

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

S7-400

6ES7414-4HJ04-0AB0

CPU 414-4H REDUNDANT PROCESSOR

Applicable product family: SIMATIC S7-400H automation systems

OFFICIAL SOURCE

6ES7414-4HJ04-0AB0.pdf

The following pages are selected from the supplied manufacturer document and retain their original page content.



***** Replacement part ***** SIMATIC S7-400H, CPU 414H Central processing unit for S7-400H and S7-400F/FH, 4 interfaces: 1 MPI/DP, 1 DP and 2 for sync modules, 1.4 MB memory (700 KB data/700 KB program)

General information	
Product type designation	CPU 414-4H
Supply voltage	
Rated value (DC)	Power supply via system power supply
Input current	
from backplane bus 5 V DC, typ.	1 800 A
from backplane bus 5 V DC, max.	2 A
Power loss	
Power loss, typ.	4.5 W
Memory	
Type of memory	RAM
Work memory	
• integrated (for program)	700 kbyte
• integrated (for data)	700 kbyte
• expandable	No
Load memory	
• expandable FEPRM	Yes; with Memory Card (FLASH)
• expandable FEPRM, max.	64 Mbyte
• integrated RAM, max.	256 kbyte
• expandable RAM	Yes; with Memory Card (RAM)
• expandable RAM, max.	64 Mbyte
Backup	
• present	Yes
• with battery	Yes; all data
• without battery	No
Battery	
Backup battery	
• Backup current, typ.	550 µA
• Backup current, max.	1 530 µA
• Feeding of external backup voltage to CPU	5 V DC to 15 V DC
CPU processing times	
for bit operations, typ.	0.06 µs
for word operations, typ.	0.06 µs
for fixed point arithmetic, typ.	0.06 µs
for floating point arithmetic, typ.	0.18 µs
CPU-blocks	
DB	
• Number, max.	4 095; DB 0 reserved
• Size, max.	64 kbyte
FB	

• Number, max.	2 048
• Size, max.	64 kbyte
FC	
• Number, max.	2 048
• Size, max.	64 kbyte
OB	
• Number, max.	see instruction list
• Size, max.	64 kbyte
Nesting depth	
• per priority class	24
Counters, timers and their retentivity	
S7 counter	
• Number	2 048
Retentivity	
— adjustable	Yes
— lower limit	0
— upper limit	2 047
— preset	Z 0 to Z 7
Counting range	
— lower limit	0
— upper limit	999
IEC counter	
• present	Yes
• Type	SFB
S7 times	
• Number	2 048
Time range	
— lower limit	10 ms
— upper limit	9 990 s
IEC timer	
• present	Yes
• Type	SFB
Data areas and their retentivity	
Flag	
• Size, max.	8 kbyte
• Retentivity available	Yes; From MB 0 to MB 8 191
• Retentivity preset	MB 0 to MB 15
Address area	
I/O address area	
• Inputs	8 kbyte
• Outputs	8 kbyte
Process image	
• Inputs, adjustable	8 kbyte
• Outputs, adjustable	8 kbyte
• Inputs, default	1 024 byte
• Outputs, default	1 024 byte
Subprocess images	
• Number of subprocess images, max.	8
Digital channels	
• Inputs	65 536
— of which central	65 536
• Outputs	65 536
— of which central	65 536
Analog channels	
• Inputs	4 096
— of which central	4 096
• Outputs	4 096
— of which central	4 096
Hardware configuration	
Number of expansion units, max.	21
Multicomputing	No
Interface modules	
• Number of connectable IMs (total), max.	6