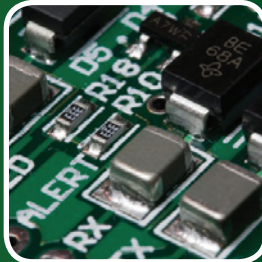




successful

ENDEAVOURS



We make electronics work the way they should, saving you up to 2 out of every 3 dollars you would otherwise have wasted, so you can manufacture your market leading product in Australia at a profit.

www.successful.com.au

Awards and Achievements

Melbourne's South East Business Awards 2011 nominee **Successful Endeavours** is no stranger to achievements. Successful Endeavours also won the 2010 Exponential Entrepreneur Awards, the 2010 Casey Business of the Year Award and was highly commended in 2009 EDN Innovation Awards.

The following is a full list of **Successful Endeavours'** awards and achievements.

- ▶ Melbourne's South East Business Awards 2011- Nominated for the Small Business Award
- ▶ Melbourne's South East Business Awards 2011- Nominated for the Business of the Year Overall Business Excellence Award
- ▶ Casey Business of the Year Award for 2010
- ▶ Joint winners in the Business & Professional Services category- Casey Business of the Year Award
- ▶ Finalist in the Manufacturer of the Year category- Casey Business of the Year Award
- ▶ 2010 Exponential Entrepreneur Award
- ▶ 2009 EDN Innovation Awards- Best Application of Analog Design - Highly Commended

- ▶ 2009 EDN Innovation Awards- Best Application of Design Software - Highly Commended
- ▶ 2008 ABC's The New Inventors program - The People's Choice and Winner of its heat for the "Safe Turning Indicator" invention
- ▶ 2008 Innovic Next Big Thing Awards- Finalist for the "Safe Turning Indicator" invention
- ▶ 2006 Innovic Next Big Thing Awards- Winner for the Mediseus device



A Wide Range Of Hardware and Software Expertise and Services

What's all the fuss about? For starters, Successful Endeavours develops software and hardware in 122 product categories and 85 industries! The hard working developers at Successful Endeavors offers a range of cost effective services to Australian manufacturers.

Successful Endeavours understands the need for successful electronics products that meet the investment balance between development cost, unit cost and time to market.

Listed below is our electronic product development offerings. For some clients we handle the whole thing.

▶ **Electronics Product Development**

- requirements capture and review
- software and hardware architectural design
- functional decomposition
- reviewing marketing data to identify features versus price point
- documentation, testing, revision control, verification, validation

Listed below is our Electronics Hardware offering.

▶ **Electronics Hardware Development**

- active and passive circuit design
- printed circuit board design and layout in Protel/Altium Designer

- impedance controlled routing for high speed interfacing and RF
- prototypes
- design audits
- low power and battery powered design
- analog electronics including preamplifiers, low noise and low distortion design
- active and passive filters including high order active filters
- power electronics including
- wireless data acquisition systems
- variable colour RGB LED drivers
- mains power supplies
- pump controllers
- consumer and industrial controls
- ESD, EMC, RFI, transient protected inputs and outputs
- design for manufacture
- very low cost production ATE systems to complement our design for manufacture service

Listed below is the electronics design and embedded software services that we supply to our clients.

► **Embedded Software Development**

- including load dump rated power supplies and peripheral interfaces
- intelligent sensors with on board microcontrollers and communications interfaces
- LIN, CAN, RS232, RS485, USB, Ethernet and custom wired communications
- TCP/IP, 802.15.4, ZIGBEE and custom low power radio communications
- active RFID with accurate distance to target measurement
- data logging and FLASH data storage including power failure tolerant storage
- IR communications including operation in full sunlight
- motor controllers including stepper, BLDC and DC
- security card readers including iButton, Proxcard, MiFare, iClass, Indala, Weigand
- embedded software development in C
- Atmel AVR specialists
- TI MSP430 specialists
- also working with 8051, ARM (including NXP LPC2000 and Atmel SAM7), NEC 78K and V850, Renesas MC16 RC8/tiny, ST7, PIC and dSPIC, 6801, 80x86
- IAR toolsets
- Borland C++ Builder for PC/Windows based code
- state machine design and coding
- communications protocols
- DSP and highly efficient translation of analog filters to software
- debouncing, noise rejection and fault tolerant design
- unit testing and automated software testing
- peer code reviews and code walk through

- full system simulation – you can test the code before the PCB is available

Listed below is our electronics manufacturing support. Our ATE price point really surprises most of our clients.

▶ **Electronics Manufacturing Support**

- ATE
- electronic serial numbering, calibration and production records
- cost reduction and reduced rework
- reduced field returns
- EMC, C-Tick, A-Tick, CE, FCC, FDA and FCC compliance assistance
- production processes, procedures and fixtures

The following is a list of mechanical services offered through our supply chain.

► **Mechanical Services**

- laser and NC cut and fold sheet metal
- plastic injection moulded cases and structural members
- membrane panels, labels, rating plates
- die cast cases
- machined and drilled components
- springs and terminals
- seals including IP67 and IP68 rated

The following is a list of the Electronics and Embedded Software product types we have worked on and/or helped to create.

▶ **Electronics and Embedded Software Products**

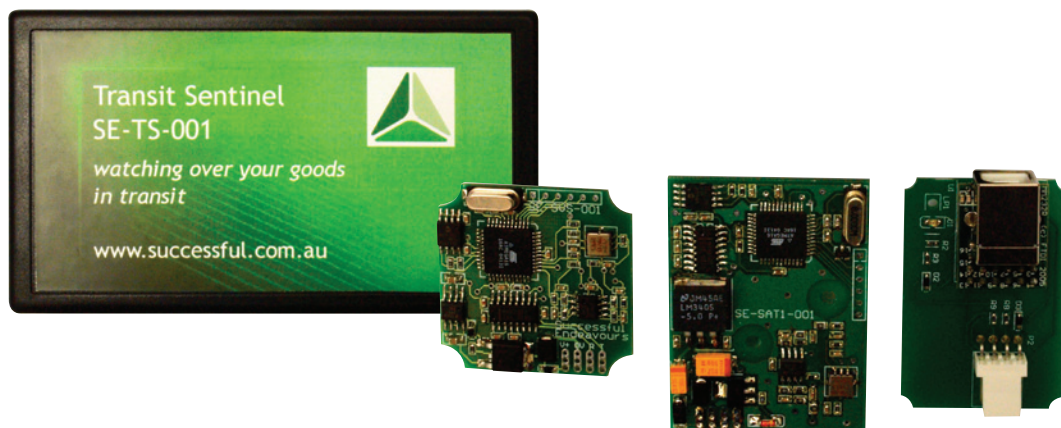
- Automotive Siren
- Automotive Immobiliser
- Automotive Body Computer
- Automotive Thermostat Monitor
- Industrial Shock and Vibration Sensor
- 2D shock sensor with event logging and shock profile capture

- 3D shock sensor with event logging and shock profile capture
- 2D tilt sensor
- 3D tilt sensor
- Remote Thermostat Monitor
- Electronic level sensor – gravitic spirit level
- Underground Cable Sheath Fault Locator
- Pipe and Cable Locator
- Cable Pair Identifier
- Cable Cutover Set
- Cable Fault Locator Bridge
- Circuit Tracer
- Portable Appliance Tester – PAT
- Time Domain Reflectometer
- Voltage Surge Arrestors
- Automated Switch Tester – high volume production
- Water Pump Controller
- Programmable Air Blower
- Pool and Spa Pump Controller
- Touchpad Pump and Blower Controller
- Pump Controller Protocol Converter
- LCD Based Spa Controller
- Temperature Probe
- Thermal Cutout for Spa
- Humidity Sealed Touchpad
- Electrically Isolated Air Plunger Actuator
- Digital Pump State Controller
- Thermistor Based Temperature Sensor
- Underwater LED Pool Light
- Pump Loss Of Prime Detector
- Earth Leakage Measurement device for Safety Certification
- Loading Coil Crosstalk Measurement Tester with 120dB range
- ADSL Service Detector
- Communications Set for Telephony Service Technicians
- Wireless Data Logger
- Corrosion Protection Data Logger
- High Voltage Disconnect Switch Controller
- Electrically Held Switch
- Temperature Controller for Reptiles
- Smoke Alarm Repeater and Exit Indicator
- Electromagnet Therapy Apparatus
- Fork Lift Speed Limiter



- 
 - Personnel Proximity Alerter using active RFID
 - Fork Lift Proximity Alerter using active RFID
 - Power Factor Correction controller
 - Ultra Low Power Battery Operated Telemetry
 - Septic Tank Sludge Level Meter
 - PIR Based Vandal Displacer
 - Bin Cycle Reminder
 - Parallel Banked High Current Capacity Battery Charger
 - UPS Battery Bank Controller
 - Trickle Charge Battery Manager
 - Epidural Procedure Simulator
 - Air Ram based Saline Syringe Simulator
 - USB Air Solenoid Valve Controller
 - Bluetooth Based RS232 Extender
 - Conveyor Belt Controller
 - Programmable Conveyor Step Controller
 - Gate Entry Keypad
 - Gate Entry Touchscreen
 - Horse Tracker with GPS
 - Kick Boxing Impact Measurement Device
 - Infra Red based communications system – IR
 - IR Vehicle Identification System
 - RFID Vehicle Identification System
 - Industrial Proximity Card Reader MiFare
 - Industrial Proximity Card Reader HID iClass
 - Industrial Proximity Card Reader HID Proxcard II
 - Industrial Proximity Card Reader Indala
 - Industrial iButton Reader
 - Protocol Converters For Security Systems
 - USB iButton Reader
 - RS232 iButton Reader
 - Wireless iButton Reader
 - Rugged Vehicle Management System
 - Automatic Rain Tank Valve Controller
 - Tyre Pressure Measurement and Reporting System for Trucks
 - Vehicle Area Network using Wireless Communications
 - iButton based Vehicle Access Controller with Event Logging
 - Custom Audio Mixer for English Language Training Assessment
 - Automated In System Programmer for Production
 - Countdown Screensaver for the Olympics
 - Studio Quality Microphone Preamplifier with Phantom Power
 - Studio Quality Instrument Interface
 - Passive DI
 - Brushless DC Motor Controller – BLDC
 - RS232 Based CRO for Windows
 - USB Based CRO for Windows

- Differential Voltage Buffer for Data Logging
- FLEXIO Platform Remote IO with Data Logging
- Windows Based Fractal Generator Software
- Windows Based GPS Tracking Software
- Graphical Data Visualisation for Windows
- Data Logger File Format Converter
- RGB LED Lighting Controller
- RS232 Protocol Analyser
- RS232 Data Capture Wizard
- Transit Sentinel Shock and Tilt Monitor for goods in transit
- Industrial Timer Module
- Concentrated Solar Power Dish Controller
- Programmable Lathe
- Safeturn Bicycle Turn Indicator
- Container Terminal Vehicle Management and Container Tracking System
- Exit Gate Access Controller
- Truck Parking Wireless Keypad
- Hand Held Vehicle Access Updater
- Dashboard Mounted Intelligent Alert Module
- Dashboard Mounted LCD Module with Keypad
- RS232 Port Multiplexer
- Active RFID 2D positioning System
- Digital Compass
- Load Dump Protected Power Supply
- Load Dump Protection Module for Vehicle Mounted Telemetry
- Remote Fuel Level Monitoring
- PLC Protocol Converter



- Infra Red 2D positioning System – IR
- Lightning Protection Interface
- DNP3 enabled Smart Grid Power Controller
- Bone Conduction Hearing Aid for those with temporary hearing loss
- Battery Operated Rainwater Tank management system
- Electrical Risk detector for plumbers
- IR based sports simulator that uses real balls
- Irrigation
- Farming
- Telephony Carriers
- Telephony Service Technicians
- Plumbers
- Trench Diggers
- Excavators
- Automotive Assemblers
- Automotive After Market
- Security
- Councils
- Churches
- Not For Profit Agencies
- Charities
- Electronics Manufacturers

The following is a list of industries we have supported with Electronics Design and Embedded Software Development.

▶ **Electronics Industries**

- Container Terminals
- Container Terminal Management Systems
- Fleet Vehicle Management
- Container Tracking
- Vehicle Access and Management
- Vehicle Tracking
- Industrial Telemetry
- Renewable Energy Generation
- Telecommunications Carriers
- Warehouses
- Road Freight
- Rail Freight
- Sea Freight
- Domestic Pools
- Domestic Spas and Spa Baths
- Commercial Pools
- Tamper Detection
- Remote Asset Monitoring
- Bicycle Safety
- Fork Lift Safety
- OH&S
- High Voltage Power Distribution
- Electrical Safety Testing and Certification
- Goods in Transit Monitoring
- RFID
- Automotive Load Dump Protection
- Data Logging
- Data Visualisation
- Legacy System Support
- IR Communications
- Fuel Monitoring
- LED Lighting and Illumination

- Full Colour Control Lighting
- Cable Video
- ESD Protection
- Lightning Protection
- Exporters
- Web Services Developers
- Power Supplies
- English Language Training
- Medical Training
- Sewage
- Septic Tanks
- Electricians
- Technicians
- Software Developers
- Embedded Software Developers
- Medical Practitioners
- Councils
- Ratepayers
- Tenants
- Automotive Component Manufacturers
- Precision Machining
- Repetition Machining
- Repetition Engineering
- Authors
- Musicians
- Studio Technicians
- Recording Studios
- Live Audio Mixing
- Music Equipment Manufacturers
- Test Equipment Manufacturers
- Power Distribution Equipment Manufacturers
- Audiologist
- Sports Simulation

The following lists the Electronics and Embedded Software technologies we have worked with so far. However, Shift Happens so we will continue to expand our offerings.

▶ **Electronics and Embedded Software Technologies**

- Printed Circuit Board Design
- Printed Circuit Board Layout
- Surface Mount
- Through Hole
- Track, Pad, Via, Buried Via, Plane, Power Plane, Layer
- Connector, joint, plug, socket, inline
- Wire, Cable, Harness, Bundle, Screen, Shield
- Strip, Crimp, Insulation
- Displacement, Crush
- Cable Tie, Grommet, Edge Strip, Trim
- IP40, IP54, IP64, IP65, IP66, IP67, IP68 enclosures
- Battery Powered
- Mains Powered
- Solar Powered
- Energy Harvesting
- RS232, RS422, RS485
- USB
- TCP/IP
- Ethernet
- GSM, GPRS, CDMA, HSDPA
- Battery Backed Real Time Clock – RTC
- Battery Backup
- FLASH memory
- Electronic Circuit Simulation
- Electronic Circuit Design
- Electronic Circuit Prototype
- EMC Testing
- C-Tick, A-Tick, CE, FCC, TUV, CSA, UL, CISPR, AS
- Safety Testing
- Microcontrollers
- 8 Bit, 16 Bit, 32 Bit
- Windows
- DOS
- Linux
- Analogue Electronics
- Power Electronics
- Stepper Motor Controller
- Brushless DC motor Controller – BLDC
- DC Motor Controller
- Speed Control
- Position Control
- GPS
- ASK, OOK, FSK, PSK, QPSK
- iButton
- Thermistor
- Resistor
- Capacitor

- Bipolar Transistor
- MOSFET
- CMOS
- LED
- Inductor
- Coil
- Choke
- Transformer
- Winding
- Component, Part
- Parts List, BOM, Bill Of Materials, Kit
- Charge Pump
- Switch Mode Power Supply – SMPS
- Passive Filter
- Active Filter
- Low Pass Filter, Band Pass Filter, High Pass Filter, Notch Filter
- SCR, Triac, Diac
- Diode
- Schottky Diode
- IGBT
- Overvoltage Protection
- Load Dump Rated
- Supercap, Super Capacitor
- Tuned Circuit
- Switch, Microswitch, Rotary Switch, Momentary Contact Switch, Latching
- Relay, Latching Relay, Bistable Relay, Mechanical Relay
- Solid State Switch
- Pot, Potentiometer, Trimpot, Linear Potentiometer, Slider, Fader
- solder, lead free, ROHS, solderless, solder free, soldering iron, solder bath, desolder
- encapsulate, pot, conformal coating, seal, water tight, water proof, weather proof
- sensor, MEMS, strain gauge, accelerometer, gyroscope, gyro
- piezo, piezo film, piezo resistive
- beeper, buzzer, speaker, microphone
- PIR, IR, LVD, LDS
- Battery Charger, Battery Management
- Antenna
- Transmitter, Receiver, Transceiver, Line Driver
- CAN, LIN, J1939, Packet, Checksum, CRC, Forward Error Correction, ECC, Error Correction Coding
- UDP, TCP, HTTP, IP, FTP, SMTP, SNMP, SNAP, RSS, Streaming, Stream
- Secure, Encryption, AES, DES, Triple DES

- Low Power Radio
- Ultra Low Power, Pico Power, Microwatt, Milliwatt, Watt
- IC, Integrated Circuit, Silicon Chip, Chip, Module, Assembly
- Assembler, C, Source Code, File, C++, Delphi, programming language
- AC, DC, Hertz, Hz, Frequency, UHF, VHF, AM, FM
- 2.4G, 315MHz, 433MHz, 433.92MHz, 434MHz, 868.3MHz, 915MHz
- Unit Test, Integration Test, System Test, Verification, Validation
- Specification, Functional Test, Test Specification, Test Plan
- Coding, Debug, Debugging, Allocation Matrix, Review, Peer Review
- Code Review, Code Walkthrough, Test Suite, Test Driven Development
- Functional Test, Stress Test, Thermal Stress, Accelerated Life test
- Design Documentation, Architecture, Achitctural Design
- FMEA, Design Audit, Design Review
- Mock, Simulate, Simulation, System Simulation
- JTAG, ISP, Debug Wire
- Bootloader, module, system, embedded system, embedded software
- Firmware, Hardware, Software, FPGA, EPLD, CPLD
- Altium Designer, Protel, IAR, Borland, Code Gear, Microsoft, Embarcadero Technologies
- SDL, Doxygen, GraphViz, ESB, Gimple PC-Lint, RSM, Greenleaf, Novamind
- VMWare, Virtualisation, Solidworks, Ultraedit, Ultraedit Studio, Programmers Notepad, Eclipse
- RAM, ROM, FLASH, EEPROM, Peripheral, Port, Register, Memory, Harvard, Address Space
- Call, Routine, Subroutine, Pass, Pointer, Parameter, Return, Global, Static, Local, Table
- Compile Time, Run Time, Design Time, Type Safe, Execution, Boot, Reset, Reboot
- Abstract, Encapsulate, Embed, Hide, Structure, Class, Object



- Power Up, Power On, System Startup, Run, Launch
 - Multiply, Multiplier, Analogue Multiplier, PLL, Phase Locked Loop
 - Comparator, Amplifier, Operational Amplifier, Gain, Phase, Margin
 - Buffer, Gate, OR, XOR, AND, NOR, NAND, NEXOR, NXOR
 - Dual, Triple, Quad, Hex
 - Binary, Boolean, Octal, Decimal, Hexadecimal, Base 2, Base 8, Base 10, Base 16
 - Pole, Zero, Stable, Transfer Function, Laplace Transfer, FFT, DCT
 - Time Domain, Frequency Domain, Phase Domain
 - First order, second order, third order
 - Differential equation, rate, delta, change
 - debounce, median, range check, bound, time constant
 - settling time, conversion time, ADC, dual slope, DAC, Multiplexer
 - Analogue Switch, Router, Address, Data, IO, input, output
 - Timer, Input Capture, Watchdog, Brown Out Detector
 - UART, USART, I2C, TWI, SPI, Microwire, Bit Bang
 - Operating System, Scheduler, Timed Task, Scheduled Task
 - Round Robin, Poll, Polled, Preemption, Preemptive
 - Multitasking, Multitask, Interrupt, Volatile Data
 - Diagnostic, Error, Error Manager, Error Log, Fault
 - Audio, Electret, Headphone, Crosstalk, Intermodulation Distortion
 - Low Noise, Low Distortion, Preamplifier
 - Instrumentation Amplifier, Balanced Circuit, Hum Immunity
 - Interference, Rejection, Transducer
 - Noise, Signal, DSP, Process
 - Motor, Haptic, Feedback, Resist
 - Sleep, Wake, Shutdown, Halt
 - Clock, Oscillator, Crystal, RC
 - Atmel, AVR, ARM, Xmega, TI, MSP430, TMS320C, Microchip, PIC, dsPIC
 - 6805, 6801, 8085, 80188, 80186, 80x86, 6502, LPC2000
 - NEC, 78K, V850, Freescale, On Semiconductor, NXP, Analog Devices
 - SAM7, Arm Cortex, Vector
 - DNP3, SCADA
 - Power Factor Correction
 - Capacitor Bank Controller
 - Solar Inverter, Micro Inverter
- Successful Endeavours** is so forward thinking that we're even preparing for jobs that don't yet exist, technologies that haven't been invented, and problems we don't even know we will have!
- You need our technological prowess in your corner! Your next low cost electronics manufacturing success story is ready to be written. Contact us today and let's get started.

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