

Serial to GPRS Gateway

Your gateway to many M2M possibilities

TMN-51T

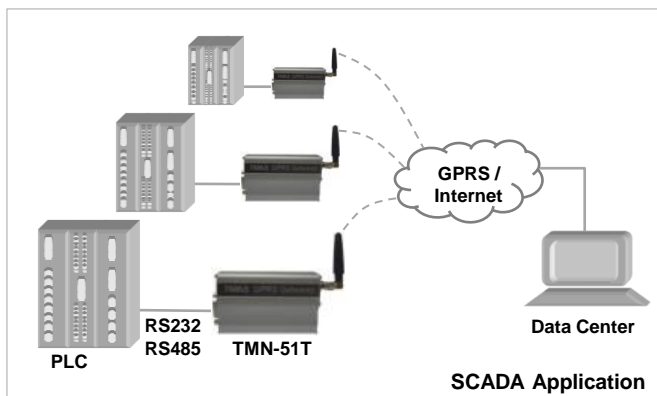
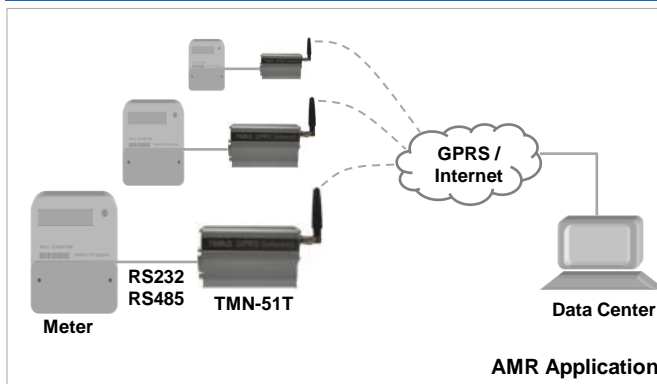
Overview

TMN-51T is a smart RS232-GPRS gateway, a device that integrated with a 32bit ARM7 core processor, with application firmware and TCP/IP stack and GSM/GPRS engine. It can operate in server or client mode, accept SIM card with dynamic IP or static IP, various connection scenario, and with auto recovery mechanism designed for mission critical application.

As compare to PSTN or GSM dial up line or lease line, the TMN-51T with GPRS communication link provide a cost economical approach to achieve a "always ON" packetized data network. It is a plug and play device, allows you the migration of your traditional serial communication system to the advance GPRS link, without tedious application development and in depth knowledge of AT command or GPRS. You can view this device as the "virtual serial wire over the air", that links all your remote equipments to the central PC. It is a full transparent, protocol independent gateway, for AMR, SCADA, general remote monitoring, control and data exchange applications.



Applications



Features

Plug and Play	<ul style="list-style-type: none"> • True Transparent Data Transfer • Protocol independent
Rich Data Options	<ul style="list-style-type: none"> • TCP for reliable data transfer • UDP for fast and bulk data transfer • App protocol for secure data transfer • Methods of serial data packetization
Robust Operation	<ul style="list-style-type: none"> • Constant self test • Self reset and recovery • Data buffering • Support auxiliary data center
Easy Control	<ul style="list-style-type: none"> • Remote configuration by SMS or GPRS • Remote activation by SMS , call or Serial command • Auto SMS of IP for dynamic IP SIM card
Always ON Connection	<ul style="list-style-type: none"> • Heart beat to maintain socket connection • Auto socket re-connection if drop • Time to live timer for network checking
Flexible Operation	<ul style="list-style-type: none"> • Server or client mode for connection • Static or dynamic IP • Can work as a standard GSM/GPRS modem • Can work as virtual wire (TMN-51T-TMN-51T, no PC) • Support RS232 / 485 / 422 hardware options • Local / Remote firmware update via GPRS
Flexible Backend	<ul style="list-style-type: none"> • Direct control by HyperTerminal commands • Provide Center Manager software • Direct porting via TCP port or virtual serial port • API for software developer • OPC for SCADA developer (For 4-20mA only) • PLC commands for M2M developer

TMAS

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TMN-51T

TMN-51T Technical Specifications

General

Transfer Protocol	TCP/UDP
Operation mode	Server / Client
SIM Card IP	Dynamic / Static IP
Data buffering	2.5K bytes
Packet size	1,450 bytes max
Packetization methods	Packet size / time interval / special end char

RF Specifications

GPRS Connectivity	GPRS multi-slot class 10 GPRS mobile station class B
Frequency Band	Dual Band EGSM900 and GSM1800 Quad Band E-GSM 850/900Mhz and GSM 1800/1900Mhz
Transmit Power	Class 4 (2W) for E-GSM 850, E-GSM 900 Class 1 (1W) for GSM 1800, GSM 1900
Antenna	External via SMA connector.

Serial Specifications

Electrical Standard	RS232 or RS485 or RS422
Connector	DB9 Female Connector
Baud rate	300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
Flow Control	None / XON/XOFF/ Hardware RTS and CTS (for RS232 only)

Other Interfaces

Analog Inputs	2 channels, 4-20mA, via Micro Fit-3.0 connector
Status LED	3mm Red

Power Requirement

Connector Interface	Micro Fit-3.0 (4 pins)
Supply Voltage	6 - 40VDC
Supply Current	0.08A at 12VDC (GPRS online, no transmission) 0.2A max at 12VDC (Data transmission)

Mechanical Specifications

Dimensions	86 x 54 x 25mm
Weight	110g
Temperature	0 to +55 °C (Normal Operation) -20 to +70 °C (Restricted Operation)

Ordering Information

TMN-51T - [X] - [XXX]

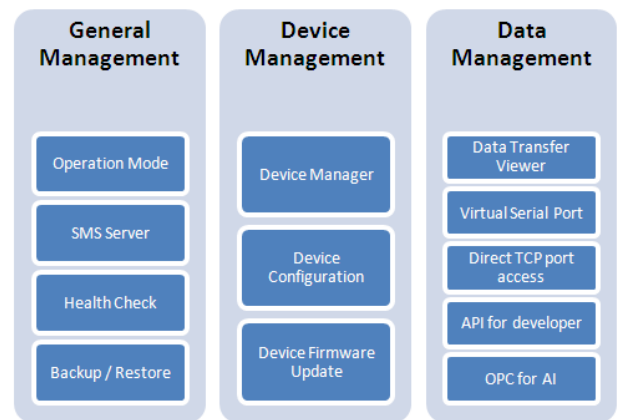
- Default for 232. Options for 485 or 422
- A Default dual band for 21 Asia countries: Abu Dhabi, Australia, Bangladesh, China, Hong Kong, India, Indonesia, Laos, Macao, Malaysia, Mongolia, Nepal, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, United Arab Emirates and Vietnam
- B Quad band for all countries

Center Manager Software

The Center Manager software is a tool provided for device evaluation and quick deployment at the data center side, to manage groups of remote TMN-51T devices. If the traditional equipment and existing software that talk via RS232 cable, it can be simply migrated to the GPRS platform, without modifications of the existing equipment and software. The Center Manager software will have VSP (Virtual Serial Port) generated to interface with the existing software. Besides, the tool allow the management of device parameters, wired or wireless configuration, firmware update etc. The data transfer viewer enable the viewing of data during the evaluation state.

The Center Manager System Block

Center Manager Software



The Center Manager Screen shot

Device Name	Device Location	Device SIM No	Device IP Address	Device Port	Device Status	Virtual Serial Port	Activation Mode	Incoming Data	Outgoing Data
Level 1 Meter F1	Factory 1	9840425	124.187.114.236	3700	Offline	COM21	Auto Activate	-	-
Level 2 Meter F1	Factory 1	9378973	119.234.31.235	3700	Online	COM22	Auto Activate	-	-
Level 3 Meter F1	Factory 1	9511248	119.234.33.255	3700	Online	COM24	Auto Activate	-	-
Level 4 Meter F1	Factory 1	9141579	119.234.41.36	3700	Online	COM23	Auto Activate	-	-
Level 5 Meter F1	Factory 1	9891522	119.234.251.41	3700	Online	COM25	Auto Activate	-	-
Water Level Met.	Factory 1	9376256	119.234.5.63	3700	Online	COM26	Auto Activate	-	-
Level 1 Meter F2	Factory 2	9325847	119.234.78.159	3700	Online	COM27	Auto Activate	-	-
Level 2 Meter F2	Factory 2	9667241	119.234.78.122	3700	Online	COM28	Auto Activate	-	-
Level 3 Meter F2	Factory 2	9672546	119.234.56.39	3700	Online	COM29	Auto Activate	-	-
Level 4 Meter F2	Factory 2	9154187	119.234.144.177	3700	Online	COM30	Auto Activate	-	-
Level 5 Meter F2	Factory 2	9239547	119.234.69.245	3700	Online	COM31	Auto Activate	-	-
Water Level Met.	Factory 2	9671285	119.234.25.2	3700	Online	COM32	Auto Activate	-	-
Gas Meter F2	Factory 2	9418893	119.234.149.132	3700	Online	COM33	Auto Activate	-	-
Pressure Meter F2	Factory 2	9664537	119.234.56.91	3700	Online	COM34	Auto Activate	-	-
Level 1 Meter F3	Factory 3	9811547	119.234.83.211	3700	Online	COM35	Auto Activate	-	-
Level 2 Meter F3	Factory 3	93314781	119.234.98.128	3700	Online	COM36	Auto Activate	-	-
Level 3 Meter F3	Factory 3	92148864	119.234.77.41	3700	Online	COM37	Auto Activate	-	-
Level 4 Meter F3	Factory 3	95546378	119.234.128.3	3700	Online	COM38	Auto Activate	-	-
Level 5 Meter F3	Factory 3	94627866	119.234.250.84	3700	Online	COM39	Auto Activate	-	-
Water Level Met.	Factory 3	93234877	119.234.47.22	3700	Online	COM40	Auto Activate	-	-
Gas Meter F3	Factory 3	96774598	119.234.30.221	3700	Online	COM41	Auto Activate	-	-
Pressure Meter F3	Factory 3	94512778	119.234.6.77	3700	Online	COM42	Auto Activate	-	-

Total Devices: 56, Total Channel: 56, Online Devices: 0, Protocol: TCP, Listen Port: 3700, IP Address: 202.146.167.110



2 Kaki Bukit Ave 1 #05-04 (Mapletree Industries) Singapore 417938
 Tel: 65-67461930 Fax: 65-67461938
 URL: <http://www.tcam.com.sg>
 Email: enquiry@tcam.com.sg

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Distributor Details

