

LAPTOP MOTHERBOARD SERVICE TRAINING [LEVEL-2]



| | |
|--------------------|---|
| Duration | 30 days |
| Course Type | Regular / Fast Track / Weekend |
| Timing | Regular : 1.00 Hrs Fast Track : 2.00 Hrs Weekend : 4.00 Hrs |
| We Provide | <p>Common: Course Materials Troubleshooting/Installation Manuals & ID Card Worldwide Online Verification Certificate</p> <p>Job Support: Job Reference as per Job provider's requirement.</p> <p>Self Employment Whole Sale Materials Purchase Address</p> |

| CLASS | TOPICS |
|------------------|--|
| SESSION-1 | <p><u>INTRODUCTION</u></p> <ol style="list-style-type: none"> 1. What Is Laptop Motherboard? 2. Architecture of Laptop Motherboard 3. Motherboard Companies & its parts identification 4. Types of Motherboard 5. Various Sections for Motherboard 6. Laptop Motherboard Ic's List 7. Motherboard IC's & Its Manufacture Name Identification 8. Motherboard Smt Components Identification 9. Laptop Chip Level Tools & Testing Equipment <ol style="list-style-type: none"> 1. SMD Micro Soldering Iron 2. Flat Tip Soldering Iron [25W] 3. Hot Air Blower 4. De Solder Wick 5. Soldering Lead 6. Soldering Flux 7. Magnifying lamp 8. IPA cleaning liquid 9. Cleaning brush 10. BGA machine 12. RCL meter 13. CRO and etc., |
| SESSION-2 | RESISTOR |
| SESSION-3 | CAPACITOR |
| SESSION-4 | INDUCTOR & TRANSFORMER |
| SESSION-5 | DIODE |
| SESSION-6 | TRANSISTOR |
| SESSION-7 | INTEGRATED CIRCUITS [IC] |
| SESSION-8 | <p>VOLT IN SECTION</p> <ol style="list-style-type: none"> 1. What Is Voltage Input Section? 2. Component Identification of Voltage Input Section 3. V IN section mosfet 4. AC adapter functional block diagram 5. AC adapter boards and its parts 6. AC Adapter components list 7. AC Adapter circuit diagram 8. AC Adapter troubleshooting |
| SESSION-9 | <p>BATTERY CHARGE & DISCHARGE SECTION</p> <ol style="list-style-type: none"> 1. Charge & Discharge Section Components Identification 2. Battery connector pin out 3. Battery Controller IC Pin Diagram 4. Pin Function of Battery Controller IC 5. Application Diagram for Battery Control IC 6. Internal Diagram for Battery Control IC 7. Block Diagram of Pwm Charger Controller 8. Power Selector Control Switches for Battery IC 9. Laptop Only Woks On Ac Adapter –What Is Solution? |

| | |
|-------------------|---|
| SESSION-10 | VOLTAGE REGULATOR SECTION [STEPDOWN] <ol style="list-style-type: none"> 1. What is voltage Regulator? 2. Types of voltage regulator 3. How to Work Voltage Regulator? 3. Block Diagram Of voltage Regulator Ic 4. Component Identification For voltage regulator Section 5. Voltage regulator Controller IC Pin Diagram 6. Voltage regulator Ic Application Diagram 7. Pin Description for voltage regulator IC 8. Voltage regulator Ic Application Diagram 9. Voltage regulator circuit Section Problem & Trouble Shooting |
| SESSION-11 | VCORE REGULATOR -VRM <ol style="list-style-type: none"> 1. What Is Voltage Regulator Module [VRM]? 2. Block Diagram Of Cpu Voltage Regulator Module [VRM] 3. VRM Section Component Identification 4. Function of CPU Core Power IC 5. Pin Diagram of CPU Core Power IC 6. Pin Description of CPU Core Power IC 7. Application Circuit of CPU Core Power IC 8. CPU Power Mosfet Pin Diagram 9. Cpu Core Power Ic's List <u>Vrm Trouble Shooting & Mosfet Pin Diagrams</u> <ol style="list-style-type: none"> 1. VRM Section Trouble Shooting 2. P-Channel Mosfet Pin Diagram 3. Dual N.channel Mosfet Pin Diagram 4. Single N.channel Mosfet Pin Diagram 5. P.Channel Drive Mosfet Pin Diagram 6. Some Package Diode Pin Diagram [3 Leg] |
| SESSION-12 | CPU TEMPERATURE & FAN CONTROL SECTION <ol style="list-style-type: none"> 1. Thermal Section Components Identification 2. Functional Block Diagram of Thermal IC 3. Thermal Control IC Pin Diagram 4. Function of CPU Fan Speed Control IC 5. Thermal Section N-Channel FET Pin Diagram 6. Some Temperature Control Ic's List 7. How to Reduce Laptop Processor Heat? 8. Laptop Cooling Fan Problem & Solution 9. Cpu Fan Does Not Rotate –What Is Solution? |
| SESSION-13 | NORTHBRIDGE & MEMORY SECTION <u>North Bridge Section</u> <ol style="list-style-type: none"> 1. Block Diagram of Northbridge 2. Identification of Northbridge 3. Northbridge Internal Diagram 4. Types of North Bridge Chipsets 5. Chipset Manufacturing Companies 6. Northbridge Section Trouble Shooting <u>RAM Section</u> <ol style="list-style-type: none"> 1. What Is Ram? 2. How Works Ram? |

| | |
|-------------------|---|
| | <ol style="list-style-type: none"> 3. Types of Laptop Ram 4. What Is Sram? (Static Ram) 5. What Is Dram? (Dynamic Ram) 6. Ddr1 & Ddr2 Ram Clock Speed 7. Ddr 3 Ram Clock Speed 8. Ram Parts Identification 9. Ddr1 & Ddr2 & Ddr3 Ram Comparison 10. Ram Slot Pin Details 11. Ram Working Voltage 12. Ram Power Supply Ic's List 13. Ram Section Trouble Shooting |
| SESSION-14 | SOUTHBRIDGE & IO SECTION <ol style="list-style-type: none"> 1. South Bridge [ICH] IC Architecture 2. Southbridge IC Bus Connectivity 3. Various Types of South Bridge 4. South Bridge Section Trouble Shooting 5. Input Output Controller [IO] 6. Identification of Io IC 7. Io IC Architecture 8. Io IC Pin Diagram 9. Io Ic's List 10. Io IC Related Trouble Shooting |
| SESSION-15 | CLOCK GENERATOR SECTION <ol style="list-style-type: none"> 1. What Is Clock Generator? 2. How to Measure Clock Speed? 3. Identification of Clock Generator IC 4. Block Diagram of Clock Generator 5. Various Clock Outputs & Its Speed 6. Clock IC Pin Diagram 7. Pin Description of Clock Ic 8. Clock Generator IC's List 9. Clock IC Related trouble shooting |
| SESSION-16 | BIOS SECTION <ol style="list-style-type: none"> 1. What Is Bios? 2. How Is Bios Used? 3. Bios IC Identification for Laptop Motherboard 4. Bios IC Functional Block Diagram 5. Bios IC Pin Diagram 6. Ami Bios Error Message 7. Award Bios Error Message 8. Bios Section Troubleshooting 1. Bios Tool Kit and Its Parts 2. Bios Chip Identification 3. The Motherboard Bios Chip Remove & Fixing Method 4. How to Fix Bios Chip to SPI Flash Programmer Kit? 5. Bios Flashing Method 6. Bios Beep and Error Code 7. Bios Flashing Method |

| | |
|-------------------|---|
| SESSION-17 | PCMCIA & KEYBOARD CONTROL SECTION <ol style="list-style-type: none"> 1. What Is Pcmcia Card? 2. Various Interface Of the Card 3. Comparision of Gold & Silver Pcmcia Card 4. Different Types Pcmcia Cards 5. Variety of Pcmcia Card 6. Pcmcia Card inside View 7. Component Identification of Pcmcia Section 8. Pcmcia Controller Block Diagram 9. Pcmcia Controller IC Pin Diagram 10. Pcmcia Card Power IC Pin Diagram 11. Pci Power IC Application Diagram 12. Pci Card Control Ic's List 13. Pci Card Trouble Shooting 14. Pc87570 Keyboard and Power Management Controller 15. Keyboard Controller IC's List |
| SESSION-18 | AUDIO SECTION <ol style="list-style-type: none"> 1. Audio IC Function 2. Identification of Audio IC 3. Audio Connector Name 4. Audio IC Pin Diagram 5. Pin Functions of Audio IC 6. Pin Diagram of Audio Amplifier IC 7. Audio Amplifier IC Internal Diagram 8. Pin Function of Audio Amplifier IC 9. Audio IC & Amplifier IC List 10. Audio Section <p>General Trouble Shooting</p> <ol style="list-style-type: none"> 11. No Sound Signal –What Is Solution? |
| SESSION-19 | LCD DISPLAY REPLACE MENT & ITS PARTS <ol style="list-style-type: none"> 1. What Is Display? 2. Types of Display 3. Lcd with Motherboard 4. Lcd Parts & Connector Details 5. How LCD Display Works? 6. How Is the LCD in A Laptop Computer So Bright? 7. Inner Parts View of Display 8. Lcd Display Layers 9. LCD Back Light Inverter 10. Ccfl & Led Back Lights 11. LCD Back Light Inverter Parts 12. FI Inverter with Ccfl Circuit Diagram 13. Some LCD Back Light Control Ic's List <p>And LCD display troubleshooting</p> |
| SESSION-20 | VOLTAGE CHECKING FOR LAPTOP MOTHERBOARD <ol style="list-style-type: none"> 1. Vin section voltage checking 2. Battery charging section voltage 3. Voltage regulator [step-down] section voltage 4. CPU Vcore [VRM]section voltage |

| | |
|-------------------|--|
| | <ul style="list-style-type: none"> 5. NB section voltage 6. Memory section voltage 7. Clock generator section voltage 8. LCD section voltage 9. Audio section voltage 10. USB section voltage |
| SESSION-21 | <p>BGA PRACTICAL</p> <ul style="list-style-type: none"> 1. What is BGA Machine? 2. BGA Machine Parts Identification? 3. BGA Chip Removing Method? 4. BGA IC REBALLING & Fixing Method |
| SESSION-22 | <p>DELL LAPTOP MOTHERBOARD</p> <ul style="list-style-type: none"> 1. Dell 1300 Laptop Motherboard Trouble Shooting 2. Dell Inspiron 1300 Laptop Motherboard Block Diagram 3. Component Identification of Motherboard 4. Laptop Battery Does Not Charge What Is Solution? 5. Laptop battery does not charge, I have try to new AC power adapter and battery. But no response. What is solution? 6. My dell Inspiron laptop battery does not charge, and power on only AC power adapter. What is solution? 7. The DELL INSPIRON 1300 laptop does not power on through AC adapter and battery. But the AC power adapter and battery is good condition? How to solve this? 8. Dell Inspiron 1300 laptop power failure problem. [Laptop is dead condition] And etc., |
| SESSION-23 | <p>SONY LAPTOP MOTHERBOARD</p> <ul style="list-style-type: none"> 1. Sony Vgn-Fs48c Laptop Motherboard 2. Sony Vgn-Fs48c Laptop Motherboard Block Diagram 3. Power Supply Functional Diagram 4. Battery Charge Controller Ic datasheet-Max-1909e 5. Step Down Control Ic data sheet Max 8734ee [Dual Output 5v & 3v] 6. Step Down Control Ic datasheet Sc486-[1.8v/0.90v Ram Power Supply] 7. Cpu Core Power Ic [VRM] datasheet |
| SESSION-24 | <p>TOSHIBA LAPTOP MOTHERBOARD</p> <ul style="list-style-type: none"> 1. Toshiba Satellite A100 Laptop Motherboard 2. Toshiba Satellite A100 Laptop Motherboard Block Diagram 3. Toshiba Satellite A100 Laptop Motherboard Power Diagram 4. Battery Charge Controller IC Bq24721 5. Step down Controller IC Tps51124 Dual Output [1.8v & 1.5v] 6. CPU Core Power IC [VRM] Max8770 Dual Phase |

| | |
|-------------------|---|
| SESSION-25 | ACER LAPTOP MOTHERBOARD 1. Acer Laptop Motherboard Part Identification 2. Acer Laptop Motherboard Back Side Components View 3. Acer Laptop Motherboard Functional Block Diagram 4. Battery Power Section IC Bq24751a 5. Application Circuit of Battery IC 6. Step down Regulator Section IC Isl6237 Dual Output 5v/3v 7. Step down Regulator Section IC Isl6228 Dual Output 1.8v/1.05v 8. CPU Core Power Section [VRM] Ic-Isl6262a Two Phase |
| SESSION-26 | LAPTOP MOTHERBOARD TROUBLESHOOTING TIPS-1 |
| SESSION-27 | LAPTOP MOTHERBOARD TROUBLESHOOTING TIPS-1 |
| SESSION-28 | LAPTOP MOTHERBOARD TROUBLESHOOTING TIPS-1 |
| SESSION-29 | LAPTOP MOTHERBOARD PRACTICAL CLASS RIVISION-1 |
| SESSION-30 | LAPTOP MOTHERBOARD PRACTICAL CLASS RIVISION-2 |

| | |
|---|---|
| <u>CHIP SYSTEMS</u> Old No.107,New No. 194,Ground floor, Lake View Road, West Mambalam, Chennai-33 Tamilnadu, INDIA (Near Postal colony 3rd Street) Phone: 044-2474 3860. Cell : +91-98410 99911, Cell : +91-94440 34246. Email : admin@chipsystems.in | <u>CHIP TECHS</u> Old No.107,New No. 194,Ground floor, Lake View Road, West Mambalam, Chennai-33 Tamilnadu, INDIA (Near Postal colony 3rd Street) Phone: 044-2474 3860. Cell : +91-98410 99911, Cell : +91-94440 34246. Email : admin@chipsystems.in |
|---|---|