Siretta
Inspired Wireless M2M Technology

quikCONNECT

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
- 4 x GPIO
- ADC

Additional Features

» SIM phonebook
» Fixed dialling number (FDN)
» Real-time clock
» 3 x LED status indication
» 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 2600, 800, 1800MHz 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 exisiting applications as well as standard RS232 serial.

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Common specifications for all versions

Specifications - Electrical

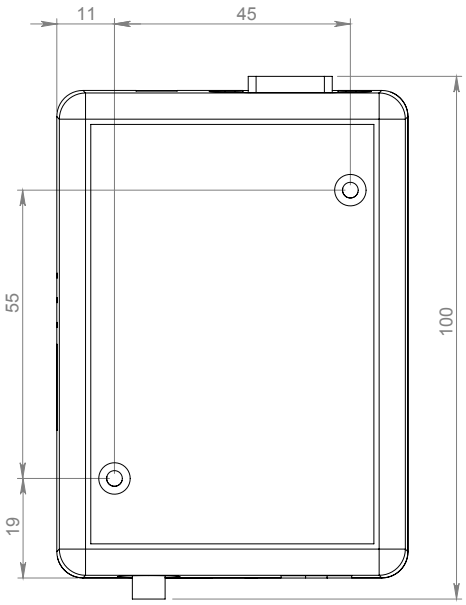
Operating temperature range:	-40 to +85°C
Storage temperature range:	-40 to +85°C
Power:	ZETA-N-GPRS only: 5 - 60VDC RJ12 Other variants: 5 - 42VDC RJ12

Specifications - Mechanical

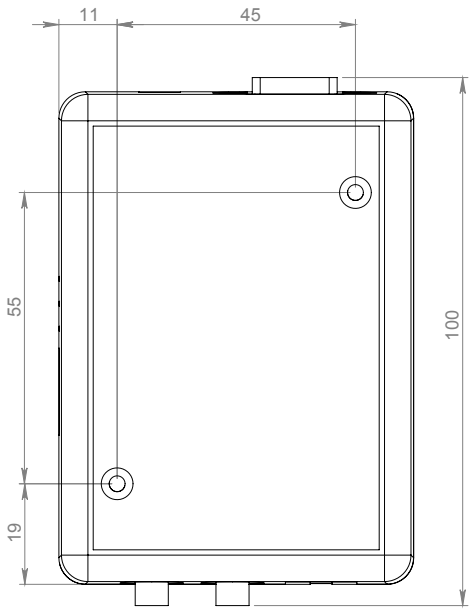
Dimensions:	93mm x 68mm x 28mm
Weight:	101g
Connector:	Sub-D 9-pin, Mini USB, SMA Male, 10-way 2mm IDC, SIM Card Holder: 1.8/3V interface

Dimensions

Non GPS Variants



GPS Variants



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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 and GLONASS
» 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-N-GPRS USB Mini USB Socket

» 5 x GPIO

ZETA-G-GPRS - 10 Way 2mm IDC Connector

» 4 x GPIO
» 1 x ADC Debug Port

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3G UMTS Version

Specifications - Electrical

Operating frequencies:	Quad band EGSM 850, 900, 1800, 1900MHz UMTS, HSPA+ 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: 7.2Mbs
    Uplink: 5.76Mbs
  - Global Version
    Download: 21Mbs
    Uplink: 5.76Mbs

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 TTFF'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

- 4 x GPIO
- 1 x ADC Debug Port

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4G LTE Version

Specifications - Electrical

Operating frequencies:	LTE (EU Version) 800, 1800, 2600MHz UMTS 850, 900, 2100MHz GPRS 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
- TTFF cold start 31.5s
- TTFF 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

- 4 x GPIO
- 1 x ADC Debug Port

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Ordering Information

ZETA X XXXX

Modem Identifier

ZETA = Industrial Modems with 5x GPIO Inputs

Module Type

N = Without GPS
G = With GPS

Technology

GPRS = Global 2G
UMTS = Global 3G
LTE (EU) = European 4G
LTE (NA) = Nothern American 4G

Part Numbering Examples

- ZETA-N-GPRS = Global GPRS Industrial Modem with 5x GPIO Inputs
- ZETA-G-LTE (EU) = European LTE Industrial Modem with 5x GPIO Inputs and GPS