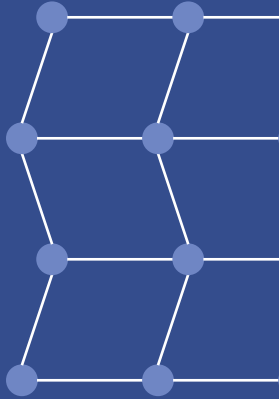


MANUFACTURER-SOURCE TECHNICAL REFERENCE

ABB TB521-ETH 1SAP112100R0170

Product Reference

ABB AC500 CPU terminal base for one CPU and two communication modules with Ethernet RJ45



DOCUMENT SCOPE

Independent Apter Power manual compiled only from the cited ABB manufacturer sources. No product photograph is included.

Product / lookup identity	ABB TB521-ETH 1SAP112100R0170
Reference number	1SAP112100R0170
Document basis	Published ABB product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/ABB/tb521-eth-1sap112100r0170>
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Product role and published parameters

WHAT IT IS, WHAT IT DOES, AND WHERE IT FITS

ABB TB521-ETH, order number 1SAPI12100R0170, is an AC500 CPU terminal base that accepts one processor module and two plug-in communication modules and provides an Ethernet RJ45 connection. It forms the electrical and mechanical base of an AC500 station by connecting the installed CPU and communication modules, distributing the documented 24 V DC supply, and linking the first S500 I/O terminal unit through the I/O-Bus. System context: ABB AC500 CPU terminal base for one CPU and two communication modules with Ethernet RJ45.

Published field	Manufacturer-published value or verified identity note
Product type	AC500 CPU terminal base
Model	TB521-ETH
Order number	1SAPI12100R0170
CPU slots	1
Communication-module slots	2
Network interface	Ethernet RJ45; must match a PM5xx-ETH CPU
Other interfaces	I/O-Bus, COM1, COM2, FBP

System function and signal path

01	Power: A 24 V DC supply is connected through the 5-pole removable terminal block. ABB warns that process or supply voltage above 30 V DC can irreparably damage the system.
02	Io Bus: Transfers I/O and diagnostic data between the installed AC500 CPU and S500 expansion modules; the base provides the physical I/O-Bus connection.
03	Com1: With the compatible CPU, COM1 can support RS-232 programming/online access, free protocol, Modbus RTU master or slave, or CS31 master over RS-485.
04	Com2: With the compatible CPU, COM2 can support RS-232 programming/online access, free protocol, or Modbus RTU master or slave; ABB states COM2 is not intended for a CS31 system bus.

Applications, answers, and official sources

1 Networked AC500 controller station: Hosts one PM5xx-ETH CPU and exposes its Ethernet RJ45 connection for programming and documented industrial communications.

2 Multi-protocol machine control: Provides COM1, COM2, Ethernet, and FieldBusPlug connection points for a configured AC500 controller in production machinery and process skids.

3 Local S500 I/O expansion: Links the CPU to S500 expansion modules over the I/O-Bus for field-signal acquisition and actuation performed by the installed I/O modules.

4 Industrial PLC control panels: Supports documented AC500 panels for conveyors, pumps, packaging, material handling, water systems, and process auxiliaries when the exact CPU and module compatibility is confirmed.

Frequently asked questions

What is ABB TB521-ETH ISAP112100R0170?	It is an AC500 CPU terminal base for one CPU and two communication modules with an Ethernet RJ45 connection.
Does TB521-ETH execute the PLC program?	No. The installed AC500 CPU executes the application; the base provides slots, terminals, and interface connections.
How many communication modules fit?	ABB documents two communication-module slots for TB521.
Which network connection is provided?	The ETH variant provides an Ethernet RJ45 interface that must match a PM5xx-ETH CPU.
Which other interfaces are available?	ABB lists I/O-Bus, COM1, COM2, and a fieldbus-neutral FBP slave interface.
What serial protocols can COM1 support?	With the compatible CPU, COM1 supports online access, free protocol, Modbus RTU master/slave, and CS31 master.

Official ABB sources

ABB AC500 Hardware	https://library.e.abb.com/public/a5f99bfde8bbfbd1c1257c210040dd7a/2CDC125017M0202.pdf
ABB product page - current distinct TB521-ETH article	https://www.abb.com/global/en/products/isap112100r0270
ABB AC500 PLC platform	https://www.abb.com/global/en/areas/motion/plc/programmable-logic-controllers/ac500