

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

S7-400

6ES7412-1XJ05-0AB0

CPU 412-1 CONTROLLER

Used with the applicable S7-400 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official manufacturer documentation

SIMATIC S7-400

Central processing units

CPU 412

Overview



- The low-cost starter solution for the medium performance range
- Can be used in small and medium-sized systems with requirements of the medium performance range

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Technical specifications

	6ES7 412-1XJ05-0AB0	6ES7 412-2XJ05-0AB0
Product status		
Hardware product status	1	
Firmware version	V5.0	V5.0
associated programming package	STEP7 V5.3 SP2 or higher with HW-update	STEP7 V5.3 SP2 or higher with HW-update
Feeding of external buffer voltage to CPU	5 to 15 V DC	5 to 15 V DC
Current consumption		
from backplane bus DC 5 V, max.	0.6 A	1.1 A
from interface DC 5 V, max.	90 mA; At the DP interface	90 mA; At each DP interface
Current consumption/power loss		
Power loss, typ.	2.5 W	4 W
Backup battery		
• Buffer current, typ.	125 µA; (up to 40 °C)	125 µA; Valid up to 40°C
• Buffer current, max.	550 µA	550 µA; Dealt with in the module data manual with the secondary conditions and the factors of influence
Memory		
Type of storage		
RAM		
• integrated (for program)	144 Kibyte	256 Kibyte
• integrated (for data)	144 Kibyte	256 Kibyte
• expandable	No	No
Load memory		
• expandable FEPRM	Yes	Yes
• expandable FEPRM, max.	64 MByte	64 MByte
• integrated RAM, max.	512 Kibyte	512 Kibyte
• expandable RAM	Yes	Yes
• expandable RAM, max.	64 MByte	64 MByte

	6ES7 412-1XJ05-0AB0	6ES7 412-2XJ05-0AB0
Backup		
• present	Yes	Yes
• with battery	Yes	Yes
• without battery	No	No
CPU/blocks		
DB		
• Number, max.	1 500; Number range: 1 to 16,000	3 000; Number range: 1 to 16,000
• Size, max.	64 Kibyte	64 Kibyte
FB		
• Number, max.	750; Number range: 0 to 7999	1 500; Number range: 0 to 7999
• Size, max.	64 Kibyte	64 Kibyte
FC		
• Number, max.	750; Number range: 0 to 7,999	1 500; Number range: 0 to 7,999
• Size, max.	64 Kibyte	64 Kibyte
OB		
• Size, max.	64 Kibyte	64 Kibyte
Nesting depth		
• per priority class	24	24
• additional within an error OB	1	1
CPU/processing times		
for bit operations, min.	75 ns	75 ns
for word operations, min.	75 ns	75 ns
for fixed point arithmetic, min.	75 ns	75 ns
for floating point arithmetic, min.	225 ns	225 ns