



Republic of the Philippines
Department of Education



Office of the Secretary

MAR 3 1 2009

DepED ORDER
No. **28**, s. 2009

**GUIDELINES IN ACCEPTING INFORMATION AND COMMUNICATION
TECHNOLOGY (ICT) EQUIPMENT AND INTERNET ACCESS SERVICES
FOR CLASSROOM INSTRUCTION AND ADMINISTRATIVE USE**

To: Undersecretaries
Assistant Secretaries
Bureau/Center/Service Directors
Regional Directors
Schools Division/City Superintendents
Regional/Division ICT Coordinators
Heads, Public Elementary and Secondary Schools
All Others Concerned

1. Our schools through the years have been recipients of various Information and Communication Technology equipment/peripherals. To complement/ supplement the coverage of the DepED Computerization Program priority should be given to ICT Equipment and Internet Access.

In order to properly manage assistance from different institutions, the following guidelines must be followed:

- a. Before accepting any offerings, the school heads are required to coordinate with their respective Regional/Division ICT Coordinating Committee who are tasked to:
 1. Coordinate and evaluate local ICT Programs and Projects;
 2. Submit proposals to the Technical Service – ICT Unit and ICT Technical Committee for evaluation; and
 3. Submit for approval by the ICT Governance Committee.
- b. The Regional/Division ICT Coordinating Committee shall confirm that the donor has complied with the configurations endorsed by the following bureaus:
 1. For Primary Schools, the Bureau of Elementary Education (BEE) has endorsed the following configuration for multimedia classrooms (Enclosure No. 1):
 - Computer Hardware with Open Standard Software – Both Open Source (Edubuntu – Linux)

- or Proprietary Software (Microsoft Windows) are acceptable
- Internet Connectivity (should be at least a minimum of 384 kbps/per unit)
2. For Secondary Schools, the Bureau of Secondary Education (BSE) has endorsed the following configuration for Computer Laboratories:
- Computer Hardware with Proprietary Software is preferable (if Operating System software will be bought, the PPP-SKU licensing scheme must be used).
 - Internet Connectivity (should be at least a minimum of 384 kbps/unit)
- c. Furthermore, the Regional/Division ICT Coordinating Committee shall validate if the equipment/internet service set for acceptance conforms to the minimum technical specifications attached herewith (Enclosure No. 2) and ensure that the recipient will be able to fully utilize the said package.
- d. After the validation, the Regional/Division ICT Coordinating Committee shall also verify that the recipient school has complied with the following requirements:
1. Available room that could be converted to a multimedia classroom or computer laboratory;
 2. Stable supply of electricity;
 3. Provisions for Security and Air Conditioning of room; and
 4. Qualified personnel to handle the equipment.
- e. All new equipment should have the following:
1. Warranty
 - On-site (Technical Personnel will proceed to where the defective equipment is located)
 - Carry-in (defective units will be brought to accredited Service Centers which should be within a 5 kilometer radius);
 2. Shipping, delivery and installation for new equipment must be included in the package;
 3. All units must conform to the minimum required specifications attached to these Proposed Guidelines; and
 4. To assure product quality performance and reliability, preferably branded units from ISO certified manufacturers.
- f. For refurbished equipment, the following minimum requirements must be observed:
1. For computer hardware, the processor must be only one (1) generation lower to the present line of computer processors;

2. Replacement parts compatible for these units are still available and easy to find;
 3. Operating System software should be installed. The Regional/Division ICT Coordinator will secure from ICTU-Technical Service the official software license Product Key; and
 4. Regions/Division Officer delivery and installation up to the school level.
- g. In case where the specification for a certain equipment or gadget does not appear in the attachments to this document, the Regional/Division ICT Coordinating Committees are tasked to ask for assistance from the ICT Technical Committee in the DepED Central Office.
- h. When all qualified recipients and appropriate specifications have been established, the procurement of ICT equipment and/or Internet Access Service whose funds will course thru DepED Regional and Division Offices may commence in accordance with the provisions of Republic Act No. 9184.
- i. All equipment when delivered and accepted by the recipient schools must be recorded by their respective Regional, Division, School Supply Officers/Property Custodians and Accountants in the Official School Records.
2. The enclosed ICT equipment specifications (Enclosure No. 2) shall be updated annually.
3. Immediate dissemination of and compliance with this Order is directed.



JESLI A. LAPUS
Secretary

Encls.:

As stated

Reference:

DepED Order: No. 1, s. 2007

Allotment: 1- -(D.O. 50-97)

To be indicated in the Perpetual Index
under the following subjects:

EQUIPMENT
INFORMATION TECHNOLOGY
RULES & REGULATIONS
SCHOOLS

R-Maricar/DM-Guidelines ICT
03-18-09

**INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)
CONFIGURATION FOR BASIC EDUCATION**

1. Elementary configuration

- a. Multimedia Classroom Configuration
 - 1) One (1) Desktop Computer with 3 or 6 shared computing terminals
 - 2) Three (3) Desktop Computers
 - 3) One (1) Interactive Whiteboard
 - 4) One (1) Digital Camera
 - 5) One (1) 29" Flat or 32" LCD Screen Television
 - 6) One (1) DVD Player
 - 7) One (1) LCD Projector
 - 8) One (1) 3-in-1 Inkjet Printer
 - 9) One (1) Projector Screen
 - 10) Internet Connection (minimum of 384 kbps/per unit)

- b. ICT-Enabled Teacher-Led Instruction Configuration
 - 1) One (1) Desktop Computer per Grade
 - 2) One (1) Uninterruptible Power Supply (UPS)
 - 3) One (1) LCD Projector
 - 4) One (1) Projector Screen

2. High School configuration (Computer Lab)

- 1) Eleven (11) Desktop Computer
- 2) One (1) Wireless Broadband Router
- 3) One (1) 3-in-1 Inkjet Printer
- 4) Eleven (11) Uninterruptible Power Supply (UPS)
- 5) Internet Connection (minimum of 384 kbps/per unit)

Advisory on
STANDARD MINIMUM SPECIFICATIONS OF ICT EQUIPMENT
(as of March 18, 2009)

1. Internet

ITEM No.	Type	Description
1	Internet Service	
	Size of Bandwidth	Minimum of 384 kbps

2. Workstation

ITEM No.	Type	Description
1	Desktop Computer	Branded and Brand New
	Microprocessor	2.2Ghz, 2MB L2 cache, 800Mhz FBS
	Motherboard	<ul style="list-style-type: none"> • Memory: Two 240-pin DDR SDRAM Dual Inline Memory Module and supports DDR2 667Mhz DIMM • Audio: On board 2 channel audio system • Video: On board graphics subsystem • LAN Support: On board 10/100 Mbps • Peripheral Interfaces: 6 USB 2.0 (2 in front and 4 at the back), Two Serial ATA interfaces
	Memory	2GB DDR2 667MHz
	Hard Disk	120GB (SATA)
	Optical Drive	DVD-/+RW (SATA)
	Monitor	17" LCD monitor
	Video	Support maximum frame buffer of 256 MB (Graphics memory is shared with system memory)
	Wireless PCI Adapter	802.11g Wireless PCI adapter card with speed up to 54Mbps, PnP installation, support 64/128 bit WEP Encryption and WPA security, with patch antenna (third party is acceptable only if it is certified that it is official brand being used for one year in the market by the computer manufacturer with corresponding part number)
	Keyboard	At least 104 USB interface
	Mouse	Optical, PS/2 or USB Interface
	Speakers	External Speakers
	Operating System/ Application Software	<ul style="list-style-type: none"> • Windows Home Basic PPP SKU • Windows Upgrade Perpetual VL Academic Edition • Office Professional 2007 Perpetual VL Academic Edition • Pre-installed Microsoft Encarta Premium 2008 • Pre-installed Anti-Virus Software with one year license
	Others	<ul style="list-style-type: none"> • ISO 9001 certified • With Recovery CDs or Pre-installed Recovery System (Operating System, Utility and Drivers) • Manufacturer's Logo/Name must be etched/printed/labeled in the motherboard • Motherboard, Monitor, Casing, Keyboard and Mouse must be of the same brand. • Suppliers must have an authorized service center in every region nationwide.
	Warranty	3 years parts and labor and onsite service

ITEM No.	Type	Description
2	Laptop Computer	Branded and Brand New
	Microprocessor	2.0Ghz, 2MB L2 cache, 800Mhz FBS
	Motherboard	<ul style="list-style-type: none"> Graphics: Support max frame buffer of 256mb (Graphics memory is shared w/ system memory) Audio: 2 channel audio system Peripheral Interface: 3 USB 2.0, VGA port, RJ45, RJ11, Headphone out, Mic in, S-Video, TV out, AC Adapter LAN Support: 10/100/1000 base T, Wi-Fi ready
	Memory	2GB
	Optical Drive	DVD super multidrive
	Hard Disk	160GB 5400rpm
	Display	14.1 wxga
	Pointing Device	Touch pad
	Operating System/ Application Software	<ul style="list-style-type: none"> Pre-installed Microsoft Vista downgraded to Microsoft Windows XP Professional 32-bit Pre-installed Anti-Virus Software with one year license
	Warranty	3 years service and parts
	Others	<ul style="list-style-type: none"> ISO 9001 certified With Recovery CDs or Pre installed Recovery System (Operating System, Utility and Drivers) Suppliers must have an authorized service center in every region nationwide. Open Disk Kit and DepED Wallpaper (provided by DepED) will be copied and installed by the supplier With 6-cell battery, carrying case

3. Printing Devices

ITEM No.	Type	Description
1	3-in-1 Inkjet Printer	Branded and Brand New
	Up to Resolution	4800(h) x 1200(v)
	Black and Color	yes
	Paper size	A4, A5, A6, B6, Letter, Legal....
	Print speed:	
	Black Text Memo (A4)	Approx. 20 ppm
	Color Text Memo (A4)	Approx. 14 ppm
	Photo 10x15cm/4x6in	Approx. 60 sec per photo (Draft)
	Copy Technology:	
	Black Text Memo (A4)	Approx. 19 cpm (Draft)
	Color Text Memo (A4)	Approx. 14 cpm (Draft)
	Scan Technology:	
	Scanner Type	Flatbed
	Scanning Resolution	Up to 600 dpi
	PC Interface	USB 2.0
	Power Voltage	220-240 volts, 50/60Hz
	OS Compatibility	Windows Vista/Windows XP/Mac OS
	Others	All consumable items should be commercially available nationwide
	Warranty	2 years service and parts

ITEM No.	Type	Description
3	Interactive Whiteboard	Branded and Brand New
	System Component	<ul style="list-style-type: none"> • Board Size 77" diagonal w/ stand • System/Driver and Authoring Software for Windows XP • Pen with tray • USB Cable/Cat 5 Cable with USB Adaptor
	Features	<ul style="list-style-type: none"> • Touch System – write, erase with your finger and pen • Save and Record functions
	Others	With (1) day user's training onsite for 3 teachers per school
	Terms and Conditions	3 years service and parts

ITEM No.	Type	Description
4	32", 42" LCD TV	Branded and Brand New
	Screen Size	32" or 42" Diagonal
	Resolution	1366 x 768p
	Contrast Ratio	1500:1
	Audio	Stereo
	Connectivity	<ul style="list-style-type: none"> • AV output • HDMI • S-video • CVBS • PC VGA in • PC Audio in
	W/ NTSC compatibility	NTSC compatibility
	Power Source	220 volts
	Warranty	2 years warranty service and parts
	Others	<ul style="list-style-type: none"> • w/ wall mounting kit included • Remote control w/ batteries • Operation Manual

ITEM No.	Type	Description
5	DVD Player	Branded and Brand New
	Playable format	CD, MP3-CD, MP3-DVD, WMA-CD, CD-R/RW, Audio CD, JPEG, VCD/SVCD
	Video disc playback system	PAL, NTSC
	Sound System	Dolby Digital
	Input/Output	<ul style="list-style-type: none"> • Composite Video Output • Analog Audio Output • Coaxial Digital Output
	W/ USB port	Yes
	Power Source	220-240 volts
	Others	<ul style="list-style-type: none"> • Remote control, AV cable, Instruction Manual, Batteries for remote control • List of accredited nationwide service center w/ addresses
	Warranty	2 years service and parts

ITEM No.	Type	Description
2	Laser Printer	Branded and Brand New
	Printing Technology	Monochrome Laser
	Printing Speed	Up to 26ppm
	Processor Speed	400Mhz
	Print Quality	Up to 1200 x 1200 dpi
	Duty Cycle	Up to 15,000
	Interface	USB 2.0
	Others	With low yield toner
	Warranty	2 years service and parts

4. Multimedia Devices

ITEM No.	Type	Description
1	LCD Projector	Branded and Brand New
	ANSI Lumens	2000 ANSI Lumens
	Resolution	1024(h) x 768(v)
	Lamp Hrs	3000 hrs
	Video Standards	NTSC, SECAM, PAL, PAL-N, PAL -M, NTSC 4.43
	Others	w/ projector mounting kit (ceiling)
	Warranty	2 years service and parts

ITEM No.	Type	Description
2	Digital Camera	Branded and Brand New
	Mega pixels	8
	LCD	2.5"
	Optical zoom lens	4x
	Face Detection	yes
	Self Timer	yes
	Computer Interface	USB 2.0
	File Format	JPEG, AVI, WAVE
	Internal Memory	16MB
	Removable Memory	1GB
	Power Source	Li-Ion Battery
	Others	<ul style="list-style-type: none"> • Night Mode • Anti-Blur or steady shot modes for moving objects • Automatic and programmed exposure modes • Drivers and Manuals • Battery charger • Camera case with strap • Dedicated USB cable
	Warranty	2 years service and parts

ITEM No.	Type	Description
6	Document Camera	Branded and Brand New
	Optics	<ul style="list-style-type: none"> • Zoom: 8x zoom • Focusing: Advance Auto Exposure • Iris Adjustment: 3 flicker
	Imaging Device	<ul style="list-style-type: none"> • Total No. of Pixels: 3 Megapixel • Frame Rate (capture): 24fps • White Balance: Auto/Manual
	Weight	2 kgs.
	Terminals	<ul style="list-style-type: none"> • VGA output • Composite Video Output • S-video Output • DVI port • USB port
	RGB Output	System: XGA signal output
	Lighting	Illumination Lamp (two): LED Lamp w/ laser positioning pointer
	Warranty	2 years warranty service and parts
	Other Features	<ul style="list-style-type: none"> • Graphics text enhancement • 4 reference point demacrete viewing area • PC and Doc Dam Video Switcher • w/ filter mode sections • Support image mirroring and 180 angle rotation functions • Stretchable mechanical arm • Built-in memory capture and store up to 80 JPEG images

ITEM No.	Type	Description
7	Tele Fax Machines	Branded and Brand New
	Print Engine	Thermal
	LCD Display	Yes
	Input/Output Width	A4
	Automatic Cutter	Yes
	Caller ID	Yes
	Built-in answering machine	Yes
	Warranty	2 years warranty service and parts

ITEM No.	Type	Description
8	Scanner	Branded and Brand New
	Scanner Type	Flatbed, Contact Image Sensor (CIS)
	Max Resolution	2400 x 4800 dpi
	Max Document Size	8.5" x 11.7"
	Interface	USB
	OS Compatibility	Windows 2000, Windows XP, Windows Vista and Mac OS
	Power Voltage	220-240 volts
	Warranty	1 year service and parts
	Others	<ul style="list-style-type: none"> • Driver • Software • USB cable • Power cable (if not USB cable powered)

ITEM No.	Type	Description
	Model	Pull-Down
	Size	70" x 70"
	Materials	White Matte

5. Network Device

ITEM No.	Type	Description
	Device Type	Access Point Gateway, Router
	Number of Antennas	2
	Network Status Indicators	Activity Status, Link Status
	Network Architecture Supported	Ethernet – 10 Mbps Twisted pair (10BaseT), Ethernet 100 Mbps Two-pair (100 BaseTX), Wireless Ethernet – 11 Mbps IEEE802.11b, Wireless Ethernet – 54 Mbps IEEE802.11g
	Speeds Supported	54 Mbps
	Wireless Security Features	PSK, WEP – 128-bit, WEP – 64-bit, WPA, WPA2
	Features	Integrated Antenna, Integrated Firewall, IPSec, NAT
	Number of Ports	4
	Port types	Ethernet – RJ-45
	Compatibility	Windows Vista
	Warranty	2 years warranty

6. Backup Device

ITEM No.	Type	Description
	Output	<ul style="list-style-type: none"> • Output Power capacity: 300Watts/500VA • Max Configurable Power: 300Watts/500VA • Nominal Output Voltage: 230V
	Output Connections	(3) NEMA 5-15R (Battery Backup)
	Input	<ul style="list-style-type: none"> • Nominal Output Voltage: 230V • Input Frequency: 60Hz • Input Connections: NEMA 5-15P • Cord Length: 1.83 meters • Input Voltage range for main operations: 180-260V
	Batteries and Runtime	<ul style="list-style-type: none"> • Battery Type: Maintenance-free sealed Lead-Acid battery • Typical recharge time: 24hrs • Typical Backup Time at Half load: 11.5mins (150watts) • Typical Backup Time at Full load: 1.3mins (300watts)
	Communication and Management	<ul style="list-style-type: none"> • Control Panel • LED Status display with On-Line: On Battery • Audible Alarm • Alarm when on battery: distinctive low • Battery alarm: overload continuous tone alarm
	Surge Protection and Filtering	<ul style="list-style-type: none"> • Surge energy rating: 180 joules
	Certification	ISO 9001 Certified
	Support	Nationwide Automatic Replacement
	Warranty	2 years