

The background image shows a large, modern industrial factory floor with high ceilings, metal structures, and various pieces of equipment. Overlaid on this is a semi-transparent blue and green digital interface. This interface features yellow rectangular outlines that resemble technical drawings or assembly plans, and streams of blue binary code (0s and 1s) floating in the air, suggesting a digital manufacturing or automation theme.

SIMATIC IPC

Beograd 01.12.2020.

SIMATIC IPC / PC-based Overview



- 1 Why Industrial PCs? - Trends and requirements
- 2 SIMATIC IPC Box and Panel PC
- 3 SIMATIC IPC Rack PC
- 4 SIMATIC IPC Flat Panels and Thin Client, Tablet
- 5 SIMATIC IPC Special requirements
- 6 SIMATIC Software and Accessories
- 7 SIMATIC Field PG

Trends and Requirements - Digitization, Industry 4.0 and Industrial Internet of Things (IIoT) as Market Drivers

1

The idea of a "transparent plant" generates "hunger for data".

2

The power, intelligence and openness of the PCs are required to process these data volumes.

3

Due to the large (and often sensitive) volume of data, **data availability and security** are becoming increasingly important.

4

PCs are being used closer and closer to the machines, which means that the demand on **robustness** continues to rise.



Increased demand for **Industrial PCs**

Versatile application possibilities with one hardware platform



Data collectors & converters

- Data recording directly at the machine
- Interface between machine and IT level
- Connection to company's information systems



Automation tasks

- Machine-based control and visualization with one device
- Complex SCADA applications
- Flexible integration of PC hardware and software



Industrial server and work stations

- PC applications in production
- Machine-based server applications
- Data management in control rooms

SIMATIC IPC / PC-based



SIMATIC PC
Flexible, versatile solutions for
PC-based automation

Unrestricted © Siemens 2019

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Ingenuity for life

SIMATIC PC-based

SIMATIC Rack PCs



SIMATIC devices for
Special requirements



SIMATIC Box PCs



SIMATIC Industrial monitors
and Thin Clients



SIMATIC Panel PCs



SIMATIC Field PG M6



SIMATIC Industrial
Tablet PC



SIMATIC Software
Controller

























SIMATIC IPC
Software and accessories



SIMATIC Industrial-PC Portfolio

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| | | Rack PC | Box PC | Panel PC |
|--|---|--|--|--|
| Embedded Industrial-PCs without fan |  | IPC1x7 Ultracompact |  IPC127E | |
| |  | IPC2x7 Compact |  IPC227E |  IPC277E |
| |  | IPC4x7 Powerful |  IPC427E |  IPC477D/E |
| High-end Industrial-PCs High-end functionality |  |  IPC647E |  IPC627E |  IPC677E |
| |  |  IPC847E | | |
| | |  IPC1047 | | |
| Advanced Industrial-PCs Latest PC technology |  |  IPC547G |  IPC527G | |
| Basic Industrial-PCs Attractive price |  |  IPC347E |  IPC327E |  IPC377E |
| | | IPC3x7 available from stock | | |

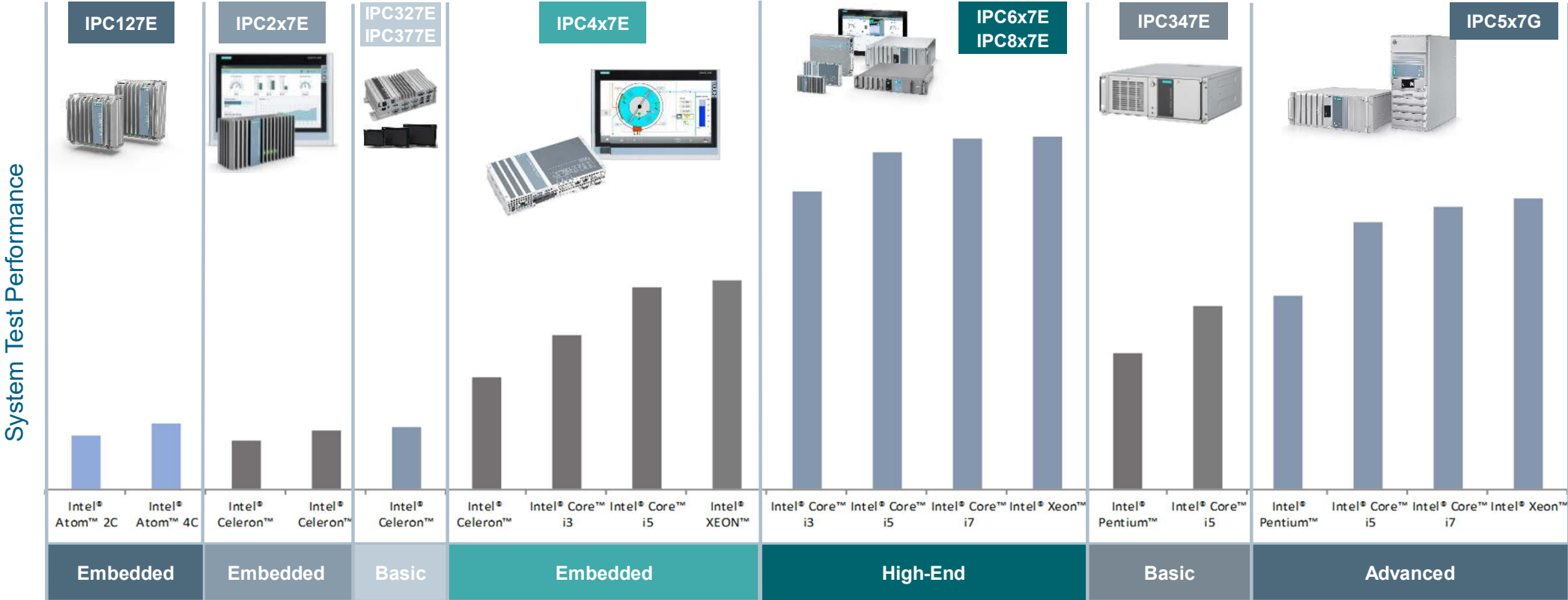
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SIMATIC IPC – System performance

High scalability for any industrial application



SIMATIC IPC127E

The ultra-compact industrial PC for your application

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- Latest CPU technology of **Intel Atom** series 2 or 4 core processors
- Integrated **SSD** up to **128GB**

Operating system

- Windows 10 Enterprise LTSC 2016
- Windows 10 Enterprise LTSC 2019

High flexibility

- Flexible mounting
- Small space requirement - installation volume approx. **0.3 liters**



High system availability

- **Maintenance-free**
- No rotating parts (fan, HDD)

High investment security

- Long-term availability
- Support period from 8 - 10 years

Adaptable to the machine

- Up to **55 °C** ambient temperature
- Dust protection due to closed housing
- LEDs for efficient self-diagnosis; optimization for headless operation

SIMATIC IPC127E

Mounting options

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Book – mount

DIN – rail

Wall – mount



SIMATIC IPC227E Nanobox/ IPC277E Nanopanel

Optimized performance in a compact design

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Performance

Optimized performance with Dual & Quad Core **Celeron** processors

extended temperature ranges
from -20 ° C to +60 ° C

Compact design

Small size for space-saving assembly

- SIMATIC Software Controller
- WinCC RT Advanced
- WinCC Unified PC RT



Large selection of displays

Single-touch version 7" - 19"

Multi-touch version 12"/15"/19"

Maintenance-free & Fanless

Ideal for use in industrial environments

Modern interfaces

Easy connection to automation and IT systems

SIMATIC IPC327E / IPC377E

Industrial PC technology at an attractive price

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Latest PC technology

with Intel **Celeron** Quad Core,
up to **8GB** RAM and
mPCIe/mSATA for easy
expandability

Proven standards

with USB 3.0, display port, **6
serial ports** and more for
easy integration into existing
systems



SIMATIC quality

designed for 24/7 operation in
industrial environments incl.
standard run-in tests and
certificates

Attractive price

with an excellent price-
performance ratio for cost-efficient
implementation of a wide range of
applications

Available from stock

with reduced complexity in pre-
configured variants for shorter
delivery times

SIMATIC IPC427E / IPC 447E

Powerful, maintenance-free and flexibly configurable

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Ingenuity for life

Powerful Intel processors
scalable from **Celeron**, **Core i**
up to **Xeon** and up to **16 GB**
RAM

Panel PC version up to
24"

for powerful HMI solutions -
also as multitouch version

High ruggedness

and maintenance-free design
without rotating parts for use
directly on the machine



Versatile configuration
and flexible mounting
options for the optimum
solution

Numerous interfaces
onboard (e.g. 3 x Ethernet) and
expansion possibilities with up to
two PCIe cards

SIMATIC IPC527G

High performance at an attractive price

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Ingenuity for life

Extensions, interfaces and drives

- Large number of interfaces and expansion options
- Multimonitor in the basic configuration
- Run-in tested for fast and trouble-free commissioning
- Attractive packages with SIMATIC HMI software

Operating system

- w/o
- Windows 7 Ultimate 32/64 Bit
- Windows 10 LTSC



High system performance in a small package

- Intel Desktop CPUs **6th** Generation **Core i5 / Core i7**
- Active cooling with fan
- Compact device design for space-saving installation

Flexibility for easy integration into the control cabinet

- Flexible mounting options (portrait, wall and table)
- Toolless opening of the housing by 1 screw for service or installation of extensions
- Full-metal enclosure for high electromagnetic compatibility and mechanical ruggedness

High-end SIMATIC IPC6x7E Box PC and SIMATIC Panel PC - The best for automation

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Performance

High performance with **Intel Celeron** and **Core i** processors of the **8th** generation for even more performance



Metal casing

Highest ruggedness and reliability for industrial use on the machine



Brilliant displays

Modern displays optionally 19", 22" and 24" all Full-HD with glass front as single-touch or multi-touch

High data security

Secure data storage through **RAID** configuration

Highest flexibility

Large expandability with up to **5 PCIe** cards for more flexibility

SIMATIC IPC / PC-based Overview



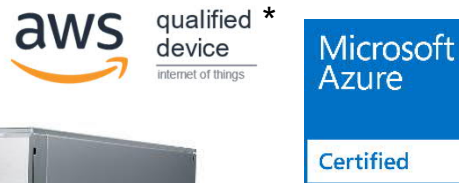
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SIMATIC Rack PCs – High performance, functionality and expandability - Made for digital dimensions

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High performance

with powerful Intel processors for demanding applications



Great expandability

with up to 11 PCI/PCIe cards for more flexibility



Maximum data and system availability

through RAID configurations, integrated UPS or redundant power supply

Modern visualization

with up to 5 monitors without additional installation effort

High Ruggedness

and reliability for industrial use

SIMATIC Rack PCs – High performance, functionality and expandability for versatile applications

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High-end

IPC1047

Maximum CPU und GPU Performance

IPC847

Maximum expandability and long-term availability

IPC647

Highest compactness and long-term availability

Industrial

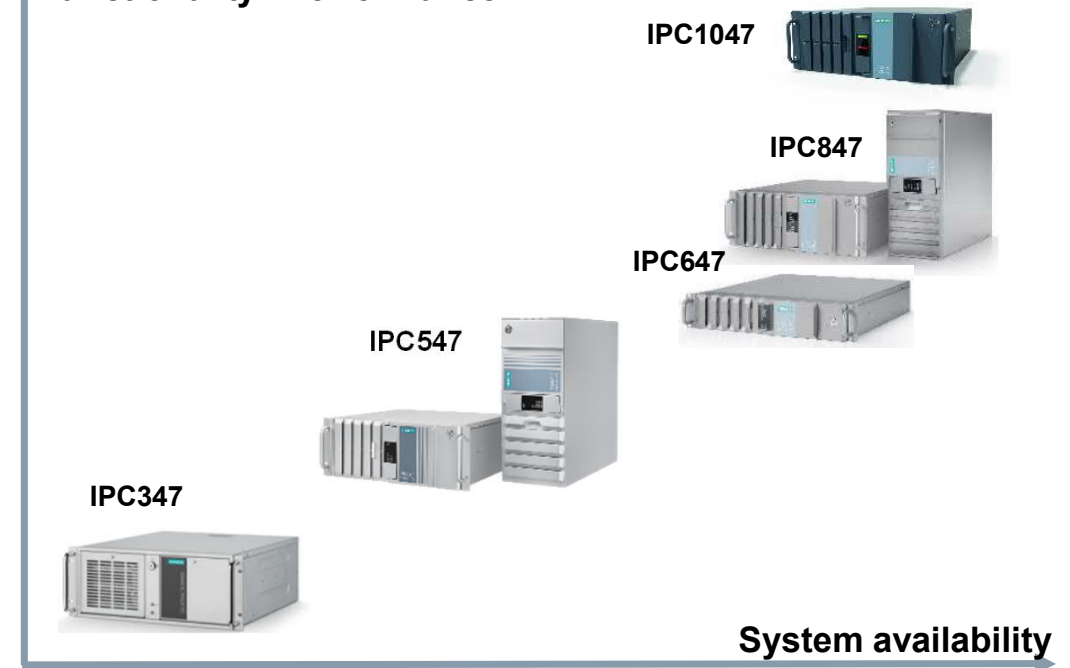
IPC547

Latest technology and maximum performance

IPC347

High performance and optimized price

Functionality / Performance



On stock - short
delivery times

Build-to-order - maximum configuration freedom

**SIMATIC Quality – 24/7 continuous operation in
industrial applications**

SIMATIC IPC347E - Basic

Entry-level Rack PC with attractive price-performance

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- Industrial functionality at an attractive price
- Substantially higher system availability compared to office PCs
- Versions available ex stock for shorter delivery periods

Performance and industrial compatibility

- PC technology with 4th-generation Intel Core i processors
- Dust protection through overpressure ventilation

System availability

- Flexibility and expandability thanks to integrated interfaces and 7 slots (PCI, PCI Express)
- Easy connection to existing systems with VGA, DVI, PS2, and 2 x COM (RS232/RS422/RS485)



SIMATIC IPC547G – Advanced

Suitable as an industrial workstation or server

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High system and data availability

Top performance with **6th** generation Intel Xeon and Core-i processors

DDR4 RAM up to **64 GB**

Diverse **RAID1** (2TB) and **RAID 5** (4TB) configurations for increased data availability

Preinstalled operating system

Windows 7 Ultimate

Windows 10 Enterprise

Windows Server 2012 – 5 clients

Windows Server 2016 – 5 clients

REDUDANT
POWER
SUPPLY



SIMATIC IPC647E – High End

High performance, functionality and compactness



Space saving

- Low height (**2U**) in 19" design is suitable for space-saving
- Compatible for mounting with older devices

Latest technology and maximum performance

- Xeon and Core-i processors **8th** generation
- Up to 64 GB DDR4 work memory
- RAID 1 and RAID 5 with **Hot swap** HDD (1TB, 2TB) or SSD (480GB, 960GB)

Hardware and software extensions

512 GB / 1024 GB **M.2 SSD NVMe**

PCIe x16 graphic card

SIAMTIC IPC DiagMonitor and Image&Partition Creator



REDUDANT
POWER
SUPPLY

SIMATIC IPC847E - High End

High performance, functionality and expandability

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REDUDANT
POWER
SUPPLY

Multi-monitoring and flexibility

- Up to **6 monitors** provide a better overview for SCADA applications
- High expandability through integrated interface and up to **11 slots** PCI and PCI Express

High level security

- **Lockable front** for protects front drives, ON/OFF and reset buttons
- USB flash can be operated while the door is locked

Easy services

- Front fan can be replaced without tools
- Enclosure can be quickly opened with removal of one screw
- Hard discs and power supply can be replaced during operation



Hot swap with RAID 1/5

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SIMATIC ITP1000

Opens up new fields of application and applications

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- No more printed documents in production
- Demanding applications now mobile
- High ruggedness, long product availability for use in industrial environments.
- The SIMATIC ITP is used in various applications in the areas of service, production, measuring / testing technology, as well as daily life.
- It can hold out drop heights of up to 2m without damage



SIMATIC ITP1000

Maximum mobile performance, every day

SIEMENS
Ingenuity for life

- **10"** with Intel **Core i5** is used for industrial mobile computing applications requiring high-level graphics performance up to **16 GB RAM**.
- This also provides enough power reserves to be prepared for future requirements.
- Microsoft Windows 10



RIFD reader



1D/2D bar code reader



Camera 5 megapixels



Long battery life



SIMATIC IFP - Industrial Flat Panels



Application

- In cases where **IPC** and the **operator/display** unit must be separated
- As a second operator unit on SIMATIC Panel PC

Type of operator control

- Display without control
- Single-touch
- Multi-touch

**IP 65 FRONT
PROTECTION**

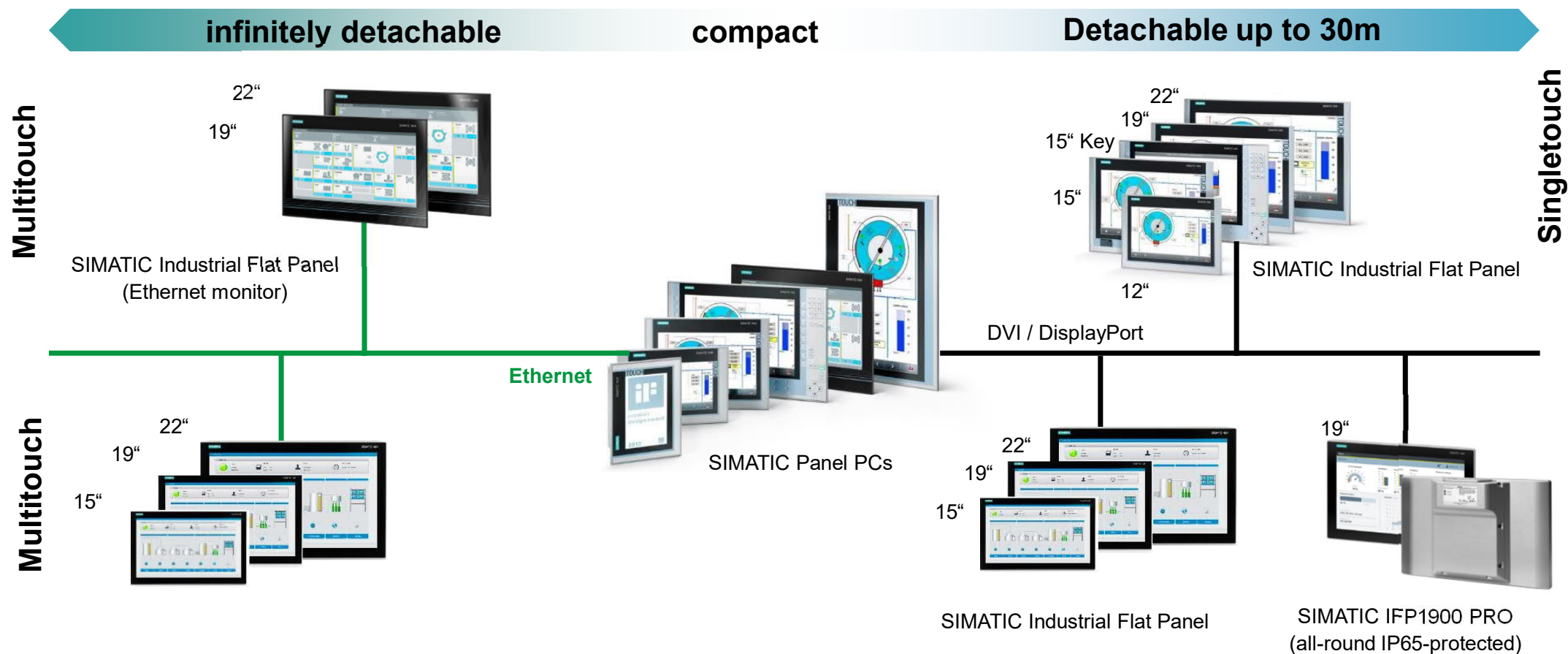
15" / 19" / 22" / 24" Full HD resolution

- Optional connection to PROFINET or PROFI-safe
- Distance up to 100m



Industrial-grade operator interfaces in a modern design for flexible and innovative operating concepts

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SIMATIC ITC – Industrial Thin Client

Distributed visualization applications



- Computer running on resources stored on central **server** instead of **local** hard drive

- Intuitive configuration
- Simple central administration
- Parallel operation of several machines
- Open for standard IT Protocols



Supported protocols

- HTML5, HTTP, VSS, JavaScript
- Sm@rt Server
- WinCC OA Client
- RDP – Remote Desktop Protocol
- VNC – Virtual Network Computing
- SINUMERIK

Type of operator control

- Single-touch 12" – 22"
- Multi-touch 15" – 22"

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IP 65

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PRO devices – benefit

- Mounting outside control cabinet
- **IP65** protection
- Service-friendly design
- Easy assembly and cabling using standard connectors
- Modern, slim design with a completely scratchproof glass front
- Intuitive multitouch operation



PROtected with SIMATIC Advanced HMI

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Industrial Flat Panel PRO
15" - 22"



Industrial Thin Client PRO
15" - 22"



Industrial Panel PC PRO
15" - 22"



INOX

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Ingenuity for life

INOX devices – pharma & beverage

- INOX versions meet the hygiene requirements of applications in the **pharmaceutical**, fine **chemical** and **food** and **beverage** industries
- **Stainless steel** front
- **IP66K** degree of protection
- Flexible mounting outside the control cabinet (support arms or stands)
- Flat Panel, Thin Client or IPC277E



INOX
STAINLESS STEEL

Ex

Ex version devices

- Specially designed for hazardous areas
- IECEx, **ATEX Zones 1, 21 and 2, 22**
- No need for protective enclosures
- In **Panel PC** and **Thin Client** versions
 - **Ex OG** – Oil and Gas application
 - **Ex NG** – Pharmaceutical chemical and science

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SIMATIC Accessories for special requirements

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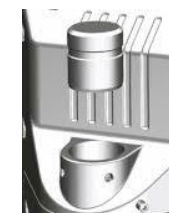
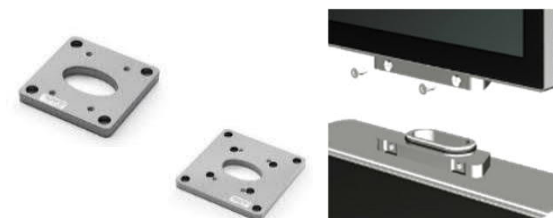
Extension Units
12" - 22"



Stainless steel keyboard
and accessories



Mounting accessories

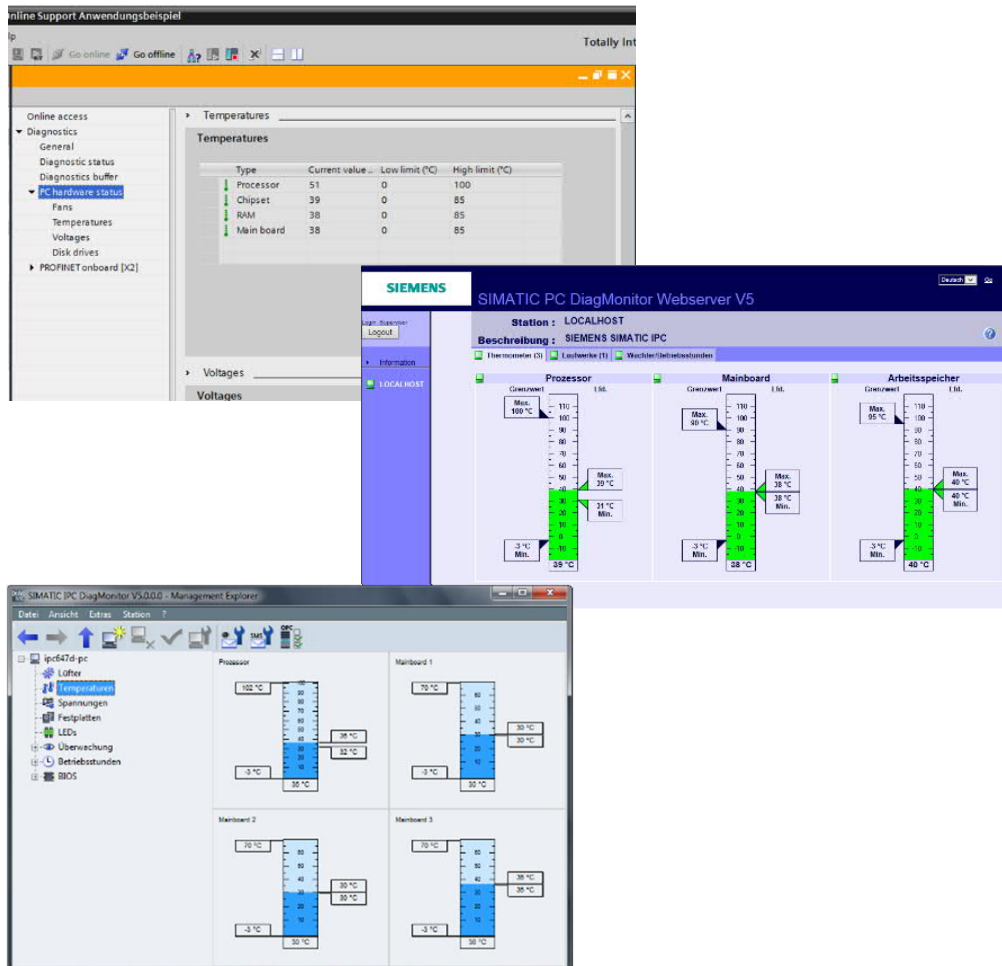


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SIMATIC IPC DiagMonitor

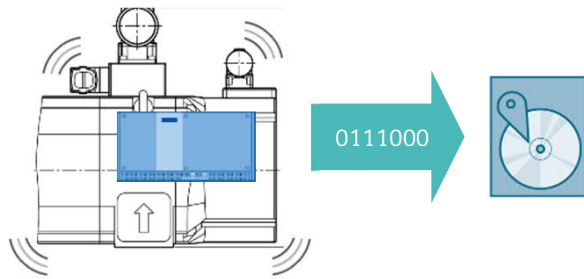


- Flexible and **worldwide** access
- Diagnostic functions for PC temperature, fan, hard disks, operating system status
- Operating hours counter for preventive maintenance
- Automatic event logging
- The management of several IPCs from one central point
- Diagnostic messages and alarms via Ethernet, e-mail, SMS and OPC

SIMATIC IPC Image & Partition Creator

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Preventive data backup

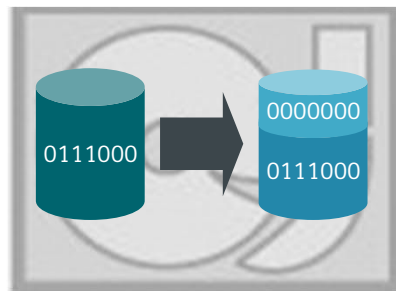


“1ClickImage” – Backup by mouse click

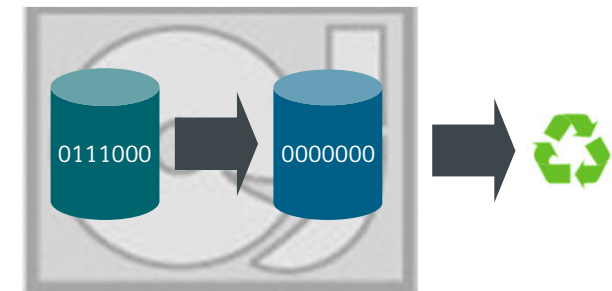


Data backup and partition management

- Can be used with any SIMATIC IPC, all SIMATIC IPC drivers integrated
- No installation required
- Menu-driven creation of a bootable USB stick version
- Virtual machine support
- Data loss protection
- Deleting data securely



Partition changes without data loss

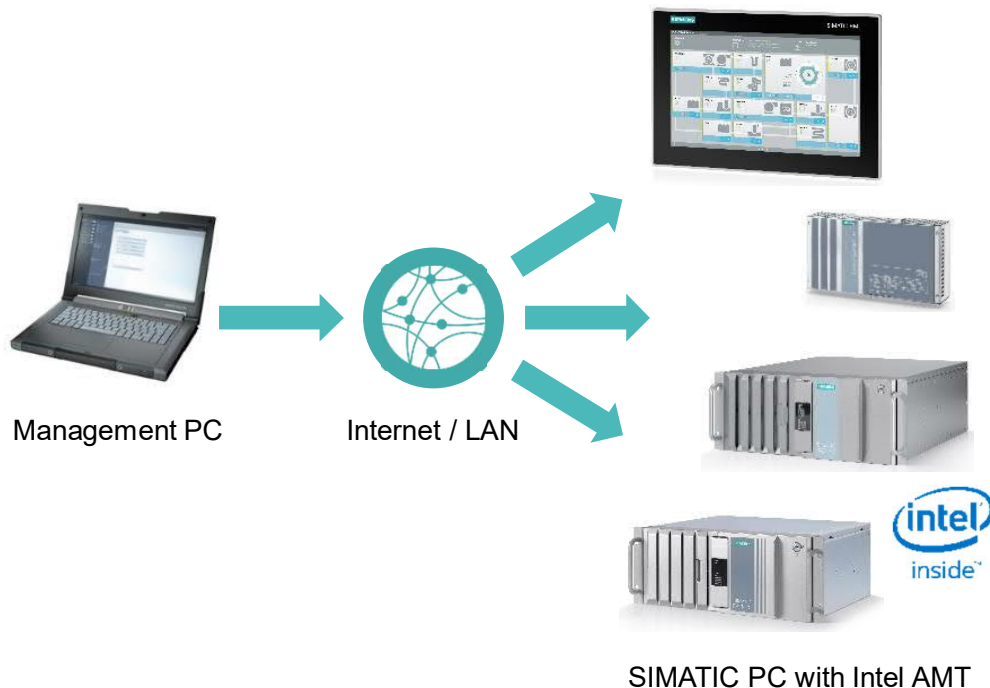


Final / secure deletion of data

SIMATIC IPC Remote Manager



Remote Service with SIMATIC IPC Remote Manager



- Protected and secure operation of SIMATIC IPCs – **worldwide**
- Available for SIMATIC PC with Intel AMT
- Without additional hardware and wiring
- Avoiding expensive on-site service calls
- Minimizing downtimes
- BIOS and software updates via remote access

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SIMATIC Field PG M6

Ready to use

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- **Mobile** industry-standard programming device
- **Robust** enclosure made of light-weight stable injection-molded **magnesium**
- Rubber-protected corners and retractable carry-handle
- 15.6" monitor with **Full HD resolution**
- Powerful, **8th** generation **Intel® Core™ i** processor
- Pre-installed **SIMATIC** engineering software
- Every single Field PG is **tested** in hard industrial conditions before delivery



**TIA
V16**

intel
inside™

Hardware

- Intel Core i5-800H or Core i7-8850H
- Intel UHD Graphics 630, **4K support**
- Up to 2TB **SSD** and additional 1024GB **M.2 SSD NVMe**
- Up to 32GB **DDR4**
- **PROFINET** and **PROFIBUS** interfaces
- Smart card slot **ID Card**

S5

S5 online interface/ S5 EPROM programmer

STEP 5 license

S5 AG cable and S5 EPROM adapter



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Attractive price with SIMATIC software

SIMATIC TIA V16:

Step 7 Professional

WinCC Advanced

Safety Advanced

SIMATIC Combo:

Step 7 Professional (V16 & 2017)

WinCC Advanced (V16 & Flexible 2008)

Safety Advanced (V16 & V5.4)

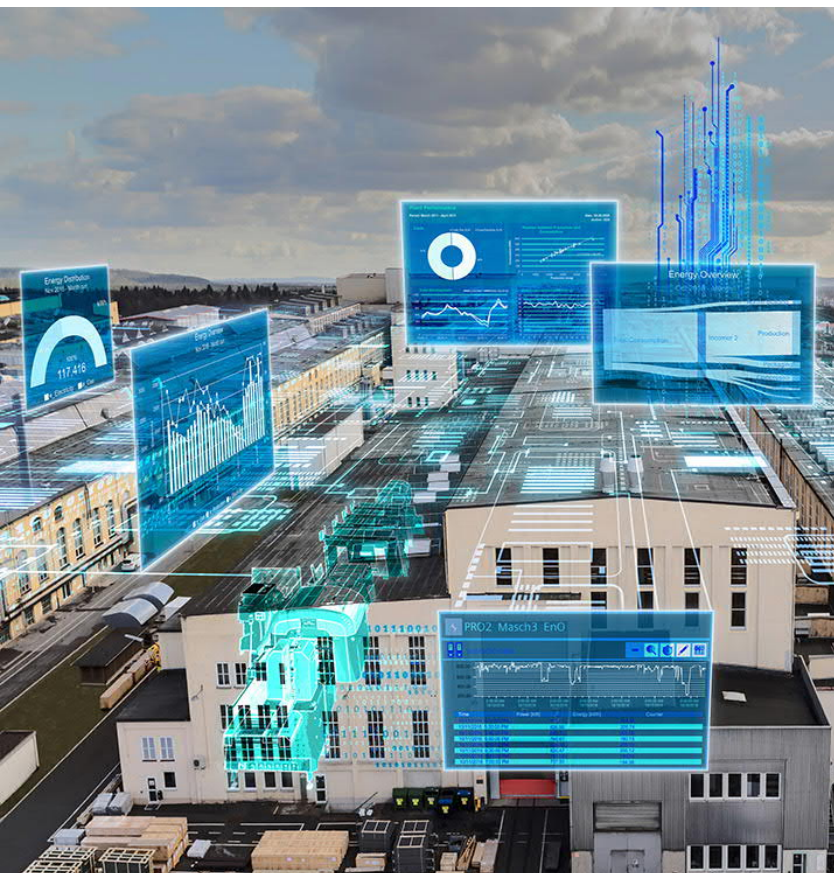
Questions and Answers

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Thank you for your attention!

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Ingenuity for life



Tamara Lazić

Technical Sales Support

Siemens doo Beograd, Digital industries

Omladinskih brigada 90v

11070 Beograd

Tel: +381 60 8170 060

Email: tamara.lazic.ext@siemens.com

siemens.com