

# Smart Modem GSM/GPRS/HSPA

# T61

Your gateway to many M2M possibilities

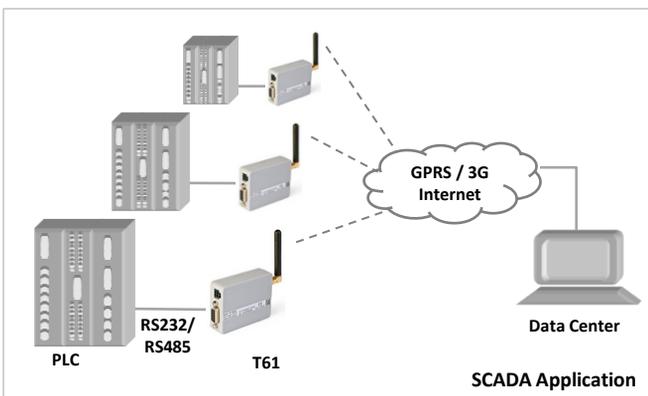
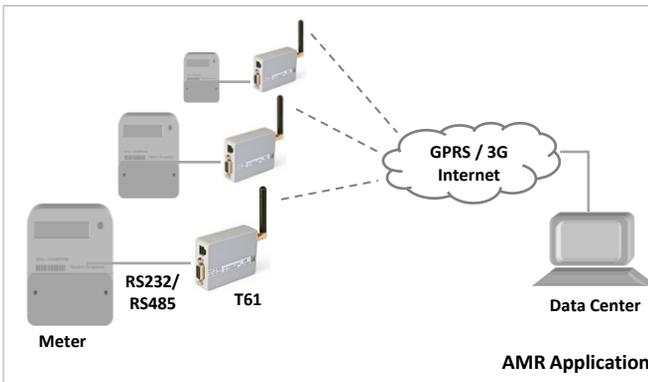
## Overview

T61 is a smart gateway to connect serial devices with RS232 or RS485 interfaces to GSM/GPRS/HSPA network. T61 could also function as a normal 2G or 3G modem to accept AT commands. It is a device that integrated with a 32bit ARM Cortex-M0+ core processor and Gemalto BGS2 (2G) or EHS5 (3G) modem modules. It can operate in server or client mode, accept SIM card with dynamic IP or static IP, supports TCP/UDP, schedule to connect, connect on demand or "always on" connection, and with Auto Recovery, Re-connection and Redundancy mechanisms. It is designed for mission critical applications.

As compare to PSTN or GSM dial up line or lease line, the T61 with GPRS or 3G communication link provides a cost economical approach to achieve "always ON" packetized data network. It is a plug and play device, allow you to migrate from traditional serial communication system to the advance GPRS or 3G 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 equipment to the central PC. It can be a full transparent, protocol independent gateway, used for AMR, SCADA, general remote monitoring, control and data exchange applications.



## Applications



## Features

<b>Plug and Play</b>	<ul style="list-style-type: none"> <li>• True Transparent Data Transfer</li> <li>• Protocol independent</li> </ul>
<b>Rich Data Options</b>	<ul style="list-style-type: none"> <li>• TCP for reliable data transfer</li> <li>• UDP for fast and bulk data transfer</li> <li>• Data logging*</li> <li>• Support auxiliary data center</li> </ul>
<b>Robust &amp; Reliable Operation</b>	<ul style="list-style-type: none"> <li>• Watchdog Timer</li> <li>• Self reset and recovery</li> <li>• User defined periodic heartbeat</li> <li>• Auto socket re-connection if connection drops</li> <li>• Time to live timer for network checking</li> </ul>
<b>Comprehensive Control &amp; Monitoring</b>	<ul style="list-style-type: none"> <li>• Dual-IP Connections</li> <li>• Dedicated Data Channel and Command Channel</li> <li>• Real-time Status feedback</li> <li>• Remote configuration via GSM/GPRS/3G or SMS</li> <li>• Remote activation by SMS, Call or Serial Command</li> <li>• Auto SMS of IP for dynamic IP SIM card</li> <li>• DDNS IP update for dynamic IP SIM card</li> <li>• Direct or OTA (Over-The-Air) Firmware Updating</li> </ul>
<b>Flexible Operation</b>	<ul style="list-style-type: none"> <li>• Server or client mode for connection</li> <li>• Static or dynamic IP</li> <li>• Can work as a normal 2G or 3G modem</li> <li>• Can work as virtual wire (T61 to T61 without PC)</li> <li>• Supports RS232 / 485 hardware options</li> <li>• Power saving mode and Connect on Schedule</li> </ul>
<b>Flexible Backend</b>	<ul style="list-style-type: none"> <li>• Direct control by HyperTerminal commands</li> <li>• Provide Center Manager software</li> <li>• Direct porting via TCP port or virtual serial port</li> <li>• API for software developer*</li> <li>• PLC commands for M2M developer *</li> <li>• Supported by TMAS M2M cloud platform*</li> </ul>
<b>Auxiliary I/O Functions</b>	<ul style="list-style-type: none"> <li>• Digital/Analog Input Alert Messages via SMS/GPRS/3G</li> <li>• Real-time Analog reading</li> <li>• Digital Output Remote Control via SMS/GPRS/3G</li> </ul>

# TMAS

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# T61

Specifications	T61 – BGS2		T61 – EHS5	
<b>General</b>				
Wireless Module	Built in with Gemalto BGS2-W		Built in with Gemalto EHS5-E	
CPU	32 bits ARM Cortex-M0+			
Transfer Protocol	TCP/UDP			
Operational Mode	Normal Modem <sup>1</sup> or Smart modem <sup>2</sup> (Client or Server mode)			
SIM card	1.8/3V, dynamic or static IP			
Internet Connections	Primary : Data Channel Secondary : Command Channel			
Data logging memory*	3M Bytes			
<b>RF Specifications</b>				
Frequency Band	GSM 850/900/1800/1900MHz		GSM/GPRS/EDGE: GSM 900/1800MHz UMTS/HSPA+: UMTS 900/2100MHz	
Output Power	2W for GSM 850/900MHz 1W for GSM 1800/1900MHz		2W for GSM/GPRS/EDGE 900MHz 1W for GSM/GPRS/EDGE 1800MHz 0.25W for UMTS (900/2100MHz)	
GPRS	Multi-slot 10 (quad band) Full PBCC support Mobile Station Class B Coding Scheme 1 – 4		Multi-slot class 12 Full PBCC support Mobile Station Class B Coding Scheme 1 – 4	
Data Rate (max.)	DL 85.6 Kbps, UL 42.8 Kbps		Normal Modem: DL 921Kbps, UL 921Kbps	Smart Modem: DL 460 Kbps, UL 460 Kbps
Antenna Interface	SMA Female 50ohm			
<b>Serial Specification</b>				
Electrical Standard	RS232 (DB9 Pin 1,2,3,4,5,7,8) or RS485 (Pin 6,9)			
Connector type	DB9 Female			
Baud Rate	Normal Modem: RS232: 1200 – 230400bps RS485: 1200 – 115200bps	Smart Modem: RS232: 300 – 230400bps RS485: 300 – 115200bps	Normal Modem: RS232: 1200 – 921600bps RS485: 1200 – 115200bps	Smart Modem: RS232: 300 – 460800bps RS485: 300 – 115200bps
Flow Control	None or Hardware RTS, CTS, DTR, DCD (RS232 only) Software XON/XOFF (Normal Modem Only)		None or Hardware RTS, CTS, DTR, DCD (RS232 only)	
<b>Other Interfaces</b>				
DI / AI	1 x DI or AI (1.8V 16bits ADC)			
DO	1 x DO open collector, max rating 1A, 48VDC			
Status LED	3mm Red			
<b>Power Supply</b>				
Connector Interface	Micro-Fit 3.0- 4pins			
Supply Voltage	5-32 VDC			
Supply Current (Ave)	@5VDC	@32VDC	@5VDC	@32VDC
Idle	50mA	10mA	55mA	10mA
Data Transfer (worst case)	380mA	60mA	850mA	150mA
<b>Mechanical</b>				
Enclosure Material	Polycarbonate			
Dimension (Enclosure L x W x H)	70x53x20mm			
Weight	60g			
Mounting	Clip with Din Rail or screw mounting			
<b>Environmental</b>				
Operating Temperature	-25 to +85 °C			
Relative Humidity	90%			
Water and Dust Proof	IP51			

\*Features are optional.

## Ordering Information

Modem Terminal  
T61- BGS2 - Terminal with built in Gemalto GSM/GPRS module BGS2-W  
T61- EHS5 - Terminal with built in Gemalto 3G module EHS5-E

Accessories  
AC/DC Adaptor, Antenna, Serial Cable can be ordered separately



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## Distributor Details