



## ZETA-NLP-LTEM (EU)

4G / LTE Category M / NB IoT Industrial Modem



### General Description

The ZETA-NLP-LTEM (EU) is a cutting edge, extremely low power industrial modem. It will connect equipment to the new LTE Cat M and NB IoT networks as they become available also providing connectivity to the existing 2G / GSM cellular network. The modem is able to operate in an extremely low power state which makes it ideal for use in industrial IoT applications today and for long term future developments.

The unique feature of the ZETA-NLP-LTEM (EU) allows it to run in an ultra low power state due to its intelligent power saving design. Additionally the range offers interface options including legacy RS232 for connection to existing equipment and a high speed USB interface.

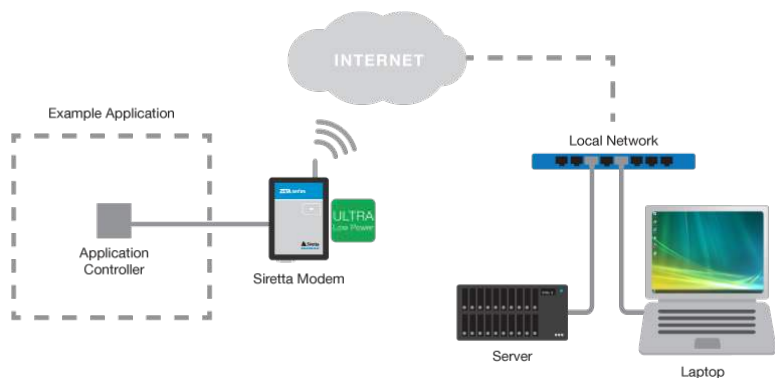
The powerful C development environment reduces redundancy and lowers system component costs, allowing developers to maximise the power of their application directly on the device and eliminating the requirement for an external microcontroller. As a result the ZETA-NLP-LTEM (EU) lends itself to rapid proof-of-concept developments with minimal investment, providing fast time to market and maximum scalability.

### Features

2G GSM	LTE Cat M	LTE NB IoT	GPRS Enabled	EU Coverage	ULTRA Low Power		
RS232 Serial	USB Serial	eDRX Low Power	PSM Low Power				
>_ Embedded	FOTA Update	AT Commands	IP Services	SIM Toolkit	Win Linux/Mac	7-42V Industrial	TEMP -40 to +85

### Featured Applications

- » Access Control Systems
- » Car Parking Payment
- » Environmental Monitoring
- » Vending Machines
- » Agriculture
- » Tank Monitoring
- » Alarm Panels
- » Industrial Sensors
- » Automatic Meter Reading
- » Utilities





## ZETA-NLP-LTEM (EU)

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### General Features

- » 3 Bands LTE:  
B3(1800), B8(900), B20(800) MHz
- » 4 Bands GSM | GPRS:  
B2(1900), B3(1800), B5(850), B8(900) MHz
- » LTE UE Category M1/NB1
- » 3GPP release 13 compliant
- » Half Duplex FDD
- » 3GPP Rel. 12 Power Saving Mode (PSM)
- » 3GPP Rel. 13 Discontinuous Reception (eDRX)
- » 3GPP Rel. 13 Extended coverage
- » SIM Application Tool Kit 3GPP TS 51.01
- » Control via AT commands according to 3GPP T S27.005, 27.007 and customized AT commands
- » IPv4/IPv6 stack with TCP and UDP protocol
- » OMA Lightweight M2M (LWM2M)

### Interfaces

- » 1 x RS232 serial port interface (9-wire)
- » 1 x USB 2.0 FS
- » 1 x RJ12 power connection (7 - 42V)  
Nominal supply 12V  
Power on & power off control
- » 1 x SMA female cellular antenna connector
- » 1 x SIM card reader (push-push) 3V, 1.8V
- » 3 x external LED status indicators (Blue, Red, Green)

### Environmental

- » Dimensions: 93mm x 67mm x 28mm
- » Weight: 90 grams
- » Extended Temperature Range: -40 to +85 deg C

### Data

- » LTE Category M1  
Uplink up to 375 kbps  
Downlink up to 300 kbps
- » LTE Category NB1  
Uplink up to 62.5 kbps  
Downlink up to 21 kbps
- » EGPRS  
Uplink up to 236 kbps  
Downlink up to 296kbps

### Approvals and Compliance

- » CE

### Sensitivity

#### Output power

- » All Bands: (LTE) CAT-M1:  
Class 3 23dBm (+-2dB)
- » All Bands: (LTE) CAT-NB1:  
Class 3 23dBm (+-2 dB)
- » Bands: GSM850, GSM900: GPRS (GMSK):  
Class 4 33dBm (+-2 dB)
- » Bands: GSM850, GSM900: EDGE (8PSK):  
Class E2 27dBm (+-2 dB)
- » Bands: DCS1800, PCS1900: GPRS (GMSK):  
Class 4 30dBm (+-2 dB)
- » Bands: DCS1800, PCS1900: EDGE (8PSK):  
Class E2 26dBm (+-2 dB)

### Application Resources and Drivers

#### AppZone C

- » Programming language: C
- » IDE: Eclipse
- » Dedicated File System: 5MB
- » Separate App. RAM Space: 2MB

#### USB Drivers

- » Windows 7/8/10 driver support
- » Linux native support (CDC ACM)