Siemens TI435-CPU
Technical Reference

TECHNICAL IDENTITY

Product function	central processing unit
System family	SIMATIC TI 405
Complete identity	TI435-CPU
Technical scope	Signal, power, communication and configuration characteristics

VALIDATED SPECIFICATIONS

Alternate identifier	435-CPU
System family	SIMATIC TI 405
Module role	PLC CPU
Programming family	DirectSOFT compatible
Communication connectors	15-pin upper; 25-pin lower
Supported protocols	DirectNET, K-sequence and Modbus by port configuration
Configuration basis	Preserve assigned settings
Acceptance focus	Confirm end-to-end response

MODEL-SPECIFIC VERIFICATION POINTS

Installed execution	Match the complete TI435-CPU marking and suffix.
Signal boundary	Confirm the source and destination assigned to the central processing unit path.
Configuration baseline	Retain range, scaling, address and diagnostic behavior.
Acceptance result	Verify stable status plus the expected end-to-end response.

ApterPower product support
Scan for model-specific assistance.

Functional architecture

SIGNAL AND SYSTEM BOUNDARY

Input boundary Confirm the installed source and electrical class before connecting TI435-CPU.	Processing role The module performs the central processing unit function inside SIMATIC TI 405.
Output boundary Match the receiving channel, load or communication endpoint.	Configuration boundary Retain range, scaling, addressing and status handling assigned to this position.

PARAMETER INTERPRETATION

Alternate identifier	435-CPU — verify this value against the installed interface.
System family	SIMATIC TI 405 — verify this value against the installed interface.
Module role	PLC CPU — verify this value against the installed interface.
Programming family	DirectSOFT compatible — verify this value against the installed interface.
Communication connectors	15-pin upper; 25-pin lower — verify this value against the installed interface.
Supported protocols	DirectNET, K-sequence and Modbus by port configuration — verify this value against the installed interface.
Configuration basis	Preserve assigned settings — verify this value against the installed interface.
Acceptance focus	Confirm end-to-end response — verify this value against the installed interface.

DATA PATH CHECKS

Source Stable source condition with correct common or reference.	Conversion Expected module status and configured engineering range.
Transfer Correct backplane, network or rack ownership.	Destination Expected controller value, output response or operator indication.

Interfaces and compatibility

INTERFACE REQUIREMENTS

Electrical class	Match the installed voltage, current or communication standard.
Channel ownership	Retain every configured channel and terminal assignment.
Reference potential	Restore commons, shields and protective grounding as designed.
Connector fit	Inspect keys, latches and mating contacts before insertion.
Software mapping	Keep the original address, tag ownership and diagnostic mapping.
System state	Use the approved maintenance state during replacement.
Compatibility	Confirm the receiving rack and surrounding module execution.
Response	Prove the complete path under a controlled input or command.

INTEGRATION CONTEXTS

Installed-base maintenance Restore the assigned central processing unit position without changing the surrounding system design.	Loop and channel service Retain terminal assignments, scaling and channel ownership during controlled replacement.
Fault isolation Separate module, field wiring and configuration causes during troubleshooting.	Commissioning Prove the complete signal path before returning the process to service.

DIAGNOSTIC FOCUS

Status indication Review ready, fault and communication indications.	Static value Compare the resting value with the retained process reference.
Dynamic value Apply an approved change and observe proportional tracking.	Alarm path Confirm expected alarm, interlock and operator indications.

Technical verification plan

BENCH AND FIELD CHECKS

Identity check	Read the complete TI435-CPU marking and suffix.
Unpowered inspection	Check terminal condition, contamination and mechanical damage.
Continuity check	Confirm conductors, commons and shields against the saved connection map.
Power check	Verify supply level and polarity before module insertion.
Configuration check	Compare retained range, scaling, address and status settings.
Static test	Confirm a stable idle value or state.
Dynamic test	Drive a controlled change through the full signal path.
Release test	Verify diagnostics, alarms, interlocks and operator visibility.

ACCEPTANCE CRITERIA

Mechanical Module seated, keyed and latched without strain.	Electrical Supply, polarity, reference and shielding verified.
Logical Address, range, scaling and channel ownership restored.	Functional End-to-end response agrees with the process reference.

ENGINEERING LIMITS

Substitution	Do not substitute a nearby suffix without verifying every interface.
Field modification	Do not alter calibrated or keyed hardware.
Mixed systems	Confirm rack, terminal and software compatibility before energization.
Release authority	Return the loop or controller only after the acceptance test passes.

Technical selection summary

MODEL-SPECIFIC DECISION POINTS

Alternate identifier	435-CPU must agree with the intended central processing unit position.
System family	SIMATIC TI 405 must agree with the intended central processing unit position.
Module role	PLC CPU must agree with the intended central processing unit position.
Programming family	DirectSOFT compatible must agree with the intended central processing unit position.
Communication connectors	15-pin upper; 25-pin lower must agree with the intended central processing unit position.
Supported protocols	DirectNET, K-sequence and Modbus by port configuration must agree with the intended central processing unit position.
Configuration basis	Preserve assigned settings must agree with the intended central processing unit position.
Acceptance focus	Confirm end-to-end response must agree with the intended central processing unit position.

RELATED SIEMENS TECHNICAL PAGES

Siemens 6ES5451-4UA13	https://www.apterpower.com/Siemens/Siemens-Simatic-S5/6es5451-4ua13
Siemens 6ES5431-7LA11	https://www.apterpower.com/Siemens/Siemens-Simatic-S5/6es5431-7la11

SELECTION CHECKLIST

Model	TI435-CPU
Platform	SIMATIC TI 405
Assigned role	central processing unit
Interfaces	Match source, destination and terminal hardware
Configuration	Match range, scaling, address and diagnostics
Acceptance	Confirm static, dynamic and alarm response