applicom® GT4010 is a Serial stand-alone gateway that allows industrial equipments to communicate and exchange data.

v1 – Aug. 2004

applicom® GT4010/GT4010R

Serial Communication Gateway

GT4010
desktop version

GT4010R
rack 19'', 1U version

Features

- Stand-alone box
- 4 Master or Slave independent Serial channels
- RS485/422 galvanic insulation 500V (RS232 or current loop in option)
- Serial protocols:
  - Modbus RTU Master/Slave,
  - Jbus Master/Slave
  - Uni-Telway Slave Client/Server
  - Other : on request.
- Integrated data base (32 Kbits, 32 Kwords)
- Configuration without programming,
- Router feature
- 2 versions: Desktop or DIN rail mounting

Package

The GT4010 is delivered with:

1. Software kit

- Configuration utility under Windows 98 or NT4 to parameter:
  - ☐ Serial port: flow, format, electrical interface, protocol, etc.
  - ☐ Read/Write Cyclic functions
- Configuration loading utility
- Test and diagnostic tools

2. Null Modem Serial cable for uploading the configuration

Description

The **applicom® GT4010** communication gateway is an independent system that allows the management of the communication via **4 asynchronous Serial ports**. Each port is independent and can be configured either in Master or Slave modes with different Serial protocols as: Jbus, Modbus RTU or Uni-Telway. (for other protocols: contact us).

The GT4010 gateway is equipped with a real-time multitask kernel which performs the communication protocols on the different Serial ports. In addition, the gateway embeds a 32 Kwords/32 Kbits database (called, **applicom®** Database) which enables data exchange between the equipments.

Master Mode: The gateway manages automatically the emission/reception data of External Slave equipment by performing requests called "**Cyclic function of Read/Write**".

Slave Mode: The gateway processes the requests coming from Client Master equipments and shares its data base as an internal memory accessible in Read/Write.

Applications

The GT4010 gateway suits to industrial applications as:

1. **Communication Gateway**

   a- Protocol conversion, Synchronous mode
   The gateway receives a request from an item of equipment according to a protocol; the gateway converts it into a request for another channel and in other protocol and vice-versa (ex: Modbus <-> Uni-Telway).

   b- Data sharing, Asynchronous mode
   The common Database allows each item of equipment to share the variables. If the equipments are Slave or Server, the exchange is made in Read/Write mode by cyclic functions; if they are Master; they can directly access to the database in Read/Write access.

2. **Communication front-end**

Some of applications do not necessarily require the use of a PC to enable the dialogue between the equipments. In this case, the GT4010 gateway - used as front-end - offers an economical solution to solve this problem.

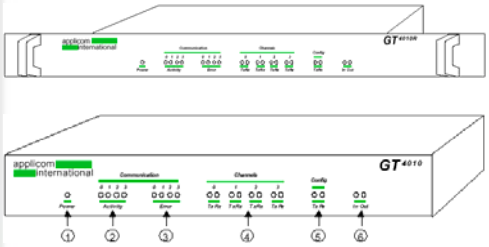
For example, the gateway manages the reception of the data coming from PLC networks and stores them in the database. The Master equipments can send remote commands to the Master channel of the PLC network via the routing tasks and then they can exchange data between them by using the common database.

The GT4010 gateway is an ideal solution for applications requiring heterogeneous multi-master communications.▲

applicom® GT4010/GT4010R

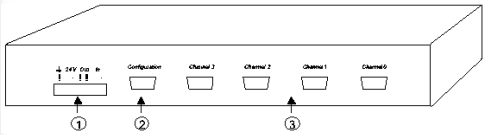
Gateway

Description



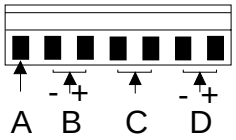
Front panel GT4010/GT4010R

① : Power supply LED.
② : LED 0 to 3 for the activity of the respective channel (request under execution).
③ : LED 0 to 3 showing an error on a channel.
④ : Transmission and reception LED of protocol channels.
⑤ : Transmission and reception LED of configuration port.
⑥ : Status LED of the "watchdog" output and optocoupled input.



Rear panel GT4010

① : Power supply box + "Watchdog" contact + Optocoupled on/off input.



A – Mechanical mass (reserved usage).
B – 24V Power supply.
C – "Watchdog" output, potential-free contact (48V DC/AC max, 2.5A max). It can be controlled by the applicom WATCHDOG function.
D – Optocoupled input (24V DC or AC)

② : Connector 9-pin, D-Sub, male for the configuration cord.
③ : Connector 9-pin, D-Sub, male for the 4 transmission lines (D-Sub, female supplied in the box).

Technical data

Physical Characteristics	
Processor	Intel 80386
Memory	RAM: 512 Kbytes – Flash: 512 Kbytes
Operating voltage	+24 VDC
Consumption	250 mA
Dimensions (L x W x H)	GT4010 : 300 x 125 x 50 mm GT4010R, 19" rack version: 483 x 165 x 43 mm
EMC Compliance	EN55022 Class B, EN6100-6-2, EN6100-3-2, EN61000-3-3
Protocols	• Jbus Master / Slave • Modbus RTU Master / Slave • Uni-Telway Master / Slave • Other : consult us
External Interface	**Physical Interfaces**
Serial Port	4 x Asynchronous Serial ports Connector: 9 pin, D-Sub, male Interface line: RS485/422 galvanic insulation 500V by default. In option, RS232 or current loop Speed: 50 to 38.400 Kbps
Format	Bits data: 7 or 8, Bits Stop: 1 or 2 Parity: even, odd or without
Digital Input	Optocoupled input, +10 to +30 DC or 24V AC (50-60 Hz)
Digital Output	"Watchdog" output, potential-free contact (48V DC/AC, 2.5A max)
Indicator (LED)	8 LEDs for diagnostic (activity /error) 4 LEDS for transmission (1 per Serial port) 4 LEDS for reception (1 per Serial port) 2 LEDS for the state of In/Out 1 LED for emission and reception of configuration port
Configuration	RS232 Serial port for easy configuration

Operations

The GT4010 gateway has to be configured before use. For doing this, configuration utilities running under Windows 98/NT are provided. These files are then uploaded in the Flash memory via the configuration Serial port.

- **Safety**: the complete configuration is saved in memory Flash for an automatic auto-boot in case of a power cut.
- **Operation**: the GT4010 gateway is completely independent both during data acquisition (through cyclic functions) and data exchange between the Serial communication ports.

Ordering information

Part n°	**Product description**
APP-GTW-S4D **APP-GTW-S4R**	▪ applicom Serial Gateway, 4 RS485/422 Serial ports, (Jbus, Modbus & Uni-Telway) Desktop version ▪ applicom Serial Gateway, 4 RS485/422 Serial ports, (Jbus, Modbus & Uni-Telway) Rack version 19'', 1U
APP-INT-232-G **APP-INT-CL2-N**	**Optional electrical interfaces** ▪ RS232C with galvanic insulation ▪ Passive Current loop 20mA without galvanic insulation
ALGT24V	**Power supply (option)** ▪ Regulated power supply 220V/24v 250 mA

NOTE: *The box is supplied with the configuration utility running on Windows 32 bits (98 and NT) Software and documentation are exclusively in French language.*

Woodhead

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