Compact Telecontrol System
TM 1703 mic

SICAM 1703 – flexible for all applications

Answers for energy.

SIEMENS

Economical and flexible – TM 1703 mic

With the growing pressure on costs in virtually all processes, there is increasing need to also automate smaller stations in order to make better and yet 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.
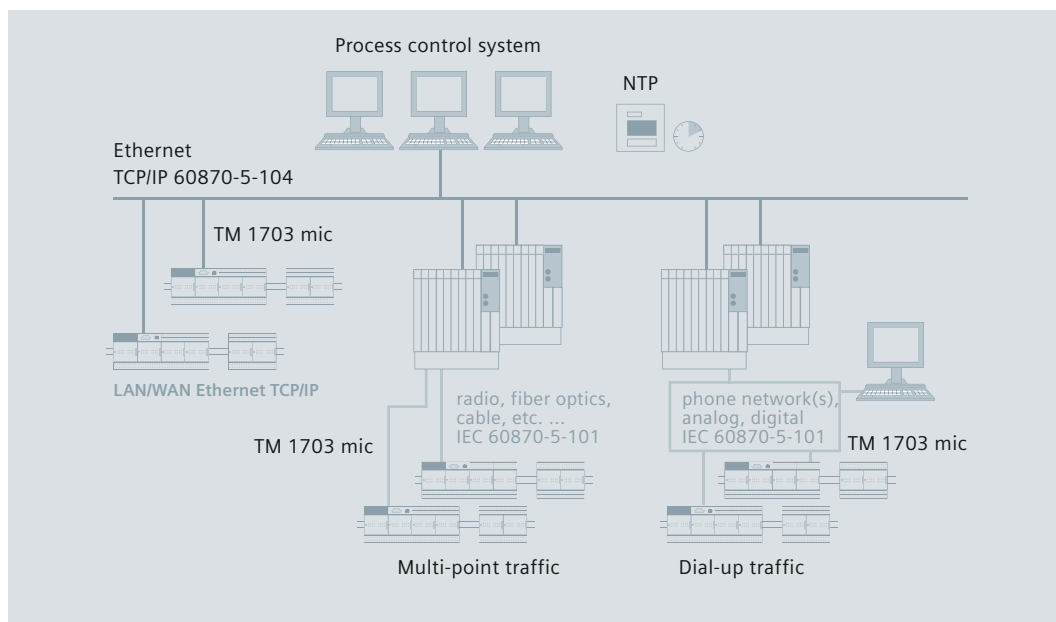
Compact performance: TM 1703 mic
TM 1703 mic (Terminal Module for microcontrol) is a low-cost, modular, telecontrol substation and belongs to the proven SICAM 1703 automation family. The devices consist of a master control element and various I/O modules and are designed for DIN rail mounting. The master control element serves for the interfacing and supplying of the I/O modules and provides a telecommunications interface in accordance with IEC 60870-5-101 for dial-up or multi-point traffic. Alternatively LAN/WAN communication can be used, according to IEC 60870-5-104 over TCP/IP.

Integrated Web server for simple engineering
We placed great importance on keeping the engineering process as simple as possible. 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 mic and is operated with a standard Web browser.

Plug & Play for servicing and commissioning
The configuration parameters in TM 1703 mic are already stored on an SIM card of the kind used in mobile phones. When commissioning or servicing, the configuration is simply transferred to the new device when the SIM card is inserted. Additional advantages of the SIM card are that all data is always available locally and there is no possibility of accidentally loading incorrect parameters (for example from a PC). Configuration is also possible with an offline tool without destination system hardware and can be carried out very simply at any desk. The fully written SIM card transfers the complete configuration into TM 1703 mic. A Web browser is the only requirement for any changes or local tests. Alternatively, the engineering process can also be carried out with the TOOLBOX II.

Process control system

NTP

Ethernet
TCP/IP 60870-5-104

TM 1703 mic

LAN/WAN Ethernet TCP/IP

TM 1703 mic

radio, fiber optics,
cable, etc. ...
IEC 60870-5-101

phone network(s),
analog, digital
IEC 60870-5-101

TM 1703 mic

Multi-point traffic

Dial-up traffic

Typical applications of TM 1703 mic

TM 1703 mic can be operated optionally in multi-point or dial-up traffic, or via LAN/WAN networks. Transmission conforms to IEC 60870-5-101 or IEC 60870-5-104.

Multi-point traffic
For transmission in multi-point traffic, external data transmission equipment can be connected via the V.28 interface. In this way it is possible, for example, to use power lines for communication by means of DLC modems.

Dial-up traffic
A wide range of connection-oriented transmission media (analog, ISDN, GSM, TETRA) is supported as standard for dial-up traffic as well.

LAN/WAN
IEC 60870-5-104-compliant transmission based on Ethernet TCP/IP is used for communication via LAN/WAN networks. Configuration, diagnostics and testing are possible from any access point to the network including remote locations.

TM 1703 mic – The system in detail
Functions of the master control elements
- Central processing functions
- Saving the parameters on SIM card
- Interfacing and supplying of the I/O modules
- Telecommunication or LAN/WAN interface
- 6 binary inputs
- 2 relay outputs
- Watchdog output

Power supply Master control unit up to 8 I/O modules
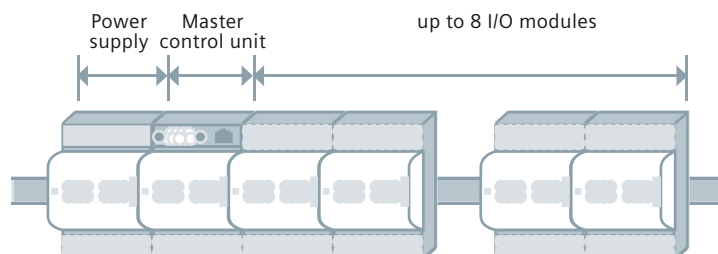
Technical data

	Type designation	Order designation	Interface	Communication	Power supply	I/O modules
Master control element	CP-6020	6MF11130GA200AA0	V.28	Dial-up or multi-point traffic	external with PS-663x	max. 8
	CP-6040	6MF11130GA400AA0	Ethernet	LAN/WAN	external with PS-663x	max. 8
SIM card	SIM card	6MF12131GA030AA0				
I/O modules	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			
	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, ±20 mA/±10 mA/±10 V			
	AI-6307	6MF11130GD070AA0	Analog input 2 x 2, ±5 mA			
	AI-6308	6MF11130GD080AA0	Analog input 2 x 2, ±1 mA/2 mA			
	AI-6310	6MF11130GD100AA0	Analog input 2 x 2 Pt100			
	AO-6380	6MF11130GD800AA0	Analog output 4 x ±20 mA/±10 mA/±10 V			
Supply voltage	PS-6630	6MF11130GG300AA0	Supply voltage 24 – 60 VDC EMC+			
	PS-6632	6MF11130GG320AA0	Supply voltage 110 – 220 VDC EMC+			
Accessories						
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 RS232/RS422; RS485 with electrical isolation			
Ambient conditions	−25 … +70 °C					
Dimensions (W x H x D)	67 x 127 x 72 mm per module					
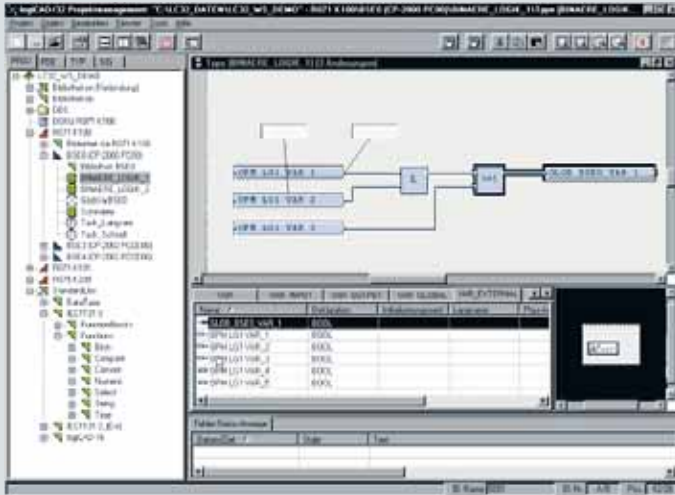
TM 1703 mic – The advantages at a glance

- TM 1703 mic is a universal system suitable for electricity distribution stations, hydro-electric power stations, pipelines, gas distribution stations, railway power supplies and tunnels, and for building protection and alarm sensors
- Simple configuration by means of integrated Web browser with no special tools or licenses, configuration, diagnostics and testing via integrated Web server
- Alternatively engineering is also possible with the TOOLBOX II
- Simple application programs
- Plug & Play with SIM card for data storage when commissioning and servicing: no tools needed for changing modules; offline- and duplication tool for SIM card
- Direct connection of process cables
- 35 mm DIN rail mounting

- Communication via IEC 60870-5-101/104
  Multi-point traffic:
  – analog or digital radio
  – telecommunications cable
  – DLC modem (Distribution Line Carrier)
  Dial-up traffic:
  – analog telephone networks
  – ISDN
  – GSM
  – TETRA (TErrestrial Trunked RAdio)
  TCP/IP communication:
  – LAN (local area network)
  – WAN (wide area network), GPRS/EDGE

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