

## ZETA Series

### 2G/3G/4G Modems with GPS Option



### Key Features

- 2G/3G/4G versions
- AT command driven
- Industrial grade
- RoHS compliant
- Extended temperature range
- Extended RF sensitivity
- Embedded TCP / IP stack
- 5 - 42V DC supply
- 5 x GPIO
- 1 x ADC

### Additional Features

- » SIM phonebook
- » Fixed dialling number (FDN)
- » Real-time clock
- » 3 x LED status indicators
- » IRA, UCS2 and GSM defaults
- » Over the air firmware updates
- » USB port (Not on ZETA-N-GPRS)

### General Description

The quikCONNECT ZETA Series is an industrial modem solution for wireless M2M applications based on 2G, 3G and 4G architectures.

The ZETA Series offers a high level of functionality in a compact plug and play housing with a host of interfaces that allow you to easily incorporate within your system. Together with its small size and advanced set of features it integrates perfectly into a wide range of M2M applications that require a high speed data exchange.

The ZETA-GPRS Series enables you to communicate to your equipment with CSD and GPRS data services provided by the network operators. Incorporating quad band GPRS Class 10 technology, the ZETA Series operates around the globe and with an extended temperature range and can be used in harsh environments.

The ZETA-UMTS Series operates on UMTS (800/850, 900, 1700, 1900, 2100MHz) globally providing connection speeds up to 21Mbps.

The ZETA-LTE Series operates on 800, 1800, 2600MHz and offers 100 Mbit download speeds and 42Mbit HSPA+ download speeds.

The integrated TCP/IP stack greatly simplifies network services such as connecting to the internet, sending emails, connecting to an FTP server and opening data socket connections through simple and easy to use AT Commands. With the broad supply voltage range (5-42VDC) the ZETA Series can be used in a range of embedded and real world solutions.

The ZETA Series can be provided with Windows, Linux and WinCE CDC Serial USB drivers that significantly ease the integration into existing applications as well as standard RS232 serial.

## ZETA Series

2G/3G/4G Modems with GPS Option

### Common specifications for all versions

#### Specifications - Electrical

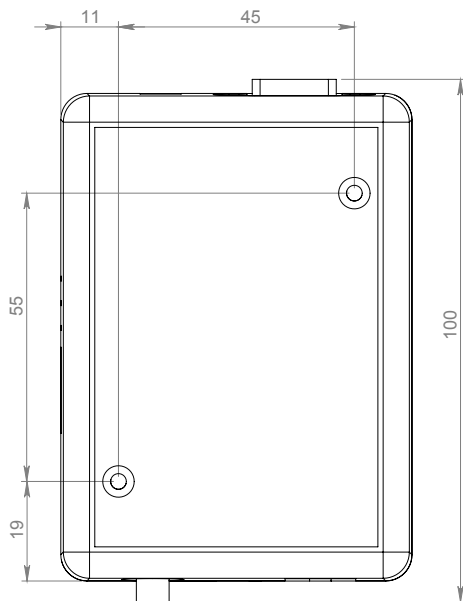
Operating temperature range:	-40 to +85°C
Storage temperature range:	-40 to +85°C
Power:	5 - 42VDC RJ12

#### Specifications - Mechanical

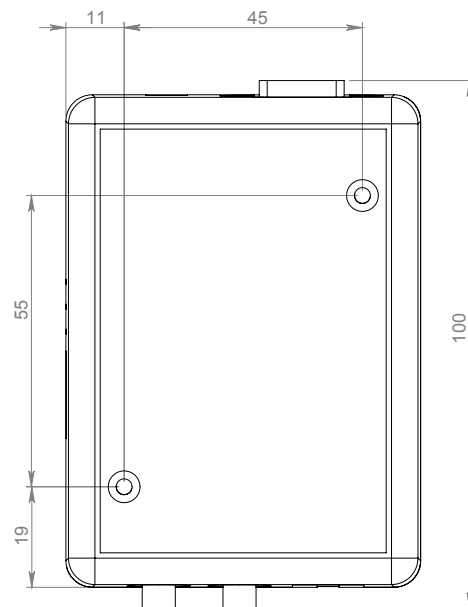
Dimensions:	93mm x 68mm x 28mm
Weight:	101g
Connector:	Sub-D 9-pin, Mini USB, SMA Male, 10-way 2mm IDC, SIM Card Holder: 1.8/3V interface

### Dimensions

#### Non GPS Variants



#### GPS Variants



## **ZETA Series**

2G/3G/4G Modems with GPS Option

### 2G GPRS Version

#### **Specifications - Electrical**

Operating frequencies:	850, 900, 1800, 1900MHz
Output power:	Class 4 (2W, 37dBm) @ GSM 850/900 Class 1 (1W, 30dBm) @ GSM 1800/1900
Sensitivity:	-107dBm @ GSM 850/900MHz -107dBm @ GSM1800/1900MHz

#### **Data:**

- » GPRS Class 10
- » Mobile Station Class B
- » Coding Scheme 1 to 4

#### **GPS:**

- » GPS, GLONASS, Galileo, QZSS
- » 32 channel GPS
- » TTFF cold start <35s
- » TTFF hot start <15s
- » Acquisition sensitivity -146dBm
- » Navigation sensitivity -160dBm
- » Tracking sensitivity -162dBm
- » Accuracy 1.5m

#### **GPIO:**

##### ZETA-N2-GPRS - 10 Way 2mm IDC Connector

- » 5 x GPIO
- » 1 x ADC Port
- » 1 x Debug Serial Port

## ZETA Series

### 2G/3G/4G Modems with GPS Option

### 3G UMTS Version

#### Specifications - Electrical

Operating frequencies:	<u>Quad band EGSM</u> 850, 900, 1800, 1900MHz
	<u>UMTS, HSPA+</u> EU Version 2100MHz, 800/850, 900MHz
	Global Version 800/850, 900, 1700, 1900, 2100MHz
Output power:	Class 4 (2W, 33dBm) @ GSM 850/900MHz
	Class 1 (1W, 30dBm) @ GSM 1800/1900MHz
	Class 3 (0.25W, 24dBm) @ UMTS
	Class E2 (0.5W, 27dBm) @ EDGE 850/900MHz
	Class E2 (0.4W, 26dBm) @ EDGE 1800/1900MHz

#### Data:

- » HSPA+
  - EU Version  
Download: 7.2Mbps  
Uplink: 5.76Mbps
  - Global Version  
Download: 21Mbps  
Uplink: 5.76Mbps

#### GPS:

- » Operating current: 100mA (plus 20mA max for external antenna)
- » High sensitivity for indoor reception, up to -167dBm (with active antenna)
- » Accuracy < 3m
- » Extremely fast TTF's at low signal levels
- » Hot start autonomous < 18s
- » Warm start autonomous < 30s
- » Cold start autonomous < 42s
- » Supports 12-channel GPS, L1 1575.42MHz
- » GPS NMEA 0183 output format
- » Date WGS-84
- » Dedicated GPS AT commands

#### GPIO:

##### 10 Way 2mm IDC Connector

- » 5 x GPIO
- » 1 x ADC Port
- » 1 x Debug Serial Port

## ZETA Series

### 2G/3G/4G Modems with GPS Option

#### 4G LTE Version

#### Specifications - Electrical

	<u>LTE (EU Version)</u>
	800, 1800, 2600MHz
Operating frequencies:	<u>UMTS</u>
	850, 900, 2100MHz
	<u>GPRS</u>
	900, 1800MHz
Output power:	Class 4 (2W, 33dBm) @ GSM 850/900MHz
	Class 1 (1W, 30dBm) @ GSM 1800/1900MHz
	Class E2 (0.5W, 27dBm) @ EDGE 850/900MHz
	Class E2 (0.4W, 26dBm) @ EDGE 1800/1900MHz
	Class 3 (0.25W, 24dBm) @ UMTS
	Class 3 (0.2W, 23dBm) @ LTE

#### Data:

- » LTE  
Download: 100Mbps  
Upload: 50Mbps
- » HSPA+  
Download: 42Mbps  
Upload: 5.7Mbps

#### GPS:

- » GPS and GLONASS
- » Cold start sensitivity -145dBm
- » Hot start sensitivity -156dBm
- » Tracking sensitivity -161dBm
- » Navigation sensitivity -159dBm
- » TTF cold start 31.5s
- » TTF hot start 1.3s
- » Position accuracy 0.4m
- » Internal LNA 135dB gain typ  
(Use passive antenna - external LNA not supported)
- » Antenna requirement for GPS/GLONASS
  - GPS frequency range  
1575.42MHz ± 2MHz
  - GLONASS frequency range  
1598.0625 - 1607.0625MHz
  - Gain  
>-5dBi
  - Polarization  
RHCP recommended
  - Impedance  
50 ohm
  - VSWR  
≤ 2:1 recommended

#### GPIO:

##### 10 Way 2mm IDC Connector

- » 5 x GPIO
- » 1 x ADC Port
- » 1 x Debug Serial Port

## ZETA Series

### 2G/3G/4G Modems with GPS Option

### Ordering Information

	ZETA	X/2	XXXX
<b>Modem Identifier</b>			
ZETA = Industrial Modems with 5x GPIO Inputs			
<b>Module Type</b>			
N = Without GPS			
G = With GPS			
2 = Next Generation Model			
<b>Technology</b>			
GPRS = Global 2G			
UMTS = Global 3G			
LTE (EU) = European 4G			
LTE (NA) = Northern American 4G			

### Parts Currently Available to Order

- ZETA-N2-GPRS = Global GPRS Industrial Modem with 5x GPIO (Next Generation Model)
- ZETA-G-GPRS = Global GPRS Industrial Modem with 5x GPIO and GPS
- ZETA-N-UMTS = Global UMTS Industrial Modem with 5x GPIO
- ZETA-G-UMTS = Global UMTS Industrial Modem with 5x GPIO and GPS
- ZETA-G-LTE = Global LTE Industrial Modem with 5x GPIO and GPS