Siemens 6GK1543-1AA01

01 Station roles

1 Record the S5 communication role

Capture the S5 CPU, CP slot and partner station configuration. Identify whether the installed application follows the passive-partner arrangement or another engineered role before altering any communication settings.

2 Secure data-dependent functions

Place equipment that depends on exchanged data in its approved maintenance state. Determine the response to stale or missing data so a communication interruption cannot leave an unintended command active.

Processor family	CP 5431
Controller platform in the verified arrangement	SIMATIC S5-135U/155U

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02 Partner and payload

1 Retain partner addressing

Save the PROFIBUS and application partner settings at both stations. Compare protocol and SDA service selection, because matching cable connections alone do not establish a valid FDL exchange.

2 Inspect the project-specific header

Record how the application forms its addressing header and user-data area. Treat the six-byte demonstration as an example only; preserve the actual installed data length and interpretation.

Bus system	PROFIBUS
Communication protocol	FDL with free layer 2 access

03 Receive/send sequencing

1 Review receive completion logic

Check the RECEIVE job and its completion/error handling before the buffer is used. Ensure the application does not copy or return partially received data when communication is interrupted or a job is retried.

2 Review send-job handling

Retain the SEND request sequence and its response to busy or error states. Confirm that the return path sends the intended buffer and does not repeatedly transmit an obsolete value after a fault.

Acknowledged service	SDA, Send Data with Acknowledge
Station role in the example	Passive S5 partner

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04 Startup and bus

1 Restore startup synchronization

Follow the commissioned S5 startup and CP synchronization arrangement. Compare startup blocks and retained configuration so a CPU restart reestablishes the intended communication state.

2 Check the physical PROFIBUS path

Inspect connectors, termination and cable routing using the applicable PROFIBUS installation procedure. Resolve physical-layer faults before modifying application data logic to compensate for unreliable communication.

S5 receive block in the example	FB121 RECEIVE
S5 send block in the example	FB120 SEND

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05 Bidirectional acceptance

1 Exchange a controlled test value

Change a permitted test value at the active partner and compare the received and returned values. Observe job status at both stations to distinguish successful transport from correct application interpretation.

2 Release the linked stations

Record partner settings, data mapping and successful bidirectional-test results. Restore normal process data only after both station applications handle communication loss and recovery as intended.

Technical basis: Siemens Communication between SIMATIC S5 and S7, application 48394001 V1.0.

Related product navigation

Siemens 6ES7212-1AF40-0XB0

Siemens 6ES7234-4HE32-0XB0

These are related references, not confirmed substitutes or an automatically approved assembly.