WildCAT PTT

Certified ARGOS Transmitter

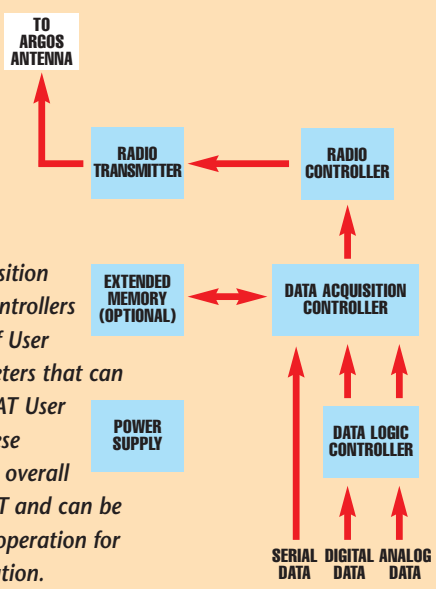
The WildCAT PTT represents a new generation of ARGOS transmitter. It is small, extremely battery efficient and fully user configurable. As with its predecessor, the SmartCAT PTT, WildCAT offers the user a PTT that provides quality ARGOS data and location positioning through the selection of high quality Temperature Compensated Crystal Oscillators (TCXO). WildCAT is also easily matched to a variety of antenna configurations and provides rugged design for demanding environmental applications. WildCAT is available as a fully user programmable and fully functional ARGOS PTT with a five-volt digital controller or as a miniature OEM RF board ideal for biological or any other low power applications.

Seimac offers ARGOS application developers direct simple support as well as full application engineering consulting services on a fee-for-service basis. Seimac engineers solutions under its ISO9001 Quality Assurance Program.

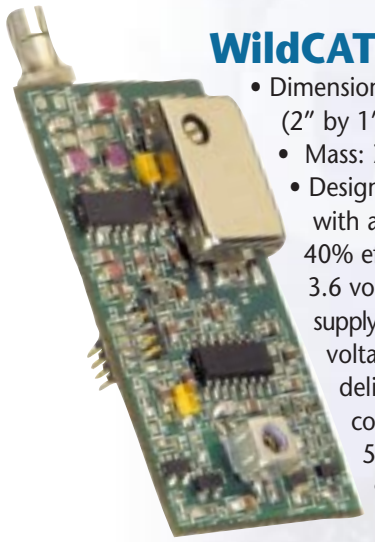
Features

- Fully user programmable including direct sensor control
- Certified to operation at -40°C
- Serial Data Single ID or Multiple ID Data Multiplexing protocol
- Crystal controlled Real-Time Clock
- 8 bit, 8 channel A to D converter with sample and hold (4 channels default, 8 available)
- Rugged extruded aluminum enclosure
- Integrated circuit based design helps to provide frequency stability with no adjustments required
- High quality TCXO for frequency stability over temperature range
- Optional Extended Memory/GPS Interface board
- Certified "Class A" ARGOS transmitter
- Available as a miniature OEM RF board capable of 3 volt operation

The WildCAT PTT can be thought of as consisting of 4 basic blocks with 1 optional block as shown in the diagram at right.

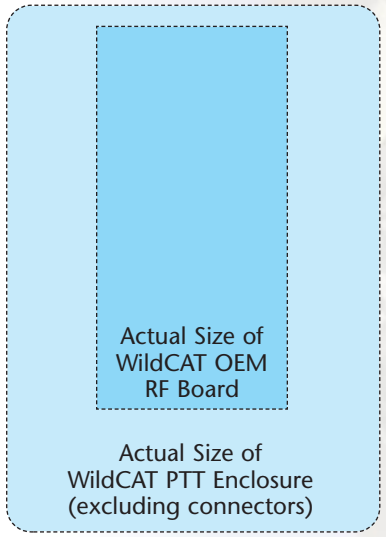


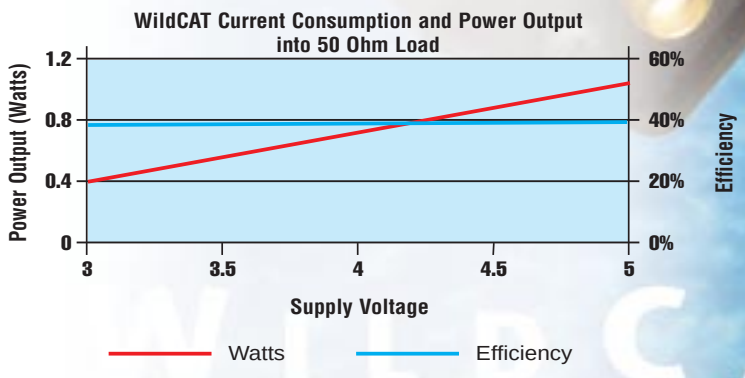
The Radio, Data Acquisition and the Data Logic Controllers each have a number of User Programmable Parameters that can be set using the WildCAT User Interface Software. These Parameters control the overall function of the WildCAT and can be used to customize the operation for your particular application.



WildCAT OEM RF Board

- Dimensions: 5.1cm by 2.5 cm by 0.6 cm (2" by 1" by 0.25")
- Mass: 7 grams unpotted
- Designed to produce 1 watt RF output with a 5 volt supply but will operate with 40% efficiency down to .5 watt with a 3.6 volt supply and .35 watt with a 3.0 volt supply. Absolute maximum supply voltage is 6 volts. RF output is delivered to a coaxial connector with a nominal 50 ohm load
- Frequency and modulation preset at factory – no adjustments required
- Control and modulation inputs are controlled by open collectors. Jumpers are provided on the board to emulate all popular ARGOS OEM RF boards
- Operating temperatures range is -40°C to +70°C
- Designed to allow casting in plastics/epoxy for deep dive marine applications





The World's Most Popular Line of ARGOS Transmitters

Features:

- User Programmable
- Two OEM Radio Choices
- Low-Power Design
- Miniature Form
- Data-Multiplexing

Seimac solutions

Delivering custom engineered tracking, meteorological & data solutions

Seimac is an engineering firm specializing in the design of data acquisition and telemetry systems.

Seimac has provided satellite systems engineering, data communication technology and consultancy since 1978.

Our staff includes engineers, technicians and scientists who are specialists in software, instrumentation, satellite radios, acoustics and RF design. We design, assemble and customize the electronics portion of our products. We also specify the design and functionality of the other components, sensors and housings for our products and thus bring a unique set of skills to providing a complete solution for our clients. Seimac is a registered ISO 9001 company producing quality products for transport, marine, utility, environmental and safety applications.

For more information about Seimac and our Environmental Radio products, please call:
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Technical Support:
www.seimac.com/wcatsup.htm

Seimac also manufactures High Data Rate transmitters for the GOES satellite network

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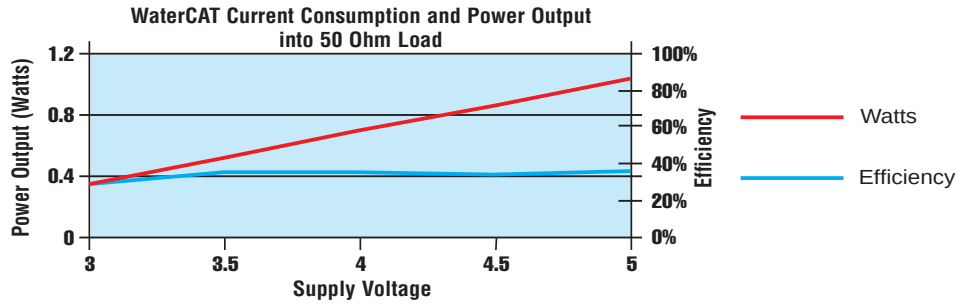
Blue Represents Actual Size of WaterCAT OEM RF Board

WaterCAT
OEM RF BOARD ARGOS TRANSMITTER

The WaterCAT OEM RF Board is a new product designed specifically for non-biological, OEM imbedded ARGOS applications. WaterCAT is a derivative of Seimac's highly successful WildCAT radio design. WaterCAT was designed to allow ocean instrument manufacturers to easily take advantage of improved receiver capability in the latest generation of ARGOS instruments aboard NOAA polar-orbiting satellites by reducing output power and s preading frequency.

Features

- Fail-safe or "crowbar" circuitry built in for ease of implementation & certification of complete PTT
- 1 Watt RF output with 5 Volt supply or 0.5 Watt RF output with 3.6 Volt supply
- RF power output adjusted by easy-access jumpers



WildCAT PTT Specifications

Functionality	
Base Function	Fully compliant with ARGOS PTT operating specifications
User Programmable Functions	User ID, Transmit Repetition Rate, Transmit Windowing based on data acquired and/or on timers
ID Multiplexing	Supports up to 4 ID's and 128 Byte message in a single SmartCAT (up to 10 ID's and 1280 Bytes with Extended memory Option)
Data Acquisition	Analog, Digital or Serial Data
Physical	
Dimensions	7cm (2.8") w x 2.9cm (1.2") h x 5.9cm (2.3")l (inc. enclosure)
Weight	110 grams (3.9 oz)
Environmental	
Temperature Operating	-40°C to +50°C
Temperature Storage	-55°C to +80°C
Relative Humidity	95% non-condensing
Shock	100g, 11 nSec half sine wave shock, three shocks on each of the three primary axes
Vibration	1 hour vibration on each of the three primary axes with random vibrations
Power Supply	
Voltage Range	5.5 to 20 volts
Current Drain	
Sleep	55uA typical
Data Acquisition	10mA typical
Transmit	600mA typical
RF	
Output Power	1.1 Watts
Antenna Output Impedance	50 Ohms
Modulation Type	Manchester encoded phase modulated
Modulation Depth	1.1 radians peak
Interface	
Serial	
Baud rate	1200,2400,4800,9600 (user selectable)
Bits	8 bits
Parity	None
Stop bits	1
Handshaking	Hardware – RTS,CTS or software controlled
Digital	
Number of Inputs	4 default, optionally 8
Equivalent Input Circuit	1 CMOS gate load (each input)
Control lines	1 (used to control power to external sensors)
Analog	
Number of Inputs	4 default, optionally 8
Resolution	8 bits
Voltage range	0-5 Volts
Input Leakage Current	<400nA
Extended Memory Option	
Mechanical	Installed within standard WildCAT enclosure
Configuration	I MB of Flash Memory, up to 32 kB of RAM, up to 32 kB of ROM
ID Multiplexing	Extends multiple IDs to 10 with messages of up to 1280 Bytes

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