branch Offices worldwide: 34
- Distributors worldwide:
  in more than 75 countries

  (as of 11/2017)

▶ www.beckhoff.com

All in-depth information at a glance.

Main Catalog 2018
Volume 1 | IPC, Motion, Automation

PC-based Control for
Integrated Building Automation

Enabling your Creativity:
PC-based Control from Beckhoff
for Stage and Show Technology

Integrated Building Automation Solutions
For Investors, Planners and Technicians

Integrated Building
Automation Solutions
for System Integrators

Integrated Building
Automation Solutions
for Specialist Engineers

Urban Automation
PC-based Control for Urban Environments

Print media online
The Beckhoff catalogs and flyers are available for download
on the Internet. Printed copies are available on request.
Please use our online order form to specify your requirements.

▶ **www.beckhoff.com/media**

General information

- Website
- Main Catalog: Volume 1 and 2
- Product Overview
- News Catalog

Main Catalog 2018 Volume 2 | I/O

Product Overview | 2017

News | 01*2018

News

Specific information

- PC-based Control for integrated Building automation
- PC-based Control for Stage and Show
- Integrated Building Automation for Technicians
- Building Automation for
  - System Integrators
  - Specialist Engineers
  - Architects
  - Operators
  - Investors

Integrated Building Automation Solutions for Architects

Integrated Building Automation Solutions for Operators

Integrated Building Automation Solutions for Investors
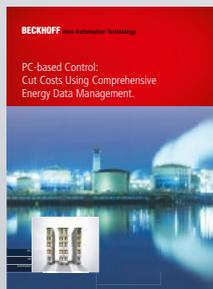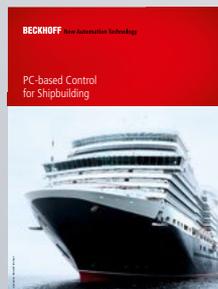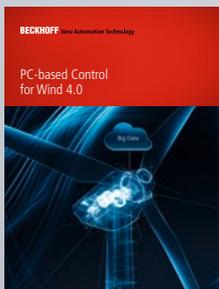
Additional information

- PC-based Control for
  - Urban Environments
  - Wind 4.0
  - Shipbuilding
  - Energy Data Management

PC-based Control for Wind 4.0

PC-based Control for Shipbuilding

PC-based Control: Cut Costs Using Comprehensive Energy Data Management.

Company magazine

- PC Control Magazine
- Stage Technology Compendium
- Building Automation Compendium

DK 3762-0218

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