## **SIEMENS**

## **Data sheet**

## 6AV7880-0HA12-2DA2

SIMATIC ITP1000, 8 function keys, Ethernet 10/100/1000 Mbit/s, 1x RS232, 2x USB 3.0, 1x UAJ, 1x USB type-C, 1x SD card reader, Wifi 802.11 a/b/c/g, Bluetooth, Lithium-ion battery; 10" Multitouch (1280 x 800); Camera, RFID and barcode reader; 256 GB SSD; Windows 7 Ultimate 64 bit SP1, MUI (de, en, fr, es, it); Core I5-6442EQ; 16 GB RAM; 110/230 V AC power supply unit, Power supply cable for USA; without software (included);

	cable for OSA, without software (included);
General information	
Design of the programming device	Tablet PC
Display	
Design of display	10" multi-touch
Resolution (pixels)	
<ul> <li>Horizontal image resolution</li> </ul>	1 280 pixel; 1 920 pixels
Vertical image resolution	800 pixel; 1 200 pixels
General features	
Luminance	220 cd/m²; 350 cd/m²
Backlighting	
Type of backlighting	LED
Control elements	
Keyboard fonts	
Design	Touch
Touch operation	
<ul> <li>Integrated touch pad</li> </ul>	No
Supply voltage	
Design of the power supply	External wide-range power supply; 3-pole
permissible range, lower limit (AC)	100 V; ±10 %, sinusoidal
permissible range, upper limit (AC)	240 V; ±10 %, sinusoidal
Line frequency	
permissible range, lower limit	47 Hz
permissible range, upper limit	63 Hz
Processor	
Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB cache); Intel Core i5-6442EQ (6 MB cache, up to 2.70 GHz, iAMT)
Hyper-threading	No
Turbo Boost Technology 2.0	Yes
Graphic	
Graphics controller	Intel® HD graphics 530
Drives	
SSD	Yes
Memory capacity	256 Gbyte; Up to 512 GB SSD
TPM Security Chip	Yes
Memory	
Type of memory	DDR4-SDRAM SO-DIMM
Work memory	
• integrated	4 Gbyte; 8 GB or 16 GB
Accumulator	
Replaceable	Yes; Lithium-ion battery
Capacity	5 900 mA·h
Battery runtime, min.	6 h; According to MobileMark 2014
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 232 interfaces	1
Number of USB interfaces	3; USB 3.0
• Type A	2
• Type C	1
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But the first test to	V V/A
Bluetooth radio standard	Yes; V4.0
Multimedia card/SD card slot	2 in 1 (SDHC UHS-II, MMC)
Universal Audio Jack	Yes; Audio socket for 3.5 mm jack
Video interfaces  • DisplayPort	Yes; DP 1.2 (Mini DisplayPort)
Industrial Ethernet	Tes, DF 1.2 (Willi DisplayFort)
Industrial Ethernet interface	1x Ethernet (RJ45)
— 100 Mbps	Yes
— 1000 Mbps	Yes
IAMT (Intel Active Management Technology)	Yes
WLAN	
• Type	IEEE 802.11 a/b/g/n and ac
Wireless transmission	
Protocol for wireless transmission	Legic Prime, Legic Advant, ISO 15693, ISO 14443 A/B
<ul> <li>Operating frequency (rated value)</li> </ul>	13.56 MHz
• Range, max.	30 mm; Range depends on transponder
Interrupts/diagnostics/status information	
LED status display	Battery charge level, device status, access to drive, WLAN active, SD card,
ENC	application LED
EMC	
Interference immunity against discharge of static electricity	Veg. 14 IV/ contect dischars - (1- IEO 004 0/IEO 4000 4 0 EOD) - 0 IV/
<ul> <li>Interference immunity against discharge of static electricity acc. to IEC 61000-4-2</li> </ul>	Yes; ±4 kV contact discharge (to IEC 801-2/IEC 1000-4-2; ESD), ±8 kV air discharge (to IEC 801-2/IEC 1000-4-2; ESD)
Interference immunity to cable-borne interference	
Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5,
	surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to
Interference immunity on signal cables	ground) ±1 kV (according to IEC 61000-4-4, burst, length < 30 m); ±2 kV (according to
• Interierence infinitifity off signal cables	IEC 61000-4-4, burst, length > 30 m); ±2 kV (according to IEC 61000-4-5, surge
	sym./line to ground, length > 30 m)
Degree and class of protection	
IP degree of protection	IP40
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
DIN/ISO 9001	Yes
Military use  • Conforms to MIL-STD-810G	Yes
Ambient conditions	Tes
Ambient temperature during operation	
min.	5 °C; Max. 10 °C/h (no condensation)
• max.	45 °C; Max. 10 °C/h (no condensation)
Ambient temperature during storage/transportation	is a, maxima on the contaction,
• min.	-20 °C; Max. 20 °C/h (no condensation)
• min. • max.	-20 °C; Max. 20 °C/h (no condensation) 60 °C; Max. 20 °C/h (no condensation)
• max.	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC
max.  Relative humidity  Operation, min.	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14
max.  Relative humidity	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC
max.  Relative humidity  Operation, min.	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14
<ul> <li>max.</li> <li>Relative humidity</li> <li>Operation, min.</li> <li>Operation, max.</li> </ul>	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC
<ul> <li>max.</li> <li>Relative humidity</li> <li>Operation, min.</li> <li>Operation, max.</li> </ul> Vibrations	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14
<ul> <li>max.</li> <li>Relative humidity</li> <li>Operation, min.</li> <li>Operation, max.</li> </ul> Vibrations <ul> <li>Operation, tested according to IEC 60068-2-6</li> </ul>	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14
<ul> <li>max.</li> <li>Relative humidity</li> <li>Operation, min.</li> <li>Operation, max.</li> </ul> Vibrations <ul> <li>Operation, tested according to IEC 60068-2-6</li> </ul> Shock testing	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  Yes
<ul> <li>max.</li> <li>Relative humidity</li> <li>Operation, min.</li> <li>Operation, max.</li> </ul> Vibrations <ul> <li>Operation, tested according to IEC 60068-2-6</li> </ul> Shock testing <ul> <li>tested according to IEC 60068-2-27</li> </ul>	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  Yes
max.  Relative humidity     Operation, min.     Operation, max.  Vibrations     Operation, tested according to IEC 60068-2-6  Shock testing     tested according to IEC 60068-2-27  Operating systems  Local language of operating system	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  Yes  Yes
max.  Relative humidity	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  Yes  Yes  Multi-Language User Interface (MUI): 6 languages (English, German, French, Spanish, Italian, Chinese)
<ul> <li>max.</li> <li>Relative humidity</li> <li>Operation, min.</li> <li>Operation, max.</li> <li>Vibrations         <ul> <li>Operation, tested according to IEC 60068-2-6</li> </ul> </li> <li>Shock testing         <ul> <li>tested according to IEC 60068-2-27</li> </ul> </li> <li>Operating systems         <ul> <li>Local language of operating system</li> <li>windows 7</li> </ul> </li> </ul>	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  Yes  Yes  Multi-Language User Interface (MUI): 6 languages (English, German, French, Spanish, Italian, Chinese)  Yes; Ultimate 64 bit, SP1
<ul> <li>max.</li> <li>Relative humidity</li> <li>Operation, min.</li> <li>Operation, max.</li> <li>Vibrations <ul> <li>Operation, tested according to IEC 60068-2-6</li> </ul> </li> <li>Shock testing <ul> <li>tested according to IEC 60068-2-27</li> </ul> </li> <li>Operating systems <ul> <li>Local language of operating system</li> </ul> </li> <li>pre-installed operating system</li> <li>Windows 7</li> <li>Windows 10</li> </ul>	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  Yes  Yes  Multi-Language User Interface (MUI): 6 languages (English, German, French, Spanish, Italian, Chinese)
max.  Relative humidity         Operation, min.         Operation, max.  Vibrations         Operation, tested according to IEC 60068-2-6  Shock testing         tested according to IEC 60068-2-27  Operating systems  Local language of operating system  pre-installed operating system         Windows 7         Windows 10  Software	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  Yes  Yes  Multi-Language User Interface (MUI): 6 languages (English, German, French, Spanish, Italian, Chinese)  Yes; Ultimate 64 bit, SP1
<ul> <li>max.</li> <li>Relative humidity</li> <li>Operation, min.</li> <li>Operation, max.</li> <li>Vibrations <ul> <li>Operation, tested according to IEC 60068-2-6</li> </ul> </li> <li>Shock testing <ul> <li>tested according to IEC 60068-2-27</li> </ul> </li> <li>Operating systems <ul> <li>Local language of operating system</li> </ul> </li> <li>pre-installed operating system</li> <li>Windows 7</li> <li>Windows 10</li> </ul>	60 °C; Max. 20 °C/h (no condensation)  5 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  85 %; At 30 °C/h (no condensation); Tested according to IEC 60068-2-78, IEC 60068-2-30, IEC 60068-2-14  Yes  Yes  Multi-Language User Interface (MUI): 6 languages (English, German, French, Spanish, Italian, Chinese)  Yes; Ultimate 64 bit, SP1

<ul> <li>STEP 7 Professional (TIA Portal)</li> </ul>	No	
• STEP 7	No	
<ul> <li>WinCC flexible Advanced 2008</li> </ul>	No	
<ul> <li>WinCC Advanced (TIA Portal)</li> </ul>	No	
• STEP 5	No	
Mechanics/material		
Material of housing	metal	
Magnesium alloy	Yes	
Socket for Kensington lock	Yes	
rubber corner guards	Yes	
Dimensions		
Width	330 mm	
Height	32 mm	
Depth	214 mm	
Weights		
Weight, approx.	1.6 kg; incl. rechargeable battery	
Scope of supply		
Accumulator	Yes	
Power supply	Yes	
Recovery media	Yes; Restore & Recovery	
Other		
free hotline	Yes	
Note:	Made in Germany: development and production in Germany	

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