

2.2 APC620, 2 PCI slot variant

2.2.1 Interfaces

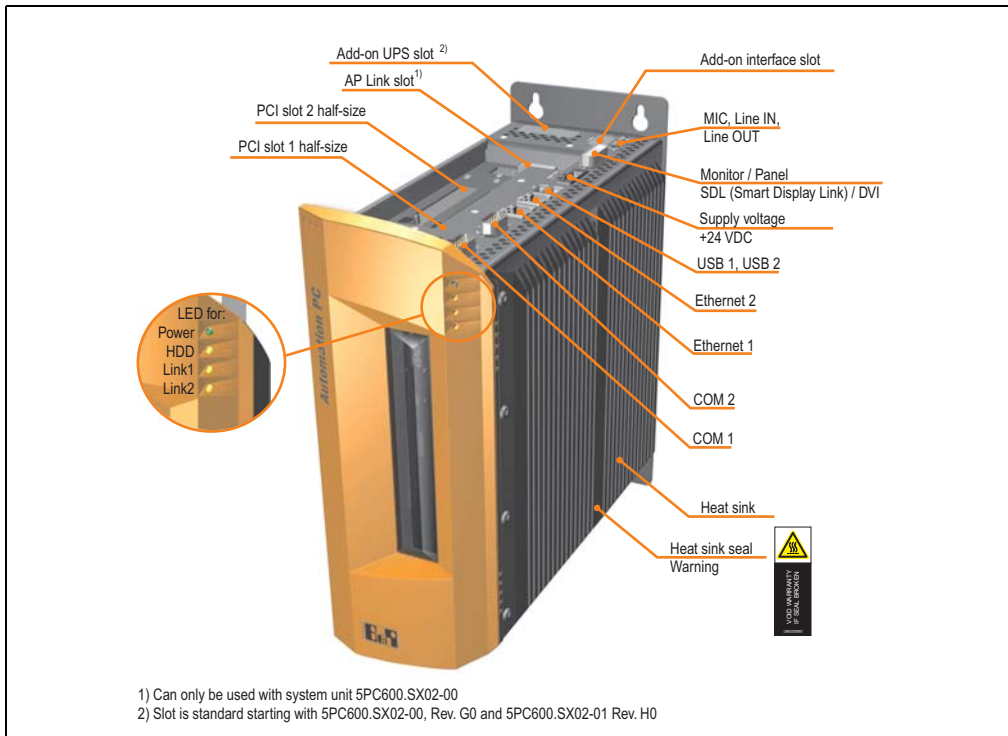


Figure 8: Interface overview - APC620, 2 PCI slot variant (top)

Warning!

Do not remove mounting screws from the heat sink, as it is connected to the processor and chipset by a thermal coupling. Should this connection be broken, the APC620 must be sent for repair. Removal of the mounting screws, which can be determined by a broken seal, voids all warranty.

During operation, surface temperatures of the heat sink may reach 70 °C (warning "hot surface").

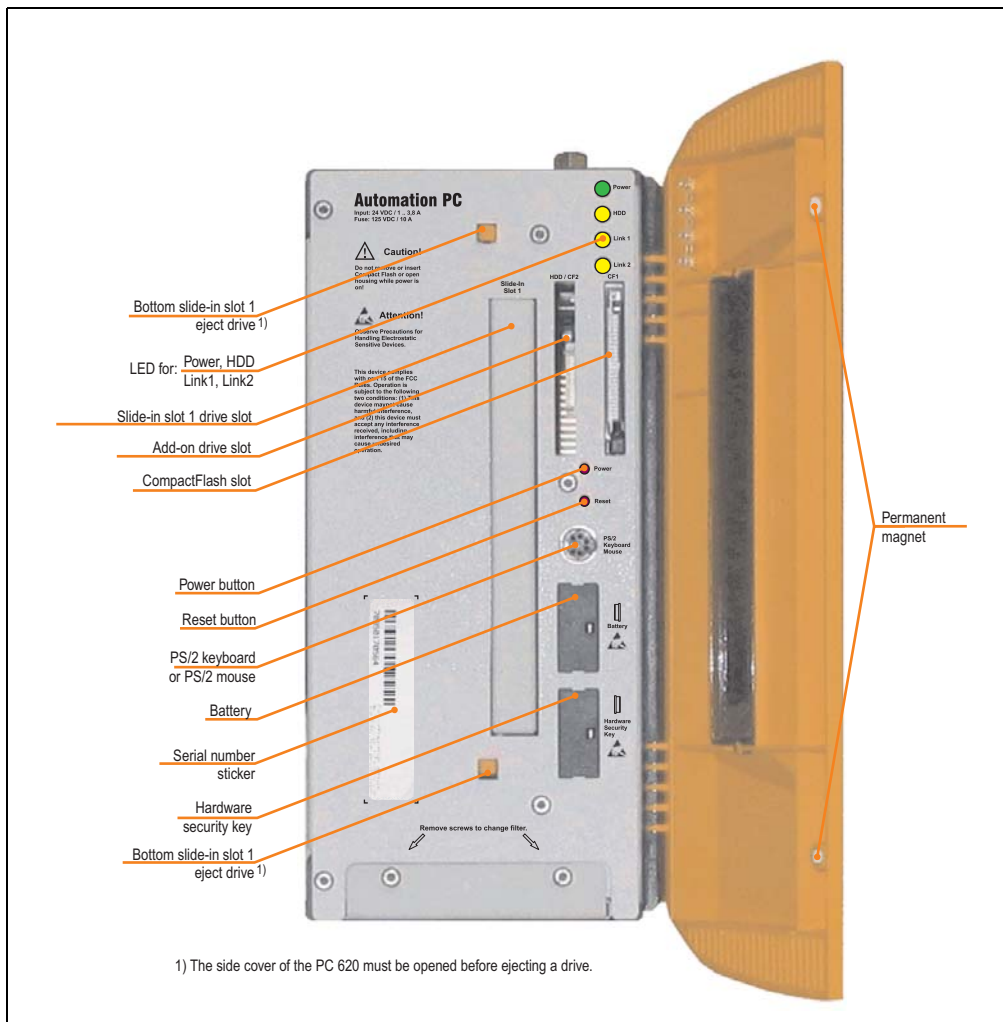


Figure 9: Interface overview - APC620, 2 PCI slot variant (front)

Information:

The orange front doors contain two permanent magnets. Contact between a data carrier that saves data magnetically (hard disk, diskette, the magnetic strip of a credit card, etc.) and a magnet can cause loss of data.

2.2.2 Technical data

Features	APC620, 2 PCI slot variant
Boot loader / Operating system	BIOS / see the chapter 4 "Software" on page 337
Processor	Component-dependent, see technical data for the CPU board
Cooling Method	Passive via heat sink and optionally supported with an active fan kit
Main memory	Max. 512 MB with 815E CPU board, max. 1 GB with 855GME CPU board
Graphics Controller	Component-dependent, see technical data for the CPU board
Power failure logic Controller Buffer time	MTCX ¹⁾ (see also page 739) 10 ms, dependent on the system unit revision (see page 525)
Real-time clock Battery-buffered Accuracy	Yes Component-dependent, see technical data for the CPU board
Battery Type Removable Lifespan	See also page 145 Renata 950 mAh Yes, accessible behind the orange cover 4 years ^{2) 3)}
Ethernet Controller Amount	See also page 118 or page 120 2
CAN bus	Optional with add-on interface (5AC600.CANI-00)
CompactFlash Type Amount	See also page 140 or page 141 Type I 2 (max. 4 using optional components)
Serial interface Amount Type UART Transfer rate Connection	See also page 111 or page 112 2 RS232, modem-capable, not electrically isolated 16550 compatible, 16 byte FIFO Max. 115 kBaud 9-pin DSUB
USB interface Type Amount Transfer rate Connection Current load	See also section "USB port" on page 121 USB 2.0 2 Low speed (1.5 Mbit/s), full speed (12 Mbit/s), to high speed (480 Mbit/s) Type A Max. 500 mA per connection
Reset button	Yes, accessible behind the orange cover
LEDs	4 directed outwards via fiber optic lines, see also section "Status LEDs" on page 138
PCI slots half-size full-size	See also section "PCI slots" on page 135 2 -
Add-on UPS internal slot	Yes 5PC600.SX02-00 starting with revision G0, 5PC600.SX02-01 starting with revision H0 present See also section "Add-on UPS module slot" on page 134
SRAM internal slot options	Yes 5PC600.SX02-00 starting with revision H0, 5PC600.SX02-01 starting with revision K0 present

Table 23: Technical data - APC620, 2 PCI slot variant

Technical data • Entire device

Electrical characteristics	APC620, 2 PCI slot variant
Power supply Rated voltage Rated current Starting current Power consumption	24 VDC $\pm 25\%$ 3.8 A Typ. 7 A, max. 40 A for < 300 μ s Component-dependent, see section 2.8 "Power management APC620 system unit with 1 PCI slot"
Mechanical characteristics	
Housing ⁴⁾ Material Paint Front cover	Galvanized plate, plastic Light gray (similar to Pantone 427CV), dark gray (similar to Pantone 432CV) Colored orange plastic (similar to Pantone 144CV)
Outer dimensions	See section "Dimensions" on page 61.
Weight	Approx. 4.5 kg (component-dependent)
Environmental characteristics	
Ambient temperature Operation Storage Transport	Component-dependent, see the section about ambient temperature on page 78 and page 82 -20°C .. +60°C -20°C .. +60°C
Relative humidity Operation Storage Transport	Component-dependent, see section "Humidity specifications" on page 108 Component-dependent, see section "Humidity specifications" on page 108 Component-dependent, see section "Humidity specifications" on page 108
Vibration ⁵⁾ Operation (continuous) Operation (occasional) Storage Transport	2 - 9 Hz: 1.75 mm amplitude / 9 - 200 Hz: 0.5 g 2 - 9 Hz: 3.5 mm amplitude / 9 - 200 Hz: 1 g 2 - 8 Hz: 7.5 mm amplitude / 8 - 200 Hz: 2 g / 200 - 500 Hz: 4 g 2 - 8 Hz: 7.5 mm amplitude / 8 - 200 Hz: 2 g / 200 - 500 Hz: 4 g
Shock ⁵⁾ Operation Storage Transport	15 g, 11 ms 30 g, 15 ms 30 g, 15 ms
Protection type	IP20
Altitude Operation	max. 3000 m ⁶⁾ (component-dependent)
Electromagnetic compatibility	
Emissions Network-related emissions Emissions	EN 61000-6-4, EN 55022 A EN 61000-6-4, EN 55011 class A, EN 55022 class A, EN 61131-2, 47 CFR Part 15
Immunity Electrostatic discharge (ESD) High-frequency electromagnetic fields High-speed transient disturbances (Burst) Surges Conducted values Magnetic fields with electrical frequencies Voltage dips, interruptions Damped vibration	EN 61000-6-2, EN 61131-2, EN 55024 EN 61000-6-2, EN 61131-2, EN 55024 EN 61000-6-2, EN 61131-2, EN 55024 EN 61000-6-2, EN 61131-2, EN 55024 EN 61000-6-2, EN 61131-2, EN 55024 EN 61000-6-2, EN 61131-2, EN 55024 EN 61000-6-2, EN 61131-2, EN 55024 EN 61000-6-2, EN 61131-2, EN 55024

Table 23: Technical data - APC620, 2 PCI slot variant (cont.)

1) Maintenance Controller Extended.

- 2) at 50 °C, 8.5 µA of the supplied components and a self discharge of 40%.
- 3) If an SRAM module (Mod.Nr. 5AC600.SRAM-00) is installed, the buffer duration is 2 1/2 years.
- 4) Depending on the process or batch, there may be visible deviations in the color and surface structure.
- 5) Maximum values, as long as no other individual component specify any other.
- 6) Derating the maximum ambient temperature - typically 1°C per 1000 meters (from 500 meters above sea level).

2.2.3 Dimensions

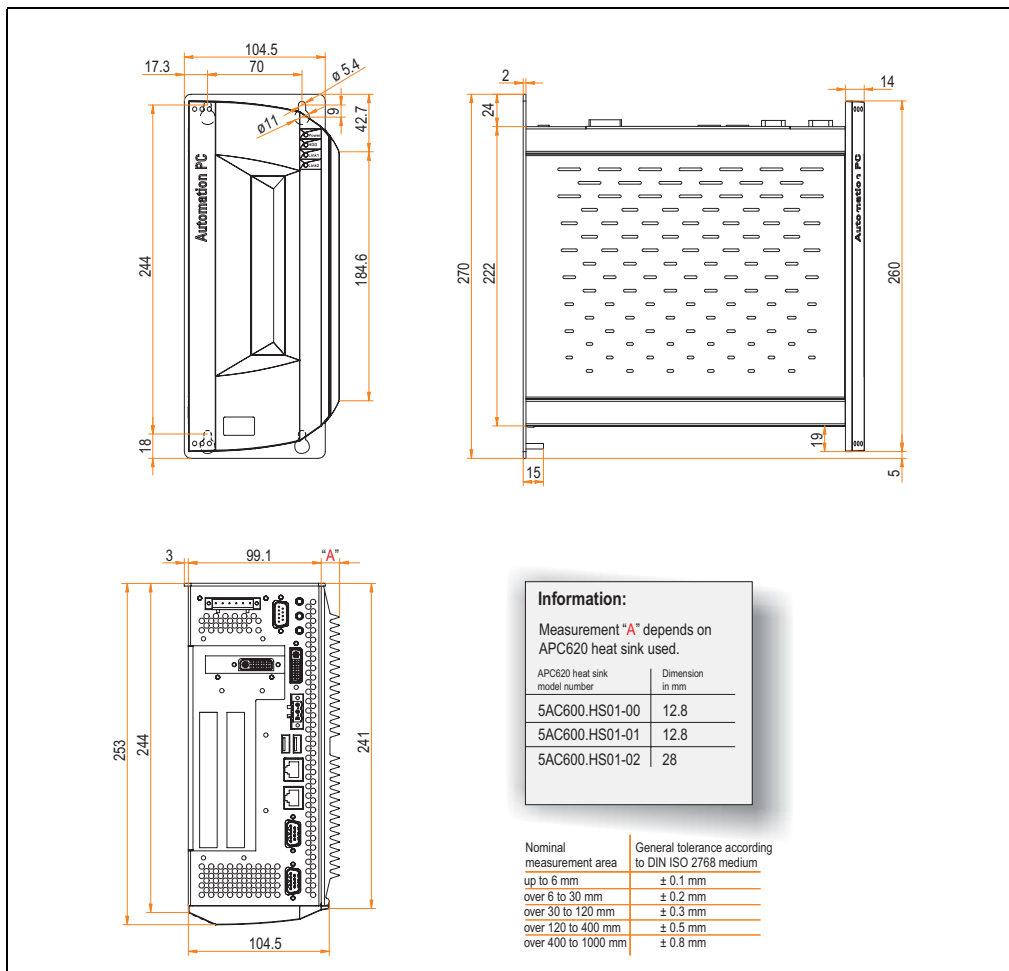


Figure 10: Dimensions - APC620, 2 PCI slot variant

3. Individual components

3.1 System units

All of the individual components of the Automation PC620 system come together inside the system unit. The system unit consists of an APC620 housing with an integrated main board. The housing units are available in variations with 1, 2, 3 and 5 PCI slots and in APC620 embedded. Units with 2, 3 or 5 PCI slots have an additional 1 or 2 slide-in drives, respectively.

3.1.1 APC620 with 1, 2, 3 and 5 PCI slots

Features	5PC600.SX01-00	5PC600.SX02-00	5PC600.SX02-01	5PC600.SF03-00	5PC600.SX05-00	5PC600.SX05-01
Photo						
Serial interfaces Type Amount UART Transfer rate Connection	RS232, modem capable 2 16550 compatible, 16 byte FIFO Max. 115 kBaud 9-pin DSUB, male					
Ethernet Controller Transfer rate Connection	See "Ethernet connection ETH1" on page 118 and "Ethernet connection ETH2" on page 120 10/100 Mbit/s RJ45 twisted pair (10 BaseT / 100 BaseT)					
USB interface Type Amount Transfer rate Connection	USB 2.0 2 Up to 480 Mbit (high speed) Type A					
Monitor / Panel	DVI-I, female					
AC97 sound	Mic., line in, line out					
IF optional slot	1					
PCI slots half-size full-size PCI standard Bus speed	1 - 2.2 33 MHz	2 - 2.2 33 MHz		- 3 2.2 33 MHz	5 - 2.2 33 MHz	
CompactFlash slot 1 (CF1) Internal organization	integrated Primary master					

Table 73: Technical data - 1, 2, 3 and 5 PCI slot types

Technical data • Individual components

Features	5PC600.SX01-00	5PC600.SX02-00	5PC600.SX02-01	5PC600.SF03-00	5PC600.SX05-00	5PC600.SX05-01
Combined CompactFlash slot 2 / hard disk (HDD/CF2) Internal organization	Yes, optional add-on CompactFlash slot or add-on hard disk Primary slave					
Insert for slide-in drive 1 Internal organization	-	Yes Secondary slave				
Insert for slide-in drive 2 Internal organization	-	-	-	-	Yes Secondary master	
APC620 UPS module optional	Yes, starting with Rev. H0	Yes, starting with Rev. G0	Yes, starting with Rev. H0	Yes	Yes, starting with Rev. F0	Yes, starting with Rev. H0
SRAM module optional	Yes, starting with Rev. I0	Yes, starting with Rev. H0	Yes, starting with Rev. K0	Yes	Yes, starting with Rev. H0	Yes, starting with Rev. H0
Reset button	Yes					
Power button	Yes					
PS/2 keyboard/mouse	Yes, combined, will be automatically detected					
Battery slot	Yes					
Hardware security key slot	Yes (DS1425 from MAXIM/Dallas)					
Fan slot	Yes					
Automation Panel link slot	-	1	-	1	1	-
Status LEDs	Power, HDD, Link1, Link2					
Real-time clock (RTC) Battery-buffered Accuracy	Yes See the technical data for CPU boards					
MTCX ¹⁾	Yes					
Electrical characteristics						
Power supply Rated voltage Starting current Power consumption	24 VDC ± 25% Typically 7A Maximum 40 A for < 300 µs See section 2.8 "Power management APC620 system unit with 1 PCI slot".			24 VDC ± 25% Typically 10 A Maximum 40 A for < 300 µs see section 2.10 "Power management APC620 system unit with 3 PCI slots" or 2.11 "Power management APC620 system units with 5 PCI slots"		
Mechanical characteristics						
Housing ²⁾ Material Paint Front cover	Galvanized steel plate Light gray (similar to Pantone 427CV), dark gray (similar to Pantone 432CV) Colored plastic (similar to Pantone 144CV)					
Outer dimensions Width Length Height	65 mm 251 mm 270 mm	104.5 mm 253 mm 270 mm		125 mm 253 mm 410 mm	185.4 mm 253 mm 270 mm	
Weight	Approx. 1.5 kg	Approx. 2.6 kg		Approx. 4.5 kg	Approx. 3.8 kg	
Mounting plates (for M4 screws)	4			4	6	
Drilling templates for mounting	(see chapter 3 "Commissioning", section 1.2 "Drilling templates")					

Table 73: Technical data - 1, 2, 3 and 5 PCI slot types (cont.)

1) Maintenance Controller Extended, for more information, see the section "Maintenance Controller Extended (MTCX)" on page 739.

2) Depending on the process or batch, there may be visible deviations in the color and surface structure.