

# Engineering Design Services

- Talijon is an Electrical Engineering design services firm providing customers a full range of design services from turnkey to point solutions.
- Our design and development expertise includes Hardware (Analog, Digital, High-speed), FPGA (RTL – Verilog/VHDL and Verification), Software (device drivers, embedded S/W, uController firmware), Design analysis & review, and system verification.
- Here are a few of our developments.....

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# Single Board Computer for Network Security Appliance

## Scope of Work

- Turnkey development of a Single Board Computer for a Network Security Appliance.

## Design Highlights/Challenges

- System architecture and packet processing performance analysis
- Design and development of processing hardware capable of Gigabit sustained throughput
- Software support
- Signal Integrity analysis on high speed interfaces
- Thermal analysis
- Expandable processing via Hypertransport interface.
- Deep packet store with integrated hard disk management, supporting upto 4GB RAM and 4 hard disks.
- Real-time clock, LCD/Human-interface connections, dual PCMCIA slots for peripheral expansion



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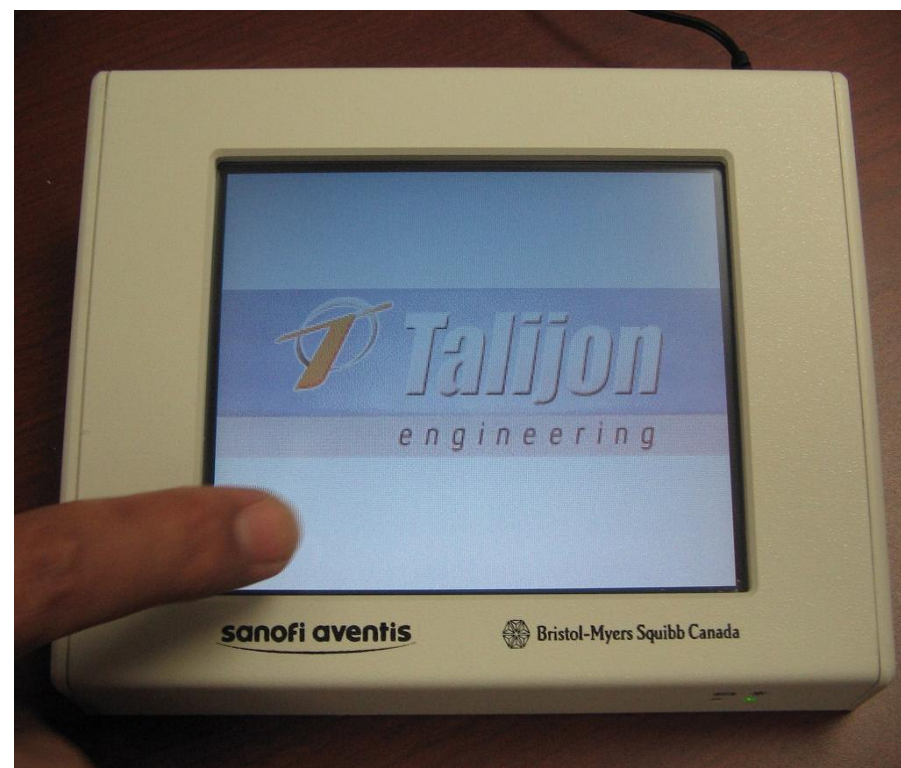
# Handheld Wireless Interactive Data Terminal

## Scope of Work

- Turnkey development of an interactive handheld data terminal with wireless communication capability

## Design Highlights/Challenges

- Touchscreen display for user interaction
- Design and development of processing hardware
- Comprehensive Software with Optimized Graphics API
- Host PC Application Software for maintenance and communication
- 2.4Ghz Wireless communication to the Host PC (upto 50m)
- USB connectivity for maintenance and upload
- Integrated Fast-charge NIMH battery charger
- Mechanical design
- Cost-optimized design
- Production support and warranty program



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# USB-powered Video Tuner and MPEG Decoder

## Scope of Work

- USB powered Video Tuner and MPEG Decoder

## Design Highlights/Challenges

- High speed USB-to-PCI bus bridging
- Low-power-optimized design suitable for USB operation.
- Automatic switch-over between wall adapter and USB power.

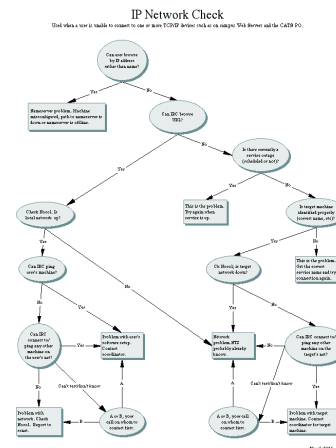
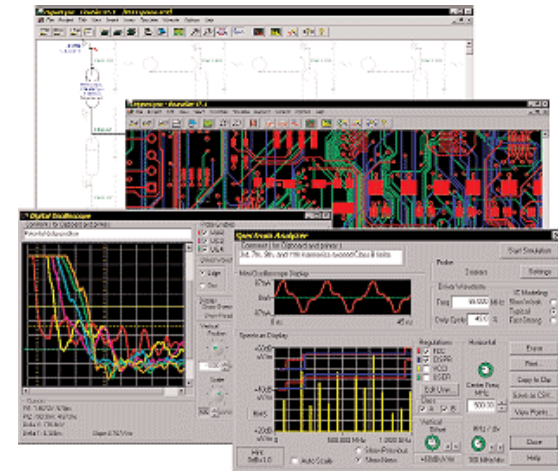


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# Additional Design Services

## Scope of Work

- Custom H/W Design and development for various applications
- FPGA design and development
- ASIC-to-FPGA re-targetting
- System-on-Chip (SoC) development
- Embedded S/W Design and development
- Signal Integrity Analysis
- Design Review and problem analysis
- Turnkey Product development



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