Machine-level visualization with SIMATIC HMI
Efficient to a new level

siemens.com/hmi
Added value = More value!

SIMATIC HMI – Overview

SIMATIC Basic HMI – Panel-based
Economic realization of simple HMI tasks

SIMATIC Advanced HMI – Panel-based
Realization of demanding, complex HMI tasks with a high level of convenience

SIMATIC Advanced HMI – PC-based
Efficient realization of even the most demanding and complex HMI tasks

HMI Software

References – Overview

The top 3 tools for your optimum HMI solution

Contact
Added value =
More value!

> **Efficient engineering**
Create your visualization faster and more easily than ever before!

> **Innovative design and operation**
Make visualizing the calling card for your machine!

> **Brilliant HMI devices**
Use the right HMI device for your application!

> **Safe and secure**
Protect your investment, your know-how and ensure reliable operation!

> **Commissioning in the fast lane**
Waste no time with testing and servicing!

> **Openness with PC-based**
You and your applications remain flexible and independent!

SIMATIC HMI – the sm@rt interface
HMI solutions are the only interface between man and machine. Optimal interaction between the two makes a valuable contribution in the following ways:

- Productivity – means competitiveness
- Efficiency – means cost savings
- Usability – means time savings

“Overall, we saved a lot of time in development and became even more flexible in terms of engineering.”

Florian Ruegg, Solinaut GmbH

Find out more: siemens.com/hmi-added-values

Read the whole story
Equipment for monitoring and operator control is needed wherever people have to work with machinery and plants performing tasks A to Z. It is not difficult to find the right device for the specific task. The challenge is to find a solution that is future-proof and flexible, that can be integrated into higher-level networks, and that can also meet the ever-increasing demands for transparency and data provision.

SIMATIC HMI Panels have proven their value in many different applications in all industrial sectors over many years. The range of the systems in use is just as wide as that of the applications and technologies in the respective plants.

For entry-level
Basic HMI is recommended for simple applications with a limited quantity scale and where the price-performance ratio is important in addition to a fast and intuitive operation.

The devices offer a brilliant display quality and high-power visualization. This significantly facilitates the operation even of simple machines and equipment. Through turnkey and flexible solutions, you also save valuable time during installation and engineering.

More informations

For higher demands
If you are looking for a panel-based solution for more demanding applications with larger quantity scales, make a decision for Advanced HMI.

The user benefits from excellent functionality and a wide range of devices and applications, with key or touch operation. Both stationary and mobile solutions are available.

More informations

For very high-end solutions
If production places particularly high demands on the quantity and type of information that must be processed and documented, a PC-based system is recommended. It offers the appropriate options for sufficient storage space, processing power, and data connectivity.

The user can either opt for a centralized solution, in which the visualization and PC are a single unit, or for a decentralized solution with an industrial monitor as a thin client.

More informations

> Find out more: siemens.com/basic-hmi
> Find out more: siemens.com/advanced-hmi-panel
> Find out more: siemens.com/advanced-hmi-pc
SIMATIC HMI Software in the TIA Portal

more than just a visualization software

From machine-level visualization all the way to the high-performance SCADA system, SIMATIC WinCC in the TIA Portal and its efficient tools covers the entire engineering and visualization software spectrum – integrated across all performance classes!

Find out more: siemens.com/wincc
Machine-level visualization for success

The SIMATIC HMI portfolio brings numerous practical automation solutions to life. Companies such as the Swiss-based Solinaut can offer specialized engineering services and software development support. The cooperation with Siemens over the Totally Integrated Automation engineering framework (TIA Portal) allows all project participants to greatly benefit.

Programmers can save considerable amounts of time on development. End customers, on the other hand, are pleased at receiving a solution that is clearly structured, intuitively easy to operate and tailored to their individual specifications.

The success of SIMATIC HMI is underscored by numerous client projects. It is used for diverse visualization tasks in a wide range of Industries. If there is one thing that all of the companies have in common, it is the enormous headway that SIMATIC HMI panels have allowed them to make.
The top 3 tools for your optimum HMI solution

HMI Toolbox

It is usually the small things that make everyday life easier. For example, we offer: A stopwatch, calculator, calendar and many more such devices.

HMI Template & Designs

Simply drag and drop to create unique user interface – with perfect usability and modifiable designs!

Remote access

Easy maintenance and service at all times – even from remote locations. And all this with access protection!

Find out more: siemens.com/hmi-toolbox

Find out more: siemens.com/hmi-templates-designs

Find out more: siemens.com/hmi-remote-access
“In our company where, in effect, a single person does all the engineering, we notice the excellent support provided by the TIA Portal.”

Markus Achermann, Geschäftsführer AC Schwimmbadtechnik
You can use the SIMATIC HMI KP8 / KP8F and KP32F key panels to quickly realize operator panels. Since they are prefabricated and ready for installation, you will save time and money setting them up.

A smart alternative to long-travel keys:
- Flexible installation and direct installation in the control cabinet (IP65)
- Buttons with LED backlighting (5 colors)
- Connection via PROFINET with integrated switch
- Digital I/Os for connecting key switches or lamps, for example
- Integrated safety functionality; fail-safe transmission of safety-related signals via PROFIsafe

Your advantages at a glance
- Up to 60% less overhead for wiring and installation
- Direct connection of an emergency stop button or other fail-safe signals possible
- Easy integration into the automation solution
Basic Panels are made for the cost-effective implementation of simple visualization tasks on the machine level. Their basic features and functionality as well as the especially attractive price make them perfect entry-level devices.

Beauty is simplicity:
- High-resolution, dimmable widescreen displays from 4” to 12” with 64,000 colors (also configurable for portrait format)
- Combined operation via touch screen and freely configurable keys
- USB connection for project transfer, data archiving, keyboard, mouse, etc.
- PROFIBUS or PROFINET versions for process communication

Your advantages at a glance
- Highest usability through innovative graphical user interface
- Fast start-up and archivable data recording
- Perfect interaction with the S7-1200 basic controller

Find out more:
siemens.com/basic-panels-starter-kits
Devices for special requirements

SIPLUS Basic Panels
For simple automation tasks under extreme environmental conditions, special hardened SIPLUS versions are available offering increased operational reliability.

The standard for extreme conditions:
- Corrosive gas resistance to chemical, biological and mechanically active substances and salt mist
- 100% dewing and ice formation allowed
- Extended temperature range (–40 to +70 °C)
- Installation altitudes of –1,000 to +5,000 meters

Your advantages at a glance
- Continuous operation even in rough conditions
- Reduced production downtime and performance degradation
- High degree of investment security

Find out more:
siemens.com/siplus-extreme
Panel-based

SIMATIC
Advanced HMI

Realization of demanding, complex HMI tasks with a high level of convenience

“The visualization fulfills all of our needs: colors, pop-up and slide-in windows. Everything works and looks great.”

Jörg Koziol, Project Leader at Sesitec GmbH

Read the whole story

SIMATIC HMI Comfort Panels

SIMATIC HMI Mobile Panels

Devices for special requirements

Added value  SIMATIC HMI – Overview  HMI Software  References  Tools for HMI solutions
SIMATIC HMI Comfort Panels

SIMATIC HMI Comfort Panels are designed for implementation of high-performance visualization applications on the machine-level. High performance, functionality and numerous integrated interfaces offer the greatest convenience in high-end applications.

Convenience without compromise:
- Brilliant, stepless dimmable widescreen displays from 4” to 22” with 16 million colors (configurable for portrait format)
- Touch or key operation and viewing angles of up to 170°
- Integrated system card for automatic backups
- Power management on the machine, even with PROFlenergy
- Perfect interaction with the advanced controller SIMATIC S7-1500

Your advantages at a glance
- Wide range of products, continuously scalable
- Flexibility thanks as standard functionality (including VB scripts and various viewers for system documentation and websites)
- Maximum data security, also in case of service

Did you know?
To start smart and save money, we offer starter kits with Comfort Panel, SIMATIC WinCC Comfort and accessories!

Find out more:
siemens.com/comfort-panels-starter-kits

Find out more:
siemens.com/comfort-panels
Take power and safety directly in your hands. When it comes to high-end mobile applications, opt for mobile panels. These are also for fail-safe machines and widely distributed plants. The process of communication can be hardwired or connected via Wi-Fi.

Safe and secure:
- Brilliant, stepless dimmable widescreen displays with 4", 7" or 9" and 16 million colors
- Location identification via terminal box or RFID (with IWLAN version)
- Comprehensive, integrated solutions with Safety Integrated
- Flexible evaluation of the safety switch elements, for example, via fail-safe S7 controllers
- Unique illuminated emergency stop button with PROFIsafe

For more, watch the video: How robust are the mobile panels really?

Your advantages at a glance
- Highly ergonomic, combined with industrial design
- Space-saving and flexible in connection and installation
- Unique integration in safety applications

Find out more: siemens.com/mobile-panels
Devices for special requirements

Outdoor Panels
The outdoor panels are specifically designed for outdoor use and certified for numerous industries. They are extremely robust, readable in all lighting conditions, and safe to use.

“Convenience” for any use outdoors:
• Extreme application ranges from –30 °C to +60 °C at an elevation of 3,000 meters
• IP66-protected front panel with high UV resistance
• Glare-free daylight-readable display with automatic brightness control
• High vibration and shock resistance

Further versions available:

IP65
INOX
SIPLUS

> Find out more:
> siemens.com/comfort-outdoor
PC-based

SIMATIC Advanced HMI
Efficient realization of even the most demanding and complex HMI tasks

“The user-friendliness of our machines is an important factor for our customers. It’s an area where we can now score even more points.”

Stefan Müller, Hans Weber Maschinenfabrik GmbH

Read the whole story

SIMATIC Industry Panel-PCs
SIMATIC IFP und SIMATIC ITC
Devices for special requirements
Smart remote
Multitouch

Industrial Flat Panel
Industrial Thin Clients
Panel PCs
The most complex visualization and control tasks can be realized centrally on the machine with extremely compact industrial panel PCs. From embedded to high-end industrial PCs, you can find optimum solution in our portfolio – to meet the many requirements of your automation system.

Greater emphasis on individuality:
• Brilliant widescreen displays from 7” to 22” with innovative single- or multi-touch technology
• High-performance processors and fast, robust mass storage (SSD, CFast)
• A variety of interfaces and configurations
• High quality and serviceability

Your advantages at a glance
• Processing large amounts of data quickly
• Flexible configuration and expansion
• High data security and system availability in continuous operation

Find out more: siemens.com/simatic-ipc
Siemens has two innovative options for distributed control concepts. SIMATIC industrial monitors and thin clients are used as desktop devices for control centers, as built-in devices for operator panels or as PC-based visualization and control solutions in which the control unit is operated separately.

Much more than just an industrial monitor!
- Brilliant widescreen displays from 12” to 22” with single- (ITC) or multi-touch technology (IFP) and fast response times
- For installation or support arm / pedestal mounting (IP65)
- For the industrial 24-hour use
- Detached placement via DisplayPort / DVI, USB or Ethernet (ITC)

Your advantages at a glance
- High system availability ensured
- Universal application: 15m / 30m / unlimited
- Very user-friendly with gesture and multi-touch operation

Find out more:
- siemens.com/simatic-ifp
- siemens.com/simatic-itic
Devices for special requirements

**PRO – for all-round protection**
The all-round IP65 protected PRO devices and expansion modules enable flexible operation via support arm or pedestal. The service-friendly rear panel is easy to detach, even after installation, for example, when replacing the memory card or subsequent cabling.

**INOX – for hygienic production**
Certified stainless steel equipment offers safety and purity for hygienic applications in the pharmaceutical, fine chemicals and food/beverage industries. Its smooth, splinterproof surface with IP67K degree of protection is easy to clean and drains liquids quickly.

**EX – for genuinely hard cases**
The HMI devices for hazardous areas can be used in zones 1/21 and 2/22 without implementing special measures, such as costly enclosures or additional certifications. This also applies to the chemical, oil/gas or shipbuilding industries.

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**Advantages at a glance**
- Continuously scalable for performance class and size
- Individually configurable expansions and installation
- Attractive operator control solutions, winner of the IF Design Award 2017

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**Did you know?**

Wherever your specific needs are not fully met by our standard equipment, Customized Automation provides the perfect solution. For example, we offer custom front panels that are available in a few days, even in small quantities.

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Find out more:
- Customized Automation: [siemens.com/customized-automation](siemens.com/customized-automation)
- SIMATIC HMI PRO: [siemens.com/simatic-hmi-pro](siemens.com/simatic-hmi-pro)
- SIMATIC HMI EX: [siemens.com/simatic-hmi-ex](siemens.com/simatic-hmi-ex)
Smart remote control and monitoring
With the SIMATIC WinCC Sm@rtClient app (for Android and iOS), you get mobile remote operating and monitoring on your smartphone or tablet. You are thus informed at all times and can react accordingly even when you are not on-site. This innovative, web-based solution is also possible overarching SCADA applications with WinCC Professional.

Global service of machines and plants
- Global access
- Travel cost savings
- Fast troubleshooting

Machine builder
Customer

Find out more:
siemens.com/wincc-smart-client

The system solution for optimizing production
PC-based SIMATIC HMI/SCADA systems and SIMATIC industrial PCs form a high-performance and reliable platform for the acquisition, evaluation and visualization of data. The coordinated and certified package of hardware and software offers the highest quality in all areas.
Innovation in design and operation – glass front with multi-touch

The Industrial Flat Panels and Panel PCs from Siemens already support fast operation using intuitive gestures. This ensures that your visualization solutions will become even more innovative and efficient.

More touch with multi-touch:
• Projected capacitive touch technology with simultaneous detection of 5 fingers
• Automatic detection of inadvertent contacts, e.g. with palm, drops, dirt etc.
• Anti-reflective glass front, scratch-resistant and chemical resistant
• Contrasting and sharp image display
• Approvals for various Industries (e.g. shipbuilding or hazardous areas)

Find out more: siemens.com/hmi-multitouch
Efficient engineering – the basis for innovation
The Swiss company Solinaut provides engineering services and software development for automation solutions.
In cooperation with Siemens and by using the TIA Portal (Totally Integrated Automation) the system integrator provided the company valuable benefits.

Programmers save a great deal of time in the development. For example, several parameters can be created in a single step when engineering in the TIA Portal and blocks can be saved in libraries. In this way, Solinaut can concentrate on the important aspects of clear and intuitive visualization in an automation solution.

The results are tailor-made solutions to meet the needs of end users. For one such company, the Altendorf cheese dairy, it has more than paid for itself.

Feast for the eyes – just like the cheese
Companies such as the Altendorf cheese dairy depend on automation due to the increasing global competition. One factor in this regard is to consistently make full use of the potential for optimization over the complete life cycle of a machine or plant. Specifically, this means less consumption of resources in production and to provide an operation intuitive enough that staff can concentrate on the quality of products.

This is why system integrator Solinaut developed a customized visualization concept for the Altendorf cheese dairy with decisive advantages:

- Enormously simplified process control for employees, including special panel screens with flow charts
- Quick access to functions through slide-in and pop-up windows
- More control and easy maintenance with remote access

This investment in automation has already paid off. The time spent in daily production has practically been cut in half. The dairy now uses significantly less energy and water. Owner Erich Keller can look positively into the future.

Find out more:
siemens.com/hmi-video-solinaut

Find out more:
siemens.com/hmi-video-altendorf
The company, based in Hochdorf near Lucerne Switzerland, designs and builds exclusive swimming pools and jacuzzis. Their customers are private clients, architects, as well as operators of hotels or campsites.

AC Schwimmbadtechnik is using a new operating concept to simplify the control and water treatment of private swimming pools with the aid of S7-1200 controllers and Basic Panels.

The Basic package replaces the previous solution that had several LEDs and push buttons, so now there is only one panel for all messages and information. This allows even non-specialists or private users to operate their water treatment very easily and to instantly know what to do.

Such an integrated solution offered many advantages for AC Schwimmbadtechnik as well. A relatively small company often lacks the resources to have in-house know-how for a variety of systems. Standard software significantly reduces the work involved.

“In our company where, in effect, a single person does all the engineering, we notice the excellent support provided by the TIA Portal.”

Markus Achermann, Managing Director of AC Schwimmbadtechnik
The name Sesitec has become synonymous with the aquatic sports scene. The company has been developing waterski and wakeboard parks since 1992, both for amateur athletes as well as for professional tournaments. Over 320 installations have already been set up worldwide. Sesitec is considered the market leader within the segment.

The most important asset for these parks is the fun factor, not only for the visitors. The park operators also want to have fun operating the facilities. The control unit plays a pivotal role here. A large, clearly structured display is important, also that it is able to withstand harsh outdoor conditions, including heat, extreme lighting conditions, moisture, vibrations and, particularly during the summer, hand lotion!

In the end, an HMI Comfort Outdoor Panel was selected, which proved to be a perfect fit. No matter the sun’s angle or intensity: The operator always has a good view of everything on the bright, contrast-rich display. With the appropriate engineering, additional processes such as the cross-examination of tickets can also be integrated into the visualization. As a result, the overall operation has become more customer-friendly and transparent. That also means: more attention for each individual customer.

“The visualization fulfills all of our needs: colors, pop-up and slide-in windows. Everything works and looks great.”

Jörg Koziol, Project Leader at Sesitec GmbH
The Hans Weber Maschinenfabrik GmbH located in Kronach, Germany has been in business for over 100 years. The company has always been a manufacturer of automatic grinding machines, both for metals as well as for wood. It’s industrial wood-processing machines can be found in the most complex areas of application.

To maintain a decisive advantage over other competitors, the company particularly focuses its efforts on the quality and efficiency of its products. This is achieved through the use of innovative technologies such as contact-free workpiece detection and the proprietary CBF sanding technology.

The company not only stresses that the sanding results be perfect, but also the workmanship of the machines themselves. The more superior the quality of the product, the more important the design of the machines becomes. These days, that includes intuitive touchscreen control. For its WEBER i-Touch control concept, a SIMATIC HMI PRO Comfort Panel was therefore chosen.

The sophisticated design underscores the quality workmanship of the machine components. Combined with a matching extension unit, it greatly simplifies the work at the machine. More than ever before, the machine has become a showcase for the client.

“The user-friendliness of our machines is an important factor for our customers. It’s an area where we can now score even more points.”

Stefan Müller,
Hans Weber Maschinenfabrik GmbH
Find out more: siemens.com/hmi

Machine-based visualization with SIMATIC HMI

- Efficient in engineering
- Innovative in design and operation
- Brilliant HMI operator devices
- Protection – with certainty
- Rapid commissioning
- Openness with PC-based

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