



Knightsbridge
Wireless Communications

KWC-SYS.COM

LEADER IN

ENGINEERING DESIGN DEVELOPMENT

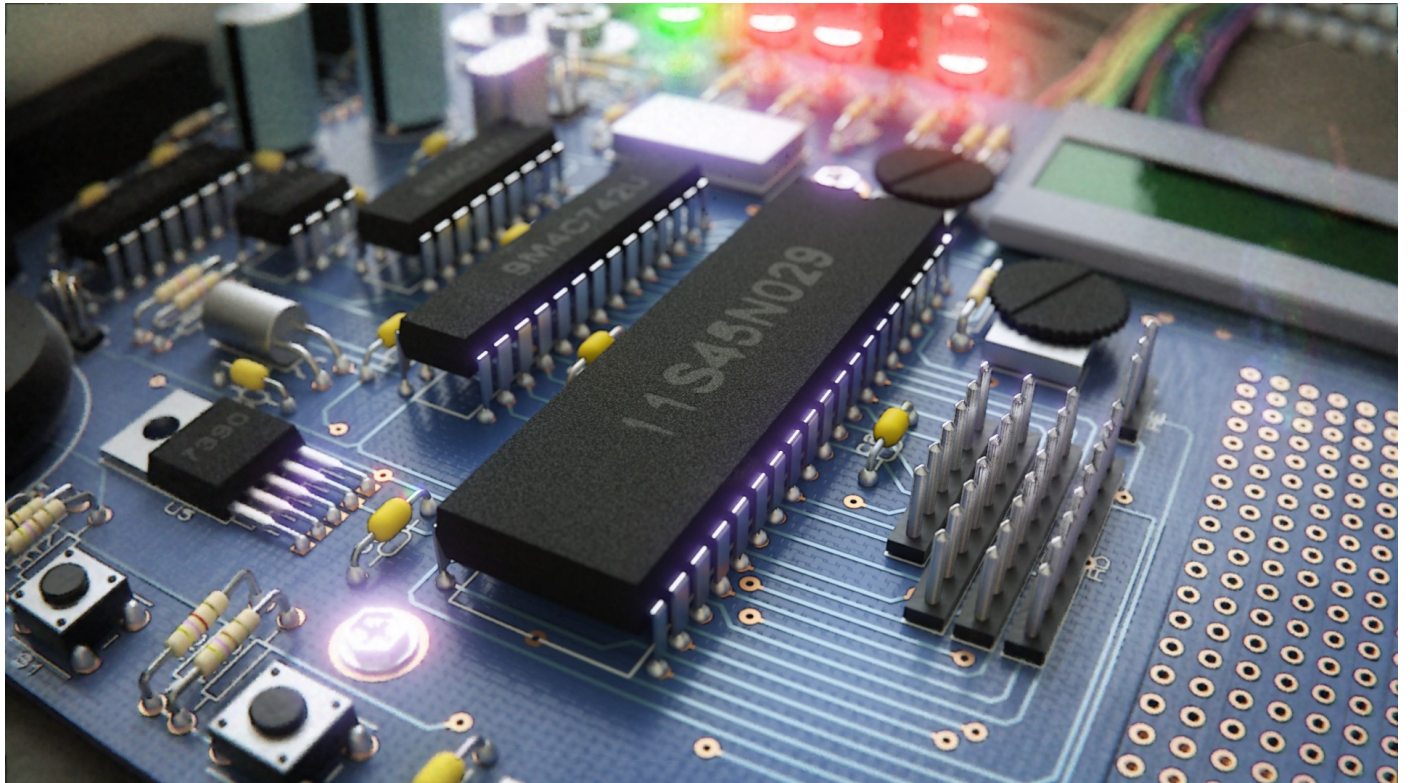
YOUR SILENT PARTNER TO INTRODUCE
YOUR NEW AND INNOVATIVE PRODUCTS TO
THE MARKET TIMELY AND CONFIDENTIALLY





WE ARE THE LEADER IN

FPGA, DSP, MCU AND CUSTOM ENGINEERING DESIGN SERVICES



We are skilled professionals in embedded and real-time software, electronics and Industrial/Mechanical design and development.

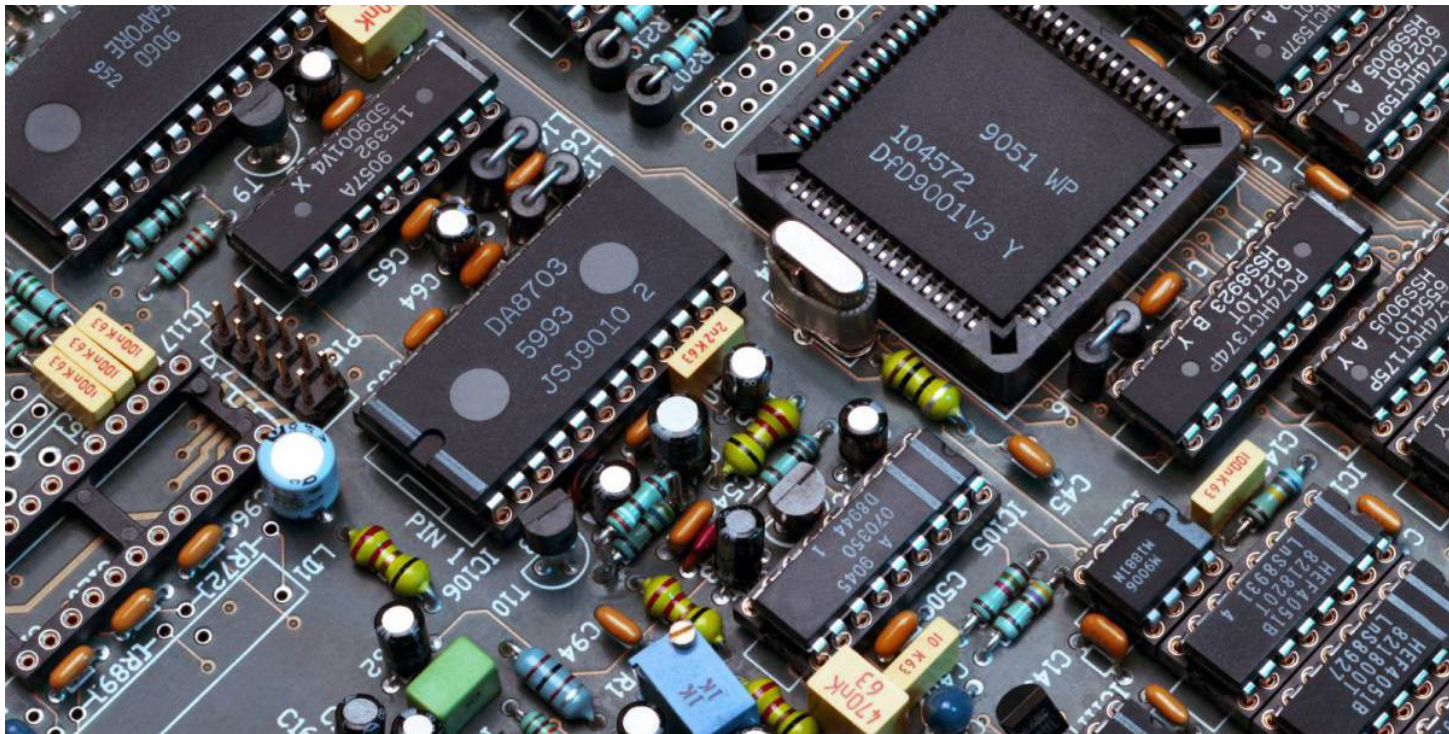
Take advantage of our experienced team of management, hardware/software engineering, and industrial designers to conceive, design and prototype your physical product.



SYSTEMS LEVEL DESIGN AND DEVELOPMENT

The strength of Knightsbridge Wireless design services lies in our development services integrating hardware with software, including everything from FPGA design, to board-level design and development, and embedded software development.

Short product life cycles, coupled with increasingly complex electronic designs, mean that manufacturers often struggle to optimize productivity and bring products to market on time. Our experience using ESL design methodologies and tools can help your team to speed up the design cycle.





FPGA DESIGN

At Knightsbridge, we can take your design from concept to specification writing and then on to high-level FPGA design, and development, as well as verification and documentation.

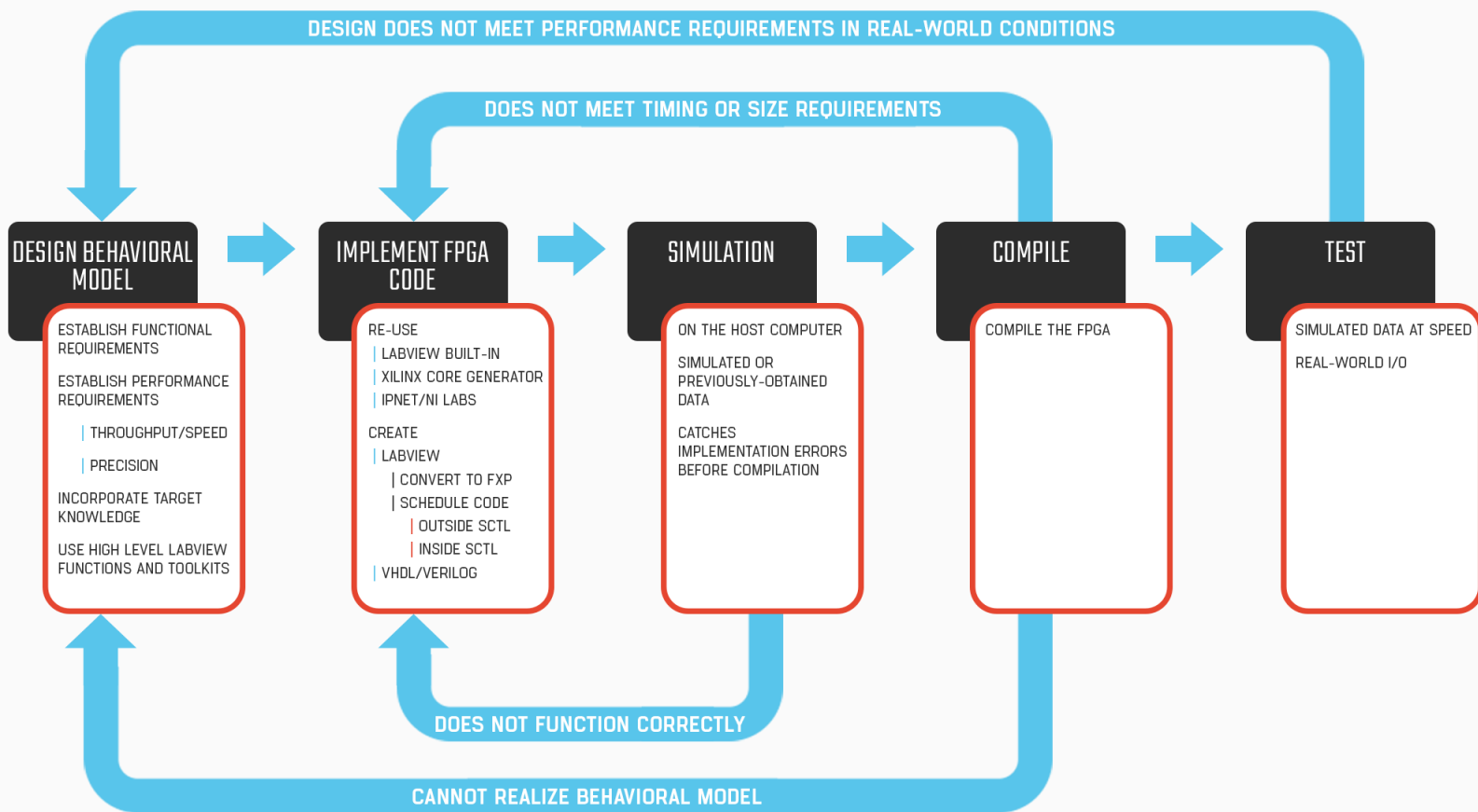


Our Sr. electronic design engineers meet the most stringent requirements for FPGA development using systematic ASIC design methodologies for both project and team management.

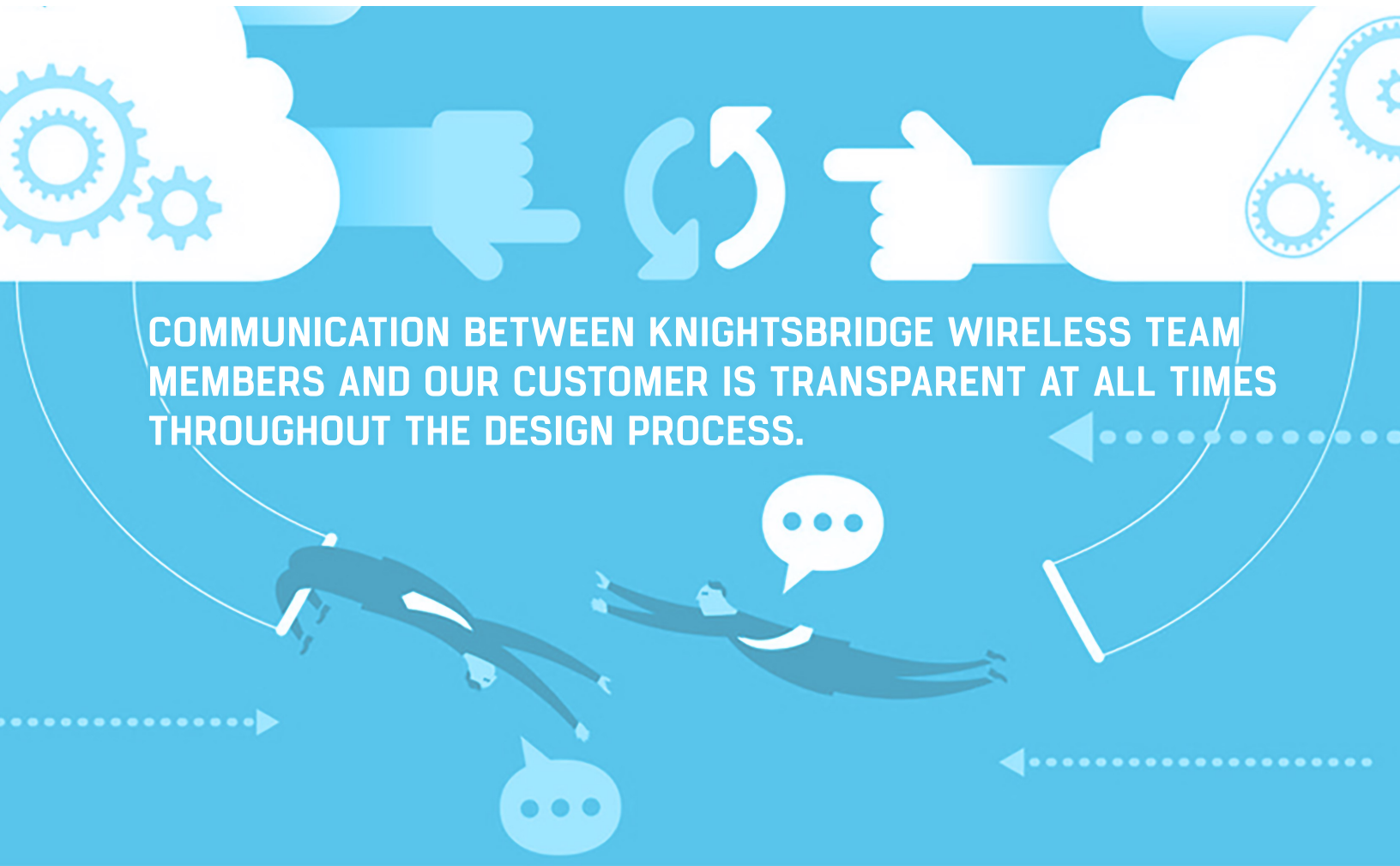
In most cases, a senior engineer will architect the design, write the specifications for the FPGA implementation and manage the overall project. In parallel, an FPGA verification specialist will design a test bench to verify the system to be implemented.



Once the architecture of the system and verification environment are documented, the test-bench development are then performed using additional resources. In general, this means that a minimum of three or more designers collaborate on every FPGA development project that we deliver.



The structured design approach used at Knightsbridge Wireless ensures that there is a high probability of eliminating design errors, thus ensuring a high level of quality and efficiency resulting ultimately in a faster time-to-market for your product.



COMMUNICATION BETWEEN KNIGHTSBRIDGE WIRELESS TEAM MEMBERS AND OUR CUSTOMER IS TRANSPARENT AT ALL TIMES THROUGHOUT THE DESIGN PROCESS.

We aim to work collaboratively with our customers and operate as a natural extension to your in-house design engineering department.

Our FPGA design services are complemented by our team's complete range of electronic design expertise including functional verification, digital signal processing, embedded software development, functional verification, power/signal integrity analysis, system and hardware architecture and electronic system-level design services.



DIGITAL SIGNAL PROCESSING DESIGN

Digital signal processing (DSP) design projects are becoming increasingly challenging in the electronics industry and many organizations seek help from experienced DSP consultants. Greater system complexity, as well as strict performance targets, often makes it difficult for companies to bring electronic products to market quickly and efficiently



At Knightsbridge Wireless, we are able to quickly understand your needs and our teams deliver results tailored to your unique business requirements. With extensive experience working with leading electronics component and equipment manufacturers, our engineers' knowledge will ensure that your planned concepts are quickly translated into successful electronic products.

HOW CAN WE HELP?

We can provide you with DSP design recommendations at any stage in the electronic product development process, from feasibility studies through to final implementation and from verification through to debugging.



Our senior DSP team is specialized in Digital Signal Processing design projects, algorithm development and high-level design methodologies. Our background in real-time, highly reliable DSP design projects, results in production quality designs that undergo rigorous verification, allowing you to save precious time during lab verification and quickly bring your product to market.



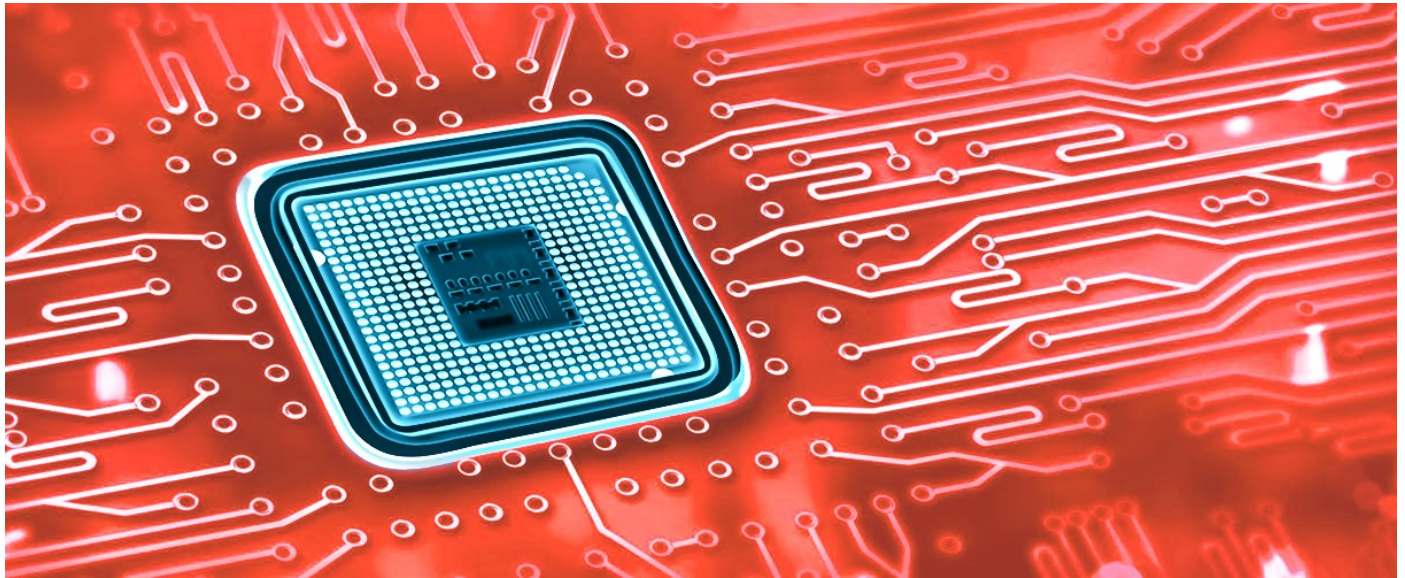
Developing an efficient DSP design project on an FPGA can pose unexpected challenges, and some hardware developers or DSP consultants may sacrifice algorithm fidelity for more efficient hardware results, or, alternatively, fail to take advantage of the DSP capabilities of the target FPGA.

OUR RANGE OF DSP DESIGN SERVICES INCLUDE:

- ALGORITHM DEVELOPMENT
- ARCHITECTURE DEFINITION
- DIGITAL SIGNAL PROCESSING DESIGN REVIEW
- CO-PROCESSING, DEVICE AND SYSTEM PARTITIONING
- MATLAB/SIMULINK SIMULATION
- OPTIMIZATION FOR COST, PERFORMANCE AND EFFICIENCY
- VERIFICATION AND DEBUGGING



EMBEDDED SOFTWARE DESIGN



Knightsbridge Wireless provides expert embedded software development and embedded firmware/software engineering design solutions. We leverage the latest embedded technology to help you develop quality electronic products.

Our embedded team can provide you with a complete range of embedded software development services.



OUR EXPERTISE RESIDES IN:

■ SYSTEM ARCHITECTURE AND PARTITIONING

■ BOARD BRING-UP

■ EMBEDDED IMPLEMENTATIONS

□ REAL-TIME OPERATING SYSTEMS (RTOS)

□ CUSTOM KERNEL DRIVERS

□ APPLICATION DEVELOPMENT (ASSEMBLY/C/C++)

■ PROJECT ORGANIZATION AND BUILD AUTOMATION

■ DEVICE DRIVER DESIGN

■ OS/KERNEL MODIFICATIONS AND PATCHES

■ OPEN-SOURCE SOFTWARE (OSS) HARDENING

■ SOFTWARE ACCELERATION WITH CUSTOM HARDWARE



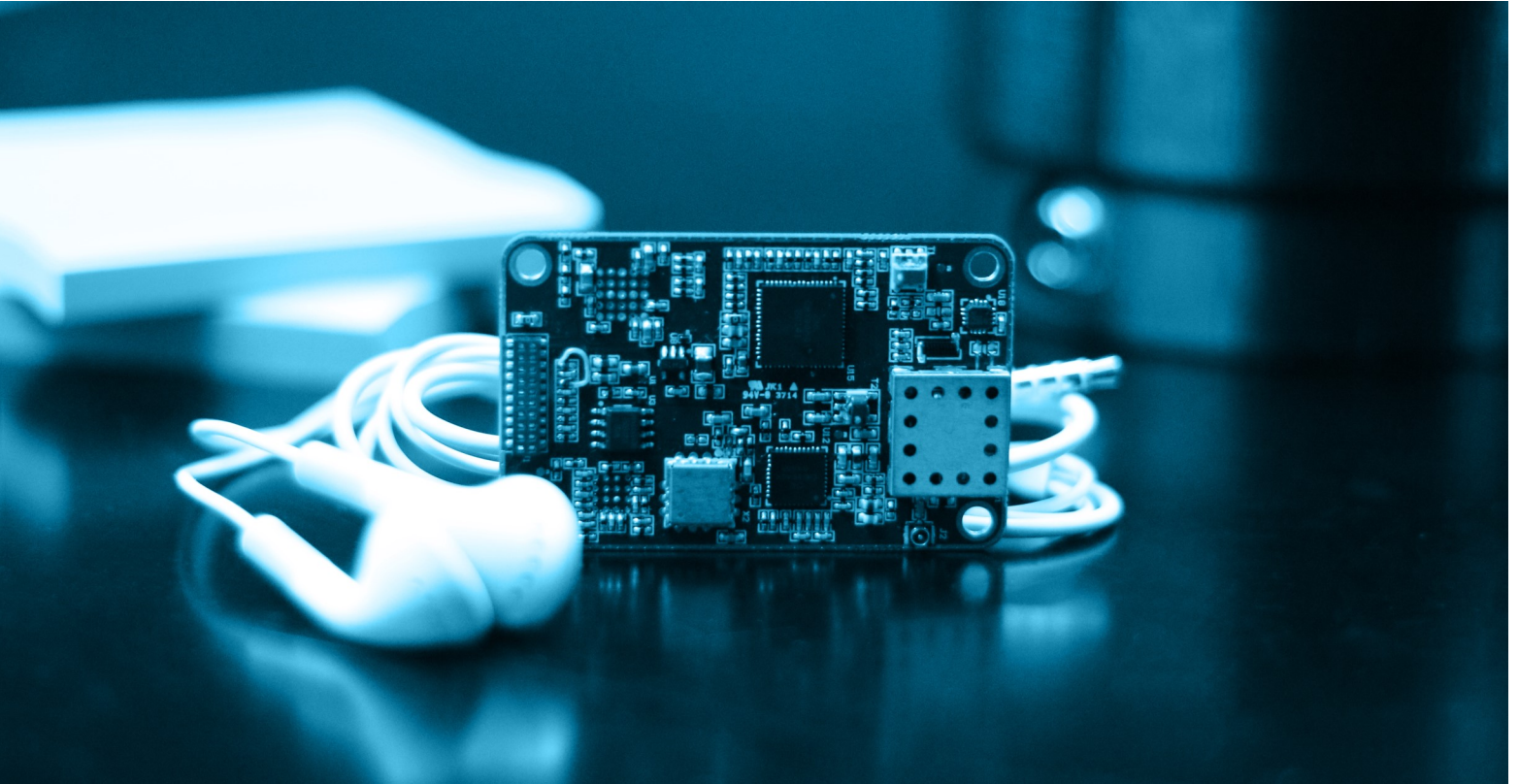
Our team applies its vast embedded firmware design knowledge to fully optimize your application with its extensive hands-on experience with common embedded platforms and OSs including:

- X86 AND I386 PROCESSORS
- ARM, AVR, ST AND ESP32 MICROCONTROLLERS
- LINUX, FREERTOS AND RIOT OPERATING SYSTEMS

From complex OSs like Linux, all the way down to small RTOSs like FreeRTOS and RIOT, the architecture of an embedded software system by Knightsbridge Wireless is meticulously developed to deliver the best performance, while being compliant with industry standards. System-level design tools used by Knightsbridge Wireless's team include MATLAB/Simulink, SystemC and NS2/NS3.



RF DESIGN SERVICES



Knightsbridge Wireless offers custom wireless/RF solutions specific to your requirements and needs, or adaptations to existing designs from Low Frequency to Microwave. Our expertise resides in research, development and manufacturing of high-performance Software Defined radio modems and wireless networking systems for industrial, medical and military applications.



KNIGHTSBRIDGE WIRELESS' SYSTEM LEVEL DESIGN:

- SYSTEM ARCHITECTURES, MODELING, SIMULATION
- LINK BUDGETS, INTERMODULATION AND NOISE FIGURE ANALYSIS
- SPREAD SPECTRUM/FREQUENCY HOPPING COMMUNICATION SYSTEMS
- DIGITAL/ANALOG COMMUNICATIONS SYSTEMS
- RECEIVERS – SUPERHETERODYNE, DIRECT CONVERSION,
SUPER-REGENERATIVE (RKE)
- TRANSMITTERS – LOW AND HIGH POWER (UP TO 1 KW)
- OSCILLATORS – VCOS, XOS, VCTCXOS
- PHASE-LOCKED LOOPS (PLL) AND DIRECT DIGITAL SYNTHESIZERS (DDS)
- MODULATORS AND DEMODULATORS
- COUPLERS, MATCHING NETWORKS,
TRANSMISSION LINES (MICROSTRIP, STRIPLINE, COAXIAL)
- AUDIO, DIGITAL, AND POWER SUPPLY CIRCUITS