

# ZGUS

## 1. Document

### Document information

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| <b>Keywords</b> |                |
| <b>Abstract</b> |                |

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### 3. Introduction

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ZGUS is a supplier of value added parts for specific instrumentation technology purposes.

Parts with the following functionality are supplied

- The **BLUE** chip for hand held UART communications for support purposes (from **B**utton, **L**CD, **U**ART, Rotary **E**ncoder chip).
- The **MIG** chip, for low parts count Ferrous and Non Ferrous Metal Detector purposes (which had **M**ach**I**ne **G**un audio).
- The **SGET** chip for amplitude, phase and noise response estimation to specific generated step-wise sinusoid frequencies (from **S**inusoid **G**enerator and **E**stimator of **T**ransfer chip).

Also some less commonly available components for selected products are supplied.

This document provided general information on ZGUS and ZGUS products. For more information please visit web site [zgus.com](http://zgus.com).

Updates of this document can be obtained at <http://s.zgus.com/documents/ZGUS.pdf>

#### 3.1 Product Preview

This information applies to products under development. Their characteristics and specifications are subject to change without notice.

There are two practical implications that buyers of preview products should to be aware of. One is that a higher than normal level of support than would normally be expected for a product that is not at a preview stage may become available and the second is that changes to documentation, characteristics and specifications will not necessarily be included in a list of changes made or will later be dropped from such lists.

## 4. Products

For product pricing, pricing arrangements and volume discounting (up to 50%) please visit <http://tech.zgus.com/buy>

Australian orders have 10% GST added.

### 4.1 Firmware Programmed Product

| Part Type | Part Description/Documentation Link  | Part Series | Part Codes or ID  |
|-----------|--|-------------|---|
| BLUE chip | For hand held UART communications for support purposes (name from <b>B</b> utton, <b>L</b> CD, <b>U</b> ART, Rotary <b>E</b> ncoder chip). 28 pin PDIP<br><br>Documentation<br><a href="http://s.zgus.com/documents/ZG1B.pdf">http://s.zgus.com/documents/ZG1B.pdf</a>   | ZG1B        | C9-D28 with current ZG1B firmware for 'Off the shelf' customers |
| MIG chip  | For low parts count Ferrous and Non Ferrous Metal Detector purposes (named from formerly having <b>M</b> achIne <b>G</b> un audio).<br><br>Documentation<br><a href="http://s.zgus.com/documents/ZG1M.pdf">http://s.zgus.com/documents/ZG1M.pdf</a>  | ZG1M        | C9-D28 with current ZG1M firmware for 'Off the shelf' customers |
| SGET chip | For amplitude. phase and noise response estimation to specific generated step-wise sinusoid frequencies (name from <b>S</b> inusoid <b>G</b> enerator and <b>E</b> stimator of <b>T</b> ransfer chip).<br><br>Documentation<br><a href="http://s.zgus.com/documents/ZG1S.pdf">http://s.zgus.com/documents/ZG1S.pdf</a> | ZG1S        | For 'Established Customers'<br><br>ZG1S-D2-Q20                  |

PRODUCT PREVIEW

## 4.2 Component Products

| Part Type              | Part Description   | Part Series       | Part Codes or ID |
|------------------------|--|-------------------|------------------|
| 1A, 20V Schottky Diode | Optional low voltage drop diode for BLUE chip integrated SMP (Switch Mode Pump). Not SMD | SMP-1N Component  | M511-1N5817      |
| 10uH Inductor          | Optional Inductor for BLUE chip integrated SMP (Switch Mode Pump). Not SMD               | SMP-IND Component | M434-23-100      |

## 4.3 Bootloader

ZG1L (BOOT) bootloader firmware is included with 'Off the shelf' ZG1B (BLUE) and ZG1M (MIG) firmware on C9-D28 chips.

The bootloader can be used to upgrade ZG1B and ZG1M on C9-D28 chips and can be used to interchange firmware between ZG1B and ZG1M on the C9-D28 chips with the ZG1L bootloader

If no action is taken on reset to engage the bootloader then the bootloader only performs integrity checks on ZG1B or ZG1M firmware. If the integrity checks are passed then the ZG1B or ZG1M firmware takes over.

The bootloader is documented at <http://s.zgus.com/documents/ZG1L.pdf>

## 5. Placing Orders and Payment

Orders are placed by emailing [sales@zgus.com](mailto:sales@zgus.com). An order will only be accepted by requesting you confirm details, shipping arrangements, costs, usage and diversion restrictions by email.

### 5.1 Order Payment

Orders can be paid for by either

- Visiting ZGUS and paying by cash, credit card or savings card or
- Paying an invoice issued by email with a link to pay securely by PayPal.

Orders can be paid for at time of collection form ZGUS

## 5.2 Free Samples

ZGUS will provide free samples of goods with free postage on request to eligible customers.

## 5.3 Order Process

### Please remember

- ZGUS is a supplier of value added parts for specific purposes
- ZGUS supplies such parts and some related parts in volume amounts with discounts up to 50%.

ZGUS is not a retailer focused on efficient supply of goods in single unit amounts. However

- ZGUS will provide goods in single unit amounts, including as free samples to eligible customers
- ZGUS has policies in place for orders of goods with value under \$50 for quick turnaround and low delivery costs.
- ZGUS has policies in place for orders of goods with value under \$50 to reduce the ordering process for existing customers with repeat orders.

### Following is our current order process for new customers.

1. Make pre-sales inquiries by email to [sales@zgus.com](mailto:sales@zgus.com), by telephone or by visiting ZGUS by appointment
2. Issue an order request by email to [sales@zgus.com](mailto:sales@zgus.com)
3. If required, participate by email or telephone in clarification
4. Receive a request by email to confirm order details, costs, estimated dispatch date and relevant agreements
5. Send an email to confirm order and agreements
6. Receive a request for payment prior to goods being made available for dispatch or for collection
7. Arrange to make the payment
8. Receive confirmation of payment.
9. If goods are to be collected by a nominated agent, make or confirm the appointment
10. Receive confirmation of dispatch of goods or confirmation of collection of goods by appointment by a nominated agent
11. Receive the goods
12. Make a timely check that goods are as requested and are undamaged

13. Provide requested feedback by providing satisfaction ratings with regard to goods for their purpose, goods as described, order process, delivery and communication.

## 5.4 Packaging/Handling

For parcels up to 500 gm we charge a flat rate. This current packaging price can be found on <http://tech.zgus.com/buy>

Australian orders have 10% GST added

All items are packaged within anti-static bubble wrap, are further packaged within sealed plastic containers, further packaged within anti-static bubble wrap and finally packaged within a delivery package.

## 5.5 Order Turnaround Time

For confirmed orders with value under \$50 with confirmed stock on hand and paid before 10AM Brisbane Time on a working day; our standard is same day dispatch.

For existing customers with repeat orders for goods under \$50 we expect to be able to introduce ordering shortcuts as well as same day dispatch.

We will provide estimates of when orders can be dispatched when confirmation of orders is requested. No requests for payment are made until orders are ready for dispatch.

## 5.6 Shipping

Customers are welcome to arrange collection of parcels by a nominated agent at their own expense from ZGUS, by appointment.

For where we are located in Australia, Australia Post provide a very cost effective, reliable and timely delivery service to Australia and the rest of the world. They also provide cost effective courier services to the rest of the world.

In addition because of where we are in Australia far we have so far found no advantage to using courier services over regular air mail, except that courier services will do the customs paper work for you with additional costs. We provide sufficient documentation to enable customs to be cleared quickly.

**It should be remembered for orders below a particular declared value customs often do not care and will pass parcels straight through, as it is worth the effort of collecting revenue.**

Our preferred delivery service is Australia Post. For orders delivered through Australia Post with value over \$50 we require signed delivery confirmation and Extra Cover charges to be paid.

The charge for this is the cost price as indicated in the downloadable Australia Post [Post Charges Booklet \(MS11\)](http://www1.auspost.com.au/pac/pdfs/PostCharges.pdf), from link <http://www1.auspost.com.au/pac/pdfs/PostCharges.pdf>

If you request we will provide you with details for shipping costs for a given parcel weight to your location according to various methods selected from the above booklet.

The weight of a PDIP 28 chip is about 2 gm. Packaging will have minimum weight of 100 gm.

All methods for goods with value over \$50 require signed delivery.

Methods below must also take consideration of weight and dimension. The delivery time of air mail is 3-10 working days with conditions (such as rapid customs clearance)

#### **5.6.1 Domestic Parcels will be sent by either**

- Value under \$50. Regular parcel
- Value under \$5,000. Regular parcel mail with additional cost for mail registration, Extra Cover (if value over \$100) and delivery confirmation.
- Another method as agreed using Australia Post or a courier company

#### **5.6.2 International parcels will be sent by either**

- Value under \$50. Regular air mail parcel.
- Value under \$5,000 International air mail parcel with additional cost for Extra Cover and delivery confirmation
- Another method as agreed using Australia Post or a courier company

#### **5.6.3 Minimum Delivery Charges for goods with value under \$50**

On 14 January 2009 following were the minimum delivery charges for parcels of an appropriate weight, value and size using Australia Post

These charges are in addition to the value of goods and in addition to the packaging/handling charge.

**Australia** \$4.20 (GST included)

**Zone A (New Zealand)** \$6.85

**Zone B (Asia/Pacific)** \$7.95

**Zone C (USA/Canada/Middle East)** \$9.05

**Zone D (Rest of the World)** \$10.70

### **5.7 Customs duties, taxes, storage/demurrage fees and HS tariff numbers**

Customs duties, taxes and any storage/demurrage fees are the responsibility of the recipient.

For orders below a particular declared value customs often do not care and will pass parcels straight through, as it is not worth the effort of collecting revenue.

Value of goods, HS tariff numbers and country of manufacturing origin of goods will be included in information provided prior to dispatch and will also be attached to parcels.

This will assist in goods not being held up awaiting customs clearance.

Customers need to be aware Storage/Demurrage fees can be applied to articles that are not processed in a timely manner during clearance.

### **5.8 Export And Diversion Restrictions**

Due to import agreements with US suppliers, some countries cannot be exported to from Australia. These include Cuba, North Korea, Sudan, Syria and Iran

Those who order need to explicitly agree goods will be used for their stated purpose (by not being erased and reprogrammed for other purposes) and goods will not be diverted to countries prohibited as per Australian and US law.

## 6. Information

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### 6.1 Documentation

This ZGUS document is available from <http://s.zgus.com/documents/ZGUS.pdf>

Product documentation is available from <http://tech.zgus.com/documentation>

There is also documentation not directly related to products at other locations.

### 6.2 Video Demonstrations

There are video demonstrations at <http://tech.zgus.com/videos>

### 6.3 ZGUS Support Forum

There is a ZGUS support forum at <http://tech.groups.yahoo.com/group/zgus/>

### 6.4 Eagle CAD Parts Library

EAGLE is a popular electronics design layout tool. [EAGLE](#) is needed to read the [ZGUS Eagle CAD parts library](#) available from <http://tech.zgus.com/eagle>

### 6.5 Free Software Tools

Some software tools to help with development are provided. These tools are free.

#### 6.5.1 Hidprobe

[Hidprobe](#) is for use from a PC with USB-UART tools. Powerful scripting and a basic single channel seven bit retriggerable graph trace are included.

#### 6.5.2 RF libraries

[RF libraries](#) are provided with a sample radio UART application are for use with a specific radio kit board. One of the RF libraries is a compilation of a code provided by the radio chip manufacturer.

### 6.6 Spice Modeling

There is some incomplete electronic SPICE modeling of VLF metal detector coil behavior at <http://tech.zgus.com/spice>

## **6.7 Planned Product**

Subject to field results, an enhanced SGET part is a future technology chip part that is not expected to be available for several years. A PDIP footprint version is planned.

## 7. Contact Information

**Business Name and Address:**

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Edmonton QLD 4869  
Australia

**Postal Address:**

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Australia

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Business/Trading Name ZGUS

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