Data sheet

6ES7647-0BA00-0YA2

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SIMATIC IOT2050, 2x Gbit Ethernet RJ45; Display port; 2x USB2.0, SD card slot, 24 V DC industrial power supply

Installation type/mounting	
Design	IoT Gateway, built-in unit
Supply voltage	
Type of supply voltage	12/24 V DC
Mains buffering	
Mains/voltage failure stored energy time	5 ms
Processor	
Processor type	ARM TI AM6528 GP
Graphic	
Graphics controller	Integrated
Drives	
Slot for drives	1x microSD card slot
Memory	
Type of memory	DDR4
Main memory	1 GB RAM
Capacity of main memory, max.	1 Gbyte
Hardware configuration	
Slots	
free slots	1x Arduino, 1x mPCle
Digital inputs	
Number of digital inputs	20
Input voltage	
 Type of input voltage 	DC
Digital outputs	
Number of digital outputs	20
Output voltage	
 Type of output voltage 	DC
 permissible voltage at output, min. 	3.3 V
 permissible voltage at output, max. 	5 V
Interfaces	
PROFIBUS/MPI	can be implemented with plug-in card
Number of industrial Ethernet interfaces	2
Number of PROFINET interfaces	2
USB port	2x USB 2.0
Connection for keyboard/mouse	USB
serial interface	1x COM (1x RS 232 / 422 / 485)
Video interfaces	
Graphics interface	1x DisplayPort

Industrial Ethernet	
	2v Ethornot (P 145)
Industrial Ethernet interface	2x Ethernet (RJ45)
— 100 Mbps	Yes
— 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	Voc
Temperature monitoring Watablean	Yes
Watchdog	Yes
Status LEDs	Yes
EMC	
Interference immunity against discharge of static electricity	14 kV contact discharge acc. to IEC 04000 4 0 10 kV size likely
 Interference immunity against discharge of static electricity 	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
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 ground)
 Interference immunity on signal cables >30m 	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
Interference immunity against voltage surge	
asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Degree and class of protection	
IP degree of protection	IP20
IP (all-round)	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC EMC	Yes CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005, CE, EN IEC 61000-6-4:2019, EN IEC 61000-6-2:2019
Ambient conditions	01000-0-4.2018, LIVILO 01000-0-2.2018
Ambient temperature during storage/transportation	
min.	-20 °C
• min. • max.	-20 °C
Altitude during operation relating to sea level	
Installation altitude above sea level, max.	2 000 m
Relative humidity	
Relative humidity	5 85 % at 30 °C, no condensation
Operation, max.	85 %
Vibrations	
 Vibration resistance during operation acc. to IEC 60068-2-6 	tested according to IEC 60068-2-6: 10 cycles; 5 to 8.4 Hz: deflection 3.5 mm; 8.4 to 200 Hz: acceleration 9.8 m/s²
Shock testing	
Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Shock load during operation Operating systems pre-installed operating system	No
Shock load during operation Operating systems pre-installed operating system without operating system	
Shock load during operation Operating systems pre-installed operating system	No
Shock load during operation Operating systems pre-installed operating system without operating system	No
Shock load during operation Operating systems pre-installed operating system without operating system Mechanics/material	No Yes
Shock load during operation Operating systems pre-installed operating system without operating system Mechanics/material Enclosure material (front)	No Yes
Shock load during operation Operating systems pre-installed operating system without operating system Mechanics/material Enclosure material (front) Plastic Aluminum Stainless steel	No Yes plastic Yes
Shock load during operation Operating systems pre-installed operating system without operating system Mechanics/material Enclosure material (front) Plastic Aluminum Stainless steel Glass	No Yes plastic Yes Yes
Shock load during operation Operating systems pre-installed operating system without operating system Mechanics/material Enclosure material (front) Plastic Aluminum Stainless steel	No Yes plastic Yes Yes Yes Yes

Height Depth	142 mm 100 mm
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