

Team
Up

12th Edition
2012



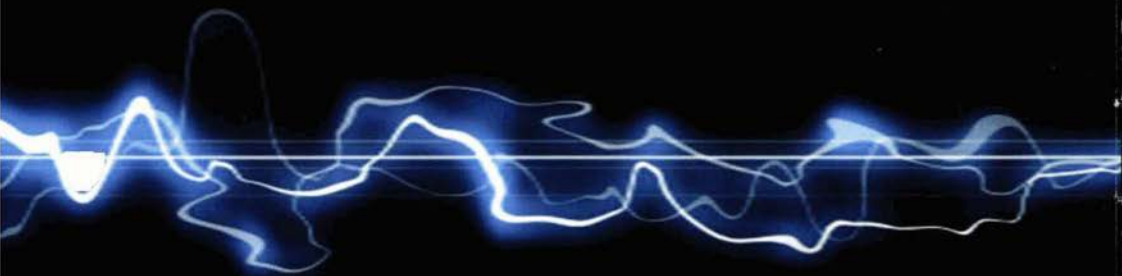
Geonautics
INTERNATIONAL



Team Up ►

Part of a team of dedicated Companies specializing in the design, engineering and manufacturing of covert surveillance solutions, Geonautics has been part of the Global Law Enforcement Community for more than 20 years and continues to hold your safety, confidence and trust at the pinnacle of their philosophy. Speak with them directly to see how they can make things just a little easier for you.

Geonautics International supplies technical surveillance systems and equipment to bona fide law enforcement, intelligence, government and military organizations only.



Geonautics

Geonautics.com



covert technical surveillance systems

Contents

Koala L2 (4), Bilby recorders (6), Dingo recorders (8), Concealments (10),
Memory specifications (11), V1 Emu (12), System Components (13),
Tracking TL4 (14), T4 (15), T3 (16), Kit contents (17), Specifications (18).

For full specifications visit Geonautics.com

L2
FTP

Live Listen
Record + Upload
Simultaneously ▶



2012 NEW FEATURES

- ▶ Supports FTP over SSL
- ▶ PIN protection of SMS commands
- ▶ Upload 'ALL' capable
- ▶ Upload on 'TIMERS' capable
- ▶ Upload on 'TRIGGERS' capable
- ▶ SMS carbon-copy feature
- ▶ Auto upload of recorder listings
- ▶ SMS control of VOX parameters
- ▶ Recording capable when mobile coverage is lost
- ▶ Configurable confirmation tones

KOALA
scale 1:1

L2 Koala is available in several configurations. Consult your Geonautics representative for options.

TEAM UP

SMS

FTP



WHAT YOU GET :

- Record, upload and live listen simultaneously for fast response to critical situations
- Send high quality audio over 3G with AES 128/256 data encryption
- Access to recordings when you need them without compromising the deployment or officer safety
- Four programmable timers for controlling modem, integrated recorder and outputs
- Programmable by DTMF and SMS for full control where and when you need it
- More than nine days recording at high quality (8GB, 11KHz/8 bit)
- Activate a recording via programmable voltage and/or movement triggers
- Send an SMS and/or dial a phone number to deliver live audio if the device is moved
- Connect a remote switch for a compact PANIC alarm which can SMS and send live audio to a predefined number
- Optional remote commanding with bi-directional remote for device status feedback
- Switch other attached equipment remotely over the mobile networks (DTMF & SMS)
- Connect external inputs to the L2 so it sends an SMS or calls a number upon trigger. EG. reed switch, PIR.
- Programmable recording management (minimization) allows the L2 to be set to record only if on a phone call and to stop recording if the call is ended
- Auto-Unmute removes the need to activate via DTMF in circumstances without human involvement

Bilby

stereo
recorders

Stereo Audio Surveillance Systems ▶

WHAT YOU GET :

- ▶ Complete kit for fast deployment P.17
- ▶ High quality *Benchmark Audio*
- ▶ Stereo recordings up to 22 kHz/16 bit
 - Ideal for post-processing
- ▶ Up to 32 GB for 99 days recording
- ▶ 2A switchable output and stereo line-out on A4rf+
- ▶ Remote commanding
 - Bi-directional communication
 - visual and tactile confirmations
 - optional add-on or integrated A4rf
 - zero self-originating RF transmission
- ▶ Low power consumption for longer battery life
- ▶ Whisper2
 - World-class control software
- ▶ 'Authenticate'
 - for tamper-proof reliable evidence
- ▶ VOX
- ▶ Internal timers
- ▶ Real-time clock
- ▶ Fast downloads

OPTIONAL :

- ▶ Bare boards available
- ▶ Audio RF switch
- ▶ Voltage adaptor cable
- ▶ Quick start Battery Caddy A2e+/A4rf
- ▶ Extend recording with daisy chaining



A4e
sub micro



A2e+



A2e+
32GB / > 99 days



A4rf ((.))
Bi-directional remote



A4rf+ ((.))
Bi-directional remote
Stereo line out
2A switchable output

Delivery



Team up with an SF1 to automatically send your recordings over 3G.
No loss of dynamic range or data. Page 13.

Lite Budget

512MB & 1GB



On a budget ... The BilbyLite.
Feature set of the A2e, BilbyLite delivers
Benchmark results at an expendable price.

Bi-directional remote



Confident TX/RX Remote Control
with status feedback from the recorder.

Power Up



240 mAhr Battery gives > 15hrs
recording time for A2e (Hi-Quality)

Power Up with R-240mAhr and R-100mAhr
rechargeable batteries or voltage adaptor.

Drop 'n Go

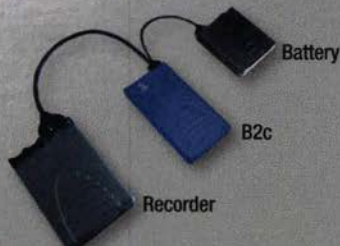
Up to 17hrs recording



Battery Caddy for your A2e+ and A4rf
supplies power for fast deployment.

Monitor

B2c High power



Monitor, control and download via bluetooth with B2c. (high or standard power)

Dingo
mono
recorders

Mono Audio Surveillance Systems ▶



ASrf ((.))
Bi-directional remote



A5e
sub micro



A5i ((.))

Internal power, Switchable internal mic, Bi-directional remote

WHAT YOU GET :

- ▶ Complete kit for fast deployment P.17
- ▶ High quality *Benchmark Geonautics Audio*
- ▶ Mono recordings up to 11 kHz/8 bit
- ▶ Up to 4 GB for 12 days recording
- ▶ Integrated battery A5i
- ▶ Remote commanding
 - Bi-directional communication with recorder
 - integrated in A5rf and A5i
 - optional on A5e
 - visual and tactile confirmations
 - Zero self-originating RF transmission
- ▶ Low power consumption for longer battery life
- ▶ Whisper2 - World-class control software
- ▶ 'Authenticate' - for tamper-proof and reliable evidence
- ▶ VOX
- ▶ Internal timers
- ▶ Real-time clock
- ▶ Fast downloads

OPTIONAL :

- ▶ Bare boards available
- ▶ RF switch for A5e
- ▶ Adaptor cable
- ▶ Extend recording with daisy chaining

Power Up



Recorder

240 mAhr Battery gives > 18hrs recording time for A5e (Hi-Q)

Rechargeable batteries.
R-100 mAhr, R-240 mAhr.

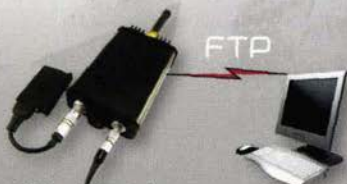


Voltage Adaptor

Set and forget with a Voltage Adaptor Cable supplying stable 5V from a vehicle battery.

Delivery

Automatic lossless delivery of your recordings over 3G.



SF1 and Recorder

AUTHENTICATE is a 'raw data integrity trail' which means the data you captured is tamper-proof and easily verified for evidential purposes.

Whisper2 is a world class interface for the control of Geonautics surveillance devices and gives seamless integration and ease of training across a suite of powerful products.



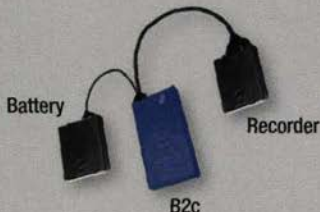
Lite Budget



On a budget ... The DingoLite. Feature set of the A3e and memory sizes of 512MB & 1GB, the limited edition DingoLite delivers Benchmark results at an expendable price.

Control

Monitor, control and download via bluetooth with B2c. (high or standard power)



Battery

Recorder

B2c

Confident TX/RX Remote Control with status feedback from the recorder.



TX/RX

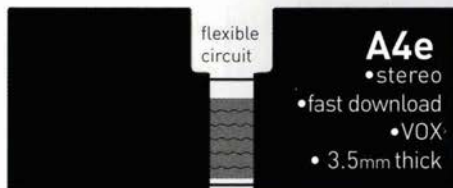
HIDES

bare
boards

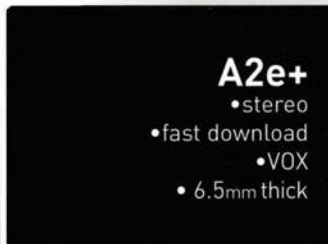
Low current draw and built to embed ...

Geonautics range of audio recorders are available as bare boards to suit your own custom concealment needs. The footprints below are shown 1:1 scale and can be cut out for use as a size guide.

Investigate the full range of Geonautics prepared audio hides or speak with your Geonautics representative to develop your own solutions.



Scale: 1:1



Memory Recording Durations

Models & memory capacities may vary in different territories.

Figures are intended as a guide only. Recording durations less than 10 hours are shown with one decimal place. Recording durations beyond 48 hours are indicated as hours /days. Duration below 48 hours are shown in hours only.

Battery/Device Operational Guide

Battery life results are dependent upon recording profile, make of battery etc and should be used as a guide only.

Device	BATTERY	HOURS
	9v	> 26hrs
	CR2450 x 2	> 3.5hrs /HQ stereo > 8hrs /Std. stereo
A2e+	CADDY	> 17hrs
	R-100mAh	> 6hrs /HQ Stereo
	R-240mAh	> 15hrs /HQ Stereo
	9v	> 26hrs
A4e	CR2450 x 2	> 3hrs /HQ stereo > 7.5hrs /Std. stereo
	R-100mAh	> 5hrs /HQ Stereo
	R-240mAh	> 12hrs /HQ Stereo
A4f	R-100mAh	> 5hrs /HQ Stereo
	R-240mAh	> 12hrs /HQ Stereo
A5e	9v	> 50hrs
	CR2032 x 2	> 8hrs /HQ mono
	R-100mAh	> 10hrs /HQ Mono
	R-240mAh	> 18hrs /HQ Mono
A5f	R-100mAh	> 9hrs /HQ Mono
	R-240mAh	> 18hrs /HQ Mono
A5i	Internal	> 8hrs /HQ Mono
A3k	3 x 399	> 3hrs
A3s	4 x 399	> 3.5hrs

DEVICE	QUALITY	64MB	128MB	256MB	512MB	1GB	2GB	4GB	8GB	16GB	32GB
A2e+ STEREO	Best (22kHz 16bit)	-	-	-	1.7 h	3.4 h	6.8 h	13 h	27 h	54 h	108 h
	Good (16kHz 8 bit)	-	-	-	4.7 h	9.3 h	18 h	37 h	74 h	145 h	297 h
	Longest (8kHz 4 bit)	-	-	-	18 h	37 h	74 h	145 h	297 h	594 h	1189 h
A2e+ MONO	Best (22kHz 16bit)	-	-	-	3.4 h	6.8 h	13 h	27 h	54 h	108 h	216 h
	Good (16kHz 8 bit)	-	-	-	9.3 h	18 h	36 h	74 h	145 h	297 h	594 h
	Longest (8kHz 4 bit)	-	-	-	37 h	74 h	145 h	297 h	594 h	1189 h	2378 h
A4RF A4RF+ A4e	Best (22kHz 16bit)	-	-	-	1.7 h	3.4 h	6.8 h	13 h	-	-	-
	Good (16kHz 8 bit)	-	-	-	4.7 h	9.3 h	18 h	37 h	-	-	-
	Longest (8kHz 4 bit)	-	-	-	18 h	37 h	74 h	145 h	297 h	594 h	1189 h
A4RF A4RF+ A4e	Best (22kHz 16bit)	-	-	-	3.4 h	6.8 h	13 h	27 h	-	-	-
	Good (16kHz 8 bit)	-	-	-	9.3 h	18 h	36 h	74 h	-	-	-
	Longest (8kHz 4 bit)	-	-	-	37 h	74 h	145 h	297 h	-	-	-
A5i A5e A5RF	11kHz mono	8 bit	1.7 h	3.4 h	6.8 h	13 h	27 h	54 h	108 h	216 h	432 h
	4 bit	3.4 h	6.8 h	13 h	27 h	54 h	108 h	216 h	432 h	864 h	1728 h
	8kHz mono	8 bit	2.3 h	4.7 h	9.3 h	18 h	37 h	74 h	145 h	297 h	594 h
L2d /FTP TL4d	11kHz mono	8 bit	-	-	-	27 h	54 h	108 h	216 h	432 h	864 h
	8kHz mono	8 bit	-	-	-	37 h	74 h	145 h	297 h	594 h	1189 h



Video and Audio Surveillance Kit

V1i V1e ▶

The Emu V1 is a compact solid-state recorder offering quality audio and video capture using the MJPEG codec.

The Emu will record any composite video input, can be triggered remotely, has timer functions for unmanned monitoring or can be body-worn and controlled with a cabled switch.

Using a raw data integrity trail to authenticate recordings, the Emu V1 is a highly versatile device for evidence gathering.



- ▶ Supplied camera concealments for quick start



- ▶ Supplied pinhole camera



- ▶ Supplied AV out cable
 - AV out allows viewing on any AV monitor
 - Ideal for set up assessment



- ▶ Optional Key fob and remote switch
 - provides the confidence of visual and tactile confirmations from the safety of up to 300m LOS

- Zero self-originating RF transmission



- Bi-directional key fob communication

System Components



- Bi-directional key fob communication



- Zero self-originating RF transmission
- Bi-directional key fob communication



- Zero self-originating RF transmission

SF1 store + forward
B2c monitoring + control
RF Switch multi purpose

SF1

- Automatically upload recordings over 3G HSPA
- Multiple options to automate recording/uploading
- No loss of dynamic range or data integrity
- Five programmable repeating timers (hourly, daily, weekly)
- Quad-band GSM / Tri-band 3G modem for greater coverage
- Programmable movement and voltage triggers
- Two closed-contact inputs
- SMS control
- Configurable once deployed via FTP & SMS
- External SMA connector for antenna options
- Wide 6-22v input voltage range



Rechargeable Batteries

- R-100 (mAh) and R-240 (mAh) • USB recharge • Charge status LED

B2c

- Remote listening via paired Bluetooth headsets
- Configure, control and download audio recorders wirelessly
- Trigger a voice call as a proximity alert
- Available in Hi-power (100m) and Standard (10m)



AUDIO RF SWITCH

- Activate recording from the safety of up to 300m LOS *
- Choose from 6 to 16v or 2 to 5.5v allowing your recording device to operate with as little as 2 x AA, 1 x 3.6v lithium or a 12v vehicle battery
- TX/RX key fob gives visual and vibrating confirmation of commands
- Also suitable as a low power general purpose switch

UNIVERSAL RF SWITCH

- Power your Geonautics devices (up to 1.5A)
- Operate from the safety of up to 300m LOS *
- Turn on/off to save power during long deployment
- Program one key fob to control many devices
- Remotely switch off modem devices to avoid sweep detection
- TX/RX key fob gives visual and vibrating confirmation of commands
- Available with bare wire termination for multi-purpose use
- Available with standard connectors to suit your Geonautics devices
- Switch other devices up to 1.5A

* Antenna dependant

TL4d

Echidna

Live Track
Live Listen
Record, Upload

WHAT YOU GET :

- ▶ Track, record and live listen simultaneously for fast response to critical situations
- ▶ Deliver audio and track data over 3G
- ▶ Quad-band GSM / Tri-band 3G modem for greater coverage
- ▶ Quality digitized audio from 2 selectable microphones
- ▶ Three multi-function I/O's (relay / trigger)
- ▶ Programmable movement and voltage sensors
- ▶ USB communications for control of device and downloading
- ▶ GSM & GPS antennas are both external, allowing for deeper concealment
- ▶ World class software and graphic user interface

OTHER MODELS AVAILABLE:

- ▶ TL4 (Live listen & track)

SNETLiteG4
SNETPad
SNETReplay



Dingo on board (TL4d)



3.4 x 1.9 x 1.1 inches

T4
Possum

Slap-n-Go Live Track

Powerful functions

Trusted deployment

T4 AT A GLANCE :

- ▶ GSM & GPS antennas are both internal to reduce installation time
- ▶ Use a C or D cell carrier for fast deployment, or standard housing for hard-wired options & reduced size
- ▶ Three I/Os, switchable voltage out, and programmable movement and voltage sensors provide advanced functionality

FEATURES COMMON TO ECHIDNA TL4 & POSSUM T4 :

- ▶ Control the device and send points over an IP network
- ▶ Positioning displayable on Google Maps™
- ▶ Four programmable Geo Fences
- ▶ New improved solid-state motion sensor
- ▶ Wide 6-22V DC operating range
- ▶ Three multi-function I/O's (relay / trigger etc)
- ▶ Programmable movement and voltage sensors
- ▶ Multiple power options: D cell, C cell or hard wired
- ▶ IP67 rated
- ▶ 100 000 point storage



T4c shown with C cell battery pack.

T3

Wombat

T3 AT A GLANCE :

- ▶ Fast installation
- ▶ Simple operation
- ▶ Long term capable
- ▶ External GPS antenna
- ▶ Powered from an internal 9v battery or external supply
- ▶ RF download & control via DL1
- ▶ GPS logger with 50 000 point storage capacity

DL1

- ▶ Confirms the number of satellites visible to the T3 during installation
- ▶ Collects the data via an RF link and reports status with vibrating confirmations
- ▶ Zero self-originating RF transmission



Slap-n-go Logger Powerful features Trusted deployment



• 9v battery fitted

Kit contents: All specifications subject to change without notice.

DEVICE	KIT CONTENTS
L2/d/FTP	TAG L2/L2d/L2FTP, leaded antenna, stubby antenna, 2 x leaded microphones (1m, 3ft), stubby microphone, USB dongle, spare connectors, screwdriver, carry case, software, manual.
A5e	TAG A5e, leaded microphone (1m, 3ft), USB dongle, 9v battery snap, stubby microphone, R-100 battery pack, spare 2 & 6 pin connectors, cable shroud, carry case, software, manual.
A5RF	TAG A5RF, key fob, leaded microphone (1m, 3ft), USB dongle, 9v battery snap, stubby microphone, R-100 battery pack, spare 2 & 6 pin connectors, spare screws, 3 x 389 batteries, screwdriver, cable shroud, carry case, software, manual.
A3e+	TAG A3e+, leaded microphone (1m, 3ft), USB dongle, 9v battery snap, stubby microphone, R-100 battery pack, spare 2 & 6 pin connectors, cable shroud, carry case, software, manual.
A5i	TAG A5i, key fob, leaded microphone (1m, 3ft), USB dongle, 9v battery snap, spare 2 & 6 pin connectors, spare screws, 3 x 389 batteries, screwdriver, cable shroud, carry case, software, manual.
A4e	TAG A4e, 2 x leaded microphones (1m, 3ft), 2 x stubby microphones, USB dongle, 9v battery snap, R-240 battery pack, spare 2 & 6 pin connectors, cable shroud, carry case, software, manual.
A4RF	TAG A4RF, key fob, leaded microphone (1m, 3ft), USB dongle, 9v battery snap, stubby microphone, R-240 battery pack, spare 2 & 6 pin connectors, spare screws, 3 x 389 batteries, screwdriver, cable shroud, carry case, software, manual.
A2e+	TAG A2e+, 2 x leaded microphones (1m, 3ft), 2 x stubby microphones, USB dongle, 9v battery snap, R-240 battery pack, spare 2 & 6 pin connectors, cable shroud, carry case, software, manual.
SF1	TAG SF1, stubby antenna, USB mini cable, power cable, SF1 adapter cable, USB dust cap, screwdriver, carry case, software, manual.
B2c	TAG B2c, stubby microphone, B2c adaptor cable, USB dongle, generic USB adaptor, 9v battery snap, R-100 battery pack, carry case, software, manual.
RF Switch	RF Switch, Key fob, power cable, antenna(s), spare screws, 3 x 389 batteries, screwdriver, carry case, software, manual
V1i/V1e	TAG V1, 5v CCD composite camera with pin hole disguises, leaded microphone (1m, 3ft), AV, audio out cable, leaded remote switch with 9v battery snap, spare 5-pin male binder connector, USB mini cable, 9v battery, 9v battery snap, carry case, software, manual.
T4	TAG T4, magnetic plate, USB dongle, power cable, lemo dust caps, C cell battery pack or D cell battery pack, screwdriver, carry case, software, manual.
TL4d	TAG TL4, leaded microphone (2m/6ft), leaded microphone (4m/13ft), stubby antenna, leaded GPS antenna, leaded GSM antenna, magnetic plate, USB dongle, 2 x power cables, screwdriver, carry case, software, manuals.
T3	TAG T3, DL1, battery cover, 9v battery, antenna, external power connector, magnetic plate, USB dongle, screwdriver, carry case, software, manual.

DEVICE	BATTERY	CURRENT (typical)		
L2 L2d/FTP	12v	PEAK	LIVE LISTEN	SLEEP
		350mA	150mA	1mA
V1i V1e	9v	Recording video & audio @ best quality	CURRENT	BATTERY LIFE
			250mA	1Hr*

DEVICE	TYPICAL D/LOAD SPEED	Mono 11kHz/8 bit (best quality) 1Gb download	Stereo 22kHz/16 bit (best quality) 1Gb download
Dongle 1 USB 1.1	11MB / min	2 hrs download time = 27 hrs of audio	2 hrs download time = 3.4 hrs of audio
Dongle 3 USB 2.0	110MB / min	10 mins download time = 27 hrs of audio	10 mins download time = 3.4 hrs of audio

General specifications:

For full specification sheets, contact your Geonautics Representative or visit Geonautics.com

All specifications subject to change without notice.

Product	Dimension mm	Dimension inch	Operating voltage	Operating current	Operating temperature	Sleep current	Max audio quality
A5e Dingo	32 x 28 x 6	1.2 x 1.1 x 0.2	4 to 10v DC	8mA	-5 to 65C / 23 to 149F	500µA	11kHz/8bit
A5RF Dingo	51 x 28 x 6	2.0 x 1.1 x 0.3	4 to 10v DC	10mA	-5 to 65C / 23 to 149F	< 1mA	11kHz/8bit
A5i Dingo	74 x 27 x 7	2.9 x 1.1 x 0.3	4 to 10v DC	10mA	-5 to 65C / 23 to 149F	< 1mA	11kHz/8bit
A4e Bilby	41 x 28 x 7	1.6 x 1.1 x 0.3	4 to 10v DC	20mA	-5 to 65C / 23 to 149F	< 1mA	22kHz/16bit
A4RF /A4RF+ Bilby	53 x 35 x 9	2.1 x 1.4 x 0.4	4 to 10v DC	22mA	-5 to 65C / 23 to 149F	< 1mA	22kHz/16bit
A2e+ Bilby	53 x 35 x 9	2.1 x 1.4 x 0.4	4 to 10v DC	20mA	-5 to 65C / 23 to 149F	< 1mA	22kHz/16bit
A2e+ Bilby 32GB	53 x 35 x 10	2.1 x 1.4 x 0.5	4 to 10v DC	20mA	-5 to 65C / 23 to 149F	< 1mA	22kHz/16bit
L2d Koala	75 x 37 x 18	2.9 x 1.5 x 0.7	6 to 22v DC	350mA (FTP)	0 to 55C / 32 to 131F	1mA	11kHz/8bit
SF1 Kookaburra	98 x 54 x 26	3.9 x 2.2 x 1.0	6 to 22v DC	450mA (FTP)	0 to 55C / 32 to 131F	< 1mA	NA
B2c Tassie Devil	40 x 28 x 6	1.6 x 1.1 x 0.3	4 to 10v DC	25mA	-5 to 65C / 23 to 149F	< 1mA	NA
B2c H Tassie Devil	51 x 28 x 6	2.0 x 1.1 x 0.3	4 to 10v DC	45mA	-5 to 65C / 23 to 149F	< 1mA	NA
V1i Emu (internal)	56 x 54 x 21	2.2 x 2.1 x 0.8	5 to 10v DC	350mA	-5 to 65C / 23 to 149F	< 0.1mA	11kHz/8bit
V1e Emu (external)	25 x 54 x 21	1.0 x 2.1 x 0.8	5 to 10v DC	350mA	-5 to 65C / 23 to 149F	< 0.1mA	11kHz/8bit
T4 Possum - hard wire	89 x 49 x 27	3.4 x 1.9 x 1.1	6 to 22v DC	220mA	-20 to 55C / -4 to 131F	< 1.5mA	NA
T4 Possum - C cell	138 x 57 x 33	5.4 x 2.2 x 1.5	6 to 22v DC	220mA	-20 to 55C / -4 to 131F	< 1.5mA	NA
T4 Possum - D cell	125 x 78 x 40	4.9 x 3 x 1.3	6 to 22v DC	220mA	-20 to 55C / -4 to 131F	< 1.5mA	NA
TL4d Echidna	89 x 49 x 27	3.4 x 1.9 x 1.1	6 to 22v DC	400mA (FTP)	-20 to 55C / -4 to 131F	< 1.5mA	11kHz/8bit
T3 Wombat	120 x 40 x 24	4.8 x 1.5 x 1.0	6 to 22v DC	50mA	-15 to 55C / 5 to 131F	500µA	NA



Geonautics International supports the transition to environmentally sustainable manufacturing processes as stated in directives by the European Union (EU).

Directive 2002/95/EC, January 2003, (RoHS)

Directive 2002/96/EC, January 2003, (WEEE)

Directive 94/62/EC, Packaging & Packaging Waste

Geonautics International is proactive in minimizing its environmental footprint across all operational procedures.

Contact | Geonautics
www.geonautics.com INTERNATIONAL

All specifications, quoted values and products are subject to change without notice.

© Copyright 2012 Geonautics International. All rights reserved.

No part of this publication may be copied or reproduced in any way without the written permission of Geonautics International. All care has been taken in compiling the information within, however the developer, Geonautics International and any associated company, distributor or reseller do not accept any responsibility for errors or misinterpretations.



Geonaureics

