

SIMATIC WINAC SLOT 416 V4.0,
PC BOARD + SW,
SINGLE LICENSE F. 1 INSTALL.,
INCL R-SW, SW AND DOCU. ON CD, CLASS A,
3 LANGUAGES (G,E,F),
EXECUTABLE U. WIN 2000/XP PRO,
REFERENCE-HW: SIMATIC PC

General information	
Hardware product version	01
Firmware version	V4.0
Supply voltage	
24 V DC	Yes ; Safety extra low voltage SELV
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
permissible range (ripple included), lower limit (DC)	18.5 V
permissible range (ripple included), upper limit (DC)	30.2 V
Input current	
from external supply (24 V DC), max.	1 A
from PCI interface (5 V DC), max.	0.8 A
from PCI interface (12 V DC), max.	0.4 A
Power	
with external supply, max.	19 W
with supply from the PC, max.	10 W
Power loss	
Power loss, max.	11 W
Memory	
Work memory	
integrated (for program)	1.6 Mbyte
integrated (for data)	1.6 Mbyte
Load memory	
expandable FEPRM	Yes
expandable FEPRM, max.	64 Mbyte
integrated RAM, max.	356 kbyte
expandable RAM	Yes
expandable RAM, max.	64 Mbyte

Battery	
Backup battery	
Backup battery	
Voltage	3.6 V
Backup current, typ.	900 µA
Backup current, max.	1950 µA
Backup time, min.	740 h
Backup time, typ.	1610 h
CPU processing times	
for bit operations, typ.	0.04 µs
for fixed point arithmetic, typ.	0.04 µs
for floating point arithmetic, typ.	0.12 µs
CPU-blocks	
DB	
Number, max.	4095
Size, max.	64 kbyte
FB	
Number, max.	2048
Size, max.	64 kbyte
FC	
Number, max.	2048
Size, max.	64 kbyte
OB	
Size, max.	64 kbyte
Number of time alarm OBs	8
Number of delay alarm OBs	4
Number of time interrupt OBs	9
Number of process alarm OBs	8
Nesting depth	
per priority class	24
additional within an error OB	2
Counters, timers and their retentivity	
S7 counter	
Number	2048
Retentivity	
adjustable	Yes
lower limit	0
upper limit	2047

preset	Z 0 to Z 7
Counting range	
adjustable	Yes
lower limit	1
upper limit	999
IEC counter	
present	Yes
Type	SFB
S7 times	
Number	2048
Retentivity	
lower limit	0
upper limit	2047
preset	No times retentive
Time range	
lower limit	10 ms
upper limit	9990 s
IEC timer	
present	Yes
Type	SFB
Data areas and their retentivity	
Retentivity without UPS and PS Extension Board	none
Retentivity with UPS	none
Retentivity with PS extension board and battery	Total working and load memory (with backup battery)
Flag	
Number, max.	16 kbyte
of which retentive	MB 0 to MB 16383
Retentivity preset	MB 0 to MB 15
Number of clock memories	8
Address area	
I/O address area	
Inputs	16 kbyte
Outputs	16 kbyte
of which distributed	
MPI/DP interface, inputs	2 kbyte
MPI/DP interface, outputs	2 kbyte
DP interface, inputs	8 kbyte
DP interface, outputs	8 kbyte

Process image	
Inputs, adjustable	16 kbyte
Outputs, adjustable	16 kbyte
Inputs, default	512 byte
Outputs, default	512 byte
Subprocess images	
Number of subprocess images, max.	15
Digital channels	
Inputs	80000
Outputs	80000
Analog channels	
Inputs	5000
Outputs	5000
Hardware configuration	
Number of single-width slots, max.	1
Number of DP masters	
overall	2
integrated	2
Number of operable FMs and CPs (recommended)	
FM	FM distributed: FM 350-1 / 350-2, FM 351, FM 352, FM 353, FM 355 / 355-2
CP, point-to-point	CP 340, CP 341 distributed
CP, LAN	Over PC CP
Slots	
required slots	1 ; PCI, PCI format: 3/4
Time of day	
Clock	
Hardware clock (real-time clock)	Yes
battery-backed and synchronizable	Yes
Operating hours counter	
Number	8
Clock synchronization	
supported	Yes
to PC-CP, slave	Yes
to MPI, master	Yes
to MPI, slave	Yes
1. Interface	
Interface type	RS 485 / PROFIBUS

Physics	RS 485
isolated	Yes
Functionality	
MPI	Yes
DP master	Yes
DP slave	Yes
MPI	
Number of connections	44
Transmission rate, max.	12 Mbit/s
Services	
PG/OP communication	Yes
Routing	Yes
Global data communication	Yes
S7 basic communication	Yes
S7 communication	Yes
DP master	
Number of connections, max.	32
Transmission rate, max.	12 Mbit/s
Number of DP slaves, max.	32
Services	
PG/OP communication	Yes
Routing	Yes
Global data communication	No
S7 basic communication	Yes
S7 communication	Yes
Equidistance mode support	Yes
SYNC/FREEZE	Yes
Activation/deactivation of DP slaves	Yes
Direct data exchange (slave-to-slave communication)	Yes
DPV0	Yes
DPV1	Yes
Address area	
Inputs, max.	2 kbyte
Outputs, max.	2 kbyte
User data per DP slave	
Inputs, max.	244 byte
Outputs, max.	244 byte
DP slave	

Services	
Routing	Yes
2. Interface	
Interface type	RS 485 / PROFIBUS
Physics	RS 485
isolated	Yes
Functionality	
MPI	No
DP master	Yes
DP slave	Yes
DP master	
Number of connections, max.	32 ; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1
Transmission rate, max.	12 Mbit/s
Number of DP slaves, max.	125
Services	
PG/OP communication	Yes
Routing	Yes
Global data communication	No
S7 basic communication	Yes
S7 communication	Yes
Equidistance mode support	Yes
SYNC/FREEZE	Yes
Activation/deactivation of DP slaves	Yes
Direct data exchange (slave-to-slave communication)	Yes
DPV0	Yes
DPV1	Yes
Address area	
Inputs, max.	8 kbyte
Outputs, max.	8 kbyte
User data per DP slave	
Inputs, max.	244 byte
Outputs, max.	244 byte
DP slave	
Services	
PG/OP communication	Yes
Routing	Yes
Isochronous mode	
Isochronous mode (application synchronized up to terminal)	Yes

Number of DP masters with isochronous mode	2
User data per isochronous slave, max.	244 byte
Equidistance	Yes
shortest clock pulse	1.5 ms
Communication functions	
PG/OP communication	Yes
Global data communication	
supported	Yes
S7 basic communication	
supported	Yes
S7 communication	
as server	Yes
as client	Yes
Number of connections	
overall	64
usable for PG communication	
reserved for PG communication	1
usable for OP communication	
reserved for OP communication	1
S7 message functions	
Number of login stations for message functions, max.	12
SCAN procedure	Yes
Process diagnostic messages	Yes
Alarm 8-blocks	Yes
Process control messages	Yes
Test commissioning functions	
Status block	Yes
Single step	Yes
Status/control	
Status/control variable	Yes
Forcing	
Forcing	Yes
Diagnostic buffer	
present	Yes
Number of entries, max.	
preset	120
Hardware requirements	
Hardware required	PC with color monitor, keyboard, mouse or pointing device for Windows

Main memory, min.	128 Mbyte
required memory on hard disk, min.	60 Mbyte
Processor	Intel Pentium 800 MHz
Operating systems	
Windows NT 4.0	No
Windows 2000	Yes ; SP3 or higher
Windows XP	Yes ; SP1 and SP2
Configuration	
Configuration software	
STEP 7	Yes ; V5.3 SP2 or higher
Programming	
Nesting levels	7
Programming language	
LAD	Yes
FBD	Yes
STL	Yes
SCL	Yes
CFC	Yes
GRAPH	Yes
HiGraph®	Yes
Software libraries	
Easy Motion Control	Yes
Know-how protection	
User program protection/password protection	Yes
Open Development interfaces	
CCX (Custom Code Extension)	No
CMI (Controller Management Interface)	Yes
SMX (Shared Memory Extension)	Yes
Inputs	4 kbyte
Outputs	4 kbyte
Dimensions	
Width	98 mm
Height	288 mm
Weights	
Weight, approx.	300 g
Status	Jul 21, 2014