SIEMENS PLC SIMATIC S7-1500CPU 1513F-1 PN 6ES7513-1FL02-0AB0 MEMORY CARD NECESSARY

Our Product Introduction

Basic Information

- Place of Origin: Germany
- Brand Name: SIEMENS
- Certification: CE
- Model Number: PLC SIMATIC S7-1500CPU 1513F-1 PN 6ES7513-1FL02-0AB0
- Minimum Order Quantity: 1
- Price: USD
- Packaging Details: 15,10 x 15,40 x 4,60
- Delivery Time: 10-12Days
- Payment Terms: L/C, T/T
- Supply Ability: 100

Product Specification

- Number Of Communication Modules: 8 CM
- Cpu Type: S7-1500
- Number Of Digital Outputs: 32 DO
- Number Of Analog Inputs: 8 AI
- Programming Software: TIA Portal
- Number Of Analog Outputs: 8 AO
- Integrated Functions: Web Server, OPC UA Server, Security
- Number Of Technology Modules: 32 TM
- Number Of Motion Control Axes: 32 MC
- Number Of Digital Inputs: 32 DI
- Power Supply: 24 V DC
- Operating System: Windows 7/10

Product Description

SIEMENS PLC SIMATIC S7-1500CPU 1513F-1 PN 6ES7513-1FL02-0AB0 MEMORY CARD NECESSARY

Product Introduction:

The SIEMENS PLC SIMATIC S7-1500 CPU 1513-1 FL 6ES7513-1FL02-0AB0 is a central processing unit (CPU) specifically designed for industrial automation applications. It belongs to the SIEMENS SIMATIC S7-1500 series, renowned for its advanced functionality, high performance, and reliability.

Product Information and Specifications:

- Model: CPU 1513-1 FL 6ES7513-1FL02-0AB0

The CPU 1513-1 FL is equipped with a powerful processor that ensures fast and efficient execution of control programs. It supports multiple programming languages, including ladder logic, function blocks, and structured text, providing flexibility and ease of use for complex control tasks.

In terms of memory capacity, the CPU 1513-1 FL offers ample storage space for both program and data. While specific details were not provided in the query, typical configurations of the CPU include program memory ranging from 300 KB to 900 KB and data memory ranging from 200 KB to 500 KB. This memory capacity allows users to store their control programs and necessary data structures for the PLC's operation.

Designed to operate in demanding industrial environments, the CPU 1513-1 FL delivers reliable and precise control for applications such as manufacturing, process control, and machine automation. It supports a wide range of communication interfaces, facilitating seamless integration with other devices and systems within the automation network.

The CPU 1513-1 FL is typically programmed and configured using Siemens' TIA Portal (Totally Integrated Automation Portal) software. The TIA Portal provides a comprehensive engineering environment for efficient programming, simulation, and diagnostics, ensuring easy development and maintenance of automation projects.

Product Attributes:

- Model: CPU 1513-1 FL 6ES7513-1FL02-0AB0
- Processor: Powerful processor for fast and efficient control program execution
- Programming Languages: Supports ladder logic, function blocks, and structured text
- Memory Capacity: Sufficient storage space for program and data
- Communication Interfaces: Supports various communication interfaces
- Engineering Software: Programmed and configured using Siemens' TIA Portal
- Suitable for: Manufacturing, process control, and machine automation applications

In summary, the SIEMENS PLC SIMATIC S7-1500 CPU 1513-1 FL 6ES7513-1FL02-0AB0 is a dependable CPU featuring advanced functionality, ample memory capacity, and seamless communication capabilities. It offers efficient and precise control for various industrial processes, making it well-suited for a wide range of industrial automation applications.

General information	
Product type designation	CPU 1513F-1 PN
HW functional status	FS03
Firmware version	V2.9
Product function	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	Yes; Distributed and central; with minimum OB 6x cycle of 500 μs (distributed) and 1 ms (central)
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	V17 (FW V2.9) / V15 (FW V2.5) or higher; with older TIA Portal versions configurable as 6ES7513-1FL01-0AB0
Configuration control	
via dataset	Yes
Display	
Screen diagonal [cm]	3.45 cm
Control elements	
Number of keys	8
Mode buttons	2
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Mains buffering	
● Mains/voltage failure stored energy time	5 ms
● Repeat rate, min.	1/s
Input current	
Current consumption (rated value)	0.7 A
Current consumption, max.	0.95 A
Inrush current, max.	1.9 A; Rated value
I²t	0.02 A²·s
Power	
Infeed power to the backplane bus	10 W

Power consumption from the backplane bus (balanced)	5.5 W
Power loss	
Power loss, typ.	5.7 W
Memory	
Number of slots for SIMATIC memory card	1
SIMATIC memory card required	Yes
Work memory	
● integrated (for program)	450 kbyte
● integrated (for data)	1.5 Mbyte
Load memory	
● Plug-in (SIMATIC Memory Card), max.	32 Gbyte
Backup	
● maintenance-free	Yes
CPU processing times	
for bit operations, typ.	40 ns
for word operations, typ.	48 ns
for fixed point arithmetic, typ.	64 ns
for floating point arithmetic, typ.	256 ns
CPU-blocks	
Number of elements (total)	4 000; Blocks (OB, FB, FC, DB) and UDTs
DB	
● Number range	1 ... 60 999; subdivided into: number range that can be used by the user: 1 ... 59 999, and number range of DBs created via SFC 86: 60 000 ... 60 999
● Size, max.	1.5 Mbyte; For DBs with absolute addressing, the max. size is 64 KB
FB	
● Number range	0 ... 65 535
● Size, max.	450 kbyte
FC	
● Number range	0 ... 65 535
● Size, max.	450 kbyte
OB	
● Size, max.	450 kbyte
● Number of free cycle OBs	100
● Number of time alarm OBs	20
● Number of delay alarm OBs	20
● Number of cyclic interrupt OBs	20; With minimum OB 3x cycle of 500 μs
● Number of process alarm OBs	50
● Number of DPV1 alarm OBs	3
● Number of isochronous mode OBs	2
● Number of technology synchronous alarm OBs	2
● Number of startup OBs	100
● Number of asynchronous error OBs	4
● Number of synchronous error OBs	2
● Number of diagnostic alarm OBs	1
Nesting depth	
● per priority class	24; Up to 8 possible for F-blocks
Counters, timers and their retentivity	
S7 counter	

● Number	2 048
Retentivity	
— adjustable	Yes
IEC counter	
● Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
S7 times	
● Number	2 048
Retentivity	
— adjustable	Yes
IEC timer	
● Number	Any (only limited by the main memory)
Retentivity	
— adjustable	Yes
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	128 kbyte; In total; available retentive memory for bit memories, timers, counters, DBs, and technology data (axes): 88 KB
Extended retentive data area (incl. timers, counters, flags), max.	1.5 Mbyte; When using PS 6 0W 24/48/60 V DC HF
Flag	
● Size, max.	16 kbyte
● Number of clock memories	8; 8 clock memory bit, grouped into one clock memory byte
Data blocks	
● Retentivity adjustable	Yes
● Retentivity preset	No
Local data	
● per priority class, max.	64 kbyte; max. 16 KB per block
Address area	
Number of IO modules	2 048; max. number of modules / submodules
I/O address area	
● Inputs	32 kbyte; All inputs are in the process image
● Outputs	32 kbyte; All outputs are in the process image
per integrated IO subsystem	
— Inputs (volume)	8 kbyte
— Outputs (volume)	8 kbyte
per CM/CP	
— Inputs (volume)	8 kbyte
— Outputs (volume)	8 kbyte
Subprocess images	
● Number of subprocess images, max.	32
Hardware configuration	
Number of distributed IO systems	32; A distributed I/O system is characterized not only by the integration of distributed I/O via PROFINET or PROFIBUS communication modules, but also by the connection of I/O via AS-i master modules or links (e.g. IE/PB-Link)
Number of DP masters	
● Via CM	6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total
Number of IO Controllers	
● integrated	1
● Via CM	6; A maximum of 6 CMs (PROFINET + PROFIBUS) can be inserted in total
Rack	
● Modules per rack, max.	32; CPU + 31 modules
● Number of lines, max.	1
PtP CM	
● Number of PtP CMs	the number of connectable PtP CMs is only limited by the number of available slots
Time of day	
Clock	
● Type	Hardware clock
● Backup time	6 wk; At 40 °C ambient temperature, typically
● Deviation per day, max.	10 s; Typ.: 2 s
Operating hours counter	

● Number	16
Clock synchronization	
● supported	Yes
● in AS, master	Yes
● in AS, slave	Yes
● on Ethernet via NTP	Yes
Interfaces	
Number of PROFINET interfaces	1
1. Interface	
Interface types	
● RJ 45 (Ethernet)	Yes; X1
● Number of ports	2
● integrated switch	Yes
Protocols	
● IP protocol	Yes; IPv4
● PROFINET IO Controller	Yes
● PROFINET IO Device	Yes
● SIMATIC communication	Yes
● Open IE communication	Yes; Optionally also encrypted
● Web server	Yes
● Media redundancy	Yes; MRP Automanager according to IEC 62439-2 Edition 2.0
PROFINET IO Controller	
Services	
— PG/OP communication	Yes
— Isochronous mode	Yes
— Direct data exchange	Yes; Requirement: IRT and isochronous mode (MRPD optional)
— IRT	Yes
— PROFIenergy	Yes; per user program
— Prioritized startup	Yes; Max. 32 PROFINET devices
— Number of connectable IO Devices, max.	128; In total, up to 512 distributed I/O devices can be connected via AS-i, PROFIBUS or PROFINET
— Of which IO devices with IRT, max.	64
— Number of connectable IO Devices for RT, max.	128
— of which in line, max.	128
— Number of IO Devices that can be simultaneously activated/deactivated, max.	8; in total across all interfaces
— Number of IO Devices per tool, max.	8
— Updating times	The minimum value of the update time also depends on communication share set for PROFINET IO, on the number of IO devices, and on the quantity of configured user data
Update time for IRT	
— for send cycle of 250 µs	250 µs to 4 ms; Note: In the case of IRT with isochronous mode, the minimum update time of 500 µs of the isochronous OB is decisive
— for send cycle of 500 µs	500 µs to 8 ms
— for send cycle of 1 ms	1 ms to 16 ms
— for send cycle of 2 ms	2 ms to 32 ms
— for send cycle of 4 ms	4 ms to 64 ms
— With IRT and parameterization of "odd" send cycles	Update time = set "odd" send clock (any multiple of 125 µs: 375 µs, 625 µs ... 3 875 µs)

Dimensions	
Width	35 mm
Height	147 mm

Depth	129 mm
Weights	
Weight, approx.	405 g