

Computers and Displays ~~Desktop and Laptop Computers~~

Covered Products:

This specification covers both stationary and portable Computers and Displays which includes Desktop Computers, Integrated Desktop Computers, Notebook Computers, Slates/Tablets, Portable All-In-One Computers, Small Scale Servers, Thin Clients, Workstations, Monitors and Signage Displays. For the purposes of this category, computers include both stationary and portable units, including desktop computers, notebook (which includes laptops) computers, and Tablet PCs. Although Computers must be capable of using input devices and displays, Computers systems do not need to include these devices on shipment to meet this definition.

Definitions:

Computer: means a computer central processing unit (CPU) and, where attached to a CPU, such computer cases, computer memory, cards and other peripheral devices as may reasonably be viewed functionally as one unit. *(As defined in State Finance Law Article XI, Section 168, General definitions 1a.)*

Desktop Computer: A Computer whose ~~where the~~ main unit is intended to be located in a permanent fixed location, often on a desk or on the floor. Desktops Computers are not designed for portability and are designed for use with utimize an external Display monitor ~~(although some more modern systems offer integrated systems which incorporated the CPU, monitor and devices in a single unit)~~, keyboard, and mouse. Desktops Computers are intended designed for a broad range of home and office applications including point of sale applications, email, web browsing, word processing, standard graphics applications, etc.

Display: See Electronic Display. For the purposes of this specification Displays include Monitors and Signage Displays.

Electronic Display (Display): A product with a display screen and associated electronics, often encased in a single housing, that as its primary function produces visual information from the following:

- a) A computer, workstation, or server via one or more inputs (e.g., VGA, DVI, HDMI, DisplayPort, IEEE 1394, USB),
- b) External storage (e.g., USB flash drive, memory card), or
- c) A network connection.

Flame Retardants (FRs): are chemicals added to products containing plastics and/or other synthetic materials to inhibit ignition and the spread of flames.

Integrated Desktop Computer: A ~~D~~esktop Computer in which the computing hardware and display are integrated into a single housing, and which is connected to ac mains power through a single cable.

Integrated ~~D~~esktop Computers come in one of two possible forms:

- a) A system where the display and computer are physically combined into a single unit; or
- b) A system packaged as a single system where the display is separate but is connected to the main chassis by a dc power cord and both the computer and display are powered from a single power supply.

As a subset of desktop computers, integrated desktop computers are typically designed to provide similar functionality as desktop systems.

Monitor: An electronic display intended for one person to view in a desk based environment.

Notebook Computer and Tablet Computers: (A) A Computer designed specifically for portability and to be operated for extended periods of time both with and without a direct connection to an AC mains power source. It includes an integrated display, a non-detachable, mechanical keyboard (using physical, moveable keys), and pointing device. (B) Mobile thin client: A computer meeting the definition of a Thin Client, designed specifically for portability, and meeting (A). (C) Two-in-one notebook: A computer which resembles a traditional notebook computer with a clam shell form factor (A), but has a detachable display which can act as an independent Slate/Tablet when disconnected. The keyboard and display portions of the product must be shipped as an integrated unit. ~~A computer designed specifically for portability and to be operated for extended periods of time without a direct connection to an AC power source. Notebooks and tablets must utilize an integrated monitor and be capable of operation off an integrated battery or other portable power source. In addition, most notebooks and tablets use an external power supply and have an integrated keyboard and pointing device, though tablets use touch-sensitive screens. Notebook and tablet computers are typically designed to provide similar functionality to desktops except within a portable device.~~

Portable All-In-One Computer: Computing device designed for limited portability that meets all of the following criteria:

- a) Includes an integrated display with a diagonal size greater than or equal to 17.4 inches (44.2 cm);
- b) Lacking keyboard integrated into the physical housing of the product in its as-shipped configuration;
- c) Includes and primarily relies on touchscreen input; (with optional keyboard);
- d) Includes wireless network connection (e.g., Wi-Fi, 3G, etc.); and
- e) Includes an internal battery, but is primarily powered by connection to the ac mains.

Signage Display: An electronic display intended for multiple people to view in non-desk based environments, such as retail or department stores, restaurants, museums, hotels, outdoor venues, airports, conference rooms or classrooms.

Slate/Tablet: A computing device designed for portability that meets all of the following criteria:

- a) Includes an integrated display with a diagonal size greater than 6.5 inches (16.51 cm) and less than 17.4 inches (44.2 cm);
- b) Lacks an integrated, physical attached keyboard in its as-shipped configuration;
- c) Includes and primarily relies on touchscreen input(although may include an optional external keyboard);
- d) Includes and primarily relies on a wireless network connection (e.g., Wi-Fi, 3G, etc.); and
- e) Includes and is primarily powered by an internal battery (with connection to the mains for battery charging, not primary powering of the device).

Small-Scale Server: A computer that typically uses desktop components in a desktop form factor, but is designed primarily to be a storage host for other computers. Small-scale servers are designed to perform functions such as providing network infrastructure services (e.g., archiving) and hosting data/media. These products are not designed to process information for other systems or run web servers as a primary function. A small-scale server has the following characteristics:

- a) Designed in a pedestal, tower, or other form factor similar to those of desktop computers such that all data processing, storage, and network interfacing is contained within one box/product;
- b) Designed to operate 24 hours/day, seven days/week, with minimal unscheduled downtime (on the order of hours/year);
- c) Capable of operating in a simultaneous multi-user environment serving several users through networked client units; and
- d) Designed for an industry accepted operating system for home or low-end server applications (e.g., Windows Home Server®, Mac® OS X Server, Linux™, UNIX™, Solaris).

Thin Client: An independently-powered computer that relies on a connection to remote computing resources

(e.g., computer server, remote workstation) to obtain primary functionality. Main computing functions (e.g., program execution, data storage, interaction with other Internet resources) are provided by the remote computing resources.

Workstation: A high-performance, single-user computer typically used for graphics, CAD, software development, financial and scientific applications among other compute intensive tasks.

Standard Setting and Certification Programs:

Various national and international standards apply to computer products. They are defined here as a guide.

Restriction of Hazardous Substances (RoHS) Directive – A European Parliament and Council Directive restricts the use of certain hazardous substances in electrical and electronic equipment. It bans the placing for sale on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.

For additional information on RoHS please visit <http://www.rohs.gov.uk/>

ENERGY STAR® - is a voluntary energy efficiency program sponsored by the U.S. Environmental Protection Agency. The ENERGY STAR® program makes identification of energy efficient computers easy by labeling products that deliver the same or better performance as comparable models while using less energy and saving money. ENERGY STAR® qualified computers and monitors automatically power down to 15 watts or less when not in use and may actually last longer than conventional products because they spend a large portion of time in a low-power sleep mode. For additional information on the ENERGY STAR® program, including product specifications and a list of qualifying products, visit the ENERGY STAR® website at <http://www.energystar.gov>.

Electronic Product Environmental Assessment Tool (EPEAT) – EPEAT is a system to help purchasers in the public and private sectors evaluate, compare and select desktop computers, notebooks and monitors based on their environmental attributes through a set of performance criteria for the design of products. The EPEAT website registry includes products that have been declared by their manufacturers to be in conformance with the environmental performance standard for electronic products - IEEE 1680- 201806. Three of the 253 EPEAT required criteria are that the registered computers must be ENERGY STAR®, are in compliance with provisions of European RoHS Directive, and PC manufacturers have provisions of product take-back service. For additional information on EPEAT please visit the EPEAT site at <http://www.epeat.net/>

Specifications:

Environmental Performance:

All Computers and Displays are required to have achieved Bronze registration or higher in the EPEAT system in the United States. All Desktop, Notebook, and Tablet PCs shall be registered Electronic Product Environmental Assessment Tool (EPEAT) Silver or better in the EPEAT registration system and must meet or exceed all of the following 6 optional EPEAT criteria for standard configuration and standard option form factors:

- 4.1.2.1 Restriction of the Use of Cadmium ~~Elimination of intentionally added cadmium~~

In addition, effected entities are encouraged to purchase Computers and Displays that meets EPEAT criteria 4.1.6.2 Reduction of Substances on the EU REACH Candidate List of SVHCs, which will ensure that the device is free of intentionally added lead and other substances of concern.

~~4.1.5.1 Elimination of intentionally added hexavalent chromium~~

~~4.1.6.2 Large plastic parts free of certain flame retardants classified under European Council Directive 67/548/EEC~~

~~4.1.7.1 Batteries free of lead, cadmium and mercury (not applicable for Monitors)~~

~~4.1.8.1 Large plastic parts free of PVC~~

~~4.8.2.2 Packaging 90% recyclable and plastics labeled~~

~~This standard includes the requirements of RoHS, ENERGY STAR®, and Energy Law, Article 5, Section 5-108a.~~

~~Note: All Desktop and Notebook PCs purchased through OGS' Aggregate PC Purchase Initiative are registered EPEAT Silver or better in the EPEAT registration system, and meet the above listed criteria. The Desktop PC Business Class category is registered as EPEAT Silver and meets or exceeds numerous optional EPEAT criteria for standard configurations and standard option form factors. This enables NY State and Local Government to maximize Environmental Preferred Purchasing considerations by acquiring PCs that meet or exceed industry standards for energy efficiency and environmental concerns.~~

~~Affected entities not using the Aggregate PC Purchase Initiative are encouraged to purchase PCs which meet the EPEAT Gold standard and the 6 optional criteria listed above plus:~~

- ~~• 4.8.3.2 Minimum postconsumer content guidelines~~

Packaging:

Packaging shall comply with Environmental Conservation Law section 37-0205. Packaging shall not contain inks, dyes, pigments, adhesives, stabilizers, or any other additives to which any lead, cadmium, mercury or hexavalent chromium is intentionally added or contain incidental concentrations of lead, cadmium, mercury or hexavalent chromium which together are greater than 100 parts per million by weight (0.01%).

New York State encourages affected entities to adopt the following:

- The use of bulk packaging.
- The use of reusable packaging.
- The use of innovative packaging that reduces the weight of packaging, reduces packaging waste, or utilizes packaging that is a component of the product.
- That all packaging remain the property of the supplier and not become the property of the affected state entity under any circumstance or condition. The vendor shall certify that the packaging material will be reused, recycled, or composted, and managed in compliance with applicable local, state, and federal laws.
- Packaging that maximizes recycled content and/or meets or exceeds the minimum post-consumer content level for packaging in the U.S. Environmental Protection Agency Comprehensive Procurement Guidelines.
- Packaging that is recyclable or compostable.

Bulk Delivery and Alternate Packaging:

New York State encourages the use of innovative packaging that reduces the weight of packaging and the generation of packaging waste. Bidders/contractors are encouraged to use reusable materials and containers and to utilize packaging configurations that take advantage of storage containers designed to be part of the product for the shipment of multi-unit purchases. New York State recognizes that these packaging methods are in the development stage and may not be currently available. Companies are urged to consider more of these options, and state contractors are urged to offer these services as part of their contract price list. Authorized users are urged to inquire about these programs when purchasing computers and determine the best solution for their needs.

Take-Back / Recycling*:

When replacing equipment, affected entities should work with the contractor during the purchasing process to evaluate available trade-in options, regardless of manufacturer. Contractors are required to offer programs that include take-back or trade-in, and proper environmental disposal of equipment (including equipment manufactured and sold by others).

State agencies are reminded to follow the NY State Finance Law § 167 regarding surplus property redistribution before utilizing take-back, recycling, or other options for disposition of any units that are still in operable condition. This standard requires donation of usable equipment to education (or other state agencies) prior to declaration of equipment as surplus or waste. Affected entities are reminded to receive certification of data destruction from hard drives if surrendered with the machines; or, if for security purposes you are required to keep the hard drive, to negotiate this with the contractor as there may be additional fees or trade-in value reductions associated with retaining the hard drive.

If units are being transferred for disposition, a record of each disposition shall be retained by the affected entity. Documentation shall be provided to the affected entity demonstrating that these products have been disposed of in environmentally sound manner in compliance with applicable local, state and federal laws. The contractor or disposing entity shall provide assurance to the affected entity that all exports of used electronics collected for reuse, recycling or disposal will be in compliance with the laws of the importing country.

*Note: One of the [required](#) criteria for EPEAT certification is [that the manufacturer shall provide a nationwide product take-back service for reuse, refurbishment and/or recycling for products in countries within which the product is declared to conform to this standard \(See IEEE Section 6.4.1.1\).](#)‡

~~*“The marketing and sale to institutions of all covered products shall include the option to purchase, at a competitive price, a take-back or recycling service that meets the U.S. EPA environmental standard defined in the “Plug-In to eCycling Guidelines for Materials Management published May 2004.”*~~

Disclosure of Flame Retardants in Computers:

NYECL §37-0111 recognizes that brominated flame retardants constitute substances hazardous to the environment, and prohibits any person to manufacture, process or distribute in commerce a product, or a flame-retardant part of a product, containing more than one-tenth of one per centum of pentabrominated diphenyl ether (pentaPBDE) or octabrominated diphenyl ether (octaPBDE), by mass. Brominated flame retardants are a class of halogenated flame retardants. Because New York State Executive Order No. 4 mandates ongoing development of lists and specifications for the procurement of commodities, services and technology that reasonably will reduce or eliminate the health and environmental risks from the use or release of toxic substances, bidders responding to solicitations are encouraged to disclose all flame retardants used in the products offered, including but not limited to penta, octa or decaPBDE and submit with their response a description of their efforts, if any, to utilize non-halogenated or other flame retardant compounds and/or design strategies that reduce the need to utilize flame retardant compounds. In addition, bidders are encouraged to offer products that meet flame retardancy standards or flammability requirements without added flame retardants with particular attention to halogenated flame retardants. Voluntary responses received will be forwarded to the Executive Order No. 4 Interagency Committee on Sustainability and Green Procurement for informational purposes to enable its periodic review and supplementation of green procurement lists and specifications for use by New York State Agencies and Authorities.