

# LTE Java Gateway

## ECL-ELS61-T3



ECL-ELS61 is developed for machine-to-machine (M2M) and telemetry solutions, communicating over cellular telecommunication network for reading, monitoring and controlling functions.

Can be used for many solutions with the help of integrated Java™ Application Platform. Builds a transparent communication platform between field devices via serial ports and remote servers or applications over 3G and 4G.

The theoretical limit to one RS485 port connection of a terminal is up to 255 field devices in a distance of 1,2 km.

Different types of data input can be processed through JAVA platform applications via serial port connections on field devices, digital inputs/outputs and optional sensors.

With the over the air (OTA) protocol, application software and firmware can be updated remotely. Therefore updates, upgrades and troubleshooting can be done remotely without the need to go to the field.

It has integrated hardware watchdog feature which protects the device against hardware and firmware crashes.

Real-time clock feature can be used for timestamp applications.

AMI firmware, developed on JAVA J2ME platform is installed specially for AMI applications. Runs as a transparent device to transmit the queries of the central AMI software and simultaneously runs as a field device to read the meter and transmit data to central AMI software.

To establish secure data transfer, IP addresses, phone numbers, and SMS numbers can be restricted on the device. A secured server address can be specified for firmware update where the downloadable content will be controlled and update can commence automatically.



Configuring and reconfiguring, parameter changes etc. can be done via serial interfaces locally or over 3G/4G remotely. During the communication, it will initiate ID and password control/authentication.

ECL-ELS61 and the AMI firmware is compatible with TeleMetriX AMI Head-end system. Remote control via TeleMetriX can be done easily.

### Approvals

- CE, R&TTE, GCF, PTCRB, IC, UL
- EuP, RoHS, REACH compliant
- AT&T2,4 , Telstra and other local approvals and provider certifications

### Physical Specifications

- Size : 98 x 101 x 60 mm
- Weight : ~300 gram
- IP54 Enclosure
- Sealable Terminal Cover
- DIN Rail Mounting

### Environmental Specifications

- -40 ... +85°C operating temperature

### Power Input

- 100 ... 240 VAC or 9 VDC–48 VDC
- 6 KV Impact Resistance

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### Wireless Features

- LTE (FDD) 3GPP Rel.9 Compliant Protocol Stack, RXDiversity
- Penta-Band LTE: Bands 1, 3, 8, 20 (800, 900, 1800, 2100 MHz), Dual-Band GSM 900 and 1800 MHz
- LTE Cat.1 DL: max. 10.2 Mbps, UL: max. 5.2 Mbps
- GPRS Class 12 DL: max. 85.6 kbps, UL: max 85.6 kbp
- SMA Antenna Connector
- Easy use push-n-eject SIM card connector
- Dual SIM and Embedded SIM Support (optional)
- Fully compatible with all GSM operators
- RLS Monitoring (Jamming Detection)

### Serial Interfaces

- 1 x RS485 Interface
- 1 x RS232 or RS485 Interface (Optional)
- 300bps - 460kbps communication speed
- 7E1, 7O1, 8N1, 8E1, 8O1 framing
- RS485 Automatic Data Direction Control

### Other Inputs/Outputs

- 2 x 250 VAC 2A Relay Outputs (NC/NO/ Shared)
- 3 x Dry Contact Inputs (Standard)
- 3 x Additional Dry Contact Inputs (Optional only for models without RS232 port)

### Other Hardware Features

- Java ME 3.2 embedded leveraging ARM11 architecture
- Multi-Threading programming and Multi-Application Execution
- 18 MB RAM and 31 MB Flash File System
- Built In Flash Memory (4Mbyte)
- Real Time Clock (RTC)
- Hardware watchdog
- 4 Programmable LED Status Indicators
- Multi SIM support, supports both M2M SIM and Regular SIM
- Integrated TCP/IP Stack,

- UDP/TCP/DNS/Ping/HTTP/FTP support
- Can send alerts to central server by the help of supercapacitor in case of power cut-off (Optional)

### JAVA Features

- Java™ ME 3.2
- Secure data transmission with HTTPS/SSL
- JAVA OTAP Remote Application Updates

### Application Features

- Java applications for AMI solutions
- Push/Pull/Poll communication
- Configuration via Serial Cable, 3G/4G, CSD or SMS
- Firmware update over 3G/4G
- Ability to restrict IP / Port / Phone numbers
- Transparent communication / gateway
- Direct meter reading and transmit meter data to server/central software
- IEC1107 Mode C automatic speed change
- ID and password authentication
- Detailed event log and troubleshooting
- TCP/IP Server and Client Mode
- Saving readout data on flash memory and prevent data loss
- Server or GSM network based time synchronization