

SIMATIC S7-1200

Central processing units

CPU 1214C

Overview



- The compact high-performance CPU
- With 24 integral input/outputs
- Expandable by:
 - 1 signal board (SB) or communication board (CB)
 - 8 signal modules (SM)
 - Max. 3 communication modules (CM)

Technical specifications

	6ES7214-1BG40-0XB0 CPU 1214C AC/DC/relay	6ES7214-1AG40-0XB0 CPU 1214C DC/DC/DC	6ES7214-1HG40-0XB0 CPU 1214C DC/DC/relay
Supply voltage 24 V DC		Yes	Yes
120 V AC	Yes		
230 V AC	Yes		
Encoder supply 24 V encoder supply • 24 V	Permissible range: 20.4 to 28.8 V	Permissible range: 20.4 to 28.8 V	Permissible range: 20.4 to 28.8 V
Power losses Power loss, typ.	14 W	12 W	12 W
Memory Work memory • integrated	75 kbyte	75 kbyte	75 kbyte
Load memory • integrated • Plug-in (SIMATIC Memory Card), max.	4 Mbyte 2 Gbyte; with SIMATIC memory card	4 Mbyte 2 Gbyte; with SIMATIC memory card	4 Mbyte 2 Gbyte; with SIMATIC memory card
Backup • without battery	Yes	Yes	Yes
CPU processing times for bit operations, typ.	0.085 µs; / Operation	0.085 µs; / Operation	0.085 µs; / Operation
for word operations, typ.	1.7 µs; / Operation	1.7 µs; / Operation	1.7 µs; / Operation
for floating point arithmetic, typ.	2.3 µs; / Operation	2.3 µs; / Operation	2.3 µs; / Operation
Data areas and their retentivity Flag • Number, max.	8 kbyte; Size of bit memory address area	8 kbyte; Size of bit memory address area	8 kbyte; Size of bit memory address area
Address area Process image • Inputs, adjustable • Outputs, adjustable	1 kbyte 1 kbyte	1 kbyte 1 kbyte	1 kbyte 1 kbyte
Time of day Clock • Hardware clock (real-time clock)	Yes	Yes	Yes

Technical specifications (continued)

	6ES7214-1BG40-0XB0 CPU 1214C AC/DC/relay	6ES7214-1AG40-0XB0 CPU 1214C DC/DC/DC	6ES7214-1HG40-0XB0 CPU 1214C DC/DC/relay
Digital inputs			
Number of digital inputs	14; integrated	14; integrated	14; integrated
• of which, inputs usable for technological functions	6; HSC (High Speed Counting)	6; HSC (High Speed Counting)	6; HSC (High Speed Counting)
Digital outputs			
Number of digital outputs	10; Relays	10	10; Relays
• of which high-speed outputs		4; 100 kHz Pulse Train Output	
Analog inputs			
Integrated channels (AI)	2; 0 to 10 V	2; 0 to 10 V	2; 0 to 10 V
Input ranges			
• Voltage	Yes	Yes	Yes
1st interface			
Interface type	PROFINET	PROFINET	PROFINET
Physics	Ethernet	Ethernet	Ethernet
Functionality			
• PROFINET IO Device	Yes	Yes	Yes
• PROFINET IO Controller	Yes	Yes	Yes
Communication functions			
S7 communication			
• supported	Yes	Yes	Yes
Open IE communication			
• TCP/IP	Yes	Yes	Yes
• ISO-on-TCP (RFC1006)	Yes	Yes	Yes
• UDP	Yes	Yes	Yes
Web server			
• supported	Yes	Yes	Yes
Integrated Functions			
Number of counters	6	6	6
Counter frequency (counter) max.	100 kHz	100 kHz	100 kHz
Frequency meter	Yes	Yes	Yes
controlled positioning	Yes	Yes	Yes
PID controller	Yes	Yes	Yes
Number of alarm inputs	4	4	4
Number of pulse outputs	4	4	4
Limit frequency (pulse)		100 kHz	
Ambient conditions			
Operating temperature			
• Min.	-20 °C	-20 °C	-20 °C
• max.	60 °C	60 °C	60 °C
Configuration			
programming			
• Programming language			
- LAD	Yes	Yes	Yes
- FBD	Yes	Yes	Yes
- SCL	Yes	Yes	Yes
Dimensions			
Width	110 mm	110 mm	110 mm
Height	100 mm	100 mm	100 mm
Depth	75 mm	75 mm	75 mm
Weights			
Weight, approx.	475 g	415 g	435 g