Embedded Project Development

We provide complete solutions in embedded systems and system level programming. Our team has a huge experience in **design and development for embedded systems** that spans many CPU architectures, chipsets and peripherals across a variety of platforms. We can develop custom software including device drivers, firmware and board support packages.

Our areas of expertise include Networking and Communication software, smart phone software, Digital Signal Processing, Security Applications and Real-Time Embedded Systems. We have created applications to provide functionality such as asset tracking with GPS, remote monitoring based on GPRS, Data acquisition systems for power grids, Industrial automation In addition we have a huge amount of experience creating software for embedded devices, wireless access points, communications equipment and embedded security systems.

- Embedded & System Level Development
- Board Support Packages
- Device Drivers
- Firmware
- Porting
- Custom Protocol Stacks

Board Support Packages

Our **Embedded Software Team** has significant experience in Board Support Package (BSP) development for various Real Time and embedded operating systems. We have experience working with the following hardware platforms: ARM, StrongARM, x86, PowerPC, MIPS, MIPSII, XScale, 8/16 bit microcontrollers, and DSP architectures such as TI, Analog Devices and Motorola.

Our engineers create BSPs and implement device drivers for standard and custom development boards. We create custom board support packages to rapidly deploy an operating system and fully utilize the features of the underlying hardware platform. We can configure the BSP to support the desired peripherals, operating system features, file systems and memory types. We can also create a boot loader to initialize and customize your hardware and device drivers. Our engineers have extensive knowledge of the following operating systems: VxWorks, Windows CE, Linux (multiple distributions), QNX, and Symbian

Device Driver Development

- Device drivers for on board and on Chip peripherals like, USB, PCI, SCSI/XIO, SD card, CMOS Camera, FLASH, PCMCIA, Ethernet, Camera, LCD controllers, etc.
- Printer Firmware development
- Middleware software components development
- Protocol stack development and implementation
- Diagnostics Package Development
- Post-silicon and Pre-silicon validation environments.

Industrial Automation

Our innovations works with companies throughout the industry, from product manufacturers, to system integrators and industrial users. We provide hardware and software design services for industrial systems. We also develop hardware and software for communication, measurement, control and automation of key systems.

Hardware Design

From board layout to complete system integration, our team of experts can provide the hardware system you need. Complete layout systems are available for board manufacturers, including: Communication Cards, Digital I/O Cards, D/A Cards or complete single board computers. We have experience with the latest embedded controllers, including those from Texas Instruments, Analog Devices, Intel, Motorola, and ARM to name a few.

We can work with you to create a complete automated hardware and software system, using off-the-shelf components or custom hardware that meets your requirements. We can customize services for your exact specifications or recommend components for your unique situation. We can create control applications for your system and even implement custom protocol drivers as necessary.

Whether you need to implement a unique interface for your device driver, or simple exposure of basic hardware functionality for a single card, We offers a cost effective solution.

Networking Software For Industrial Systems	
Modbus	RS-232 / RS-422 / RS-485
Profibus	Serial
Fieldbus	Ethernet
PLC Interfaces	Universal Serial Bus (USB)
LabVIEW™	RF/802.11 / Bluetooth
Wonderware	Virtual Serial / Com Ports

Control and Monitoring Software

We can create custom software to provide control, monitoring, data acquisition and statistical analysis. Whether your requirements are for HMI/SCADA applications, OPC servers, or a custom application, we can create software that provides the results you need. Some examples include:

Control and Monitoring	
Industrial Control	SCADA
Machine Control	Data Collection
Man Machine Interface (MMI)	Robotics
Material Handling	Motion & Sensor Controls
Process Control	Measurement
Factory Automation	Testing

Mobile App Development

We offer **Development Services** on all latest technologies to create mobile software solutions for various platforms such as iPhone / iPad, Android.

Wireless technology

Wireless technology is perhaps the hottest growth area in the technical sector. We engineers continue to be at the forefront of this technology explosion, developing hardware, firmware and software for a variety of wireless technologies.

Our engineers are experts across a wide range of leading silicon solutions including:

- AMD
- Intel
- Texas Instruments
- PIC
- ARM7, ARM 9/11

We provide a wide range of conventional 802.11 station software including firmware, device drivers, configuration utilities, OEM customization kits, installation software, control panel application and custom application software. These solutions include support for the following operating systems:

- Windows (all desktop versions)
- Windows CE / Android
- Windows Embedded
- MacOS
- Linux
- VxWorks
- Other RTOS and custom operating environments

Software supports a variety of device types, including:

- PCI
- PC Card/CardBus
- USB
- Compact Flash
- Other bus interfaces

Bluetooth™

We provide specialized Bluetooth stack, device driver, and firmware development for Bluetooth devices. We can grasp many years of audio and multimedia development for your Bluetooth multimedia devices. We also offer development support for cable replacement devices, Bluetooth host controller interface projects, serial (UART) and USB Bluetooth products.

Infrared (IR)

We have experience in a wide variety of IR development projects, including embedded products and PC peripherals. Our experience encompasses IR communication devices, sensor applications, scanners and bar code devices. Our developers also design hardware and software for optically isolated digital I/O products.

Estimate

Submit your development requirements electronically to **admin@efficientindia.com**