Operator panels
Advanced HMI Panel-based

Introduction

■ **Overview**

Realization of demanding HMI tasks with a high level of user convenience

Advanced HMI is the Panel-based solution for demanding applications with large configuration limits.
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.

SIMATIC HMI Unified Comfort Panels

The new generation of high-end, 7–22" operator panels, part of the new SIMATIC WinCC Unified System, boasts numerous improvements over the predecessor devices in terms of performance, openness and user-friendliness.

- Rugged multi-touch technology
- Innovative SIMATIC WinCC Unified visualization software
- Integrated Edge functionality
- Remote Client support

SIMATIC HMI Comfort Panels

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

- Brilliant widescreen display of 4" to 22"
- Easy commissioning and service concept

SIMATIC HMI Mobile Panels

Panels for high-end mobile applications – even in the fail-safe area of machines and widely distributed plants. The process communication can be wired or via WLAN.

- Innovative operation from 4" to 9"
- Rugged for location-related local operation
- Integrated security concept

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SIMATIC HMI Unified Comfort Panels

■ **Overview**

SIMATIC HMI Unified Comfort Panels

The new generation of high-end, 7–22-inch HMI devices, part of the new SIMATIC WinCC Unified System, boasts numerous improvements over the predecessor devices in terms of performance, openness and user-friendliness.

Thanks to their capacitive glass front with multi-touch technology, the Unified Comfort Panels are as convenient to use as a smartphone or tablet. The sharp colors and high contrast improve the readability and ease of use.

Visualization on the devices is based on SIMATIC WinCC Unified, the new visualization system in the TIA Portal. This opens up many new opportunities and functionalities for the user – across all device sizes.

Brand new to the SIMATIC HMI product portfolio is the option to expand device functionality with apps. Previously, HMI Panels were used exclusively for visualization software. Thanks to the integration of Siemens Industrial Edge, users can now run other programs simultaneously alongside this standard device functionality. Project-specific requirements can thus be implemented quickly and easily.

The following SIMATIC HMI Unified Comfort Panels are available:

- Standard design:
  - MTP700 Comfort
  - MTP1000 Comfort
  - MTP1200 Comfort
  - MTP1500 Comfort
  - MTP1900 Comfort
  - MTP2200 Comfort
- Neutral design:
  - MTP700 Comfort
  - MTP1000 Comfort
  - MTP1200 Comfort
  - MTP1500 Comfort
  - MTP1900 Comfort
  - MTP2200 Comfort

Starter Kits are available for standard design devices.

These consist of:

- HMI Unified Comfort Panel
- WinCC Unified V16 Comfort
- EDGE Runtime for Unified Comfort (Device-managed) license
- 1.5 m PROFINET cable
- Memory card (32 GB)
- Protective film

More information is available at
https://www.siemens.com/unified-comfort-panels

SIMATIC WinCC Unified options

- WinCC Unified Audit Basis
- WinCC Unified Clients (Operate Client and Monitor Client)
- WinCC Unified Database Storage
- WinCC Unified Logging
- WinCC Unified Parameter Control
- WinCC Unified Report Execution
- WinCC Unified Collaboration

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SIMATIC HMI Unified Comfort Panels Standard

Overview

SIMATIC HMI MTP2200 Unified Comfort Panel Standard design front view

SIMATIC HMI Unified Comfort Panels - standard devices

SIMATIC HMI Unified Comfort Panels consist of six different devices with varying display sizes.
All devices come with the same number of hardware interfaces and the same functionality – just select the perfect device for your needs based on the screen size.

Each Unified Comfort Panel is available in the standard design with Siemens and SIMATIC HMI branding and a silver-colored aluminum frame.

All Unified Comfort Panels come with integrated Edge functionality.

SIMATIC WinCC Unified contains visualization, communication, alarms/warnings, report creation, administration of parameter sets, archiving of user administration.
Furthermore, a WinCC Unified Client Operate (V17 or higher) for remote operator control and monitoring, and a WinCC Unified Client Monitor (V18 or higher) for monitoring only are also included. Additional clients can be enabled with a license.
Up to three client licenses can be used.

Client access is based on native web technologies such as HTML5, SVG and JavaScript. The visualization can be accessed via any modern web browser – without the need for additional installation.

Siemens Industrial Edge can be used in two different ways:
- Device-managed Edge
- Centrally-managed Edge (planned)

SIMATIC HMI Unified Comfort Panels can also be ordered with a neutral design.

Note:

The technical specifications of the neutral design devices correspond to the technical specifications of the devices with standard design.

Ordering data

	Article No.
Touch devices for SIMATIC HMI Unified Comfort Panels	
Standard design	
SIMATIC HMI MTP700 Unified Comfort Panel	**6AV2128-3GB06-0AX1**
7" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source SW which is provided free of charge. See enclosed DVD	
SIMATIC HMI MTP1000 Unified Comfort Panel	**6AV2128-3KB06-0AX1**
10.1" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source SW which is provided free of charge. See enclosed DVD	
SIMATIC HMI MTP1200 Unified Comfort Panel	**6AV2128-3MB06-0AX1**
12.1" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source SW which is provided free of charge. See enclosed DVD	
SIMATIC HMI MTP1500 Unified Comfort Panel	**6AV2128-3QB06-0AX1**
15.6" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source SW which is provided free of charge. See enclosed DVD	
SIMATIC HMI MTP1900 Unified Comfort Panel	**6AV2128-3UB06-0AX1**
18.5" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	

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SIMATIC HMI Unified Comfort Panels Standard

■ Ordering data	Article No.		Article No.
SIMATIC HMI MTP2200 Unified Comfort Panel 21.5" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	**6AV2128-3XB06-0AX1**	**SIMATIC HMI MTP1500 Unified Comfort Panel** Neutral, touch operation; 15.6" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	**6AV2128-3QB36-0AX1**
Neutral design			
SIMATIC HMI MTP700 Unified Comfort Panel Neutral, touch operation; 7" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	**6AV2128-3GB36-0AX1**	**SIMATIC HMI MTP1900 Unified Comfort Panel** Neutral, touch operation; 18.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	**6AV2128-3UB36-0AX1**
SIMATIC HMI MTP1000 Unified Comfort Panel Neutral, touch operation; 10.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	**6AV2128-3KB36-0AX1**	**SIMATIC HMI MTP2200 Unified Comfort Panel** Neutral, touch operation; 21.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	**6AV2128-3XB36-0AX1**
		Software	
SIMATIC HMI MTP1200 Unified Comfort Panel Neutral, touch operation; 12.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16; with additional certifications for explosion-proof areas and for use in marine engineering (see Technical specifications). Contains open source software, which is provided free of charge. See enclosed DVD	**6AV2128-3MB36-0AX1**	**EDGE Runtime for SIMATIC Unified Comfort** Runtime software, single license, license key for download, without software and documentation, Class A, email address required for delivery	**6AV2170-2BA00-0AA0**

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SIMATIC HMI Unified Comfort Panels Standard

■ Technical specifications

Article number	6AV2128-3GB06-0AX1	6AV2128-3KB06-0AX1	6AV2128-3MB06-0AX1	6AV2128-3QB06-0AX1	6AV2128-3UB06-0AX1	6AV2128-3XB06-0AX1
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
General information						
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

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■ **Technical specifications**

Article number	6AV2128-3GB06-0AX1	6AV2128-3KB06-0AX1	6AV2128-3MB06-0AX1	6AV2128-3QB06-0AX1	6AV2128-3UB06-0AX1	6AV2128-3XB06-0AX1
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
CCC	Yes	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
Marine approval						
• Germanischer Lloyd (GL)	No; included in DNV					
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes	Yes	Yes
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes	Yes	Yes
• Chinese Classification Society (CCS)	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation					
Configuration						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32

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Article number	6AV2128-3GB06-0AX1	6AV2128-3KB06-0AX1	6AV2128-3MB06-0AX1	6AV2128-3QB06-0AX1	6AV2128-3UB06-0AX1	6AV2128-3XB06-0AX1
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes					
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes					
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No					
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
Functionality under WinCC Unified / screens						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
Functionality under WinCC Unified / archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17
Functionality under WinCC Unified / transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	Yes; as of WinCC Unified V20	Yes; as of WinCC Unified V20	Yes	Yes; as of WinCC Unified V20	Yes; as of WinCC Unified V20	Yes; as of WinCC Unified V20
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes

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Article number	6AV2128-3GB06-0AX1	6AV2128-3KB06-0AX1	6AV2128-3MB06-0AX1	6AV2128-3QB06-0AX1	6AV2128-3UB06-0AX1	6AV2128-3XB06-0AX1
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm
Mounting cutout, width	198.3 mm	264.6 mm	310.6 mm	382 mm	448 mm	513 mm
Mounting cutout, height	142 mm	189.1 mm	221.1 mm	241 mm	278 mm	315 mm
Overall depth	63.6 mm	63.6 mm	64 mm	73 mm	73 mm	73 mm
Weights						
Weight (without packaging)	1.4 kg	2.1 kg	2.8 kg	4.3 kg	5.5 kg	6.9 kg

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Article number	6AV2128-3GB36-0AX1	6AV2128-3KB36-0AX1	6AV2128-3MB36-0AX1	6AV2128-3QB36-0AX1	6AV2128-3UB36-0AX1	6AV2128-3XB36-0AX1
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
General information						
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

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■ **Technical specifications**

Article number	6AV2128-3GB36-0AX1	6AV2128-3KB36-0AX1	6AV2128-3MB36-0AX1	6AV2128-3QB36-0AX1	6AV2128-3UB36-0AX1	6AV2128-3XB36-0AX1
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
CCC	Yes	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
Marine approval						
• Germanischer Lloyd (GL)	No; included in DNV					
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes	Yes	Yes
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes	Yes	Yes
• Chinese Classification Society (CCS)	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Standard

■ Technical specifications

Article number	6AV2128-3GB36-0AX1	6AV2128-3KB36-0AX1	6AV2128-3MB36-0AX1	6AV2128-3QB36-0AX1	6AV2128-3UB36-0AX1	6AV2128-3XB36-0AX1
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes					
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes					
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No					
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
Functionality under WinCC Unified / screens						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
Functionality under WinCC Unified / archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17
Functionality under WinCC Unified / transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	Yes; as of WinCC Unified V20	Yes; as of WinCC Unified V20	Yes	Yes; as of WinCC Unified V20	Yes; as of WinCC Unified V20	Yes; as of WinCC Unified V20
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfied Comfort Panels Standard

■ Technical specifications

Article number	6AV2128-3GB36-0AX1	6AV2128-3KB36-0AX1	6AV2128-3MB36-0AX1	6AV2128-3QB36-0AX1	6AV2128-3UB36-0AX1	6AV2128-3XB36-0AX1
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm
Mounting cutout, width	198.3 mm	264.6 mm	310.6 mm	382 mm	447.9 mm	513 mm
Mounting cutout, height	142 mm	189.1 mm	221.1 mm	241 mm	277.9 mm	315 mm
Overall depth	63.6 mm	63.6 mm	64 mm	73 mm	73 mm	73 mm
Weights						
Weight (without packaging)	1.4 kg	2.1 kg	2.8 kg	4.3 kg	5.5 kg	6.9 kg

■ More information

Every Unified Comfort Panel is available in two different design variants.
- The standard design has Siemens and SIMATIC HMI branding on the front and a silver-colored aluminum frame.
- The neutral design has no branding on the front and a black aluminum frame.

Note:

The devices with the Article No. extension *-0AX1 have additional certifications for explosion-proof areas as well as for use in shipbuilding (see technical specifications).
All other functions and properties are fully compatible with the devices with Article No. extension *-0AX0.

More information is available on the internet at
https://www.siemens.com/unified-comfort-panels

For selected SIMATIC HMI Unified Comfort Panels, the option exists to apply the customer name or logo or to select the membrane color in accordance with the customer's corporate design. This is also possible for small quantities.

More information is available at

https://www.siemens.com/express-hmi-tool

Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIPLUS HMI Unified Comfort Panels Standard

■ **Overview**

SIPLUS HMI Unified Comfort Panels - standard devices

SIPLUS HMI Unified Comfort Panels consist of six different devices with varying display sizes.
All devices come with the same number of hardware interfaces and the same functionality – just select the perfect device for your needs based on the screen size.

Each Unified Comfort Panel is available in the standard design with Siemens and SIMATIC HMI branding and a silver-colored aluminum frame.

All Unified Comfort Panels come with integrated Edge functionality.

SIMATIC WinCC Unified contains visualization, communication, alarms/warnings, report creation, administration of parameter sets, archiving of user administration.
Furthermore, a WinCC Unified Client Operate (V17 or higher) for remote operator control and monitoring, and a WinCC Unified Client Monitor (V18 or higher) for monitoring only are also included. Additional clients can be enabled with a license.
Up to three client licenses can be used.

Client access is based on native web technologies such as HTML5, SVG and JavaScript. The visualization can be accessed via any modern web browser – without the need for additional installation.

Siemens Industrial Edge can be used in two different ways:
• Device-managed Edge
• Centrally-managed Edge (planned)

SIMATIC HMI Unified Comfort Panels can also be ordered with a neutral design.

Note:

The technical specifications of the neutral design devices correspond to the technical specifications of the devices with standard design.

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

■ **Ordering data**

	Article No.
SIPLUS HMI Unified Comfort Panels	
Standard design	
SIPLUS HMI MTP700 Unified Comfort, with conformal coating	**6AG1128-3GB06-4AX1**
SIMATIC HMI MTP1000 Unified Comfort Panel, with conformal coating	**6AG1128-3KB06-4AX1**
SIMATIC HMI MTP1200 Unified Comfort Panel, with conformal coating	**6AG1128-3MB06-4AX1**
Accessories	
EDGE Runtime for SIMATIC Unified Comfort	**6AV2170-2BA00-0AA0**
Runtime software, single license, license key for download, without software and documentation, Class A, email address required for delivery	
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIPLUS HMI Unified Comfort Panels Standard

▮ Technical specifications

Article number	6AG1128-3GB06-4AX1	6AG1128-3KB06-4AX1	6AG1128-3MB06-4AX1
	SIPLUS HMI MTP700 Unified Comfort	SIPLUS HMI MTP1000 Unified Comfort	SIPLUS HMI MTP1200 Unified Comfort
General information			
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort
Ambient conditions			
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C; = Tmin	0 °C; = Tmin	0 °C; = Tmin
- For vertical installation, max.	50 °C; = Tmax	50 °C; = Tmax	50 °C; = Tmax
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity			
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning when condensation present), horizontal at vertical mounting position	100 %; RH incl. condensation/frost (no commissioning when condensation present), horizontal at vertical mounting position	100 %; RH incl. condensation/frost (no commissioning when condensation present), horizontal at vertical mounting position
Resistance			
Coolants and lubricants			
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems			
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea			
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology			
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
Remark			
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating			
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

Overview

SIMATIC HMI MTP2200 Unified Comfort Panel Hygienic, neutral design

SIMATIC HMI Unified Comfort Panels Hygienic - standard devices

SIMATIC HMI Unified Comfort Panels Hygienic comprise six different devices with different display sizes.
All devices come with the same number of hardware interfaces and the same functionality – just select the perfect device for your needs based on the screen size.

Each Unified Comfort Panel Hygienic is available in a standard design with Siemens and SIMATIC HMI branding and a silver-colored aluminum frame.
All Unified Comfort Panels Hygienic are supplied with integrated Edge functionality.
SIMATIC WinCC Unified includes visualization, communication, alarms/messages, report generation, parameter set management, archiving, and user administration.
Furthermore, a WinCC Unified Client Operate (V17 or higher) for remote operator control and monitoring, and a WinCC Unified Client Monitor (V18 or higher) for monitoring only are also included. Additional clients can be enabled with a license.
In total, up to three client licenses can be used.
Client access is based on native web technologies such as HTML5, SVG and JavaScript. The visualization can be accessed via any modern web browser – without the need for additional installation.
Siemens Industrial Edge can be used in two different ways:

• Device-managed Edge
• Centrally-managed Edge (planned)

SIMATIC HMI Unified Comfort Panels Hygienic can also be ordered with a neutral design.

Note:

The technical specifications of the neutral design devices correspond to the technical specifications of the devices with standard design.

Ordering data | Article No.

Unified Comfort Panels Hygienic	
SIMATIC HMI MTP700 Unified Comfort Hygienic Touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	**6AV2128-3GB40-0AX0**
SIMATIC HMI MTP1000 Unified Comfort Hygienic Touch operation, 10.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	**6AV2128-3KB40-0AX0**
SIMATIC HMI MTP1200 Unified Comfort Hygienic Touch operation, 12.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	**6AV2128-3MB40-0AX0**
SIMATIC HMI MTP1500 Unified Comfort Hygienic Touch operation, 15.6" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	**6AV2128-3QB40-0AX0**
SIMATIC HMI MTP1900 Unified Comfort Hygienic Touch operation, 18.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	**6AV2128-3UB40-0AX0**
SIMATIC HMI MTP2200 Unified Comfort Hygienic Touch operation, 21.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	**6AV2128-3XB40-0AX0**

Operator panels
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Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

■ **Ordering data**

	Article No.		Article No.
SIMATIC HMI MTP700 Unified Comfort Hygienic Neutral Neutral, touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V16, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3GB70-0AX0	**SIMATIC HMI MTP1900 Unified Comfort Hygienic Neutral** Neutral, touch operation, 18.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3UB70-0AX0
SIMATIC HMI MTP1000 Unified Comfort Hygienic Neutral Neutral, touch operation, 10.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3KB70-0AX0	**SIMATIC HMI MTP2200 Unified Comfort Hygienic Neutral** Neutral, touch operation, 21.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3XB70-0AX0
SIMATIC HMI MTP1200 Unified Comfort Hygienic Neutral Neutral, touch operation, 12.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3MB70-0AX0	**MTP700 Hygienic Service Pack 7"**	6AV2185-4GA20-0AX0
		MTP1000 Hygienic Service Pack 10"	6AV2185-4KA20-0AX0
		MTP1200 Hygienic Service Pack, IFP1200 Hygienic 12"	6AV2185-4MA20-0AX0
		MTP1500 Hygienic Service Pack, IFP1500 Hygienic 15"	6AV2185-4QA20-0AX0
		MTP1900 Hygienic Service Pack, IFP1900 Hygienic 19"	6AV2185-4UA20-0AX0
SIMATIC HMI MTP1500 Unified Comfort Hygienic Neutral Neutral, touch operation, 15.6" widescreen TFT display, 16 million colors, PROFINET interface, configurable as from WinCC Unified Comfort V17, contains open source software, which is provided free of charge, see enclosed DVD	6AV2128-3QB70-0AX0	**MTP2200 Hygienic Service Pack, IFP2200 Hygienic 22"**	6AV2185-4XA20-0AX0

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Operator panels
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SIMATIC HMI Unified Comfort Panels Hygienic

■ **Technical specifications**

Article number	6AV2128-3GB40-0AX0	6AV2128-3KB40-0AX0	6AV2128-3MB40-0AX0	6AV2128-3QB40-0AX0	6AV2128-3UB40-0AX0	6AV2128-3XB40-0AX0
	SIMATIC HMI MTP700 Hygienic	SIMATIC HMI MTP1000 Hygienic	SIMATIC HMI MTP1200 Hygienic	SIMATIC HMI MTP1500 Hygienic	SIMATIC HMI MTP1900 Hygienic	SIMATIC HMI MTP2200 Hygienic
General information						
Product type designation	MTP700 Unified Comfort Hygienic	MTP1000 Unified Comfort	MTP1200 Unified Comfort Hygienic	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort Hygienic
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Monitor keyboard	Yes	Yes		Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

■ Technical specifications

Article number	6AV2128-3GB40-0AX0	6AV2128-3KB40-0AX0	6AV2128-3MB40-0AX0	6AV2128-3QB40-0AX0	6AV2128-3UB40-0AX0	6AV2128-3XB40-0AX0
	SIMATIC HMI MTP700 Hygienic	SIMATIC HMI MTP1000 Hygienic	SIMATIC HMI MTP1200 Hygienic	SIMATIC HMI MTP1500 Hygienic	SIMATIC HMI MTP1900 Hygienic	SIMATIC HMI MTP2200 Hygienic
Degree and class of protection						
IP (at the front)	IP69	IP69	IP69	IP69	IP69	IP69
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• Enclosure Type 12 at the front	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
Standards, approvals, certificates						
CE mark	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No	No				
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
CCC	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	No	No	No	No	No	No
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

■ **Technical specifications**

Article number	6AV2128-3GB40-0AX0	6AV2128-3KB40-0AX0	6AV2128-3MB40-0AX0	6AV2128-3QB40-0AX0	6AV2128-3UB40-0AX0	6AV2128-3XB40-0AX0
	SIMATIC HMI MTP700 Hygienic	SIMATIC HMI MTP1000 Hygienic	SIMATIC HMI MTP1200 Hygienic	SIMATIC HMI MTP1500 Hygienic	SIMATIC HMI MTP1900 Hygienic	SIMATIC HMI MTP2200 Hygienic
Configuration						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes			Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	No	No	No	No	No	No
• Unified Collaboration	No	No	No	No	No	No
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte		12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
Functionality under WinCC Unified / screens						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
Functionality under WinCC Unified / archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

■ **Technical specifications**

Article number	6AV2128-3GB40-0AX0	6AV2128-3KB40-0AX0	6AV2128-3MB40-0AX0	6AV2128-3QB40-0AX0	6AV2128-3UB40-0AX0	6AV2128-3XB40-0AX0
	SIMATIC HMI MTP700 Hygienic	SIMATIC HMI MTP1000 Hygienic	SIMATIC HMI MTP1200 Hygienic	SIMATIC HMI MTP1500 Hygienic	SIMATIC HMI MTP1900 Hygienic	SIMATIC HMI MTP2200 Hygienic
Functionality under WinCC Unified / transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Accessories						
Further accessories are available	No; Service Pack available soon	No; Service Pack available soon	No; Service Pack available soon	No; Service Pack available soon	No; Service Pack available soon	No; Service Pack available soon
Mechanics/material						
Enclosure material (front)						
• Plastic	Yes; shatter protection film	Yes; shatter protection film	Yes; shatter protection film	Yes; shatter protection film	Yes; shatter protection film	Yes; shatter protection film
• Stainless steel	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	225.6 mm	292 mm	338 mm	412 mm	479 mm	556 mm
Height of housing front	169.6 mm	217 mm	249 mm	273 mm	309 mm	358 mm
Mounting cutout, width	198.3 mm	264 mm	310 mm	382 mm	448 mm	513 mm
Mounting cutout, height	142.1 mm	189 mm	221 mm	241 mm	278 mm	315 mm
Overall depth	66.3 mm	67 mm	64 mm	79 mm	79 mm	79 mm
Weights						
Weight (without packaging)	1.9 kg	2.65 kg	3.4 kg	5.4 kg	6.7 kg	8.15 kg

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

■ Technical specifications

Article number	6AV2128-3GB70-0AX0	6AV2128-3KB70-0AX0	6AV2128-3MB70-0AX0	6AV2128-3QB70-0AX0	6AV2128-3UB70-0AX0	6AV2128-3XB70-0AX0
	SIMATIC HMI MTP700 Hygienic Neutral	SIMATIC HMI MTP1000 Hygienic Neutral	SIMATIC HMI MTP1200 Hygienic Neutral	SIMATIC HMI MTP1500 Hygienic Neutral	SIMATIC HMI MTP1900 Hygienic Neutral	SIMATIC HMI MTP2200 Hygienic Neutral
General information						
Product type designation	MTP700 Unified Comfort Hygienic	MTP1000 Unified Comfort	MTP1200 Unified Comfort Hygienic	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort Hygienic
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Monitor keyboard	Yes	Yes		Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.0	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP69	IP69	IP69	IP69	IP69	IP69
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• Enclosure Type 12 at the front	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

■ Technical specifications

Article number	6AV2128-3GB70-0AX0	6AV2128-3KB70-0AX0	6AV2128-3MB70-0AX0	6AV2128-3QB70-0AX0	6AV2128-3UB70-0AX0	6AV2128-3XB70-0AX0
	SIMATIC HMI MTP700 Hygienic Neutral	SIMATIC HMI MTP1000 Hygienic Neutral	SIMATIC HMI MTP1200 Hygienic Neutral	SIMATIC HMI MTP1500 Hygienic Neutral	SIMATIC HMI MTP1900 Hygienic Neutral	SIMATIC HMI MTP2200 Hygienic Neutral
Standards, approvals, certificates						
CE mark	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No	No				
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
CCC	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	No	No	No	No	No	No
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCC)	No	No	No	No	No	No
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panels Hygienic

■ Technical specifications

Article number	6AV2128-3GB70-0AX0	6AV2128-3KB70-0AX0	6AV2128-3MB70-0AX0	6AV2128-3QB70-0AX0	6AV2128-3UB70-0AX0	6AV2128-3XB70-0AX0
	SIMATIC HMI MTP700 Hygienic Neutral	SIMATIC HMI MTP1000 Hygienic Neutral	SIMATIC HMI MTP1200 Hygienic Neutral	SIMATIC HMI MTP1500 Hygienic Neutral	SIMATIC HMI MTP1900 Hygienic Neutral	SIMATIC HMI MTP2200 Hygienic Neutral
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes			Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	No	No	No	No	No	No
• Unified Collaboration	No	No	No	No	No	No
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte		12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
Functionality under WinCC Unified / screens						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
Functionality under WinCC Unified / archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	No	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17	Yes; as of WinCC Unified V17
Functionality under WinCC Unified / transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

Overview

SIMATIC HMI Unified Comfort PRO: fully-enclosed IP65 degree of protection, ready-to-use, can be installed directly at the machine

SIMATIC HMI Unified Comfort Panels PRO in 12", 15", 19" and 22" widescreen formats expand the Unified Comfort Panel portfolio to include devices with fully-enclosed IP65 protection. The rugged aluminum enclosure enables it to be used directly at the machine and guarantees durability, even in harsh and extreme operating environments.

Highlights:

- All-round IP65 degree of protection
- 100% Unified Comfort Panel functionality incl. Siemens Industrial Edge
- Identical display resolutions as the SIMATIC HMI Unified Comfort Panels
- Can be adapted to support arm system of various manufacturers
- Extension with hardware operator controls by means of Extension Units
- Fast integration capability
- Mechanical compatibility with SIMATIC HMI Comfort Panel PRO devices (support arm and Extension Unit connection)
- Devices can be ordered in Siemens and neutral design (without Siemens brand)

More information is available at
http://siemens.com/simatic-hmi-pro

System components for fully-enclosed IP65-protected devices:

System components for PRO devices are only suitable for SIMATIC HMI/IPC PRO devices.

In combination with SIMATIC HMI PRO basic devices, these components enable flexible adaptation to individual customer requirements for operator control and monitoring at the machine level, as well as offering a versatile and attractive solution for cabinet-free visualization and automation.

The following system components are available:

- Fixing elements
  - Adapter sets
  - Basic adapter
  - Round tube adapter
- Extension Units 12" – 22" with operator controls
- Extension components
  - Stainless steel keyboard
  - Tool and keyboard tray

For more detailed information about system components refer to "Industrial Computing" -> "Devices for special requirements" -> "PROtected devices and system components".

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

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▪ Ordering data

	Article No.		Article No.
SIMATIC Unified Comfort Panel PRO			

MTP1200 Unified Comfort PRO
12.1'' TFT display,
1280 x 800 pixels,
16 million colors; multi-touch;
1 x RS422/485,
1 x PROFINET/Industrial Ethernet
interface with MRP (2 ports);
1 x Ethernet (Gigabit);
2 x SD card slot; 4 x USB;

- For support arm (not extendable, flange on top) — **6AV2128-3MB27-0AX0**
- For support arm (not extendable, flange on top), neutral front — **6AV2128-3MB57-0AX0**
- For support arm (extendable, round tube) — **6AV2128-3MB27-0BX0**
- For support arm (extendable, round tube), neutral front — **6AV2128-3MB57-0BX0**
- For supporting foot (extendable, flange below) — **6AV2128-3MB27-1BX0**
- For supporting foot (extendable, flange below), neutral front — **6AV2128-3MB57-1BX0**

MTP1500 Unified Comfort PRO
15.6'' TFT display,
1366 x 768 pixels,
16 million colors; multi-touch;
1 x RS422/485,
1 x PROFINET/Industrial Ethernet
interface with MRP (2 ports);
1 x Ethernet (Gigabit);
2 x SD card slot; 4 x USB;

- For support arm (not extendable, flange on top) — **6AV2128-3QB27-0AX0**
- For support arm (not extendable, flange on top), neutral front — **6AV2128-3QB57-0AX0**
- For support arm (extendable, round tube) — **6AV2128-3QB27-0BX0**
- For support arm (extendable, round tube), neutral front — **6AV2128-3QB57-0BX0**
- For supporting foot (extendable, flange below) — **6AV2128-3QB27-1BX0**
- For supporting foot (extendable, flange below), neutral front — **6AV2128-3QB57-1BX0**

MTP1900 Unified Comfort PRO
18.5'' TFT display,
1920 x 1080 pixels,
16 million colors; multi-touch;
1 x RS422/485,
1 x PROFINET/Industrial Ethernet
interface with MRP (2 ports);
1 x Ethernet (Gigabit);
2 x SD card slot; 4 x USB;

- For support arm (not extendable, flange on top) — **6AV2128-3UB27-0AX0**
- For support arm (not extendable, flange on top), neutral front — **6AV2128-3UB57-0AX0**
- For support arm (extendable, round tube) — **6AV2128-3UB27-0BX0**
- For support arm (extendable, round tube), neutral front — **6AV2128-3UB57-0BX0**
- For supporting foot (extendable, flange below) — **6AV2128-3UB27-1BX0**
- For supporting foot (extendable, flange below), neutral front — **6AV2128-3UB57-1BX0**

MTP2200 Unified Comfort PRO
21.5'' TFT display,
1920 x 1080 pixels,
16 million colors; multi-touch;
1 x RS422/485,
1 x PROFINET/Industrial Ethernet
interface with MRP (2 ports);
1 x Ethernet (Gigabit);
2 x SD card slot; 4 x USB;

- For support arm (not extendable, flange on top) — **6AV2128-3XB27-0AX0**
- For support arm (not extendable, flange on top), neutral front — **6AV2128-3XB57-0AX0**
- For support arm (extendable, round tube) — **6AV2128-3XB27-0BX0**
- For support arm (extendable, round tube), neutral front — **6AV2128-3XB57-0BX0**
- For supporting foot (extendable, flange below) — **6AV2128-3XB27-1BX0**
- For supporting foot (extendable, flange below), neutral front — **6AV2128-3XB57-1BX0**

▪ Technical specifications

Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
General information						
Product type designation	MTP1200 Unified Comfort PRO		MTP1200 Unified Comfort PRO		MTP1200 Unified Comfort PRO	
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	12.1 in	12.1 in	12.1 in	12.1 in	12.1 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	800 pixel	800 pixel	800 pixel	800 pixel	800 pixel	800 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes

Operator panels
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SIMATIC HMI Unified Comfort Panel PRO

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Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
Installation type/mounting						
Mounting	Support arm	Support arm	Support arm	Support arm	Pedestal	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

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Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
EAC (formerly Gost-R)	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
CCC	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
Use in hazardous areas						
• ATEX Zone 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• ATEX Zone 22	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• IECEx Zone 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• IECEx Zone 22	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• cULus Class I Zone 2, Division 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Basic Engineering (TIA Portal)	No	No	No	No	No	No
• WinCC Unified Comfort Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher
• WinCC Unified PC Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher

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Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes	Yes	Yes	Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	600	600	600
Functionality under WinCC Unified / screens						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
Functionality under WinCC Unified / archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

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■ Technical specifications

Article number	6AV2128-3MB27-0AX0	6AV2128-3MB57-0AX0	6AV2128-3MB27-0BX0	6AV2128-3MB57-0BX0	6AV2128-3MB27-1BX0	6AV2128-3MB57-1BX0
	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO	SIMATIC HMI MTP1200 Unified Comfort PRO
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	313 mm	313 mm	313 mm	313 mm	313 mm	313 mm
Height of housing front	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter
Weights						
Weight (without packaging)	5.1 kg	5.1 kg	5 kg	5 kg	5.1 kg	5.1 kg

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Article number	6AV2128-3QB27-0AX0	6AV2128-3QB57-0AX0	6AV2128-3QB27-0BX0	6AV2128-3QB57-0BX0	6AV2128-3QB27-1BX0	6AV2128-3QB57-1BX0
	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO
General information						
Product type designation	MTP1500 Unified Comfort PRO	MTP1500 Unified Comfort PRO Neutral Front	MTP1500 Unified Comfort PRO		MTP1500 Unified Comfort PRO	MTP1500 Unified Comfort PRO Neutral Front
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	15.6 in	15.6 in	15.6 in	15.6 in	15.6 in	15.6 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel
• Vertical image resolution	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting	Support arm	Support arm	Support arm	Support arm	Pedestal	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

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Article number	6AV2128-3QB27-0AX0	6AV2128-3QB57-0AX0	6AV2128-3QB27-0BX0	6AV2128-3QB57-0BX0	6AV2128-3QB27-1BX0	6AV2128-3QB57-1BX0
	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
EAC (formerly Gost-R)	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
CCC	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
Use in hazardous areas						
• ATEX Zone 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• ATEX Zone 22	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• IECEx Zone 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• IECEx Zone 22	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• cULus Class I Zone 2, Division 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Basic Engineering (TIA Portal)	No	No	No	No	No	No
• WinCC Unified Comfort Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher
• WinCC Unified PC Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher

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Article number	6AV2128-3QB27-0AX0	6AV2128-3QB57-0AX0	6AV2128-3QB27-0BX0	6AV2128-3QB57-0BX0	6AV2128-3QB27-1BX0	6AV2128-3QB57-1BX0
	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes	Yes	Yes	Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	800	800	800	800	800	800
Functionality under WinCC Unified / screens						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
Functionality under WinCC Unified / archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

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Article number	6AV2128-3QB27-0AX0	6AV2128-3QB57-0AX0	6AV2128-3QB27-0BX0	6AV2128-3QB57-0BX0	6AV2128-3QB27-1BX0	6AV2128-3QB57-1BX0
	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO	SIMATIC HMI MTP1500 Unified Comfort PRO
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	396 mm	396 mm	396 mm	396 mm	396 mm	396 mm
Height of housing front	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm; Without basic adapter
Weights						
Weight (without packaging)	6.1 kg	6.1 kg	6 kg	6 kg	6.1 kg	6.1 kg

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SIMATIC HMI Unified Comfort Panel PRO

■ **Technical specifications**

Article number	6AV2128-3UB27-0AX0	6AV2128-3UB57-0AX0	6AV2128-3UB27-0BX0	6AV2128-3UB57-0BX0	6AV2128-3UB27-1BX0	6AV2128-3UB57-1BX0
	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO
General information						
Product type designation	MTP1900 Unified Comfort PRO	MTP1900 Unified Comfort PRO Neutral Front	MTP1900 Unified Comfort PRO		MTP1900 Unified Comfort PRO	MTP1900 Unified Comfort PRO Neutral Front
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	18.5 in	18.5 in	18.5 in	18.5 in	18.5 in	18.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting	Support arm	Support arm	Support arm	Support arm	Pedestal	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC HMI Unified Comfort Panel PRO

■ **Technical specifications**

Article number	6AV2128-3UB27-0AX0	6AV2128-3UB57-0AX0	6AV2128-3UB27-0BX0	6AV2128-3UB57-0BX0	6AV2128-3UB27-1BX0	6AV2128-3UB57-1BX0
	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
EAC (formerly Gost-R)	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
CCC	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
Use in hazardous areas						
• ATEX Zone 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• ATEX Zone 22	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• IECEx Zone 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• IECEx Zone 22	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• cULus Class I Zone 2, Division 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Basic Engineering (TIA Portal)	No	No	No	No	No	No
• WinCC Unified Comfort Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher
• WinCC Unified PC Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher

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Operator panels
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SIMATIC HMI Unified Comfort Panel PRO

Technical specifications

Article number	6AV2128-3UB27-0AX0	6AV2128-3UB57-0AX0	6AV2128-3UB27-0BX0	6AV2128-3UB57-0BX0	6AV2128-3UB27-1BX0	6AV2128-3UB57-1BX0
	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes	Yes	Yes	Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	800	800	800	800	800	800
Functionality under WinCC Unified / screens						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
Functionality under WinCC Unified / archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

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Operator panels
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SIMATIC HMI Unified Comfort Panel PRO

■ **Technical specifications**

Article number	6AV2128-3UB27-0AX0	6AV2128-3UB57-0AX0	6AV2128-3UB27-0BX0	6AV2128-3UB57-0BX0	6AV2128-3UB27-1BX0	6AV2128-3UB57-1BX0
	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO	SIMATIC HMI MTP1900 Unified Comfort PRO
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	462 mm	462 mm	462 mm	462 mm	462 mm	462 mm
Height of housing front	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm; Without basic adapter
Weights						
Weight (without packaging)	7.1 kg	7.1 kg	7 kg	7 kg	7.1 kg	7.1 kg

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■ **Technical specifications**

Article number	6AV2128-3XB27-0AX0	6AV2128-3XB57-0AX0	6AV2128-3XB27-0BX0	6AV2128-3XB57-0BX0	6AV2128-3XB27-1BX0	6AV2128-3XB57-1BX0
	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO
General information						
Product type designation	MTP2200 Unified Comfort PRO	MTP2200 Unified Comfort PRO Neutral Front	MTP2200 Unified Comfort PRO		MTP2200 Unified Comfort PRO	MTP2200 Unified Comfort PRO Neutral Front
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	21.5 in	21.5 in	21.5 in	21.5 in	21.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting	Support arm	Support arm	Support arm	Support arm	Pedestal	Pedestal
Mounting in portrait format possible	No	No	No	No	No	No
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

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Operator panels
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SIMATIC HMI Unified Comfort Panel PRO

■ Technical specifications

Article number	6AV2128-3XB27-0AX0	6AV2128-3XB57-0AX0	6AV2128-3XB27-0BX0	6AV2128-3XB57-0BX0	6AV2128-3XB27-1BX0	6AV2128-3XB57-1BX0
	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UKCA mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
EAC (formerly Gost-R)	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
CCC	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
Use in hazardous areas						
• ATEX Zone 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• ATEX Zone 22	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• IECEx Zone 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• IECEx Zone 22	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• cULus Class I Zone 2, Division 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation	No; in preparation
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Basic Engineering (TIA Portal)	No	No	No	No	No	No
• WinCC Unified Comfort Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher
• WinCC Unified PC Engineering (TIA Portal)	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher	Yes; V18 or higher

Operator panels
Advanced HMI Panel-based
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SIMATIC HMI Unified Comfort Panel PRO

■ Technical specifications

Article number	6AV2128-3XB27-0AX0	6AV2128-3XB57-0AX0	6AV2128-3XB27-0BX0	6AV2128-3XB57-0BX0	6AV2128-3XB27-1BX0	6AV2128-3XB57-1BX0
	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes	Yes	Yes	Yes	Yes	Yes
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No	No	No	No	No	No
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	800	800	800	800	800	800
Functionality under WinCC Unified / screens						
• Number of configurable images	1 200	1 200	1 200	1 200	1 200	1 200
Functionality under WinCC Unified / archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes	Yes	Yes	Yes	Yes	Yes
Functionality under WinCC Unified / transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

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Operator panels
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SIMATIC HMI Unified Comfort Panel PRO

■ **Technical specifications**

Article number	6AV2128-3XB27-0AX0	6AV2128-3XB57-0AX0	6AV2128-3XB27-0BX0	6AV2128-3XB57-0BX0	6AV2128-3XB27-1BX0	6AV2128-3XB57-1BX0
	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO	SIMATIC HMI MTP2200 Unified Comfort PRO
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	527 mm	527 mm	527 mm	527 mm	527 mm	527 mm
Height of housing front	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter
Weights						
Weight (without packaging)	8.5 kg	8.5 kg	8.4 kg	8.4 kg	8.5 kg	8.5 kg

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC WinCC Unified options

■ **Overview**

SIMATIC WinCC Unified options

WinCC Unified Audit

Contains the functionality to trace all operator actions related to value changes on tags.
Other entries in the Audit Trail can be made by system and script functions.

Licensing:

One RT license is required for each RT station (Panel or PC) to be monitored. The WinCC Unified Report license is required for automatic creation of reports.
When upgrading to a new WinCC Unified version, no additional upgrade license is required. This option is upgraded with the upgrade license of the Unified base system.

WinCC Unified Clients

WinCC Unified Client is the graphical user interface for interacting with WinCC Unified Runtime.
The WinCC Unified Client accesses the WinCC Unified Runtime via web mechanisms (on the runtime station itself or via a network) for operator control and monitoring of machines and plants. Using the standard web mechanisms, the WinCC Unified images can be displayed on any PCs or mobile devices in the HTML5-capable browser. No additional know-how of the web is necessary for engineering of the WinCC Unified Screens in the TIA Portal.
A distinction is made between WinCC Unified Client Operate and WinCC Unified Client Monitor.

WinCC Unified Client Operate

The WinCC Unified Client Operate is used for operator control and monitoring of the WinCC Unified Runtime (Panel or PC).

WinCC Unified Client Monitor

The WinCC Unified Client Monitor is used purely for monitoring the WinCC Unified Runtime (PC).
It can be navigated using the operating screens, but the connection to the field for tags is no longer active. Moreover, defined functions, e.g. acknowledgment in the alarm and tag logging control is blocked.

Licensing:

A (server-based) license of the WinCC Unified Runtime is required for each WinCC Unified Client.
The client licenses are provided on the runtime station (the server or HMI Unified Panel) and are graded in accordance with the number of simultaneous WinCC Unified Web Client access operations.
The number of version-independent licenses can be increased at any time via additive WinCC Unified Client licenses (countable licenses).
WinCC Unified Client Operate: License packages in stages of 1, 3, 10, 30 and 100 WinCC Unified Clients Operate.
WinCC Unified Client Monitor: License packages in stages of 1, 3 and 10 WinCC Unified Clients Monitor.

License-free client access to the PC Runtime (PC) contained in the WinCC Unified PC Runtime:

- 1 x WinCC Unified Client Operate for local operator control and monitoring
- 1 x WinCC Unified Client Operate for operator control and monitoring via the web client (local or remote)
- 1 x WinCC Unified Client Monitor for monitoring via the web client (local or remote)

License-free access to the Panel Runtime (Panel) contained in the HMI Unified Comfort Panel:

- 1 x local operator control and monitoring on the HMI Unified Comfort Panel
- 1 x WinCC Unified Client Operate for operator control and monitoring via the web client (remote)
- The Unified Comfort Panel supports up to 3 web clients

WinCC Unified Database Storage

WinCC Unified PC uses a file-based database (SQLite) in the basic system for the archiving of process values and messages. The WinCC Unified Databased Storage option is available for use with greater quantity frameworks or lengthy archiving periods. All archive data is stored in an MS SQL server after installing the option and the license.

Licensing:

WinCC Unified PC: One license per WinCC Unified PC Runtime is required for activating the functionality.
When upgrading to a new WinCC Unified version, an additional upgrade license is required.

WinCC Unified Logging

Option for WinCC Unified for archiving of process values and messages. Process value archiving for the recording, compression and storage of measured values and alarm logging to record events. Online evaluation of process value archives and alarm logs with display and possible operations, for example representation of trends and display of tables, as well as further processing. Powerful standard functions permit user-friendly and flexible utilization of the logs.

Licensing:

SIMATIC Unified Comfort Panels:

- Messages can be logged without an additional license.
- Process values (tags) can be archived without an additional license.
- Use of file-based archiving, with the possibility of a maximum 5,000 logging tags

WinCC Unified PC:

- Messages can be logged without an additional license.
- Graded licenses for the number of logging tags used are available for the archiving of process values (tags).
  This number can be increased at any time via additive WinCC Unified Logging Tags (countable licenses).
- The licenses are divided into 100, 500, 1 000, 5 000, 10 000 and 30 000 logging tags.
- A maximum of 5,000 logging tags are possible when using file-based archiving (default)
- When using the database-based archiving (optional), the number of logging tags is limited by the performance capability of the PC system being used.

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Operator panels
Advanced HMI Panel-based
Unified Comfort Panels

SIMATIC WinCC Unified options

■ **Overview**

WinCC Unified Parameter Control

Option for SIMATIC WinCC Unified for the generation and management of parameter sets which contain associated machine or production data. The structure of a user data type (PLC UDT or HMI UDT) can be adopted for one or more parameter set types and can be changed automatically using a new user data type version.

Licensing:

SIMATIC Unified Comfort Panels:

• No license is required

WinCC Unified PC:

• One license per WinCC Unified PC Runtime is required for activating the functionality.
When upgrading to a new WinCC Unified version, no additional upgrade license is required. This option is upgraded with the upgrade license of the Unified base system.

WinCC Unified Report Execution

Excel Addin is included in the scope of supply of WinCC Unified to connect WinCC Unified Tags, Logging Tags and Alarms with an Excel report template. The report templates are imported into the WinCC Unified Runtime without the engineering system at runtime, and connected with execution parameters. Afterwards, reports are automatically created cyclically, needs-oriented or event-oriented, stored in Excel and/or PDF format and/or sent by Email.

Licensing:

No license is required for the creation of reports in Excel and manual execution of the reports in Excel or from the Report Runtime Control. A WinCC Unified Report Execution license (Panel or PC) is required for the automated cyclic report depending on requirements and events.
When upgrading to a new WinCC Unified version, no additional upgrade license is required. This option is upgraded with the upgrade license of the Unified base system.

WinCC Unified Collaboration

Licensing:

Each WinCC Unified Station (Panel or PC) to be connected via Collaboration requires a corresponding license.
The scope and type of exchanged data is not limited.
The configuration of Collaboration in the engineering system does not require additional licensing.
When upgrading to a new WinCC Unified version, no additional upgrade license is required. This option is upgraded with the upgrade license of the Unified base system.