

## Sample Projects and Skill Sets Summary – Eointec Solutions

Project	Hardware Development	Tasks	Network Protocols	Processor	Operating System and other software components	Languages
Tutushare.com – Browser Based Screensharing App	NA	<ul style="list-style-type: none"> <li>Develop a Cloud based screen sharing website to allow real-time communication via a Browser.</li> </ul>	WebRTC, WebSockets, Node.js	na	Wordpress, Amazon Web Services (AWS), OpenStack, Webrtc, Kurento	PHP, HTML, CSS, Javascript
Video Access Control for High Rise Apartments	<ul style="list-style-type: none"> <li>Altium CAD</li> <li>Power Line Communication – Qualcomm Chipset</li> <li>Prototyping</li> <li>Documentation</li> </ul>	<ul style="list-style-type: none"> <li>Develop a Video Access control system for Apartment blocks that will be monitored by Counsels for the UK market</li> <li>Multiple apartment Blocks.</li> <li>Video and Audio Communication on a LAN and trans versing the NAT in a WAN environment.</li> <li>RFID access control system.</li> <li>Concierge Functionality with Android Application Communication</li> <li>PowerLine Communication</li> <li>Local User Interface</li> </ul>	Session Initiation Protocol (SIP) SDP, RTP, TCP/UDP. Sever/Client, ICE TURN, STUN, NTP	Qualcomm Chipset TMS320DM355 – ARM9 Cypress PSoc	Embedded Web Server, Streaming Applications Embedded Linux, Linux Kernel driver development. Windows application development using Qt and QML. Android Development, OpenGL, Android	Qt – Development, QML, Javascript, C, C++, QML, Shell scripting, OpenGL, Android Operating System
Security System for Trailers – long haul	<ul style="list-style-type: none"> <li>Hardware Architecture Design</li> <li>Low power design</li> <li>Altium CAD</li> <li>Prototyping</li> <li>Documentation</li> </ul>	<ul style="list-style-type: none"> <li>Design a security system for Haulage Trucks to detect an intrusion in the truck curtain.</li> <li>Sensor Detection, Alarming,</li> <li>KeyFob technology</li> <li>MySQL database</li> <li>GPS, GSM</li> </ul>	TCP/IP MySQL KeyFob local network and alerting	ACME Systems – ARIA G25 (Atmel Arm9) MSP430 microcontroller	Embedded Linux - Debian, Linux Kernel driver development.	MySQL, C, C++, PHP, Perl, HTML, Java Scripting and Shell scripting,
Current Interrupter, For Cathodic Protection Industry	<ul style="list-style-type: none"> <li>Hardware Design</li> <li>Altium CAD</li> <li>Prototyping</li> <li>Documentation</li> </ul>	<ul style="list-style-type: none"> <li>GPS syncing and control of current interrupters</li> <li>UI Development using QT</li> <li>Logging results</li> <li>Real Time Clock</li> </ul>	N/A	OMAP35x – Arm Cortex MSP430 microcontroller	Embedded Linux, Linux Kernel driver development.	Qt - Development, C, C++, QML, Shell scripting
Video security	<ul style="list-style-type: none"> <li>FPGA Design</li> <li>High speed PCB design</li> <li>Altium CAD</li> <li>Production Documentation</li> <li>Prototyping</li> </ul>	<ul style="list-style-type: none"> <li>VHDL Design</li> <li>Embedded Linux</li> <li>VMS Video Monitoring Service software</li> <li>Video Analytics</li> </ul>	RTSP ONVIF Networking Stack	Spartan FPGA TMS320 DM368	Embedded Web Server, Streaming Applications Embedded Linux, Linux Kernel driver development. Windows application development	C, C++, PHP, Perl, HTML, Java Scripting and Shell scripting, VHDL
Wireless Networking	<ul style="list-style-type: none"> <li>High speed PCB design</li> <li>Altium CAD</li> <li>Production Documentation</li> <li>Prototyping</li> </ul>	<ul style="list-style-type: none"> <li>Embedded Web Server Development</li> <li>Wifi driver development</li> <li>Embedded Application Development</li> </ul>	HTTP, TCP/UDP, RTSP, WLAN, PPP, VLAN	Atheros Chipset TMS320DM355 – ARM9 Cypress PSoc	Embedded Web Server, Streaming Applications Embedded Linux, Linux Kernel driver development.	C, C++, PHP, Perl, HTML, Java Scripting and Shell scripting,
Mobile Video for automotive Industry		<ul style="list-style-type: none"> <li>RTSP server</li> <li>Wifi Direct</li> <li>Real-time optimization</li> <li>Fast Boot (ubl+uboot) optimization</li> </ul>	RTSP DHCP NTP	OMAP-L128	Embedded Linux BIOS 5	C programming

Touch Screen Control + Networking	<ul style="list-style-type: none"> <li>High speed PCB design</li> <li>Altium CAD</li> <li>Production Documentation</li> <li>Prototyping</li> </ul>	<ul style="list-style-type: none"> <li>Embedded GUI development</li> <li>QT</li> <li>Embedded Web Browser Client</li> <li>Transporting IP over Power line</li> <li>Power over Ethernet</li> </ul>	HTTP, TCP/UDP	Atheros Chipset OMAP35x – Arm Cortex +C64x DSP MSP430 microcontroller	QT UI Framework Embedded Linux, Linux Kernel driver development.	C, C++, PHP, Perl and Shell scripting,
Embedded Graphical Display development	<ul style="list-style-type: none"> <li>High speed PCB design</li> <li>Altium CAD</li> <li>Production Documentation</li> <li>Prototyping</li> </ul>	<ul style="list-style-type: none"> <li>Embedded GUI development</li> <li>QT</li> <li>GTK</li> </ul>		OMAP35x – Arm Cortex +C64x DSP	QT UI Framework Embedded Linux, Linux Kernel driver development.	C, C++, PHP, Perl and Shell scripting,
Video and audio Streaming over IP (Multiple Projects)	<ul style="list-style-type: none"> <li>High speed PCB design</li> <li>Altium CAD</li> <li>Production Documentation</li> <li>Prototyping</li> </ul>	<ul style="list-style-type: none"> <li>Video Compression (MPEG4, JPEG, H263, H.264)</li> <li>Audio Compression (G711, MP3, proprietary)</li> <li>Motion Detection.</li> <li>Embedded web server design</li> <li>3G Networking</li> </ul>	SIP, NTP, RTSP, SDP, RTP, RTCP, UDP, TCP/IP	TMS320DM6446 – Arm9+C64x DSP core.  TMS320DM355 – ARM9  TMS320DM365 – ARM9	Embedded Linux, Codec Engine, DSPLink Xdais, XDC. Linux Kernel driver development.	C, C++, PHP, Perl and Shell scripting,
Video and audio Streaming over IP (Multiple Projects)		<ul style="list-style-type: none"> <li>Video Compression (MPEG4, JPEG, H263, H.264)</li> <li>Audio Compression (G711, MP3, proprietary)</li> <li>Windows Control Application.</li> </ul>	RTSP, SDP, RTP, RTCP, UDP, TCP/IP, Proprietary control Protocol.	TMS320DM642	RF3( Framework), RF5 (Framework), DSP/Bios, DSPEngine, DSPIgnition.	C, C++, assembly. Windows Programming (MFC)
Voice Over IP		<ul style="list-style-type: none"> <li>Audio Compression</li> <li>DTMF Generation</li> <li>Networking</li> <li>VAD</li> <li>Echo Cancellation</li> </ul>	UDP, TCP, RTP, H.323	TMS320C54x Low Power Fixed Point Processor	DSP/Bios	C, assembly
Keyboard, Video, Mouse (KVM)		<ul style="list-style-type: none"> <li>Design of proprietary video codec.</li> <li>Mouse, Keyboard data encryption</li> <li>Networking</li> </ul>	TCP, IP, Proprietary transport security protocol.	TMS320C6701 Floating point DSP	DSP/Bios	C, assembly