

Schneider Electric

AM-SA85-000

Network Adapter

Schneider Electric AM-SA85-000 is a single-channel ISA host adapter for connecting a computer to a Modbus Plus network. Its usable communication path depends on the installed SA85 driver and the configuration of the host application.

System position



Keep the hardware and software identities separate

AM-SA85-000 is the single-channel ISA adapter. The host application supplies a separate communication configuration. Q1683 covers CitectSCADA 1.00, 1.01, 1.10, 1.11, 1.20, 2.00, 2.01 and 3.00; it does not establish support for every modern Windows or Citect release.

Physical host path	ISA bus
Network path	One Modbus Plus channel
Software scope	Only the legacy Citect versions listed in Q1683
Card setup	Memory and station address set by DIP switches

Evidence: FA197319; Q1683 p.1

AM-SA85-000 is not a dual-channel Profibus card or a PCI adapter. Legacy Citect setup values below apply to the software versions identified in Q1683, not automatically to newer operating systems or driver packages.

CONTACT APTER POWER

WHATSAPP / PHONE +86 180 3023 5313
EMAIL sales13@apterpower.com
WEBSITE www.apterpower.com



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Interfaces and integration

Load the documented legacy driver chain

The documented Citect environment loads the Modicon device driver and the DOS runtime component before starting Windows. The Windows MBPLUS component provides the application-side driver. Treat this as a historical setup sequence, not an instruction to install old components into an unsupported operating system.

SA85.SYS	Modbus Plus device driver
DOS_MP.EXE	Modbus Plus DOS TSR
MBPLUS.DLL	Modbus Plus Windows driver
Q1683 interrupt	0x5B with /r2
Startup location	DOS_MP launched from WINSTART.BAT before Windows

Evidence: Q1683 pp.1-2

Map the board to the selected adapter

Give the board a unique name and select MBPLUS as the board type. If the host uses multiple SA85 boards, the board address must match the driver /n option. Board identity selects the adapter; it is not the destination PLC address.

Board name	User-defined unique name
Board type	MBPLUS
Board address	Board number used in SA85.SYS /n
I-O Port field	Not used in the documented board form
Interrupt and Special Opt fields	Not used in the documented board form

Evidence: Q1683 p.1 Boards form

Engineering decision

Which driver startup settings are used for AM-SA85-000 in the Q1683 Citect configuration?

That legacy setup uses SA85.SYS with software interrupt 0x5B and /r2, then loads DOS_MP from WINSTART.BAT before Windows. These settings apply to the Citect versions named in Q1683.

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Technical resource bands

Read the exact model limits separately from system configuration and software-context values. No nearby-model electrical value is substituted.

Host bus	ISA	Legacy Citect virtual ports	Up to 8 per board; each can address multiple units
Network protocol	Modbus Plus	Legacy Citect driver files	SA85.SYS, DOS_MP.EXE, MBPLUS.DLL
Network channels	1	Q1683 driver interrupt	0x5B with /r2; applies to the documented legacy Citect setup
Original supply identity	Adapter only	Q1683 timeout	2000 ms
Replacement kit	AM-SA85-030: AM-SA85-000 adapter and driver-suite CD	Q1683 poll time	20 ms
Address configuration	On-board DIP switches: memory address and station address	Q1683 watch time	30 seconds
Legacy Citect board type	MBPLUS	Q1683 pending requests	2
Legacy Citect board identifier	Matches SA85.SYS /n option when multiple boards are used	Q1683 transfer block	238 bytes
Legacy Citect routing format	Five-part PLC route: p.p.p.p.p	Q1683 StringReverse	0: no byte swapping within string words

Q1683 describes CitectSCADA 1.00-3.00 settings; its interrupt and timing values are not universal recommendations for other software or operating systems.

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Controls and service logic

Allocate virtual ports for the polling plan

One board can have up to eight virtual ports, and a port can serve multiple Modbus Plus units. For performance, Q1683 recommends a virtual port for each unit. Do not confuse eight virtual ports with eight physical channels or a restriction to eight destination devices.

Physical channel count	One for AM-SA85-000
Virtual port allocation	Up to eight per board in the documented Citect setup
Units per virtual port	Multiple units permitted
Performance arrangement	Separate virtual port per unit where appropriate

Evidence: Q1683 p.1 virtual-port note

Keep timing values within their source context

The table records the Q1683 legacy configuration values. Pending requests, transfer blocks and polling intervals are separate settings. Confirm the installed driver and application release before applying them; increasing a timeout alone does not repair an incorrect board identifier or PLC route.

MaxPending	2
Block	238 bytes
Retry / Delay	0 / 0
TimeOut	2000 milliseconds
PollTime	20 milliseconds
WatchTime	30 seconds

Evidence: Q1683 p.2 Standard citect.ini options

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Engineering decisions

Verify the intended PLC variable class

The legacy MBPLUS configuration uses distinct address classes for coils, input status and registers. Select the proper class before evaluating values or enabling writes. A successfully established route does not prove that the application is reading the intended variable type.

00001 class	Output coils; digital
10001 class	Input status; digital
30001 class	Input registers; integer, long, real or string
40001 class	Output registers; integer, long, real or string

Evidence: Q1683 p.2 Modbus Variables

Will AM-SA85-000 fit a PCI-only host computer?

AM-SA85-000 uses ISA, so a PCI-only slot is not its host interface. Keep it separate from PCI or PCIe Modbus Plus adapter references.

Related portfolio navigation

These separate product pages are reference navigation, not a statement of interchangeability or approval for the installed system.

Schneider Electric 416NHM30030A	View Schneider Electric 416NHM30030A page
Schneider Electric 490NRP25400	View Schneider Electric 490NRP25400 page
Schneider Electric 140NOE77100	View Schneider Electric 140NOE77100 page

Technical evidence record

Replacement for the Modbus Plus ISA adapter AM-SA85-000 - FA197319

Using SA85 Modbus Plus Card - CitectSCADA Q1683, 23 November 2007

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