

| Embedded System Hardware Design Training - Basic |  |
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| Day  | Topic  |
| Day1<br>(Morning)                                | <ul style="list-style-type: none"> <li>• Introduction to Electronic Hardware System Design</li> <li>• Understanding an Hardware Design Document</li> </ul>   |
| Day1<br>(Afternoon)                              | <ul style="list-style-type: none"> <li>• Introduction to electronic components resistors, capacitors, inductors, transistors, PLD, FPGA</li> <li>• Component Identification and selection for the requirement</li> </ul> |
| Day2<br>(Morning)                                | <ul style="list-style-type: none"> <li>• Power supply conversion               <ul style="list-style-type: none"> <li>○ Basics of AC to DC</li> </ul> </li> </ul>  |
| Day2<br>(Afternoon)                              | <ul style="list-style-type: none"> <li>• Power supply conversion               <ul style="list-style-type: none"> <li>○ Basics of DC to DC</li> </ul> </li> </ul>  |
| Day3<br>(Morning)                                | <ul style="list-style-type: none"> <li>• Digital I/O               <ul style="list-style-type: none"> <li>○ I/O standards</li> <li>○ Buffers/Drivers/Level Translators</li> </ul> </li> </ul>                            |
| Day3<br>(Afternoon)                              | <ul style="list-style-type: none"> <li>• Analog I/O               <ul style="list-style-type: none"> <li>○ Basics of ADC and DAC</li> </ul> </li> </ul>  |
| Day4<br>(Morning)                                | <ul style="list-style-type: none"> <li>• Introduction to Processor based system</li> <li>• Introduction to FPGA based system</li> </ul>  |
| Day4<br>(Afternoon)                              | <ul style="list-style-type: none"> <li>• Memory Interface               <ul style="list-style-type: none"> <li>○ SRAM</li> <li>○ Flash/EPROM</li> <li>○ SDRAM</li> </ul> </li> </ul>                                     |
| Day5<br>(Morning)                                | <ul style="list-style-type: none"> <li>• Serial communication Interface               <ul style="list-style-type: none"> <li>○ UART</li> <li>○ SPI</li> <li>○ I2C</li> </ul> </li> </ul>                                 |
| Day5<br>(Afternoon)                              | <ul style="list-style-type: none"> <li>• Schematic Entry</li> <li>• BOM creation</li> </ul>  |
| Day6<br>(Morning)                                | <ul style="list-style-type: none"> <li>• PCB Stack up creation</li> <li>• Layout Guideline</li> </ul>  |
| Day6<br>(Afternoon)                              | <ul style="list-style-type: none"> <li>• PCB CAD Layout Design</li> </ul>  |
| Day7<br>(Morning)                                | <ul style="list-style-type: none"> <li>• Fabrication Guidelines and Gerber Release</li> <li>• Fabrication process</li> <li>• Assembly process</li> </ul>   |
| Day7<br>(Afternoon)                              | <ul style="list-style-type: none"> <li>• Lab Ethics (Procedure for Safety – ESD, Power sequence etc)</li> <li>• Testing - Test and Measurement equipments</li> <li>• Test Report preparation</li> </ul>                  |