Siemens 6ES5946-3UA22

Complete Product Information

Siemens 6ES5946-3UA22 is a CPU 946 F central processing unit for the SIMATIC S5-155U programmable controller. It executes the STEP 5 control program and coordinates the controller's rack-based automation tasks.

PRODUCT ROLE AND VERIFIED FEATURES

Feature 1

Identified by Siemens as a SIMATIC S5 CPU 946 F central processing unit.

Feature 2

Assigned to the S5-155U programmable-controller platform.

Feature 3

Executes the stored STEP 5 user program and controller operating functions.

Feature 4

Interfaces with the S5 rack, memory and I/O resources used by the installed controller.

VERIFIED DATA SNAPSHOT

Product family	SIMATIC S5
Processor type	CPU 946 F
Controller system	S5-155U
Programming environment	STEP 5

SYSTEM RELATIONSHIP

Field device → **Product interface** → **System channel** → **Verified response**

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Product dossier

Siemens 6ES5946-3UA22 is a CPU 946 F central processing unit for the SIMATIC S5-155U programmable controller. It executes the STEP 5 control program and coordinates the controller's rack-based automation tasks.

VERIFIED IDENTITY AND ROLE

Product family	SIMATIC S5
Processor type	CPU 946 F
Controller system	S5-155U
Programming environment	STEP 5
Module role	Central processing unit
Lifecycle	Discontinued product

PRODUCT CHARACTERISTICS

- Identified by Siemens as a SIMATIC S5 CPU 946 F central processing unit.
- Assigned to the S5-155U programmable-controller platform.
- Executes the stored STEP 5 user program and controller operating functions.
- Interfaces with the S5 rack, memory and I/O resources used by the installed controller.

SELECTION BOUNDARY

Article identity	Use the complete 6ES5946-3UA22 ordering string.
Processor designation	Confirm the CPU 946 F marking.
Controller platform	Apply only to the documented SIMATIC S5-155U system.
Engineering environment	Retain the approved STEP 5 project and operating record.

IMPORTANT NOTICE	Use the complete article number and verify the intended SIMATIC system before installation.

System context and applications

Field device → Product interface → System channel → Verified response

DOCUMENTED SYSTEM RELATIONSHIP

The cpu module serves a defined role in its documented SIMATIC system. Match the rack, interfaces, configuration and program safeguards before the controlled system returns to service.

COMMON APPLICATIONS

Legacy machine control

Run the existing STEP 5 control program in a maintained S5-155U rack.

Process sequencing

Coordinate deterministic logic, interlocks and output decisions in the installed controller.

Plant maintenance

Restore the documented processor position without changing the approved application program.

System recovery

Return the controller to its recorded startup state after an exact-article replacement.

CONFIGURATION RECORDS TO PRESERVE

Rack position	Record the installed slot and adjacent module arrangement.
Program assets	Preserve the STEP 5 user program and hardware configuration.
Memory media	Identify installed memory media before transfer or replacement.
Interfaces	Label every connected interface before removal.
Operating state	Record CPU mode, indicators and the approved startup condition.

SERVICE INFORMATION PATH

Engineering record	The verified STEP 5 project defines the controlled program and hardware setup.
Installed record	Rack position, memory media and interface labels connect the article to its physical location.
Acceptance record	Startup status, I/O communication and machine response provide the release evidence.

Operation, service and recovery

CONTROLLED SERVICE SEQUENCE

1 — Identify	Compare the complete article number and CPU designation with the work order.
2 — Safeguard	Back up the program, configuration and operating parameters.
3 — Record	Document slot, switches, memory media and interface connections.
4 — Isolate	Remove power and apply the site's electrostatic-discharge controls.
5 — Install	Seat the verified module and restore recorded interfaces and settings.
6 — Validate	Check CPU mode, indicators, I/O communication and machine interlocks.

PRODUCT PRECAUTIONS

01	Confirm the complete 6ES5946-3UA22 article number and CPU 946 F designation before removing the installed CPU.
02	Verify that the host controller is the documented S5-155U platform.
03	Back up the STEP 5 user program, hardware configuration and operating parameters.
04	Record rack slot, switch positions, memory media and interface connections.
05	Remove power and follow site electrostatic-discharge controls before handling the module.
06	Do not transfer memory media until the required CPU state and site procedure are confirmed.
07	Check startup indicators, controller mode and I/O communication after installation.
08	Validate interlocks and the controlled machine sequence before returning outputs to service.

RECOVERY DECISION POINTS

CPU does not reach the recorded mode	Recheck module seating, memory media and the approved startup procedure.
I/O communication is incomplete	Review rack interfaces, connected resources and the retained hardware configuration.
Controlled sequence differs	Stop release and compare the restored STEP 5 project with the verified backup.

Acceptance record and support

RELEASE EVIDENCE

Identity	6ES5946-3UA22 and CPU 946 F markings verified.
System	Installed position confirmed in the intended S5-155U rack.
Program	STEP 5 project and controlled configuration restored from the verified record.
Communication	Rack and I/O communication checked after startup.
Functional response	Interlocks and the intended machine sequence accepted before output release.
Service record	Technician, date, observed status and final disposition recorded.

MODEL-SPECIFIC QUESTIONS

What processor type is Siemens 6ES5946-3UA22?	It is the Siemens SIMATIC S5 CPU 946 F central processing unit.
Which controller platform uses Siemens 6ES5946-3UA22?	Siemens assigns it to the S5-155U programmable-controller system.
Which programming environment applies to Siemens 6ES5946-3UA22?	The controller application uses the SIMATIC STEP 5 environment.

RELATED SIEMENS MODELS

Siemens 6ES5928-3UB21	Related product reference. Review the complete ordering string before selection.
Siemens 6ES5470-4UA12	Related product reference. Compare the required interface and system position.
Siemens 6ES5465-4UA12	Related product reference. Confirm the execution independently for the intended task.

SOURCE AND CONTACT

Manufacturer source	Siemens Industry Mall product record for 6ES5946-3UA22
Evidence boundary	Technical statements are limited to the identified product or applicable manufacturer family.
Selection control	Use the complete ordering string and verify the installed system before purchase or installation.

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