

## **Invertech Electronics**

Engineering, R&D & Consulting, Market Analysis in: Smart Label Technology / RFID / Transponders, Patents, RF and Microwave, Electromagnetic engineering, Antennas Microelectronics and IC Design

## Invertech Electronics Pty Ltd Capabilities Profile

## **Overview:**

Invertech is an Adelaide Australia based RF technology research & development / engineering consulting company specialising in Smart Label / transponder, reader systems architecture, transponder CMOS IC asic chip design, general RF / microwave engineering, electromagnetics, antennas. RFID industry consultancy, business strategy development, patents and IP licensing, standards, and international advisory company with 4 decades of professional experience specialising in wireless communication and data telemetry technologies, RFID technology and RF engineering fields. Invertech's principal is a professional engineer and member of the IEEE, including the Antenna & Propagation Society (APS) and Microwave Theory & Techniques Society (MTTS).

Broad-based Invertech offers efficient and cost-effective solutions provision to discerning industry clients right from conceptual design through to the breadboard prototyping / preproduction phase.

## Core capabilities embrace:

Analogue and RF circuit and system design from DC to microwave. Analogue integrated circuit IC design. Feasibility studies, project reviews, patent and intellectual property assessment and evaluation

RF signal processing systems, low-noise pre-amplifiers, high dynamic range low distortion broadband linear amplifiers and RF power amplifiers, RF filters – distributed and lumped-element, Rx antenna multicouplers, antenna array combiner and phasing networks, etc. low-noise high spectral purity RF signal sources and DDS synthesizers, SDR, receiver preselectors, solid-state / tube transmitter design

RF passive components – baluns, ununs, RF power combiners, hybrids, RF transformers, TLT xfmrs, directional couplers, impedance matching networks, diplexers, high intercept mixers, limiters, phase shifters, SWR / return loss bridges, antenna tuning units / ATU, T/R switches, high-power filters

Special purpose and miniature/electrically-small antennas - bespoke transmitting and receiving antenna systems for VLF/HF/VHF/UHF, magnetic loop antennas, E-field and H-field sensors, planar low profile printed-circuit antennas, wideband active antennas, directional arrays, beam steering antennas

Propagation studies, backscatter, active and passive mono / bistatic radar with non-cooperative sources

Esoteric communications systems, signal analysis, covert communication system design, ELINT, SIGINT, MASINT, ECM, Spread Spectrum techniques, secure communications link design, EW

Weak signal detection, correlators, SNR enhancement, interference cancellation, adaptive filtering RFI/EMI/EMC / TEMPEST, incidental electromagnetic emissions based covert surveillance systems