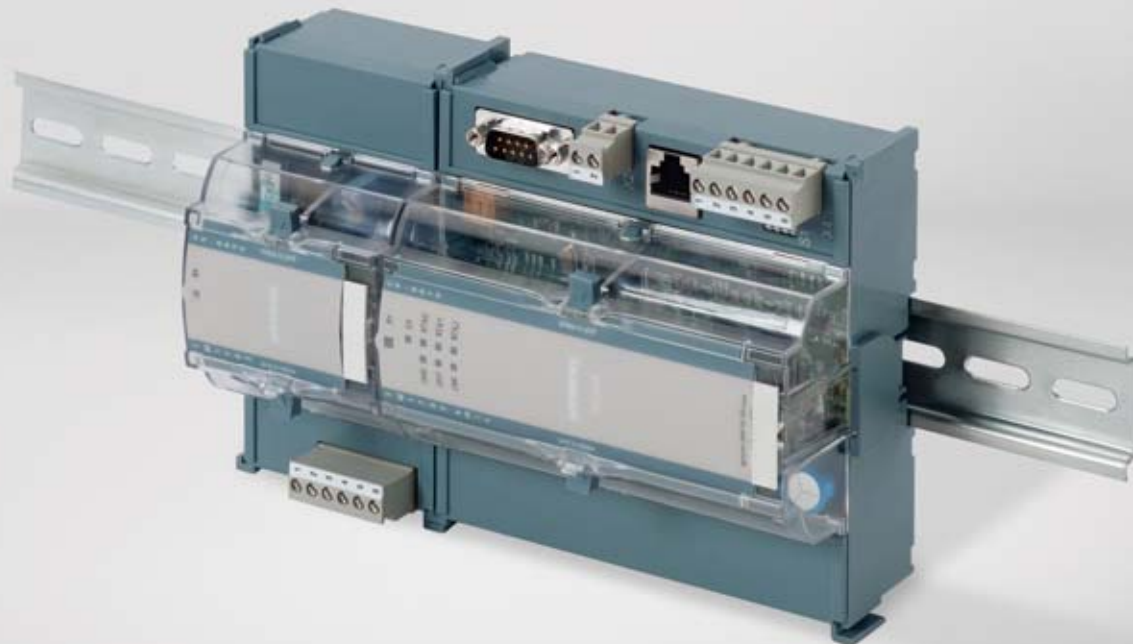


**SIEMENS**



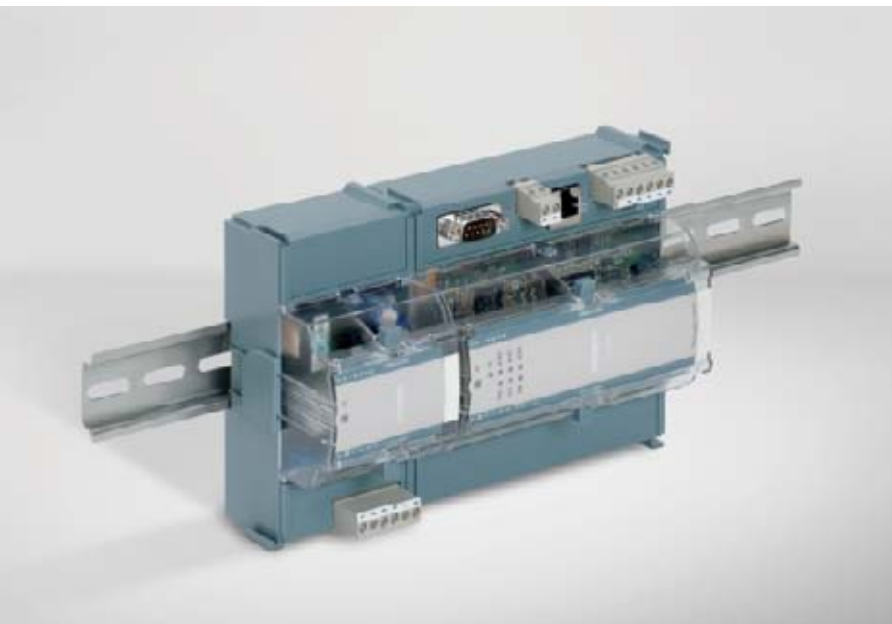
[www.siemens.com/energy](http://www.siemens.com/energy)

# Smart Automation System TM 1703 emic

SICAM 1703 – flexible for all applications

Answers for energy.

**SIEMENS**  
siemens-russia.com



## The new member of the proven SICAM 1703 family

With growing pressure on costs in virtually all processes, there is an increasing need to also automate smaller stations to make better and more reliable use of existing equipment. Modern, high-performance automation systems allow the integration of smaller stations to provide universal and reliable management of complex processes. But smaller stations are also being equipped with greater functionality because of the increased demand for more information. From straightforward monitoring activities to control functions and the integration of additional equipment, modern systems need to offer a wide range of functionality.

### **Flexible use of TM 1703 emic**

As the logical consequence of these demands, TM 1703 emic (Terminal Module 1703 enhanced microcontrol) represents the expansion of the proven product TM 1703 mic. TM 1703 emic is a low-cost, flexible and modular telecontrol station, and is part of the proven SICAM 1703 automation family. The hardware consists of a master control element and various I/O modules, and is designed for DIN rail mounting. The proven I/O modules can be used and fitted on all products in the SICAM 1703 family.

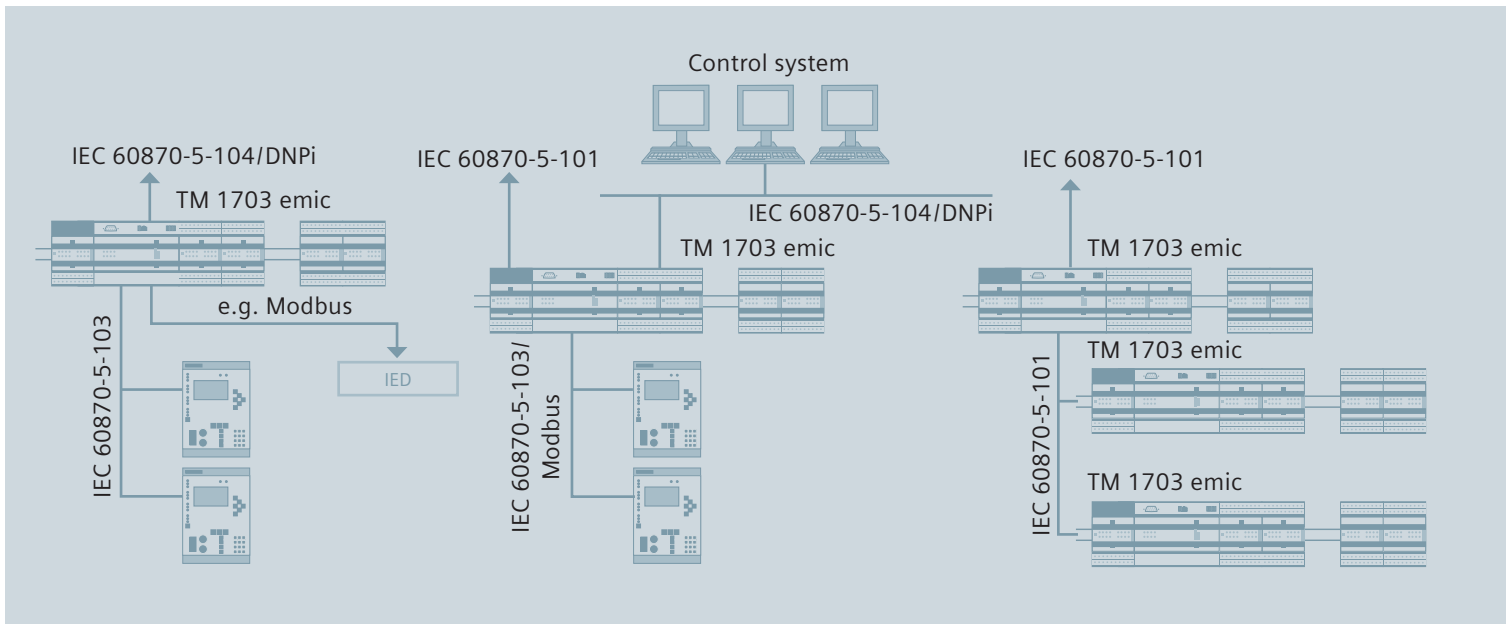
The master control element is used for interfacing and supplying the I/O modules and provides three communication interfaces (1 x Ethernet and 2 x serial) to meet a wide range of requirements. Complete flexibility is ensured here as well, because different communications protocols can be allocated freely. The option of automation functions rounds out the range of functionality of the TM 1703 emic.

### **Integrated Web server for simple engineering**

Keeping the engineering process as simple as possible was a top priority with the TM 1703 emic. The master control element has an integrated web server for configuration, diagnostics and testing, so that no special tools or additional licenses are needed. The tool is already integrated in TM 1703 emic and is operated with a standard Web browser. Engineering, diagnostics and testing of the TM 1703 emic can also be carried out with the proven TOOLBOX II, the integrated engineering tool for the entire SICAM 1703 family.

### **TM 1703 emic puts everything on one card**

The TM 1703 emic receives the parameterizing data via a flash card. Consequently, the correct parameters are always available locally and there is no need to load data from a PC. This makes exchanging devices during servicing a straightforward Plug & Play operation, and it is very simple to transfer configuration data to the replacement device with the flash card. For this reason, and because of the comprehensive remote diagnostics options, downtimes can be reduced to a minimum.



## Practical applications of TM 1703 emic

Thanks to its node functionality, TM 1703 emic has many different potential applications. TM 1703 emic can be used as an ordinary telecontrol substation with any kind of communication to a control center. If TM 1703 emic doesn't offer adequate signal scope, additional TM 1703 emic systems can be connected. Freely programmable application programs for local control functions complete the all-round versatility of the TM 1703 emic.

- Dial-up traffic
  - A wide range of connection-oriented transmission media (analog, ISDN, GSM, TETRA) are supported as standard for dial-up traffic as well.
- LAN/WAN
  - IEC 60870-5-104/DNPi communication based on Ethernet TCP/IP is used for communication via LAN/WAN networks.

### Highly flexible options for communication to the control center:

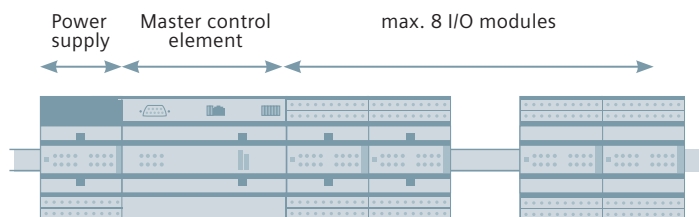
- Multi-point traffic
  - External data transmission equipment can be connected via the V.28 interface for multi-point traffic transmission.

### TM 1703 emic – The system in detail

Functions of the master control element

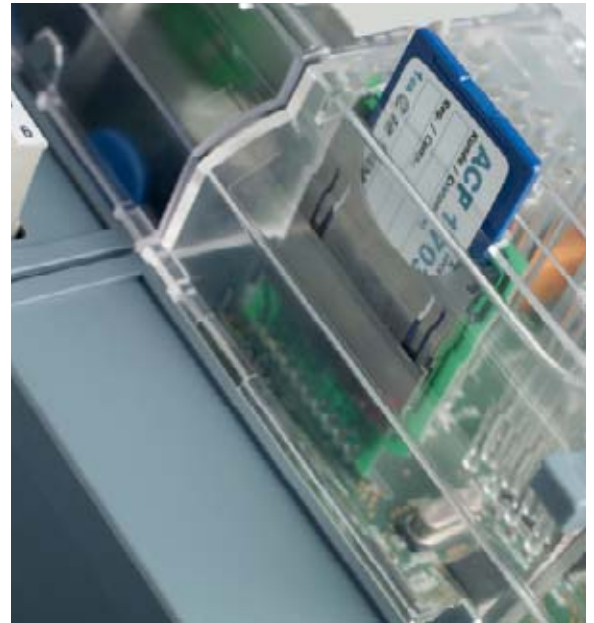
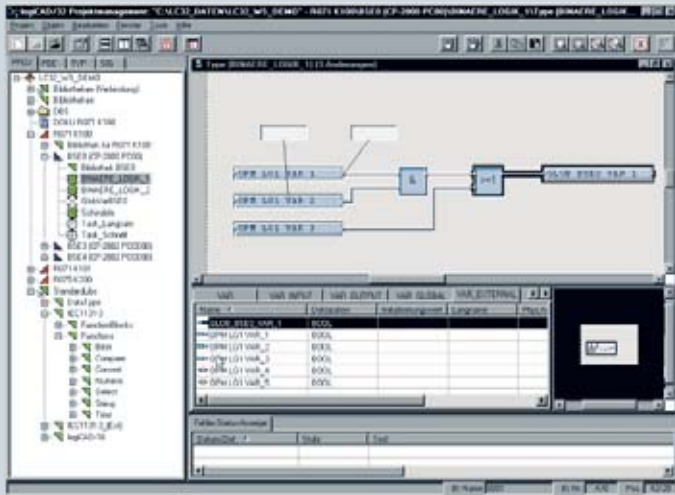
- Central processing functions
- Storing of the parameters and the firmware on a flash card

- Interfacing and supplying of the I/O modules
- 3 communication interfaces, with different individual communication protocols (IEC 60870-5-101, 103, 104, Modbus, DNP 3.0, other protocols on request)



# Technical data

	Type designation	Order designation	Description	I/O modules
<b>Master control element</b>	CP-6010	6MF11130GA100AA0	Processing & 3 x Comm. (V.28, RS485, Ethernet)	max. 8
<b>Flash card</b>	Flash card	6MF12131GA050AA0	Memory card for parameters and firmware	
<b>I/O modules</b>	DI-6100	6MF11130GB000AA0	Binary input 2 x 8, 24–60 VDC	
	DI-6101	6MF11130GB010AA0	Binary input 2 x 8, 110–220 VDC	
	DI-6102	6MF11130GB020AA0	Binary input 2 x 8, 24–60 VDC 1 ms	
	DI-6103	6MF11130GB030AA0	Binary input 2 x 8, 110/220 VDC 1 ms	
	DI-6104	6MF11130GB040AA0	Binary input 2 x 8, 220 VDC	
	DO-6200	6MF11130GC000AA0	Binary output transistor 2 x 8, 24–60 VDC	
	DO-6212	6MF11130GC120AA0	Binary output relay 1 x 8, 24–220 VDC, 230 VAC	
	DO-6220	6MF11130GC200AA0	Command output basic module	
	DO-6221	6MF11130GC210AA0	Command output basic module with measurement	
	DO-6230	6MF11130GC230AA0	Command output relay module	
	AI-6300	6MF11130GD000AA0	Analog input 2 x 2, $\pm 20$ mA/ $\pm 10$ mA/ $\pm 10$ V	
	AI-6307	6MF11130GD070AA0	Analog input 2 x 2, $\pm 5$ mA	
	AI-6308	6MF11130GD080AA0	Analog input 2 x 2, $\pm 1$ mA/2 mA	
	AI-6310	6MF11130GD100AA0	Analog input 2 x 2 Pt100	
	AO-6380	6MF11130GD800AA0	Analog output 4 x $\pm 20$ mA/ $\pm 10$ mA/ $\pm 10$ V	
<b>Power supply modules</b>	PS-6630	6MF11130GG300AA0	Power supply module 24–60 VDC EMC+	
	PS-6632	6MF11130GG320AA0	Power supply module 110–220 VDC EMC+	
<b>Accessories</b>				
Modems	CE-0700	6MF11020BC000AA0	V.23 Leased line modem	
	CE-0701	6MF11020CA810AA0	VFT channel modem	
Converters	CM-0827	6MF11110AJ270AA0	Converter V28/optical	
	CM-0819	6MF11112AJ100AA0	Converter V28/RS422; RS485 with electrical isolation	
<b>Ambient conditions</b>	–25 ... +70 °C			
<b>Dimensions (W x H x D)</b>	134 x 127 x 72 mm (master control element)			
	67 x 127 x 72 mm (power supply, I/O modules)			



## TM 1703 emic – The advantages at a glance

TM 1703 emic is a universal system suitable for use in electricity substation, hydropower plants, pipelines, gas distribution stations, railway power supplies and tunnels, for building protection, and as an alarm signaling system.

- Integrated node functionality for interfacing additional equipment via various protocols
- Simple configuration via Web browser, without special tools or licenses, configuration, diagnosis and testing via integrated Web server
- As an alternative, engineering is also possible with the TOOLBOX II
- Integrated remote maintenance, remote diagnostics and remote parameterization
- Application programs for local controls and interlocks
- Plug & Play for start-up and servicing through use of flash card for data storage
- Modules can be exchanged with no need for a tool
- Direct connection of the process cables
- Mounting on 35-mm DIN rail

**Published by and copyright © 2011:**

Siemens AG  
Energy Sector  
Freyeslebenstrasse 1  
91058 Erlangen, Germany

Siemens AG  
Energy Sector  
Power Distribution Division  
Energy Automation  
Humboldtstrasse 59  
90459 Nürnberg, Germany

[www.siemens.com/energy-automation](http://www.siemens.com/energy-automation)

For more information, please contact  
our Customer Support Center.

Phone: +49 180/524 70 00

Fax: +49 180/524 24 71

(Charges depending on provider)

E-mail: [support.energy@siemens.com](mailto:support.energy@siemens.com)

Power Distribution Division

Order No. E50001-G720-A144-X-4A00 | Printed in Germany

Dispo 06200 | c4bs-No. 7440

TH 345-110324 | BR | 480301 | WS | 03113.0

Printed on elementary chlorine-free bleached paper.

All rights reserved.

Trademarks mentioned in this document  
are the property of Siemens AG, its affiliates,  
or their respective owners.

Subject to change without prior notice.

The information in this document contains general  
descriptions of the technical options available, which  
may not apply in all cases. The required technical  
options should therefore be specified in the contract.