

No. EDN-RMSA-2/2014-ICT Phase-II Vol. I  
O/o State Project Director, RMSA/SSA  
Himachal Pradesh, Shimla-1

Dated: Shimla-1 the

July, 2015

To

1. All the Dy. Director (Higher Education)  
Himachal Pradesh
2. All the Dy. Director (Elementary Education)  
Himachal Pradesh
3. All the DPOs Cum Principal DIETs  
Himachal Pradesh
4. All the Principals,  
GSS Schools (Under ICT Phase-II)
5. All the Headmasters  
GHS (Under ICT Phase-II)

Subject: School Level Inspection Committee for ICT@School Phase-II Project

Madam/Sir,

It is to inform you that, entire ICT@School Phase-II project is being implemented in State by Dept. of Higher Education through State Project Director (SSA/RMSA) and M/s IL&FS Education & Technology Services Ltd. as implementing agency by the Govt. after due process.

As per the tender, M/s IL&FS shall supply the Hardware, Software and other infrastructure with required specification and quantity in each school (copy attached as Annexure- A)

Now in order to ensure that the hardware, software and other infrastructure related activities are carried out as tendered specification, a school level three member committee is constituted as follows:

1. Principal /Head Master
2. PGT (IP) (Physics lecturer in case PGT(IP) is not available)
3. TGT (Science) [Non-Medical]


This committee will ensure that the hardware, software and other infrastructure received in school is as per the specification given above and in case the items are found below standard or substandard the same shall be reported to the SPD (SSA/RMSA) at the same time.

Further this committee will issue one certificate after proper satisfaction and on the basis of this certificate the payment shall be made to the implementing agency from State Project Office. The copy of certificate <sup>will be</sup> ~~is enclosed as Annexure A.~~ supplied later on.

In case of any issue the same may be reported/clarified from office of SPD(SSA/RMSA) and any enquiry shall be entertained regarding the same on following phone numbers:

1. Sh. Suresh Kumar (ICT Coordinator)- 8988309825
2. Sh. Vivek Pratap Singh (IT Consultant)- 9582426619

Yours faithfully

  
State Project Director (SSA/RMSA)  
Himachal Pradesh

Endst. No.


Dated

Shimla-171001,

July, 2015

Copy for information please:

1. The Addl. Chief Secretary (Edu) to the Govt. of Himachal Pradesh.
2. The Director Higher Education, Himachal Pradesh
3. The Director Elementary Education, Himachal Pradesh

  
State Project Director (RMSA/SSA)  
Himachal Pradesh, Shimla-171001

**List of Hardware / Software and other materials to be installed in schools under ICT@School Phase-II**

Sr. No	Item	Specification	Quantity	Remarks
1	<b>Integrated Computer Projector</b>  <b>Make&amp;Model: IETS-KYAN</b>	<ul style="list-style-type: none"> <li>• <b>Projection System:</b> DLP Technology</li> <li>• <b>Brightness:</b> 2500-ANSI Lumens (Short Throw)</li> <li>• <b>Resolution:</b> WXGA (1280x800)</li> <li>• <b>Contrast Ratio:</b> 2500:1</li> <li>• <b>Computer System :</b> Intel Core i3 Processor, with Integrated graphics, 2 GB DDR III RAM, 320 GB Serial SATA II 7200 RPM HDD, Optical Drive DVD RW, Wireless Keyboard &amp; optical Scroll Mouse</li> <li>• <b>Input:</b> PS/2 Mouse &amp; Keyboard, RF-in for TV, USB ports, Microphone in</li> <li>• <b>Output :</b> Internal 30 watts Audio Output, LAN: 1x Gbps LAN,</li> <li>• Integrated analogue cable TV tuner</li> </ul>	02	One for each smart classroom
2	<b>Interactive White Board</b>  <b>Make:Labotrix(ITES)</b> <b>Model:LWB8 210/K-Board</b>	<ul style="list-style-type: none"> <li>• <b>Active Size:</b> Minimum 77/78" diagonal</li> <li>• <b>Board surface:</b> Scratch resistant surface; maintenance free</li> <li>• <b>Operating System:</b> Window 98, 2000, ME, NT, XP, Vista, Windows 7 or higher and Linux</li> <li>• <b>Aspect Ratio:</b> 4:3</li> <li>• <b>Writing Tools:</b> Pen/ stylus/ finger</li> <li>• <b>Active Area:</b> Minimum active diagonal length of 1700 mm</li> <li>• <b>Resolution:</b> 4096*4096</li> <li>• <b>Position Accuracy:</b> ± 0.2 mm</li> <li>• <b>Power Options:</b> only through PC/Laptop/USB</li> <li>• <b>Technology:</b> Touch resistive/Digitizer technology/ Electromagnetic / Infra Red technology</li> <li>• <b>Data ports:</b> USB</li> <li>• <b>Connectivity and Usage:</b> Can be used individually and in conjunction with interactive pads and interactive panel</li> <li>• <b>Storage:</b> Saving of files in PC/Laptop</li> <li>• <b>Software:</b> Should have interactive features like palm touch, OCR, image gallery, image enlarge; snap shots, recording lectures, reveal option, Bilingual (English/Hindi) menu software etc.</li> <li>• <b>Accessories:</b> Stylus/ Pens, USB Cable, Software CD, user manual etc. to be a part of standard supply</li> </ul>	02	One for each smart classroom
3	<b>Desktop Computers for ICT Labs</b>	<ul style="list-style-type: none"> <li>• The System with</li> <li>• Motherboard branded for OEM or the Computer Manufacturer</li> <li>• 4 PCI Slots (including minimum 1*PCIx16 slot)</li> </ul>	02 Servers & 08 node connections.	

	<p><b>Make:HP</b>  <b>Model:280G1MT</b>  <b>(SERVER)</b>  <b>Model:HPV192</b>  <b>(Monitor)</b></p>	<ul style="list-style-type: none"> <li>• Intel Core i5-4690S@3.1 GHz or higher Processor/ AMD to meet</li> <li>• SPEC CPU2006 benchmarked with SPEC rating in the range of at least 100 +/-5 with 4GB RAM (60% of SPEC int _rate base 2006 plus 40% of SPEC fp rate base 2006 score)</li> <li>• 5 GT/s System Bus</li> <li>• Intel H81 Series Express Chipset or better/ AMD 785G/ NVIDIA or higher</li> <li>• 4 GB DDR3 RAM @1333 MHz Non ECC (Expandable up to 8 GB)</li> <li>• 500 GB SATA Hard Disk Drive (7200 rpm) SMART.</li> <li>• 16X or higher(SATA based) DVD-RW</li> <li>• Integrated on M/B High Definition Sound AC97/ 20-bit audio (or equivalent)</li> <li>• Integrated Intel extreme graphics on M/B/ Integrated onboard</li> <li>• Graphics</li> <li>• Integrated Serial ATA (3 Gbps) controller with 4 ports</li> <li>• Integrated on M/B 10/100/1000 Mbps Ethernet controller with full duplex &amp; WOL support</li> <li>• Ports - Rear: 6xUSB, Front: 2xUSB, 1xVGA &amp; 1xRJ45,2xPS/2 or USB Keyboard &amp; Mouse can be used.</li> <li>• 18.5" LED backlit display colour monitor with maximum 0.3 mm dot pitch, TCO-05,1366x768, 1000:1 contrast ratio, 250 cd/m2, 5ms response time,160/160 degree view angle, VGA connectivity, EMI/FCC (or ETDC Report for meeting FCC norms)compliance, Energy star compliance same brand as that of PC. 104 Keys OEM English Keyboard (it must have soft keys ), same brand as that of PC</li> <li>• Optical Mouse of same brand as that of PC.</li> <li>• ATX/BTX/Micro ATX/SFF Chassis with 1 x 3.5" &amp; 2 x 5.25" front accessible bays, 2 x3.5" internal drive bays and adequate power supply.</li> </ul>		
4	<p><b>Shared Computing System</b></p> <p><b>Make: N-Computing</b>  <b>Model: X550</b></p>	<p><b>Access Device:</b> Allow (1+4) users to share a single host Through a shared Computing PC-Sharing kit(which includes one Full Height PCI Card, Virtualization software, and 4 access devices with Speaker Output, PS/2 Mouse and PS/2 Keyboard Output. Monitor output and RJ 45 Connection Port. Each access device should be standalone equipment and not integrated with any peripherals like keyboard, mouse, monitor etc.</p> <p><b>Monitor :</b> Each user should have independent Monitor:18.5" LED backlit display color monitor with maximum 0.3 mm dot pitch, TCO-05, 1366x768,1000:1 contrast ratio, 250 cd/m2, 5ms responsetime,160/160 degree view anger, VGA connectivity, EMI/FCC (or ETDC Report for meeting FCC norms) compliance,</p>	02	(1 for 4 computers)

		Energy star compliance same brand as that of PC. The access device should be integrated with host PC via UTP cable		
		<b>Keyboard :</b> USB or PS/2 104 Keys keyboard same brand as that of PC		
		<b>Mouse:</b> USB or PS/2 Optical mouse same brand as that of PC		
		<b>Log-in &amp; Log-out:</b> Login Experience, Responsiveness (mouse, keyboard, application start - up and execution). Graphics/Multimedia, Logout		
		<b>Power consumption :</b> Power consumption of each access device should not exceed more than 1-2 watts		
		<b>Each user should have independent desktop environment</b>		
		<b>Following O/s/andothertobe Supported:</b> MS Windows OS XP/Vista/7 & Server2003/2008,Windows Server 2008 R2, Windows Multipoint Server 2010,2011) and Linux.(Ubuntu)		
		Office Suite (MS), Internet and other software's viz., Flash based Multimedia applications.		
		<b>Peripheral Ports :</b> VGA, USB or PS/2 Mouse, USB or PS/2 Keyboard and Speakers.		
		<b>Connection overview :</b> 1) Speaker Jack (2) USB or PS/2 Keyboard Port (3) USB or PS/2Mouse Port (4) VGA Monitor Port (5) RJ-45 PCICard Connection Port		
		<b>Distance from Host PC :</b> Maximum 20 feet		
		<b>Cable Length :</b> Standard Category 6 UTP Cable: upto 5 meters(16 feet), 6 STP Cable: upto 10 meters (33 feet.)		
		<b>Audio :</b> 16 bit stereo output via speaker port		
		<b>No. of Users per kit:</b> 1+4 users to one Kit		
		<b>Connection Type :</b> Direct UTP Cable		
		<b>Cat6 UTP Patch cords :</b> Factory Crimped with RJ 45 jacks on both the ends of Cat6 STP Cable of 5Mtrs length or Actual Host Terminal. Should not increase more than 10Meter or 32 ft		
		<b>Certifications :</b> ISO 9001, FCC Class B, MIC, RoHS Compliant		
		<b>External Speakers :</b> Pair of external Speakers, same Make of PC		
		<b>Warranty:</b> Virtualization Software should support current operating system and for another five year for latest Provided by Windows & Linux (Ubuntu)		
5	<b>Online UPS of 1 KVA Make Emerson Model: Liebert GXT-MT</b>	<ul style="list-style-type: none"> <li>• True On-Line UPS with double conversion technology</li> <li>• Capacity 1 KVA/ 800 W</li> <li>• Rectified &amp; Inverter Device IGBT based</li> <li>• DG Set compatibility</li> <li>• Rated Output Voltage 230 V(1-Phase)</li> <li>• Rated Output Current 3.6 A at 0.8 p.f.</li> <li>• Input Voltage Range 160-270 VAC</li> </ul>	1	For ICT Lab

		<ul style="list-style-type: none"> <li>• Input Frequency Range 50 Hz ± 6%</li> <li>• Input Current THD &lt; 15%</li> <li>• THD Output &lt;7% for non-linear loads and &lt; 4% for linear loads.</li> <li>• Voltage Regulation (Mains Mode) 230 V +- 1%</li> <li>• Waveform pure sinewave</li> <li>• Power Factor 0.95 lag to unity</li> <li>• LCD display for ups status, load label, battery level, input /output voltage &amp; fault condition</li> <li>• Output Frequency regulation</li> <li>• Free running Mode 50Hz ± 0.5%</li> <li>• Sync Mode 50Hz ± 2Hz</li> <li>• Crest factor for loads 3:1</li> <li>• Overall Efficiency &gt;85%</li> <li>• Inverter Efficiency &gt; 90%</li> <li>• Cold Start Feature</li> <li>• Charger Type CVCC SMPS based</li> <li>• Overload Capacity 110% for 10 min 125% for 1 min</li> <li>• Batteries SMF (VRLA) Type of reliable brand like Panasonic, Hitachi, Exide or equivalent to provide 1 hr backup Min VAH : 1440 VAH</li> <li>• Quality Standards: ISO-9001-2000 Certified Safety Standards and EMC Standards as per IEC standards, should be capable of operating in eco-mode for energy saving</li> </ul> <p>Software option / Interface RS 232 port /USB/ DB – 9 port: SNMP Compatible must support windows/linux/Novell/free BSD.</p>		
6	<p><b>Line Interactive UPS 1KVA</b>  <b>Make: Emerson</b>  <b>Model: Libert i</b>  <b>Tone BX</b></p>	<ul style="list-style-type: none"> <li>• Capacity 1000 VA</li> <li>• Inverter Device MOSFET based</li> <li>• Rated Output Voltage 230 V(1-Phase)</li> <li>• Rated Output Current 4.0 A at 0.8 p.f.</li> <li>• Input Voltage Range 160-270 VAC</li> <li>• Input Frequency Range 50 Hz ± 6%</li> <li>• Waveform quasi sinewave</li> <li>• Power Factor 0.65 lag to 0.8</li> <li>• Output Frequency regulation (inverter mode)</li> <li>• Frequency regulation in Inverter Mode 50Hz ± 0.5%</li> <li>• Overall Efficiency &gt; 70%</li> <li>• Inverter Efficiency &gt; 75%</li> <li>• Cold Start Feature</li> <li>• Charger capacity min. 2 amp</li> <li>• Overload Capacity 110% (for 30 sec)</li> <li>• Batteries SMF ( VRLA ) Type of reliable brand like Panasonic, Hitachi, Exide or equivalent to provide 50-60 minutes backup (on single PC) Min VAH : 336 VAH</li> </ul> <p><b>Quality Standards</b></p> <ul style="list-style-type: none"> <li>• ISO-9001-2000 Certified Safety Standards</li> </ul>	02	1 for each smart classrooms

		<p>and EMC Standards as per</p> <ul style="list-style-type: none"> <li>• IEC standards</li> <li>• Software option / Interface RS 232 port</li> </ul>		
7	<b>Speaker</b>	<b>Pair of external speaker same make of PC</b>	8 Pairs	
8	<b>UPS Battery</b>	<b>Make: Roket Model-ES-42-12(12 Volt, 42 AH)</b>	11	03 for ICT lab & 4 for each smart classrooms
9	<b>Printer/copier/scan/ fax Model: HP-LJM128fn Make: HP</b>	Multi Functional Laser Printer with facility of print, scan, copy and Fax; Print Speed 16 PPM, Resolution: 600x600 dpi (1200 DPI effective output), 64 MB RAM, 150 sheet fed tray ; Fax speed 33.6 Kbps, auto redialing, Scanner: Flatbed & 30 sheet fed ADF, Processor Speed :386Mhz or higher , Hi- Speed USB 2.0 or better, display LCD, 10/100 Base-T Ethernet network, copier resize 25 to 400%, copy speed upto 18cpm; Power Consumption: less than 390W in active mode, less than 5W in stand by and less than 0.05W in off mode; Energy Start qualified.	01	
10	<b>Networking Switch/LAN Equipment for ICT Lab and Smart School Make: D link Model: DGS-1100-08</b>	8 or 16 Port Smart Switch with loop back detection, 16 or 24 Port CAT6 Patch Panel full loaded, Necessary cables to connect access device/terminal to desktop computer as per requirement	01	
11	<b>Patch cords Make: D-link Model: CAT 6 UTP</b>	<b>Cat6 UTP Patch cords</b> : Factory Crimped with RJ 45 jacks on both the ends of Cat6 STP Cable of 5Mtrs length or Actual Host Terminal. Should not increase more than 10 Meter or 32 ft	11	
12	<b>Web Camera Make: Zebronics Crisp HD</b>	<ul style="list-style-type: none"> <li>• HD Video calling (1280 X 720 pixels) with recommended system</li> <li>• Video capture: Up to 1280 X 720 pixels</li> <li>• Photos: Up to 5 megapixels (software enhanced)</li> <li>• Built-in mic Hi-Speed USB 2.0 certified (recommended)</li> <li>• Universal clip fits laptops, LCD monitors</li> <li>• Video and photo capture</li> </ul>	01	
13	<b>Software</b>	Microsoft Windows multipoint server 2011 loaded on both servers.	02	
14	<b>Miscellaneous</b>	12 reams of white paper A4 75 gsm, blank 15 RW DVDs and 4 unit of printer toner for MFD.		
15	<b>Modular Workstation Godrej</b>	Supply of workstations in tile based modular partition system of overall thickness shall be 56mm.The frame shall comprise of 2 vertical uprights, a top horizontal tube and a bottom C channel as a welded structure. The vertical upright shall be made from 1.5mm thick CRCA	01	

		<p>M.S. Grade D formed into “C” channel of 28.4 X 40. The top horizontal shall be 1.2 mm thick M.S. tube of 38.1 X 25.4 mm (1 X 1 ½ inch). The bottom horizontal shall be 1.5 mm thick M.S. “C”</p> <p>channel of size 38.1mm x 25.4 mm (1 ½ in x 1 in). The frame shall be powder coated in standard black colour. The vertical upright shall have 4 side slots of size 60mm H X 10mm W, for passage of cables through out the width of the panel. The bottom horizontal shall have 2 slots of size 100mm L X 20mm W for entry of cables into the system. The vertical upright shall have front slits for fixing work surface brackets at a pitch of 25.4mm. To avoid passage of light through the horizontal gap of 4.4mm between the tiles, a 0.8mm the M.S. CRCA Grade D, black powder coated C shaped light barrier shall be riveted to the frame. The light barrier shall have three slots of size 75 X 15mm for the wires to pass through.</p>		
		<p><b>Frame Joinery</b></p> <p>The frames shall be joined to each other with the help of 2 way, 3 way and 4 way joineries with the help of universal connectors at the junction of the frames. The universal connector shall be screwed to the frame using M6 X 30 long socket button head cap screws.</p> <p><b>Trims</b></p> <p>Powder coated aluminum alloy (of grade He-9 – 63400) Flat trims of 53.5mm X 13mm and average wall thickness of 1.2 mm shall be fitted on the top horizontal using M6 X 55L bolts &amp; Nut and the open vertical ends of the upright using M6 X 25L Bolt &amp; Nut. The open vertical joinery for the configuration 2 way and 3 way shall be covered with 2 way and 3 way aluminum alloy (of grade He-9 – 63400) vertical trims of 1.2mm average thickness, which shall be powder coated and press fitted onto the universal connector made of 2mm th M.S. All the joinery shall be finished with diecast powder coated Mazak flat caps.</p> <p><b>Prelaminated fins</b></p> <p>Prelaminated fins as end partitions shall be 25mm th made of plain particle board finished with laminate of approved shade and color and edge banded with hot pressed PVC lipping. The same shall be fitted to the main panel with the help of fin extrusions</p>		
		<p><b>Tiles:</b></p> <p><b>Fabric tiles:</b> Fabric shall be upholstered on metal tiles in 0.6 mm thick M.S. CRCA Grade D as per IS:513-1994</p> <p><b>Plain Metal tiles:</b> It shall be powder coated metal tiles in 0.6 mm thick M.S. CRCA Grade D as per IS:513 - 1994.</p>		



		<p><b>Worksurfaces:</b></p> <p>Rectangular work tops of sizes 1049mm w x 599mm d shall be made of 25mm thick Prelaminated particle board interior grade of approved shade conforming to IS:12823:1990. Bottom shall have a backing laminate of minimum 0.6 mm thickness. All the edges of work surface shall be provided with machine pressed 2 mm thick PVC lipping glued with hotmelt EVA glue</p> <p>The worksurfaces shall be mounted on the 13 inch worksurface bracket of 2.5mm thick M.S.. Side panels shall be attached to the upright using the side panel brackets. All the above brackets shall be powder coated.</p> <p>Workstation should be provided along with CPU Holder. Metal</p> <p>component of Holder shall be finished with powder coating</p> <p>Workstation should be Green Guard Certified/IGBC Certified</p>		
16	<b>Wooden cabinet for Smart Classrooms</b> <b>Make: Godrej</b>	Overall Size of table should have 1000L*600W*750D. The table should have Horizontal width of 555 mm which is required for housing key board pull out tray and should be between two side panels. There should be overhang on table top required on both side with size of 15 mm. The Clear horizontal width inside for CPU chamber 180mm. The Clear horizontal width inside for UPS chamber shall be 178 mm. The above specification is required considering 18 mm prelam practical board PLT side panel. Lockable KBPT considered is Lockable Wooden keyboard pullout tray. The table should adhere to the image given. Manufacturing tolerance will be allowed as (+/-5%) as per industry norms	02	1 for each classrooms
17	<b>Computers Chairs</b>	Supreme-Lily	30	
18	<b>PVC Flooring</b>	Providing and fixing 2mm thick PVC/Rubber flooring plain. Colored /Corbel or mosaic or matted or wood pattern finish, laid with approved adhesive. Wherever a minor repair is required for leveling the floor the same may also be carried out.	400sq.ft.(+/- 10%) or actual size of the room	Responsible
19	<b>Earthing</b>	Copper plate earthing stations making earthing with copper earth plate 600 mm x 600 mm x 3 mm thick including funnel, char-coal/coke, salt, all earth work. The earthing should be 4 feet deep or more.	01	

### Material for site preparation

Sr.No	Particular	Make	Quantity per lab
A	<b>Electrification</b>		
1	Electrical wiring as per indian	Anchor/ Havells	As required

	standard 1mmsq., 1.5mmsq., 2mmsq		
2	6 amp switch and socket for Integrated computer projector	Anchor	02
3	Moduler 6 amp switch and socket for 8 nodes	Anchor	08 set
4	Moduler 6 amp switch and socket for high end Desktop computers	Anchor	02 set
5	16 amp switch and socket for 1 KVA online UPS	Anchor	01
7	6 amp switch and socket for 1 KVA line interactive UPS	Anchor	02
8	MCB 32 amp before UPS	L&T/Anchor/Havells or eq.	01
9	PVC conduit pipe fitting with PVC bands & junction boxes	Good quality ISI	As required
10	Extension cable with switch and plug top to connect K-yan.	Good quality ISI	01
11	I/O box in smart classrooms	D-link	02
12	CAT 6 cabling for smart classroom connectivity	D-link	As required