SAFFRON TECHNICAL INSTITUTE

An ISO 9001:2008 Certified Institute

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LEARN CHIP LEVEL LAPTOP AND DESKTOP TRAINING BOTH BASIC AND ADVANCE

Valid **CERTIFICATE** IS PROVIDED
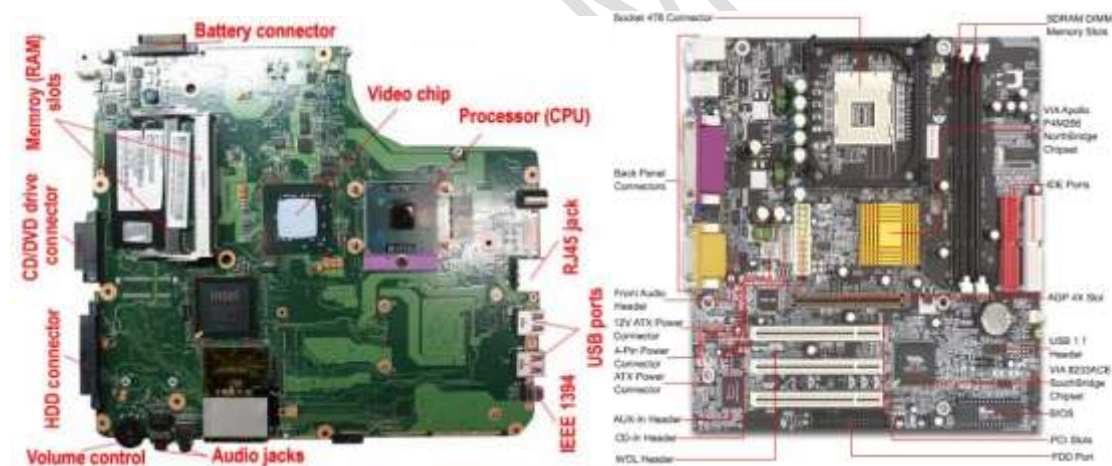
Chip level Repairing Course includes :

1) Basic electronics and micro components

   Introduction and determining values of SMD(Surface Mounted) components: resistors, condensers, Semiconductor diodes and Zener diodes, PNP and NPN transistors, N-Channel and P-Channel mosfets, N-Channel and P-Channel Power Trench mosfets, resistor colour coding system, fuse, connectors, and coils

2) The basic fundamentals of a laptop
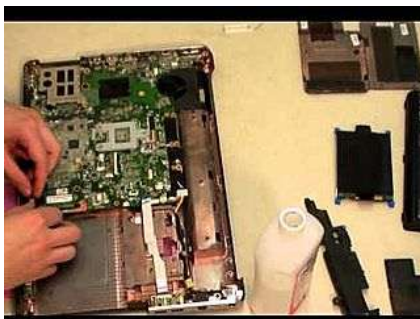3) Difference between the working of a laptop, netbook and desktop computer

4) Upgrading memory modules like RAM, Harddisk & BIOS

5) BIOS Programming using EEPROM PROGRAMMER TOOL

PLCC32   DIP8   SOIC8/SOP8   TSOP BIOS

6) Power management of a laptop
7) Diagnosing problems without disassembling a laptop
8) Expert guidance and procedures of repairing a laptop
9) Assembly and disassembly of different laptops with video guidance

10) Testing of batteries and power adaptors
11) Technique of using Cathode Ray Oscilloscope(CRO)

12) Testing Frequencies of circuit and crystals using Cathode Ray Oscilloscope(CRO)
13) Testing frequencies using digital frequency meter
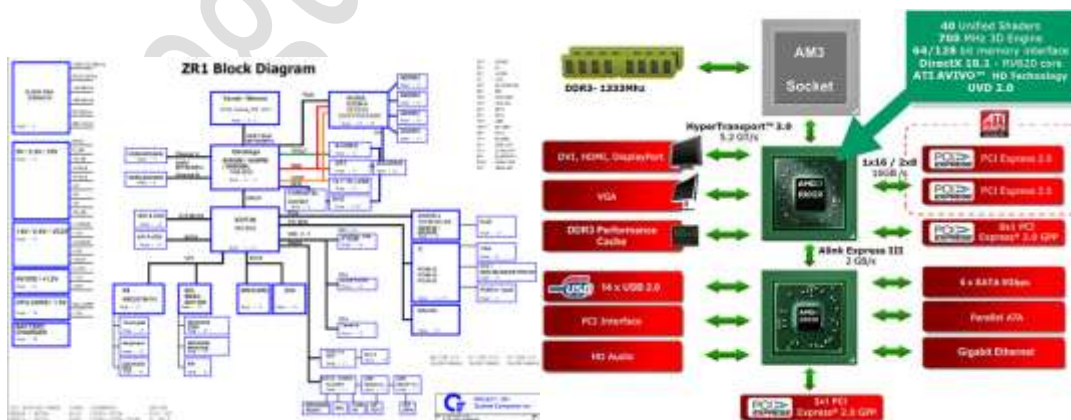
14) Technique of using Multitester

15) Installation of Drivers for various Operating Systems which do not come with the system upon identification of chips

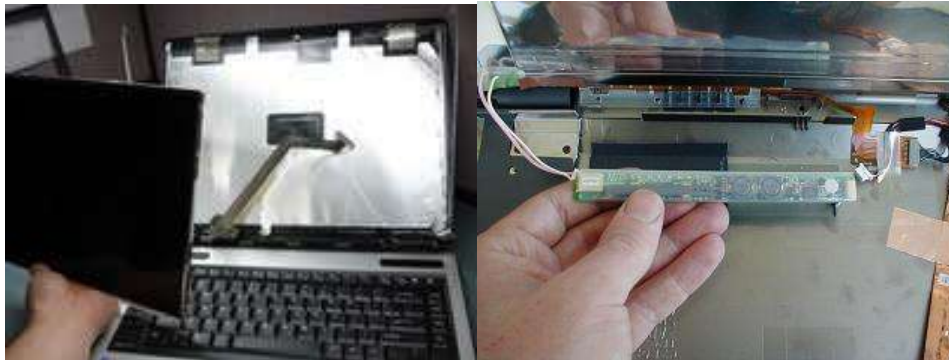16) Repairing Human Interface Devices (Keyboard, Touchpad, Trackball etc.)

17) Block diagrams and schematic diagrams of different laptop and desktop motherboards

18) Replacing Mobile Processor, FPC belts, DVI cables, switches, speakers, web cams, ventilation fans, Bluetooth cards, WI-FI cards, WI-FI antenna cables of laptops
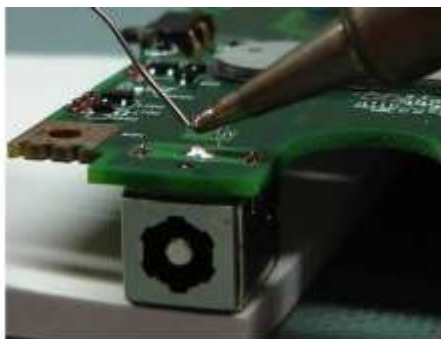
19) Repairing LCD display and Inverter circuit of laptops

20) Identification of all chips and crystals on laptop and desktop motherboard
21) Soldering and Desoldering techniques

Use of soldering iron, desolder wire, electric desolder pump, SMD vacuum picker, ect.

22) Track tracing and jumpering
23) Detailed component list and working of various sections of laptop and desktop motherboards:
As PWM section, volt IN section, CPU temperature sensing and control section, Audio codec-amplification-headphone-HDA section, Charging-Discharging section, Step-Down section, Graphics section, System controller, Embeded controller, input-output section.

24) Datasheet reading and testing:
As VDD, VCC , PCICLK, VID, Power Good, X-in, X-out, USB_48MHZ, REF, VSS, VIN, V+, VBAT, etc.
25) Testing of chips using Datasheet

26) Operating SMD Rework Station

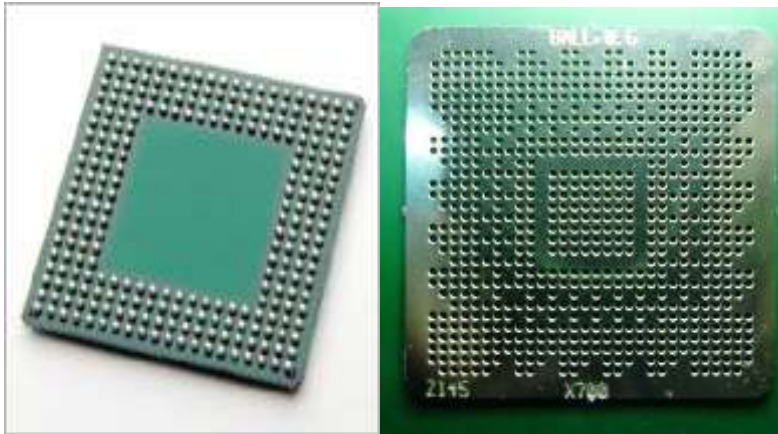27) Replacing of faulty chips using SMD Rework Station

28) Notes and course material with pictures and videos created on the basis of actual practical experience (available in soft copy and hard copy)
29) Complete fault finding diagnostics and sure-shot solutions
30) Operating BGA REWORK STATION

31) Reballing BGA chipsets, GPU's, DSP's using stencils and solder balls. Like Nvidia, ATI, intel, VIA, AMD and more.

32) Replacing BGA Northbridge, Southbridge, GPU's, DSP's. Like Nvidia, ATI, intel, VIA, AMD using BGA REWORK STATION
33) Testing Data Addresses on RAM, BIOS, PCI by using CRO
34) Using different types of Electronic Debug cards, Ram testers, CPU socket testers for laptop and desktop motherboards

35) Detailed numbering of all the chips of the laptop and desktop motherboards in Excel sheet,
    For example:

Sr. No.	Folder Name	File Name1	File Name2	File Name3	File Name4	File Name5
1	Audio Ampliphier Chip	ES1988.pdf	LM4863.pdf			
2	audio chip	15595_5417b0131255a17d6b1f738e3cc83087.pdf	100965aSmartAMC-AudioModemCodec.pdf	87560554AD1981B_c.pdf	RTL ALC202.pdf	SDC00047AEB.pdf
3	BIOS	AMIBIOS8_Flash_Recovery_Whitepaper_v10.pdf	BIOS_KW3_rev1_01.pdf	HW__8-American_Megatrends_Inc_(AMI)_2.61_BIOS_setup_guidelines_for_AM2_AM3_motherboards.pdf	setup600.pdf	
4	Card Reader Control					
5	charging-discharging ic	ADP3806.pdf	LT1172.pdf	LTC1759CG.pdf	MAX1772.pdf	MAX8724.pdf
6	clock synthesizer	950211bf.pdf	CY28346.pdf	go-SLG8LP465.pdf	go-SLG8445OBV.pdf	ICS9LPR501.pdf
7	CMOS control	7407.pdf	bq3285lf.pdf	CD4069UBC.pdf	datasheet.pdf	FS_FST3384.pdf
8	COM Port chip	ST75185C	gd75232.pdf	slls350l.pdf		
9	CPU temp control	1030arq.pdf	MAX1668-MAX1989.pdf	NE1617.pdf	REF02.pdf	tps54610.pdf
10	PWM masters	MAX8771.pdf	isl6556_-_pwm.pdf		sl3000.pdf	MAX1887-MAX1897.p
11	PWM	MAX1887-MAX1897.pdf	ADP3421.pdf	DS9248-03P.pdf	ISL6266.pdf	MAX1714-MAX1714B
12	CPU,IO,RAM voltage chip	MAX1715.pdf				
13	dsp ic	7011ds.pdf				
14	Graphic clock chip	146926_1.pdf				
15	Graphic RAM chip	K4G323222M.pdf				
16	Headpnone driver	APA2308				
17	IDE controller	W83303AD_AGa.pdf				
18	IO chip	it8702f-a.pdf	it8712f.pdf	W83626F.pdf	W83627.pdf	w83627dhg.pdf
19	Keyboard Touchpad chip	oz998.pdf				
20	Keyboard,touchpad chip	DS012932.pdf				
21	LAN control	82562G	12ST002XX	ics 1893.pdf	TST1284A LF-RevA0-041220.pdf	
22	LAN port chip	MAAM-007219				
23	LED (indicator) chip	7407.pdf				
24	Mosfet drivers	ADP3418.pdf	RT9607		sc1211.pdf	
25	CPU fan tac chip	1030A RQ				
26	pc card controller	pci1510.pdf				
27	pc card data bus	DP83816.pdf	SN54AHC245,			
28	PCI LAN chip	OZ6912				
29	pcmcia card controller	MAX1630-MAX1635.pdf				
30	power control	93c46.pdf				
31	RAM BUS chip		PI5C16862C	ISL6227		
32	RAM control	2015s.pdf	W83310DS_DG_09.pdf			
33	RAM power supply	LTC1628.pdf	max1540e.pdf	slls350l.pdf		
34	Secondary step down	CS4334.pdf				
35	Security chip	pc97338.pdf				
36	step-down	74ACT125.pdf	LTC1736.pdf	LTC3732.pdf	LTC 1709.pdf	max1630-1635.pdf
37	stereo amplifier	66798az.pdf	slos335a.pdf	tpa0312.pdf		
38	Super IO	fan5093.pdf	sn74lvc32a.pdf			
39	USB Buffer chip		GM2526			
40	volt in		LTC1539.pdf			
41	Microcontroller					

Documents:

1) One Passport size photo   2) One Certificate ID proof (school LC / Voter ID card / Birth Certificate).

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Website : http://saffroninstitute.com