Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel Basic

■ **Overview**

SIMATIC IFP Basic

With the SIMATIC IFP Basic product series, the range of industrial touch monitors in the SIMATIC IFP product family has been extended by cost-effective versions.

SIMATIC IFP Basic devices feature touch operation and are available in 4 display sizes: 12", 15", 19" and 22".

■ **Ordering data**   **Article No.**

SIMATIC IFP Basic	
SIMATIC IFP1200 Basic Flat Panel with 12" display (16:10); Touch, 1 280 x 800 pixels Standard up to 5 m; for 24 V DC; DisplayPort / VGA interface	**6AV7862-2BC00-0AA0**
SIMATIC IFP1200 Basic Covered Flat Panel with 12" display (16:10); degree of protection IP65 (front and rear), Touch, 1 280 x 800 pixels Standard up to 5 m; for 24 V DC; DisplayPort interface (on the rear)	**6AV7862-2BC10-0AA0**
SIMATIC IFP1500 Basic Flat Panel with 15" display (16:9); Touch, 1 366 x 768 pixels Standard up to 5 m; for 24 V DC; DisplayPort / VGA interface	**6AV7862-2BD00-0AA0**
SIMATIC IFP1900 Basic Flat Panel with 19" display (16:9); Touch, 1 366 x 768 pixels Standard up to 5 m; for 24 V DC; DisplayPort / VGA interface	**6AV7862-2BE00-0AA0**
SIMATIC IFP2200 Basic Flat Panel with 22" display (16:9); Touch, 1 920 x 1080 pixels Standard up to 5 m; for 24 V DC; DisplayPort / VGA interface	**6AV7862-2BF00-0AA0**

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel Basic

■ **Technical specifications**

Article number	6AV7862-2BC00-0AA0	6AV7862-2BC10-0AA0	6AV7862-2BD00-0AA0	6AV7862-2BE00-0AA0	6AV7862-2BF00-0AA0
	SIMATIC IFP1200 Basic	SIMATIC IFP1200 Basic Covered	SIMATIC IFP1500 Basic	SIMATIC IFP1900 Basic	SIMATIC IFP2200 Basic
General information					
Product type designation	IFP1200 Basic	IFP1200 Basic C	IFP1500 Basic	IFP1900 Basic	IFP2200 Basic
Short designation	Basic Flat Panel 12" Touch	Basic Flat Panel 12" Touch	Basic Flat Panel 15" Touch	Basic Flat Panel 19" Touch	Basic Flat Panel 22" Touch
Display					
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	12.1 in; 12"	12.1 in; 12"	15.6 in; 15"	18.5 in; 19"	21.5 in; 22"
Screen diagonal [cm]		30.7 cm			
On Screen Display (OSD) configuration	No	No	No	No	No
Number of colors	16 000 000; 16 million	16 000 000; 16.2 million	16 000 000; 16 million	16 000 000; 16 million	16 000 000; 16 million
Resolution (pixels)					
• Image resolution	1 280 x 800	1 280 x 800	1 366 x 768	1 366 x 768	1 920 x 1 080
General features					
• Brightness/contrast		400 cd/m² / 1 000:1			
• Detachable from computer unit	5 m	5 m	5 m	5 m	5 m
Backlighting					
• Type of backlighting	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	30 000 h
Control elements					
Control elements	single-touch screen	single-touch screen	single-touch screen	single-touch screen	single-touch screen
Input device					
• Integrated mouse cursor control	No	No	No	No	No
Touch operation					
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive
Installation type/mounting					
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes		Yes	Yes	Yes
Supply voltage					
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Interfaces					
Number of USB interfaces	2; USB 2.0 (downstream)	1; USB 2.0 (downstream)	2; USB 2.0 (downstream)	2; USB 2.0 (downstream)	2; USB 2.0 (downstream)
USB on the rear	Yes; 2x onboard	Yes; 1x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Video interfaces					
• DisplayPort	Yes	Yes	Yes	Yes	Yes
Touch interfaces					
• USB	Yes; USB 2.0 Type B	Yes; USB 2.0 type B	Yes; USB Type A	Yes; USB Type A	Yes; USB Type A
Degree and class of protection					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
IP (rear)		IP65			
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
cULus	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	No	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel Basic

■ Technical specifications

Article number	6AV7862-2BC00-0AA0	6AV7862-2BC10-0AA0	6AV7862-2BD00-0AA0	6AV7862-2BE00-0AA0	6AV7862-2BF00-0AA0
	SIMATIC IFP1200 Basic	SIMATIC IFP1200 Basic Covered	SIMATIC IFP1500 Basic	SIMATIC IFP1900 Basic	SIMATIC IFP2200 Basic
Ambient conditions					
Ambient temperature during operation					
• min.	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	60 °C	45 °C	45 °C	40 °C
Relative humidity					
• Operation, max.	85 %	85 %	85 %	85 %	85 %
Vibrations					
• Vibration load in operation	5 m/s²	30 m/s²	5 m/s²	5 m/s²	5 m/s²
• Vibration load during transport/storage	10 m/s²	10 m/s²	10 m/s²	10 m/s²	10 m/s²
Shock testing					
• Shock load during operation	150 m/s²	150 m/s²	150 m/s²	150 m/s²	150 m/s²
• shock acceleration during storage/transport	150 m/s²	250 m/s²	250 m/s²	250 m/s²	250 m/s²
Mechanics/material					
Enclosure material (front)					
• Aluminum	Yes	Yes	Yes	Yes	Yes
Dimensions					
Width of the housing front	319.6 mm	319.6 mm	406 mm	473 mm	540 mm
Height of housing front	225.6 mm	225.6 mm	258 mm	297 mm	334 mm
Mounting cutout, width	302 mm	302 mm	388.4 mm	455 mm	522.2 mm
Mounting cutout, height	208 mm	208 mm	240.5 mm	279.2 mm	316.8 mm
Overall depth	50.1 mm	49 mm	59 mm	59 mm	59 mm
Weights					
Weight (without packaging)	2.7 kg	2.8 kg	4.1 kg	5.1 kg	6.5 kg

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ Overview

Industrial Flat Panels are rugged industrial monitors.

The devices are suitable as built-in devices and, in the PRO variant, for direct mounting on a support arm/pedestal. Various display sizes of 12", 15", 19", 22" and 24" are available.

Depending on requirements, the monitors can be installed up to 100 m away from the IPC. Convenient operation of modern user interfaces is possible thanks to multi-touch.

■ Ordering data

	Article No.
Industrial Flat Panel monitors	
SIMATIC IFP1200 V2	
12" multi-touch 1 280 x 800	
• Standard design, up to 5 m	6AV7863-1MA00-2AA0
• Neutral design	6AV7863-1MA00-2NA0
12" multi-touch 1 280 x 800, extended HDBase T up to 100 m	
• Standard design	6AV7863-1MA10-2AA0
• Neutral design	6AV7863-1MA10-2NA0
SIMATIC IFP1500 V2	
15" multi-touch, 1 920 x 1 080 pixels	
• Standard up to 5 m, incl. DP/USB cable 1.8 m	6AV7863-5MA00-2AA0
• Extended version HdBaseT up to 100 m	6AV7863-5MA10-2AA0
• Ethernet version up to 100 m	6AV7863-5MA20-2AA0
• Standard up to 5 m, neutral design	6AV7863-5MA00-2NA0
• Extended version, neutral design	6AV7863-5MA10-2NA0
• Ethernet version, neutral design	6AV7863-5MA20-2NA0
SIMATIC IFP1900 V2	
19" multi-touch, 1 920 x 1 080 pixels	
• Standard up to 5 m, incl. DP/USB cable 1.8 m	6AV7863-6MA00-2AA0
• Extended version HdBaseT up to 100 m	6AV7863-6MA10-2AA0
• Ethernet version up to 100 m	6AV7863-6MA20-2AA0
• Standard up to 5 m, neutral design	6AV7863-6MA00-2NA0
• Extended version, neutral design	6AV7863-6MA10-2NA0
• Ethernet version, neutral design	6AV7863-6MA20-2NA0
SIMATIC IFP2200 V2	
22" multi-touch, 1 920 x 1 080 pixels	
• Standard up to 5 m, incl. DP/USB cable 1.8 m	6AV7863-4MA00-2AA0
• Extended version HdBaseT up to 100 m	6AV7863-4MA10-2AA0
• Ethernet version up to 100 m	6AV7863-4MA20-2AA0
• Standard up to 5 m, neutral design	6AV7863-4MA00-2NA0
• Extended version, neutral design	6AV7863-4MA10-2NA0
• Ethernet version, neutral design	6AV7863-4MA20-2NA0
SIMATIC IFP2400 V2	
24" multi-touch, 1 920 x 1 080 pixels	
• Standard up to 5 m, incl. DP/USB cable 1.8 m	6AV7863-7MA00-2AA0
• Extended version HdBaseT up to 100 m	6AV7863-7MA10-2AA0
• Ethernet version up to 100 m	6AV7863-7MA20-2AA0
• Standard up to 5 m, neutral design	6AV7863-7MA00-2NA0
• Extended version, neutral design	6AV7863-7MA10-2NA0
• Ethernet version, neutral design	6AV7863-7MA20-2NA0

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ Ordering data

	Article No.		Article No.
Accessories		**Accessories for HDBaseT variants**	
Set with steel mounting clips	6AV6671-8XK00-0AX3	**Cable set, consisting of:**	
DisplayPort cable (industrial quality)		Transceiver Unit with	
• 3 m	6AV7860-0DH30-0AA0	• Two ferrites	
• 5 m	6AV7860-0DH50-0AA0	• USB cable, length 0.5 m	
DVI-D cable (industrial quality)		• Connector type A	
• 3 m	6AV7860-0BH30-0AA0	• Connector type A	
• 5 m	6AV7860-0BH50-0AA0	• DisplayPort cable, length 0.5 m	
USB cable (industrial quality)		• Cat. 6A Ethernet cable, length see "Specification"	
• 3 m	6AV7860-0CH30-0AA0	• 10 m	6AV7860-1EX21-0AB1
• 5 m	6AV7860-0CH50-0AA0	• 15 m	6AV7860-1EX21-5AB1
		• 20 m	6AV7860-1EX22-0AB1
		• 30 m	6AV7860-1EX23-0AB1
		Cat. 6A Ethernet cable	
		• 10 m	6AV7860-0EH01-0AA0
		• 15 m	6AV7860-0EH01-5AA0
		• 20 m	6AV7860-0EH02-0AA0
		• 30 m	6AV7860-0EH03-0AA0

■ Technical specifications

Article number	6AV7863-5MA00-2AA0	6AV7863-5MA10-2AA0	6AV7863-5MA20-2AA0	6AV7863-5MA00-2NA0	6AV7863-5MA10-2NA0	6AV7863-5MA20-2NA0
	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15 MT V2 Extended	SIMATIC Flat Panel 15" MT ETH	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15" MT V2 Extended	SIMATIC Flat Panel 15" MT ETH
General information						
Product type designation	IFP1500 V2	IFP1500 V2	IFP1500 V2	IFP1500 V2	IFP1500 V2	IFP1500 V2
Short designation	SIMATIC IFP1500 V2	Flat Panel 15" multi-touch ext.		Flat Panel 15" multi-touch	SIMATIC IFP1500 V2 ext.	
Display						
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	15.6 in; 15"	15.6 in; 15"	15.6 in	15.6 in; 15"	15.6 in; 15"	15.6 in
Screen diagonal [cm]	40 cm	40 cm	40 cm	40 cm	40 cm	40 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°	160° x 140°	178° x 178°	178° x 178°	160° x 140°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	400 cd/m² / 700:1	400 cd/m² / 700:1	400 cd/m² / 700:1	400 cd/m² / 700:1	400 cd/m² / 700:1	400 cd/m² / 700:1
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes	Yes	Yes	Yes
• Detachable from computer unit	5 m	100 m; HDBaseT protocol	100 m; Ethernet	5 m	100 m; HDBaseT protocol	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• 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; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device						
• Integrated mouse cursor control	Yes	Yes	Yes	Yes	Yes	Yes
Touch operation						
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system	Yes	Yes; If supported by operating system	Yes; If supported by operating system	Yes

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ **Technical specifications**

Article number	6AV7863-5MA00-2AA0	6AV7863-5MA10-2AA0	6AV7863-5MA20-2AA0	6AV7863-5MA00-2NA0	6AV7863-5MA10-2NA0	6AV7863-5MA20-2NA0
	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15 MT V2 Extended	SIMATIC Flat Panel 15" MT ETH	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15" MT V2 Extended	SIMATIC Flat Panel 15" MT ETH
Installation type/mounting						
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	1 A	1 A	1 A	1 A	1 A	1 A
Current consumption, max.	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A		2; USB 2.0 type A	2; USB 2.0 type A	
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DVI-D	Yes	No	No	Yes	No	No
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	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						
Certificate of suitability	hazardous zone 2/22; shipbuilding			hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes		Yes	Yes	No
• ATEX Zone 22	Yes	Yes		Yes	Yes	No
• IECEx Zone 2	Yes	Yes	Yes; in preparation	Yes	Yes	Yes; in preparation
• IECEx Zone 22	Yes	Yes	Yes; in preparation	Yes	Yes	Yes; in preparation
• FM Class I Division 2	Yes	Yes	Yes; in preparation	No	Yes	Yes; in preparation

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

Technical specifications

Article number	6AV7863-5MA00-2AA0	6AV7863-5MA10-2AA0	6AV7863-5MA20-2AA0	6AV7863-5MA00-2NA0	6AV7863-5MA10-2NA0	6AV7863-5MA20-2NA0
	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15 MT V2 Extended	SIMATIC Flat Panel 15" MT ETH	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15" MT V2 Extended	SIMATIC Flat Panel 15" MT ETH
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	90 %; no condensation					
Vibrations						
• Vibration load in operation	10 m/s²	10 m/s²	10 m/s²	10 m/s²	10 m/s²	10 m/s²
• Vibration load during transport/storage	10 m/s²	10 m/s²	10 m/s²	10 m/s²	10 m/s²	10 m/s²
Shock testing						
• Shock load during operation	150 m/s²	150 m/s²	150 m/s²	150 m/s²	150 m/s²	150 m/s²
• shock acceleration during storage/transport	250 m/s²	250 m/s²	250 m/s²	250 m/s²	250 m/s²	250 m/s²
Mechanics/material						
Enclosure material (front)				With neutral design	With neutral design	
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width of the housing front	398 mm	398 mm	398 mm	398 mm	398 mm	398 mm
Height of housing front	257 mm	257 mm	257 mm	257 mm	257 mm	257 mm
Mounting cutout, width	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm
Mounting cutout, height	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm
Overall depth	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm
Weights						
Weight (without packaging)	4 kg	4 kg	4 kg	4 kg	4 kg	4 kg

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ **Technical specifications**

Article number	6AV7863-6MA00-2AA0	6AV7863-6MA10-2AA0	6AV7863-6MA20-2AA0	6AV7863-6MA00-2NA0	6AV7863-6MA10-2NA0	6AV7863-6MA20-2NA0
	SIMATIC Flat Panel 19" MT V2	SIMATIC Flat Panel 19 MT V2 Extended	SIMATIC Flat Panel 19" MT ETH	SIMATIC Flat Panel 19" MT V2	SIMATIC Flat Panel 19 MT V2 Extended	SIMATIC Flat Panel 19" MT ETH
General information						
Product type designation	IFP1900 V2	IFP1900 V2	IFP1900 V2	IFP1900 V2	IFP1900 V2	IFP1900 V2
Short designation	SIMATIC IFP1900 V2	SIMATIC IFP1900 V2 ext.		SIMATIC IFP1900 V2	SIMATIC IFP1900 V2 ext.	SIMATIC IFP1900 V2
Display						
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	18.5 in; 19"	18.5 in; 19"	18.5 in	18.5 in; 19"	18.5 in; 19"	18.5 in
Screen diagonal [cm]	47 cm	47 cm	47 cm	47 cm	47 cm	47 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes	Yes	Yes	Yes
• Detachable from computer unit	5 m	100 m; HDBaseT protocol	100 m; Ethernet	5 m	100 m; HDBaseT protocol	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• 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; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation						
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system	Yes	Yes; If supported by operating system	Yes; If supported by operating system	Yes
Installation type/mounting						
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	1.2 A	1.2 A	1.2 A	1.2 A	1.2 A	1.2 A
Current consumption, max.	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A		2; USB 2.0 type A	2; USB 2.0 type A	
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DVI-D	Yes	No	No	Yes	No	No
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ Technical specifications

Article number	6AV7863-6MA00-2AA0	6AV7863-6MA10-2AA0	6AV7863-6MA20-2AA0	6AV7863-6MA00-2NA0	6AV7863-6MA10-2NA0	6AV7863-6MA20-2NA0
	SIMATIC Flat Panel 19" MT V2	SIMATIC Flat Panel 19 MT V2 Extended	SIMATIC Flat Panel 19" MT ETH	SIMATIC Flat Panel 19" MT V2	SIMATIC Flat Panel 19 MT V2 Extended	SIMATIC Flat Panel 19" MT ETH
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	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						
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding		hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes		Yes	Yes	
• ATEX Zone 22	Yes	Yes		Yes	Yes	
• IECEx Zone 2	Yes	Yes		Yes	Yes	
• IECEx Zone 22	Yes	Yes		Yes	Yes	
• FM Class I Division 2	No	Yes		No	Yes	
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	90 %; no condensation					
Vibrations						
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing						
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2
Mechanics/material						
Enclosure material (front)				With neutral design	With neutral design	
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum		aluminum	aluminum	aluminum
Dimensions						
Width of the housing front	464 mm	464 mm	464 mm	464 mm	464 mm	464 mm
Height of housing front	294 mm	294 mm	294 mm	294 mm	294 mm	294 mm
Mounting cutout, width	448.6 mm; Tolerance: +1 mm	448.6 mm; Tolerance: +1 mm	448 mm; Tolerance: +1 mm	448.6 mm; Tolerance: +1 mm	448.6 mm; Tolerance: +1 mm	448 mm
Mounting cutout, height	278.6 mm; Tolerance: +1 mm	278.6 mm; Tolerance: +1 mm	278 mm; Tolerance: +1 mm	278.6 mm; Tolerance: +1 mm	278.6 mm; Tolerance: +1 mm	278 mm
Overall depth	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm
Weights						
Weight (without packaging)	5 kg	5 kg	5 kg	5 kg	5 kg	5 kg

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ Technical specifications

Article number	6AV7863-7MA00-2AA0	6AV7863-7MA10-2AA0	6AV7863-7MA20-2AA0	6AV7863-7MA00-2NA0	6AV7863-7MA10-2NA0	6AV7863-7MA20-2NA0
	SIMATIC Flat Panel 24" MT V2	SIMATIC Flat Panel 24 MT V2 Extended	SIMATIC Flat Panel 24" MT ETH	SIMATIC Flat Panel 24" MT V2	SIMATIC Flat Panel 24 MT V2 Extended	SIMATIC Flat Panel 24" MT ETH
General information						
Product type designation	IFP2400 V2	IFP2400 V2		IFP2400 V2	IFP2400 V2	
Short designation	SIMATIC IFP2400 V2	SIMATIC IFP2400 V2		SIMATIC IFP2400 V2	SIMATIC IFP2400 V2	
Display						
Design of display	TFT widescreen display, LED backlighting					
Screen diagonal	23.8 in; 24"	23.8 in; 24"	23.8 in	23.8 in; 24"	23.8 in; 24"	23.8 in
Screen diagonal [cm]	60.47 cm	60.47 cm	60.47 cm	60.47 cm	60.47 cm	60.47 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; RGB 6 bit + Hi_FRC	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; RGB 6 bit + Hi_FRC
Viewing angle	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	250 cd/m² / 1 000:1					
• non-reflective and tempered mineral glass screen	Yes			Yes	Yes	Yes
• Detachable from computer unit	5 m	100 m; HDBaseT protocol	100 m; Ethernet	5 m	100 m; HDBaseT protocol	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• 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; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation						
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system		Yes; If supported by operating system	Yes; If supported by operating system	
Installation type/mounting						
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V	24 V	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A
Current consumption, max.	1.9 A	1.9 A	1.9 A	1.9 A	1.9 A	1.9 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A		2; USB 2.0 type A	2; USB 2.0 type A	
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DVI-D	Yes		No	Yes		No
• DisplayPort	Yes; Display port V1.2					
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ Technical specifications

Article number	6AV7863-7MA00-2AA0	6AV7863-7MA10-2AA0	6AV7863-7MA20-2AA0	6AV7863-7MA00-2NA0	6AV7863-7MA10-2NA0	6AV7863-7MA20-2NA0
	SIMATIC Flat Panel 24" MT V2	SIMATIC Flat Panel 24 MT V2 Extended	SIMATIC Flat Panel 24" MT ETH	SIMATIC Flat Panel 24" MT V2	SIMATIC Flat Panel 24 MT V2 Extended	SIMATIC Flat Panel 24" MT ETH
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	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						
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding		hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes	Yes		Yes	Yes	
FM approval	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes		Yes	Yes	
• ATEX Zone 22	Yes	Yes		Yes	Yes	
• IECEx Zone 2	Yes	Yes		Yes	Yes	
• IECEx Zone 22	Yes	Yes		Yes	Yes	
• FM Class I Division 2	No	Yes		No	Yes	
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	90 %; no condensation					
Vibrations						
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing						
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width of the housing front	585 mm	585 mm	585 mm	585 mm	585 mm	585 mm
Height of housing front	363 mm	363 mm	363 mm	363 mm	363 mm	363 mm
Mounting cutout, width	569.6 mm; Tolerance: +1 mm	569.6 mm; Tolerance: +1 mm	569 mm; Tolerance: +1 mm	569.6 mm; Tolerance: +1 mm	569.6 mm; Tolerance: +1 mm	569 mm; Tolerance: +1 mm
Mounting cutout, height	347.6 mm; Tolerance: +1 mm	347.6 mm; Tolerance: +1 mm	347 mm; Tolerance: +1 mm	347.6 mm; Tolerance: +1 mm	347.6 mm; Tolerance: +1 mm	347 mm; Tolerance: +1 mm
Overall depth	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm
Weights						
Weight (without packaging)	7.9 kg	7.9 kg	7.9 kg	7.9 kg	7.9 kg	7.9 kg

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ Technical specifications

Article number	**6AV7863-1MA00-2AA0**	**6AV7863-1MA00-2NA0**	**6AV7863-1MA10-2AA0**	**6AV7863-1MA10-2NA0**
	SIMATIC Flat Panel 12" MT V2	SIMATIC Flat Panel 12" MT V2	SIMATIC Flat Panel 12" MT V2 Extended	SIMATIC Flat Panel 12" MT V2 Extended
General information				
Product type designation	IFP1200 V2	IFP1200 V2	IFP1200 V2	IFP1200 V2
Short designation	Flat Panel 12" multi-touch	Flat Panel 12" multi-touch	Flat Panel 12" multi-touch ext.	Flat Panel 12" multi-touch ext.
Display				
Design of display	TFT widescreen display, LED backlighting			
Screen diagonal	12.1 in	12.1 in	12.1 in	12.1 in
Screen diagonal [cm]	30.7 cm	30.7 cm	30.7 cm	30.7 cm
On Screen Display (OSD) configuration	No	No	No	No
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	176° x 176°	176° x 176°	176° x 176°	176° x 176°
Resolution (pixels)				
• Image resolution	1 280 x 800	1 280 x 800	1 280 x 800	1 280 x 800
General features				
• Brightness/contrast	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 800:1
• Detachable from computer unit	5 m	5 m	100 m; HDBaseT protocol	100 m; HDBaseT protocol
Backlighting				
• Type of backlighting	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	70 000 h; At 25°C	70 000 h; At 25°C	70 000 h; At 25°C	70 000 h; At 25°C
Control elements				
Input device				
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation				
• Design as touch screen	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes	Yes
Installation type/mounting				
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	24 V; PELV / SELV floating			
Input current				
Current consumption (rated value)	0.65 A	0.65 A	0.65 A	0.65 A
Current consumption, max.	1 A	1 A	1 A	1 A
Interfaces				
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB
Video interfaces				
• DVI-D	Yes			
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces				
• USB	Yes	Yes	Yes	Yes
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20
NEMA (front)				
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ **Technical specifications**

Article number	**6AV7863-1MA00-2AA0**	**6AV7863-1MA00-2NA0**	**6AV7863-1MA10-2AA0**	**6AV7863-1MA10-2NA0**
	SIMATIC Flat Panel 12" MT V2	SIMATIC Flat Panel 12" MT V2	SIMATIC Flat Panel 12" MT V2 Extended	SIMATIC Flat Panel 12" MT V2 Extended
Standards, approvals, certificates				
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508
FM approval	Yes; in preparation	Yes; in preparation	Yes; in preparation	Yes; in preparation
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas				
• ATEX Zone 2	Yes; in preparation	Yes; in preparation	Yes; in preparation	Yes; in preparation
• ATEX Zone 22	Yes; in preparation	Yes; in preparation	Yes; in preparation	Yes; in preparation
• IECEx Zone 2	Yes; in preparation	Yes; in preparation	Yes; in preparation	Yes; in preparation
• IECEx Zone 22	Yes; in preparation	Yes; in preparation	Yes; in preparation	Yes; in preparation
• FM Class I Division 2	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity				
• Operation, max.	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation
Vibrations				
• Vibration load in operation	1 gn	1 gn	1 gn	1 gn
• Vibration load during transport/storage	1 gn	1 gn	1 gn	1 gn
Shock testing				
• Shock load during operation	15 gn	15 gn	15 gn	15 gn
• shock acceleration during storage/transport	15 gn	15 gn	15 gn	15 gn
Mechanics/material				
Enclosure material (front)	In standard design	With neutral design	In standard design	With neutral design
• Aluminum	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum
Dimensions				
Width of the housing front	326 mm	326 mm	326 mm	326 mm
Height of housing front	237 mm	237 mm	237 mm	237 mm
Mounting cutout, width	310 mm; Tolerance: +1 mm	310 mm; Tolerance: +1 mm	310 mm; Tolerance: +1 mm	310 mm; Tolerance: +1 mm
Mounting cutout, height	221 mm; Tolerance: +1 mm	221 mm; Tolerance: +1 mm	221 mm; Tolerance: +1 mm	221 mm; Tolerance: +1 mm
Overall depth	62.5 mm	62.5 mm	62.5 mm	62.5 mm
Weights				
Weight (without packaging)	3 kg	3 kg	3 kg	3 kg

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ **Technical specifications**

Article number	6AV7863-4MA00-2AA0	6AV7863-4MA10-2AA0	6AV7863-4MA20-2AA0	6AV7863-4MA00-2NA0	6AV7863-4MA10-2NA0	6AV7863-4MA20-2NA0
	SIMATIC Flat Panel 22" MT V2	SIMATIC Flat Panel 22 MT V2 Extended	SIMATIC Flat Panel 22" MT ETH	SIMATIC Flat Panel 22" MT V2	SIMATIC Flat Panel 22" MT V2 Extended	SIMATIC Flat Panel 22" MT ETH
General information						
Product type designation	IFP2200 V2	IFP2200 V2	IFP2200 V2	IFP2200 V2	IFP2200 V2	IFP2200 V2
Short designation	SIMATIC IFP2200 V2	SIMATIC IFP2200 V2 ext.		SIMATIC IFP2200 V2	SIMATIC IFP2200 V2	SIMATIC IFP2200 V2
Display						
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	22" TFT multi-touch	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	22" TFT multi-touch
Screen diagonal	21.5 in; 22"	21.5 in; 22"	21.5 in	21.5 in; 22"	21.5 in; 22"	21.5 in
Screen diagonal [cm]	56 cm	56 cm	56 cm	56 cm	56 cm	56 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	170° x 170°	170° x 170°	178° x 178°	170° x 170°	170° x 170°	178° x 178°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1
• Detachable from computer unit	5 m	100 m; HDBaseT protocol	100 m; Ethernet	5 m	100 m; HDBaseT protocol	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• 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; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	
Touch operation						
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system		Yes; If supported by operating system	Yes; If supported by operating system	
Installation type/mounting						
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
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
Input current						
Current consumption (rated value)	1 A	1 A	1 A	1 A	1 A	1 A
Current consumption, max.	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A		2; USB 2.0 type A	2; USB 2.0 type A	
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse			USB			USB
Video interfaces						
• DVI-D	Yes	No	No	Yes	No	No
• DisplayPort	Yes; Display port V1.2					
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel

■ Technical specifications

Article number	6AV7863-4MA00-2AA0	6AV7863-4MA10-2AA0	6AV7863-4MA20-2AA0	6AV7863-4MA00-2NA0	6AV7863-4MA10-2NA0	6AV7863-4MA20-2NA0
	SIMATIC Flat Panel 22" MT V2	SIMATIC Flat Panel 22 MT V2 Extended	SIMATIC Flat Panel 22" MT ETH	SIMATIC Flat Panel 22" MT V2	SIMATIC Flat Panel 22" MT V2 Extended	SIMATIC Flat Panel 22" MT ETH
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20		IP20	IP20	
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes		Yes	Yes	
• Enclosure Type 12 at the front	Yes	Yes		Yes	Yes	
Standards, approvals, certificates						
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding		hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus					Yes	
FM approval	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2
RCM (formerly C-TICK)			Yes		Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes		Yes	Yes	
• ATEX Zone 22	Yes	Yes		Yes	Yes	
• IECEx Zone 2	Yes	Yes	Yes; in preparation	Yes	Yes	Yes; in preparation
• IECEx Zone 22	Yes	Yes	Yes; in preparation	Yes	Yes	Yes; in preparation
• FM Class I Division 2	No	Yes	Yes; in preparation	No	Yes	Yes; in preparation
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	90 %; no condensation					
Vibrations						
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing						
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2
Mechanics/material						
Enclosure material (front)				With neutral design	With neutral design	With neutral design
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width of the housing front	529 mm	529 mm	529 mm	529 mm	529 mm	529 mm
Height of housing front	331 mm	331 mm	331 mm	331 mm	331 mm	331 mm
Mounting cutout, width	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm
Mounting cutout, height	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm
Overall depth	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm
Weights						
Weight (without packaging)	6.4 kg	6.4 kg	6.4 kg	6.4 kg	6.4 kg	6.4 kg

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel HYG

■ Overview

Industrial Flat Panels Hygienic are rugged industrial monitors. The devices are suitable as built-in appliances.

Various display sizes of 12", 15", 19" and 22" are available.

The monitors can be installed up to 100 m away from the IPC. Convenient operation of modern user interfaces is possible thanks to multi-touch.

■ Ordering data

	Article No.
Industrial Flat Panel monitors	
SIMATIC IFP1200 V2 Hygienic	
<u>12" multi-touch 1 280 x 800, extended HDBaseT up to 100 m</u>	
• Standard design	6AV7285-6NH00-0AA0
• Neutral design	6AV7285-6NH00-0AB0
SIMATIC IFP1500 V2 Hygienic	
<u>15" multi-touch, 1 920 x 1 080 pixels</u>	
• Extended version HdBaseT up to 100 m	6AV7285-6HH00-0AA0
• Extended version, neutral design	6AV7285-6HH00-0AB0
SIMATIC IFP1900 V2 Hygienic	
<u>19" multi-touch, 1 920 x 1 080 pixels</u>	
• Extended version HdBaseT up to 100 m	6AV7285-6KH00-0AA0
• Extended version, neutral design	6AV7285-6KH00-0AB0
SIMATIC IFP2200 V2 Hygienic	
<u>22" multi-touch, 1 920 x 1 080 pixels</u>	
• Extended version HdBaseT up to 100 m	6AV7285-6LH00-0AA0
• Extended version, neutral design	6AV7285-6LH00-0AB0
Accessories	
Set with steel mounting clips	6AV6671-8XK00-0AX3
DisplayPort cable (industrial quality)	
• 3 m	6AV7860-0DH30-0AA0
• 5 m	6AV7860-0DH50-0AA0
DVI-D cable (industrial quality)	
• 3 m	6AV7860-0BH30-0AA0
• 5 m	6AV7860-0BH50-0AA0
USB cable (industrial quality)	
• 3 m	6AV7860-0CH30-0AA0
• 5 m	6AV7860-0CH50-0AA0
Accessories for HDBaseT variants	
Cable set, consisting of:	

Transceiver Unit with
 • Two ferrites
 • USB cable, length 0.5 m
 • Connector type A
 • Connector type B
   DisplayPort cable, length 0.5 m
 • Cat. 6A Ethernet cable,
   length see "Specification"	

• 10 m	6AV7860-1EX21-0AB1
• 15 m	6AV7860-1EX21-5AB1
• 20 m	6AV7860-1EX22-0AB1
• 30 m	6AV7860-1EX23-0AB1
Cat. 6A Ethernet cable	
• 10 m	6AV7860-0EH01-0AA0
• 15 m	6AV7860-0EH01-5AA0
• 20 m	6AV7860-0EH02-0AA0
• 30 m	6AV7860-0EH03-0AA0

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel HYG

■ **Technical specifications**

Article number	**6AV7285-6NH00-0AA0**	**6AV7285-6NH00-0AB0**	**6AV7285-6HH00-0AA0**	**6AV7285-6HH00-0AB0**
	SIMATIC IFP1200 V2 ext Hygienic	SIMATIC IFP1200 V2 ext Hygienic Neutral	SIMATIC IFP1500 V2 ext Hygienic	SIMATIC IFP1500 V2 ext Hygienic Neutral
General information				
Product type designation	IFP1200 V2 ext. hyg.	IFP1200 V2 ext. hyg.	IFP1500 V2 ext. hyg.	IFP1500 V2 ext. hyg.
Short designation	Flat Panel 12" multi-touch ext. hygienic	Flat Panel 12" multi-touch ext. hygienic	Flat Panel 15" multi-touch ext. hygienic	Flat Panel 15" multi-touch ext. hygienic
Display				
Design of display	TFT widescreen display, LED backlighting			
Screen diagonal	12.1 in; 12"	12.1 in; 12"	15.6 in; 15"	15.6 in; 15"
Screen diagonal [cm]	30.7 cm	30.7 cm	40 cm	40 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	176° x 176°	176° x 176°	178° x 178°	178° x 178°
Resolution (pixels)				
• Image resolution	1 280 x 800	1 280 x 800	1 920 x 1 080	1 920 x 1 080
General features				
• Brightness/contrast	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 700:1	400 cd/m² / 700:1
• non-reflective and tempered mineral glass screen	No; reinforced pane with shatter protection film	No; reinforced pane with shatter protection film	No; reinforced pane with shatter protection film	No; reinforced pane with shatter protection film
• Detachable from computer unit	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol
Backlighting				
• Type of backlighting	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	70 000 h; At 25°C	70 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements				
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device				
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation				
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system	Yes; If supported by operating system	Yes; If supported by operating system
Installation type/mounting				
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current				
Current consumption (rated value)	0.65 A	0.65 A	1 A	1 A
Current consumption, max.	1 A	1 A	1.3 A	1.3 A
Interfaces				
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB
Video interfaces				
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces				
• USB	Yes; (device)	Yes; (device)	Yes; (device)	Yes; (device)
Degree and class of protection				
IP (at the front)	IP66K, IP69	IP66K, IP69	IP66K, IP69	IP66K, IP69
IP (rear)	IP20	IP20	IP20	IP20
NEMA (front)				
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel HYG

■ **Technical specifications**

Article number	6AV7285-6NH00-0AA0	6AV7285-6NH00-0AB0	6AV7285-6HH00-0AA0	6AV7285-6HH00-0AB0
	SIMATIC IFP1200 V2 ext Hygienic	SIMATIC IFP1200 V2 ext Hygienic Neutral	SIMATIC IFP1500 V2 ext Hygienic	SIMATIC IFP1500 V2 ext Hygienic Neutral
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	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
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas				
• ATEX Zone 2	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m	2 000 m
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Vibrations				
• Vibration load in operation	10 m/s²	10 m/s²	10 m/s²	10 m/s²
• Vibration load during transport/storage	10 m/s²	10 m/s²	10 m/s²	10 m/s²
Shock testing				
• Shock load during operation	150 m/s²	150 m/s²	150 m/s²	150 m/s²
• shock acceleration during storage/transport	250 m/s²	250 m/s²	250 m/s²	250 m/s²
Mechanics/material				
Enclosure material (front)				
• Plastic	Yes; shatter protection film	Yes; shatter protection film	Yes; shatter protection film	Yes; shatter protection film
• Stainless steel	Yes	Yes	Yes	Yes
Enclosure material (rear)	stainless steel, aluminum	stainless steel, aluminum	stainless steel, aluminum	stainless steel, aluminum
Dimensions				
Width of the housing front	337.6 mm	337.6 mm	411.8 mm	411.8 mm
Height of housing front	248.4 mm	248.4 mm	272.2 mm	272.2 mm
Mounting cutout, width	310 mm; Tolerance: +1 mm	310 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm
Mounting cutout, height	221 mm; Tolerance: +1 mm	221 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm
Overall depth	65.7 mm	65.7 mm	67.7 mm	67.7 mm
Weights				
Weight (without packaging)	3.9 kg	3.9 kg	4.7 kg	4.7 kg

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel HYG

Technical specifications

Article number	6AV7285-6KH00-0AA0	6AV7285-6KH00-0AB0	6AV7285-6LH00-0AA0	6AV7285-6LH00-0AB0
	SIMATIC IFP1900 V2 ext Hygienic	SIMATIC IFP1900 V2 ext Hygienic Neutral	SIMATIC IFP2200 V2 ext Hygienic	SIMATIC IFP2200 V2 ext Hygienic Neutral
General information				
Product type designation	IFP1900 V2 ext. hyg.	IFP1900 V2 ext. hyg.	IFP2200 V2 ext. hyg.	IFP2200 V2 ext. hyg.
Short designation	Flat Panel 19" multi-touch ext. hygienic	Flat Panel 19" multi-touch ext. hygienic	Flat Panel 22" multi-touch ext. hygienic	Flat Panel 22" multi-touch ext. hygienic
Display				
Design of display	TFT widescreen display, LED backlighting			
Screen diagonal	18.5 in; 19"	18.5 in; 19"	21.5 in; 22"	21.5 in; 22"
Screen diagonal [cm]	47 cm	47 cm	56 cm	56 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°	170° x 170°	170° x 170°
Resolution (pixels)				
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features				
• Brightness/contrast	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1
• non-reflective and tempered mineral glass screen	No; reinforced pane with shatter protection film	No; reinforced pane with shatter protection film	No; reinforced pane with shatter protection film	No; reinforced pane with shatter protection film
• Detachable from computer unit	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol
Backlighting				
• Type of backlighting	LED	LED	LED	LED
• 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; At 25°C
Control elements				
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device				
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation				
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system	Yes; If supported by operating system	Yes; If supported by operating system
Installation type/mounting				
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current				
Current consumption (rated value)	1.2 A	1.2 A	1 A	1 A
Current consumption, max.	1.5 A	1.5 A	1.3 A	1.3 A
Interfaces				
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB
Video interfaces				
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces				
• USB	Yes; (device)	Yes; (device)	Yes; (device)	Yes; (device)
Degree and class of protection				
IP (at the front)	IP66K, IP69	IP66K, IP69	IP66K, IP69	IP66K, IP69
IP (rear)	IP20	IP20	IP20	IP20
NEMA (front)				
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Flat Panel HYG

■ **Technical specifications**

Article number	6AV7285-6KH00-0AA0	6AV7285-6KH00-0AB0	6AV7285-6LH00-0AA0	6AV7285-6LH00-0AB0
	SIMATIC IFP1900 V2 ext Hygienic	SIMATIC IFP1900 V2 ext Hygienic Neutral	SIMATIC IFP2200 V2 ext Hygienic	SIMATIC IFP2200 V2 ext Hygienic Neutral
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	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
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas				
• ATEX Zone 2	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	45 °C	45 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m	2 000 m
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Vibrations				
• Vibration load in operation	10 m/s²	10 m/s²	10 m/s²	10 m/s²
• Vibration load during transport/storage	10 m/s²	10 m/s²	10 m/s²	10 m/s²
Shock testing				
• Shock load during operation	150 m/s²	150 m/s²	150 m/s²	150 m/s²
• shock acceleration during storage/transport	250 m/s²	250 m/s²	250 m/s²	250 m/s²
Mechanics/material				
Enclosure material (front)				
• Plastic	Yes; shatter protection film	Yes; shatter protection film	Yes; shatter protection film	Yes; shatter protection film
• Stainless steel	Yes	Yes	Yes	Yes
Enclosure material (rear)	stainless steel, aluminum	stainless steel, aluminum	stainless steel, aluminum	stainless steel, aluminum
Dimensions				
Width of the housing front	478.4 mm	478.4 mm	544.7 mm	544.7 mm
Height of housing front	308.2 mm	308.2 mm	346.2 mm	346.2 mm
Mounting cutout, width	448 mm; Tolerance: +1 mm	448 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm
Mounting cutout, height	278 mm; Tolerance: +1 mm	278 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm
Overall depth	67.7 mm	67.7 mm	67.7 mm	67.7 mm
Weights				
Weight (without packaging)	6.2 kg	6.2 kg	7.8 kg	7.8 kg

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Thin Client

Overview

SIMATIC ITC Industrial Thin Clients are powerful operating units for flexible use in distributed visualization applications. All devices are equipped with high-resolution, brilliant widescreen displays, and due to the diverse communication protocols they can be used both for challenging machine-level operator control & monitoring and for the connection to control systems, e.g. in the SCADA environment. They can be used as (additional) operator panels on a SIMATIC Industrial PC, Panel PC, or server, and on a SIMATIC Panel or SINUMERIK.

SIMATIC Industrial Thin Clients are also available as glass-front, capacitive multi-touch devices in display sizes 12", 15", 19", 22" and 24".

- SIMATIC ITC1200 V3 – 15" multi-touch 1 280 x 800
- SIMATIC ITC1500 V3 – 15" multi-touch 1 366 x 768
- SIMATIC ITC1200 V3 – 15" multi-touch 1 280 x 800
- SIMATIC ITC1900 V3 – 19" multi-touch 1 366 x 768
- SIMATIC ITC1500 V3 – 15" multi-touch 1 920 x 1080
- SIMATIC ITC2200 V3 – 22" multi-touch 1 920 x 1 080
- SIMATIC ITC2400 V3 – 24" multi-touch 1 920 x 1 080

The following underline installation versions with resistive single-touch are still available:
- SIMATIC ITC1200 – 12" touch
- SIMATIC ITC1500 – 15" touch
- SIMATIC ITC1900 – 19" touch
- SIMATIC ITC2200 – 22" touch

The SIMATIC HMI Thin Client Ex is available for hazardous areas (Zone 1/11). This device differs technically from the devices mentioned above. For more details, refer to the SIMATIC Thin Client EX chapter.

Ordering data

	Article No.
Industrial Thin Client with multi-touch	
SIMATIC Industrial Thin Client V3 Capacitive touch sensor Protocols supported: RDP, VNC, SMARTSERVER HTML5, etc., standard design, built-in unit	
• SIMATIC ITC1500 V3 15" widescreen TFT display	**6AV6646-1BA15-0AA0**
• SIMATIC ITC1500 V3 15" widescreen TFT display, neutral design	**6AV6646-1BA15-0NA0**
• SIMATIC ITC1500 V3 15" widescreen TFT display, Full HD	**6AV6646-1BA16-0AA1**
• SIMATIC ITC1500 V3 15" widescreen TFT display, Full HD, neutral design	**6AV6646-1BA16-0NA1**
• SIMATIC ITC1900 V3 19" widescreen TFT display	**6AV6646-1BA18-0AA1**
• SIMATIC ITC1900 V3 19" widescreen TFT display, neutral design	**6AV6646-1BA18-0NA1**
• SIMATIC ITC1900 V3 19" widescreen TFT display, Full HD	**6AV6646-1BA20-0AA1**
• SIMATIC ITC1900 V3 19" widescreen TFT display, Full HD, neutral design	**6AV6646-1BA20-0NA1**
• SIMATIC ITC2200 V3 22" widescreen TFT display	**6AV6646-1BA22-1AA1**
• SIMATIC ITC2200 V3 22" widescreen TFT display, neutral design	**6AV6646-1BA22-1NA1**
• SIMATIC ITC1200 V3 12" widescreen TFT display	**6AV6646-1BA12-0AA1**
• SIMATIC ITC2400 V3 24" widescreen TFT display	**6AV6646-1BA24-0AA1**
• SIMATIC ITC1200 V3 12" widescreen TFT display, neutral design	**6AV6646-1BA12-0NA1**
• SIMATIC ITC2400 V3 24" widescreen TFT display, neutral design	**6AV6646-1BA24-0NA1**

5

Industrial Computing
Industrial monitors and Thin Clients

SIMATIC Industrial Thin Client

■ Technical specifications

Article number	**6AV6646-1BA15-0AA0**
	SIMATIC ITC1500 V3
General information	
Product type designation	ITC1500 V3
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	15.6 in; 15"
Number of colors	16 777 216
Resolution (pixels)	
• Image resolution	1 366 x 768
General features	
• non-reflective and tempered mineral glass screen	Yes
• Detachable from computer unit	100 m
Backlighting	
• Type of backlighting	LED, dimmable
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C
Control elements	
Control elements	multi-touch screen
Touch operation	
• Design as touch screen	Yes
• Design as multi-touch screen	Yes; Projective-capacitive
• Monitor keyboard	Yes
Installation type/mounting	
Design	Built-in unit
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V
Interfaces	
Number of industrial Ethernet interfaces	2; 2 ports (switch)
Number of USB interfaces	4; on rear
USB on the rear	Yes; 2x onboard
Connection for keyboard/mouse	USB
Industrial Ethernet	
• Transmission rate, max.	1 000 Mbit/s
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	Yes
• Enclosure Type 12 at the front	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes

Article number	**6AV6646-1BA15-0AA0**
	SIMATIC ITC1500 V3
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• IECEx Zone 2	Yes
• IECEx Zone 22	Yes
• cULus Class I Zone 2, Division 2	Yes
• FM Class I Division 2	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C
Relative humidity	
• Operation, max.	90 %; no condensation
Vibrations	
• Vibration load in operation	10 m/s²
• Vibration load during transport/storage	10 m/s²
Shock testing	
• Shock load during operation	150 m/s²
• shock acceleration during storage/transport	150 m/s²
Software	
Web browser	Yes; HTML5, CSS
PDF reader	Yes
Configuration/header	
Configuration	
• Local	Yes
• Remote	Yes; Via web page
Languages	
Online languages	
• Number of online/runtime languages	3; german / english
Peripherals/Options	
USB memory	Yes; USB storage medium can be connected
Mechanics/material	
Enclosure material (front)	
• Aluminum	Yes
Dimensions	
Width of the housing front	398 mm
Height of housing front	257 mm
Mounting cutout, width	382 mm
Mounting cutout, height	241 mm
Overall depth	73 mm
Weights	
Weight (without packaging)	5 kg

More information

More information is available on the internet at

https://www.siemens.com/simatic-thin-client.