Desktop Computers

Choosing the right Desktop or Laptop Computer

In choosing a Desktop or a Laptop computer, the key factors to be considered are the work engaged by the user and the frequency of use. For a section of users where the work is limited to creating a document, checking and responding to e-mails, or working in a spreadsheet, their requirements typically do not go beyond the Microsoft Office components. Some may engage in more advanced work, but less frequently. On the other hand, those users who carry out specified tasks such as systems engineering, database management, quantitative analysis, etc., require computers with special features and advanced capabilities. For this reason, we propose not only one but three standard computer types from which the government agencies can select according to the needs of the users.

Type I

A Type I computer has all the basic features to carry out tasks such as creating a document (e.g., Microsoft Word, OpenOffice Writer, etc.), a spreadsheet (e.g., Microsoft Excel, OpenOffice Calc, etc.), presentation (e.g., Microsoft PowerPoint, OpenOffice Impress, etc.); checking and responding to emails, facility to use the internet for official purposes, etc. If the user's requirements do not go beyond these limits, the Type I computer is adequate for the purpose. Type I Computers are also sufficient for basic data entry work.

Type II

This category is good for administrative work including data entry (if the work load is high), compilation of reports and documents (more frequently), checking and responding to emails, using specific packages for finance and management, scientific applications etc. Type II computers can also be used, as decided by the management, by software development professionals, system administrators and other officers carrying out Information systems related functions.

Type III

A high-end computer (Type III) is recommenced only for users of special software applications that require advanced hardware resources. (e.g. GIS software) Most of the times the software requirements themselves call for such a computer. Sometimes the software developers and system administrators too might too need high-end computers. They should be assigned to officers purely on their work requirements and not based on the position or seniority.

Specifications for Desktop Computers

Criteria	Type I	Type II	Type III
Brand	(Branded)	(Branded)	(Branded)
Model	(Branded)	(Branded)	(Branded)
Country of Origin & Country of Manufacture / Assembly	(Branded)	(Branded)	(Branded)
Processor	Option 1: Intel® Core i3-10100 10th Generation Processor or Later	Option 1: Intel® Core i5-10400 10th Generation Processor or Later	Option 1: Intel® Core i7-10700 10th Generation Processor or Later
	Option 2: AMD Ryzen™ 3 4300G Processor or Later	Option 2: AMD Ryzen™ 5 4600G Processor or Later	Option 2: AMD Ryzen™ 7 4700G Processor or Later
Base Frequency	Intel: 3.6GHz or Higher AMD: 3.8GHz or Higher	Intel: 2.9GHz or Higher AMD: 3.7GHz or Higher	Intel: 2.9GHz or Higher AMD: 3.6GHz or Higher
Cache	Intel: 6MB or Higher AMD: 6MB L2/L3 Cache or Higher	Intel: 12MB or Higher AMD: 11MB L2/L3 Cache or Higher	Intel: 16MB or Higher AMD: 12MB L2/L3 Cache or Higher
Video Controller	Intel UHD Graphics 630 / Radeon™ Vega 8 Graphics or Better	Intel UHD Graphics 630 / Radeon™ Vega 11 Graphics or Better	Intel UHD Graphics 630 / Radeon™ Vega 11 Graphics or Better
Form Factor	Business Desktop	Business Desktop	Business Desktop
Chassis	Mini ITX or Micro ATX Tower Casing with Locking Facility. (Mini Padlock with 3 Keys should be supplied)	Mini ITX or Micro ATX Tower Casing with Locking Facility. (Mini Padlock with 3 Keys should be supplied)	Mini ITX or Micro ATX Tower Casing with Locking Facility. (Mini Padlock with 3 Keys should be supplied)
Chipset	Intel: Intel Express B / H Business 400 Series Chipset or Higher AMD: AMD B Chipset or Higher Note: Bidder should clearly specify the chipset	Intel: Intel Express B / H Business 400 Series Chipset or Higher AMD: AMD B Chipset or Higher Note: Bidder should clearly specify the chipset	Intel: Intel Express H / Q Business 400 Series Chipset or Higher AMD: AMD B Chipset or Higher Note: Bidder should clearly specify the chipset
Motherboard	Should be the same quoted brand (Serial number of the CPU should show in BIOS)	Should be the same quoted brand (Serial number of the CPU should show in BIOS)	Should be the same quoted brand (Serial number of the CPU should show in BIOS)
Memory	4 GB DDR 4 2666MHz or Higher	8 GB DDR 4 2666MHz or Higher	16 GB DDR 4 2666MHz or Higher
Maximum Memory	Upgradeable to Maximum of 16 GB RAM	Upgradeable to Maximum of 16 GB RAM	Upgradeable to Maximum of 32 GB RAM
Memory DIMM's	2 DIMM's	2 DIMM's	2 DIMM's
Hard Disk Drive	1TB Serial ATA Minimum	1TB Serial ATA Minimum	1TB SATA HDD+256GB M2 SSD
Keyboard	128 Key Standard Keyboard to be as same brand in English	128 Key Standard Keyboard to be as same brand in English	128 Key Standard Keyboard to be as same brand in English
Mouse	Two buttons with scroll wheel optical Mouse with Mouse Pad	Two buttons with scroll wheel optical Mouse with Mouse Pad	Two buttons with scroll wheel optical Mouse with Mouse Pad
Optical Drive	SATA DVD Drive (+/-RW)	SATA DVD Drive (+/-RW)	SATA DVD Drive (+/-RW)
Expansion Slots	Minimum 2 Expansion Slots including 1 Nos PCI x 16, (Specify)	Minimum 2 Expansion Slots including 1 Nos PCI x 16, (Specify)	Minimum 2 Expansion Slots including 1 Nos PCI x 16, (Specify)
Network Interface	Gigabit Ethernet Network Interface Card (10/100/1000) Internal Wi-Fi Card - USB Dongle is not accepted	Gigabit Ethernet Network Interface Card (10/100/1000) Internal Wi-Fi Card - USB Dongle is not accepted	Gigabit Ethernet Network Interface Card (10/100/1000) Internal Wi-Fi Card - USB Dongle is not accepted
I/O Ports	- Minimum 8 USB Ports; from that at least 2 USB Ports should USB 3.2 - Minimum 1 HDMI Port - VGA Port	- Minimum 8 USB Ports; from that at least 2 USB Ports should USB 3.2 - Minimum 1 HDMI Port - VGA Port	- Minimum 8 USB Ports; from that at least 2 USB Ports should USB 3.2 - Minimum 1 HDMI Port - VGA Port
Power Supply	250W PFC, or Better Power Supply	250W PFC, auto-sensing, 80 PLUS# Platinum, or higher Power Supply	250W PFC, auto-sensing, 80 PLUS# Platinum, or higher Power Supply

Operating System	Windows 10 Pro or Linux or Ubuntu 18.04+	Windows 10 Pro or Linux or Ubuntu 18.04+	Windows 10 Pro or Linux or Ubuntu 18.04+
Application Software	Sinhala and Tamil Unicode Software and Commercial Anti-Virus with License for 3 Years	Sinhala and Tamil Unicode Software and Commercial Anti-Virus with License for 3 Years	Sinhala and Tamil Unicode Software and Commercial Anti-Virus with License for 3 Years
Product certifications of the quoted Model	- Product certifications of the quoted Model - Energy Star or any other equal certificate to Energy Star issued by authorized body who has the authority to do so (Documentary evidence must be provided) - Valid ISO 9001: 2015 and ISO 14001:2015 - Offered Model must possess FCC or CE or Equal	- Product certifications of the quoted Model - Energy Star or any other equal certificate to Energy Star issued by authorized body who has the authority to do so (Documentary evidence must be provided) - Valid ISO 9001: 2015 and ISO 14001:2015 - Offered Model must possess FCC or CE or Equal	- Product certifications of the quoted Model - Energy Star or any other equal certificate to Energy Star issued by authorized body who has the authority to do so (Documentary evidence must be provided) - Valid ISO 9001: 2015 and ISO 14001:2015 - Offered Model must possess FCC or CE or Equal
Display	18.5" or above Widescreen Color LED Monitor supporting resolutions WXGA or better. Should be as the same brand of the Desktop	19.5" Widescreen Color LED Monitor supporting resolutions WXGA or better. Should be as the same brand of the Desktop	19.5" Widescreen Color LED Monitor supporting resolutions WXGA or better. Should be as the same brand of the Desktop
Manufacturer Experience	Manufacturer should have a minimum of 3 years' experience in manufacturing of the same brand. (Proof document should be attached)	Manufacturer should have a minimum of 3 years' experience in manufacturing of the same brand. (Proof document should be attached)	Manufacturer should have a minimum of 3 years' experience in manufacturing of the same brand. (Proof document should be attached)
Manufacturer Authorization Certificate	Manufacturer Authorization Certificate should be provided. (Originals should be provided on request)	Manufacturer Authorization Certificate should be provided. (Originals should be provided on request)	Manufacturer Authorization Certificate should be provided. (Originals should be provided on request)
Warranty	- Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes.	- Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes.	- Comprehensive on-site manufacturer authorized warranty for 36 months (Labor & Parts) Excluding Consumes.
	-Bidder or it's parent company or it's subsidiary should have Island-Wide owned branch network	-Bidder or it's parent company or it's subsidiary should have Island-Wide owned branch network	-Bidder or it's parent company or it's subsidiary should have Island-Wide owned branch network
	-Documentary evidence to be provided of the following under bidders' name. (a) Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional office)	-Documentary evidence to be provided of the following under bidders' name. (a) Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional office)	-Documentary evidence to be provided of the following under bidders' name. (a) Address, Contact Details & Date of Commencement of each branch/regional office (Should have completed minimum of 5 years from the Date of Commencement of each branch/regional office)
Warranty Information	Should be fix a sticker with	Should be fix a sticker with	Should be fix a sticker with
	-Supplier name	-Supplier name	-Supplier name
	-Contact Numbers	-Contact Numbers	-Contact Numbers
	-Date of Commissioning of Hardware	-Date of Commissioning of Hardware	-Date of Commissioning of Hardware
	-Warranty period	-Warranty period	-Warranty period
	On all computers	On all computers	On all computers
Brochure	Supplier should provide brochure of make/model quoted as per above specification	Supplier should provide brochure of make/model quoted as per above specification	Supplier should provide brochure of make/model quoted as per above specification

Specimen Bidder's Compliance Check Sheet

Important:

It is compulsory to use the most recent version of the ICTA Specifications at the time of the Bidding Document Publication. The purchaser should mention the particular version of the specification in the Technical Specification section of the bidding document in the following format:
Example: If the purchaser refers the Type II of this Desktop Specification Version

ICTA Version: Desktop Computers | ICT-ES-2.1.1V-C | Type II

Features	Required Minimum Specification	Bidder's Compliance	
		Yes/No	If "No", Bidder's Response
Brand			
Model			
Country of Origin & Country of Manufacture / assembly			
Processor			
Base Frequency			
Cache			
Form Factor			
Chassis			
Chipset			
Motherboard			
Memory			
Maximum memory			
Memory Dims			
Hard disk			
Keyboard			
Mouse			
Optical drive			
Expansion slots			
Video controller			
Network interface			
I/O ports			
Power Supply			
Operating system			
Application Software			
Product certifications of the quoted Model			
Display			
Manufacturer Experience			
Bidders Experience			
Manufacturer Authorization Certificate			
Warranty			
Warranty Information			
Brochure			

Other Relevant Information

Desktop computers fall into three main families:

Tower

The traditional desktop computer has a large and roomy upright case (which, due to its size, usually sits under the desk). While bulky, it offers unmatched versatility and the opportunity to upgrade or replace parts to extend the capabilities or life of the unit. The mini tower (upright) and horizontal form factor models have less room inside.

Compact

Also known as small form factor (SFF) or Mini PCs, these sandwich-sized computers include cut-down components like an all-in-one, but with no built-in screen.

All-In-One

If there is a requirement for a general purpose desktop computer with a big screen but compact size, an all-in-one could be used. These self-contained desktop computers house all the components plus the monitor in a single unit that looks just like a desktop monitor. The computer itself is usually built-in behind the screen. However, a modular PC (tower or compact models have following advantages than the All-in-one PC: Connections: on a tower model the extra space usually means can find a wider range of connection ports. Cooling: bigger fans and more room means better cooling, so can use top-end components such as faster processors and graphics cards. Space: a traditional desktop case provides much more space inside, compared to a laptop or an all-in-one model. This leaves more room for extra drives or a second graphics card. Upgrades: a traditional desktop tower-style case offers much more flexibility for upgrading or replacing parts, so your desktop PC can last much longer with a few well-chosen upgrades.

Content References

- *https://byte-notes.com*
- *https://pcpartpicker.com*
- *https://www.choice.com.au*
- *https://www.cnet.com*
- *http://www.globusinfocom.com*
- *https://www.icta.lk*
- *https://www.itbusiness.ca*
- *https://www.pcworld.com*
- *https://www.streetdirectory.com*

Need Help?

Telephone : +94 (11) 236 9099

Fax : +94 (11) 236 9091

Email : ict-equip-specs@icta.lk