



The Software and Hardware Design Experts



DornerWorks is a leader in embedded software, electronic hardware, and custom logic design. With markets expanding throughout the United States, our portfolio includes some of the most sought after projects in aerospace, medical, automotive, and others.

Our specialties include:

- Electronic Hardware Development
- FPGA Custom Logic Design and Engineering
- Requirements Definition
- Electronic System Architecture
- Verification and Validation (V&V)
- Embedded Software Development

We enter into each business relationship with the intent to form long-lasting partnerships. We work closely with you from day one by listening carefully to your company needs, understand your projects goals and challenges, and perform the objectives through professional project management. Our effort is 100% focused on your company's success!

DornerWorks brings the best talent to each project. Our staff boasts Ph.D.'s, multi-degreed engineers, patent holders, and a Six Sigma Black Belt. Our quality extends beyond our engineers, and as part of our ongoing commitment to our clients, we plan to be AS9100 and ISO 9001 certified Q2 of 2010. DornerWorks is committed to bringing the talent, passion, and ingenuity to *every* project – *every* time!

Our clients in the safety-conscious business segments have come to rely on our knowledge of industry requirements and scrupulous attention to detail:

"The members of your team are consistently **highly regarded**. That is why we do not hesitate to send **difficult technical tasks** to your team. I am not sure what you guys are doing to attract the **top talent**, but we sure like the **results...**"

- Manager, large aviation company

*"DornerWorks is **professional**, flexible, and an **essential** part of our team."*

- Product Business Manager





DornerWorks Design Skills

Microprocessors

• z80, 180	• ARM	• Atmel AVR
• Intel 8051	• hc08, 11, 12	• DEC PDP-11
• Intel 8088	• Intel x86	• Microchip PIC
• MIPS	• Motorola 68xx	• PowerPC
• Xscale	• Rolm 1666B	• SH4
• SPARC	• ColdFire	• Philips NXP
• TI DM642	• TI MSP430	• Intel 8080
• TI C2000 Series DSP		
• TI C5000 Series DSP		
• TI C6000 Series DSP		
• Rabbit, Rabbit 2000, 3000		

Hardware

<i>Analog:</i>	EMI, Filters - Signal: IIR, FIR, LED Drivers, opto-isolators, RF Non-audio, Temperature Sensor (Thermocouple etc.), Thermo-electric coolers, antenna >= 1 GHz, antenna < 1 GHz, proximity - hall effect (non-motor), Filters - Power level, proximity - opto
<i>Audio - Video</i>	Amplification / Output Processing, Microphone / Input Processing, Video image sensors, Audio: Encoding, Audio: Decoding, RF audio, Encoding (mp3, ogg, flac, etc..), Decoding, BT.656 Video (TV), NTSC/PAL
<i>Communications</i>	1394, ARINC-429, Ethernet, I2C, SPI, JTAG, LVDS, MIL-STD-1553, PCI, RS-232/422/485, SCSI, USB, 802.11x, ISA, Cardbus, AFDX, IR, IrDA, RF, Bluetooth
<i>Custom Logic</i>	Actel, Altera, VHDL, Xilinx
<i>Design Tools</i>	Altera Quartus, Cadence Orcad, Eagle Layout, Mentor DxDesigner, Mentor PADS, ModelSIM, Pspice, Schematic Capture, Synopsys, Hyperlynx
<i>Display I/O</i>	LCD , Touch panel, VFD
<i>Equipment & Tools</i>	JTAG Debugger, Logic Analyzer, Oscilloscope, Reference Sensors, RF LNA, RF Power Meter, RF Signal Generator, Spectrum Analyzer
<i>I/O</i>	ADC, DAC
<i>Memory</i>	EEPROM, Flash, SDRAM, DDRAM
<i>Modules</i>	Rabbit - Analog, Rabbit - Ethernet
<i>Motor Control</i>	Brush DC, Brushless DC, Hall Effect, Permanent magnet AC motor (PMAC), Stepper, AC induction motor (ACIM)
<i>Power Supplies</i>	Linear <=500W LowVolt 1out, Linear <=500W LowVolt Multi, SMPS buck, SMPS flyback, SMPS <=500W LowVolt 1out, SMPS <=500W LowVolt Multi, SMPS >500W HiVolt, SMPS >500W LowVolt 1out, SMPS >500W LowVolt Multi, SMPS sepic, Linear >500W HiVolt, Linear >500W LowVolt, SMPS <=500W Hi Volt, SMPS boost, SMPS isolation, Linear <=500W HiVolt

Systems

• Manufacturability	• Verification and Validation	• Reliability
• Quality Assurance	• Requirements Management	• EMC
• ee-DFMEA	• Computer Forensics	• PFMEA

Software

<i>Industrial Automation</i>	AB PLC, AutoCad , Banner Vision Systems, DeviceBuses (DeviceNet, Eth I/P, etc), Drives, motors, servos, Fanuc Robotics, HMI Design, Industrial sensors (PE's, measurement, encoders, prox switches, temp, etc), Modicon PLC, Motoman Robotics, Panel Layout, SCADA, Epson Robotics, Cognex Vision Systems
<i>Compiler - IDE</i>	Code Warrior, CodeWright, Cosmic, Diab, Dynamic C, Eclipse, GNAT Programming Studio, GNU, IAR, Kiel, LabWindows/CVI, Rational APEX, Visual C/C++/C#, WR Tornado IDE
<i>CMS</i>	Dimensions, MS SourceSafe, RCS, Subversion, WindChill, Git
<i>Data Processing</i>	DSP: Filtering, DSP: Frequency Analysis, Video: Encoding, Video: Decoding
<i>I/O Device Drivers</i>	ARINC429, Camera, DDR SDRAM, DMA, LCD, LVDS, MIL-STD-1553, Motor control, Touchscreen, UART, serial, RF, AFDX, SD Card, IR, IrDA, ISA
<i>Methodologies</i>	Agile, Requirements-Based Test, Software Quality Assurance
<i>Network / Comm Protocols</i>	ARINC-429, ARINC-622 (FANS) , ARINC-724B (ACARS), ARINC-745-2 (ADS), AS-Interface, 1394 / Firewire
<i>OS</i>	DOS, Linux (any distribution), LynxOS, Nucleus Plus, pSOS, QNX, Real-Time Linux, uCOS, Unix, VMS, Windows, WR AE653/PSC, WR VxWorks, IRMX, Windows CE, Windows XP Embedded
<i>Languages</i>	Ada, BASIC, C, C#, C++, FORTRAN, Haskell, HTML, Java, Javascript, Jovial, Lisp, Perl, PHP, PL/1, Python, Ruby, Scheme, shell scripts, TCL, Visual Basic, Prolog, Pascal
<i>Technologies</i>	ActiveX, ASP, Code Generation, COM / DCOM, MPEG, H.264/AVC, SQL, UML
<i>Tools</i>	Boot loader (generic bootloaders) , DOORS, Ethereal/Wireshark, LabVIEW, LabWindows/CVI, Matlab, NI Test Stand, PVCS, Rational ClearCase, Rational Req. Pro, Rational Rose, Simulink, TeamTrack, TeX / LaTeX, CANoe, Quark

Standards

• ISO 13485		
• IEC 62304		
• 21 CFR § 820.30 Design Control:		
• ISO 14971		
• MIL-STD-461E	• MIL-STD-810F	• MIL-STD-973
• IEC 60601-1	• IEC-6100	• NFPA 70
• 2167A	• CMMi	• FAA/RTCA DO-178B
• CE Mark	• MIL-STD-461E	• General CUL
• DO-254	• ISO 13485	• 62304
• AS9100	• ISO 9001	• DO-160E
• FCC design and verification under 47 CFR Part 15 (Class A/B)		
• Telecom Best Practices		