

Ripon USD Information Technology Recommended Technology Standards

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Fundamental Design

Computer technology within Ripon Unified School District needs to be both responsive and long lasting to be able to work within the limitations of the technology refresh budget, as provided both from the IT and LCAP Budget lines. Classroom technology should facilitate teacher interaction with their students, ease of use, and interoperability. Teaching technology should be portable, standardized, and easy to support. Administrative technology should be responsive to role needs.

As of the writing of this document, computers and support devices should be maintained to an 8-year lifespan before being refreshed with a new model if possible.

Classroom Technology

Classrooms should have the following technology available District-wide:

- Projector, either center ceiling- or wall-mounted, accepting VGA and HDMI.
- Document Camera capable of connecting to a Teacher's computer via USB, and having VGA passthrough.
- External Speaker system which connects to a Teacher's computer via 3.5mm stereo audio cable.

Chromebooks are standardized to the Dell Brand 11" Chromebook for part availability.

iPads should be the "iPad for Education" model with a Case and Appicare+.

Preferred carts are the Ergotron Brand "Basic 36".

Teacher's Computer

The Teacher's computer is the center of the modern, digital classroom. As a District (and as recommended by the County DPJPA) we are standardized on the Dell Latitude brand of computer for their low cost, expansive features, reliability, and parts availability. Assigned to a specific Teacher, these computers should have the following features:

- Screen no smaller than 11" diagonal.
- Solid State Drive of at least 256GB in size.
- At least 8GB of RAM or the 'recommended' specification for the operating system.
- An i5 (or AMD Equivalent) or better processor.
- HDMI, VGA and 3.5mm output or equivalent adapters.
- TPM and Secure Boot support.
- Absolute Security and Tracking Software.

As an option, some sites can opt to purchase Apple Branded computers - however, IT Support for these devices is much more limited than on the Dell Computers, and the users of these devices will be expected to understand more of how the computers function, and be able to troubleshoot common user-space issues such as keychain management, spaces, and setting application defaults. Apple computers also have limited port availability, and extensive adapters will be required. An Apple branded computer should be purchased with the following:

- An i5 (or AMD equivalent) or better processor.
- 16GB of RAM (cannot be upgraded).
- Screen no smaller than 11" Diagonal.
- Solid State Drive of at least 500GB in size (cannot be upgraded).
- Appropriate Adapters to have the following ports available: 2x USB A, 1x HDMI, 1 VGA, 1x 3.5mm Audio.
- Desktop Docking Station capable of Charging the Computer.
- AppleCare+

Accessories

Some additional equipment can be used to extend the capabilities of Laptops in the service of teaching, including docking stations, adapters, and other peripherals.

- Dell D6000 Universal Dock (PC)
- CalDigit TS3-Plus Docking Station (Mac w/ Thunderbolt 3)
- Tripp-Lite HDMI to VGA Adapter (P131-06N)
- Tripp-Lite Mini Displayport to HDMI VGA Adapter (P137-06N-HV-V2W)
- Logitech M185 USB Wireless Mouse
- StarTech.com Portable 4 Port SuperSpeed USB 3.0 Hub with Built-in Cable
- StarTech.com USB 3.0 to Gigabit Ethernet NIC Network Adapter

Desktop Computers

Primarily for Administrative Staff, Desktop Computers are being replaced with Docking Stations and Laptops for many non-technical roles. Desktop systems are composed of several discrete parts: The Monitor(s), Keyboard, Mouse, and Tower.

By request multi-monitor setups may be available. These take advantage of the VESA mount capabilities of the monitors to provide more Desktop Area with which to organize data.

Monitor:

- At least 24" in size (diagonal) of at least 1080P resolution, with HDMI/ DisplayPort Inputs.
- Have adjustments for Tilt, Vertical Adjustment, and Swivel.
- Be VESA mount compatible.
- Provide a bezel capable of mounting a privacy filter if requested.

Keyboard and Mouse:

- Standard US 101-key keyboard with Numberpad.
- 2-button USB Optical Mouse with Scroll wheel.

Tower:

- An i5 (or AMD equivalent) processor.

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- At least 8GB of RAM (16GB for heavy loads).
 - Solid State Drive of at least 256GB in size.
 - HDMI and 3.5mm audio output or equivalent adapters.
 - TPM and Secure Boot Support.

Servers

Servers must be designed for an extended workload, and come with an 8 year warranty for parts and repair if new. Due to the nature of these kinds of machines and the different roles they may be purchased for, their specifications are rather varied. However, AMD processors are currently preferred over Intel processors for core density, cost, and security. "Open Box" equipment is also usable if the warranty is covered as above. The preferred brand for server equipment is Dell.

Networking Equipment

Most of the networking fundamentals and administration is handled by the County DPJPA Office, which limits what can be deployed to what is acceptable to their standards. They maintain a list of equipment available to IT Staff at <https://www.dpjpa.net/equipment/network.htm> (internal link) for the most up to date copy of this information.

- Rackmount switches are to be Aruba brand in the 3810M or equivalent family, with dual redundant power supplies, and a 4SFP+ module.
- Chassis switches are to be Aruba brand in the 5400 or equivalent family, and contain at least 1 zl2 Management Module and dual redundant power supplies.
- Wireless Access Points are to be Ruckus brand, with the ZoneFlex R700 as the 'standard' deployment.
- UPS should be Tripp-Lite Branded with a network management card, and in the 750VA (1U) or 1500VA (2U) size.
- "Smart" PDU devices should be Tripp-Lite branded with the PDUMH15ATNET model being the recommended standard.
- NAS units if purchased should be Rack Mount form factor and Synology Brand.

Please note that specialized equipment such as SAN, Tape Backup, Surveillance Equipment, and others are purchased as one-off devices and may not fall into the recommended standards.

Example Equipment:

Classroom Technology:

- Lumens DC179 “Lady Bug” Document Camera
- Epson PowerLight W39 Projector
- Epson PowerLight 675W Wall-Mount Projector
- Cyber Acoustics CA-2016WB wired computer speakers.

Teacher’s Computer:

- Dell Latitude 3400 BTX 14” (i5, 256GB SSD, 8GB RAM, TPM)
- MacBook Air (13-Inch 2017 Model 256GB SSD)

Desktop:

- Dell Optiplex 7060 SFF (i5, 256GB SSD, 8GB RAM, TPM)
- Dell P2419H 24” 1080p Monitor (Swivel, Tilt, Vertical Adjustment, Rotate)
- Dell 101-Key USA Keyboard w/ 9-Key
- Dell 2-button Optical Mouse w/ Scrollwheel

Specialty Equipment

At times, some specific roles may call for special equipment or specific desires. These are normally purchased by the Site or program they are specific to.

CAD/ CAM Computers

- Dell Precision Desktops (Workstation, 16GB RAM, 500GB SSD)

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- Dell Precision Laptops (Mobile Workstation, 16GB RAM, 500GB SSD)
 - Dell Latitude w/ i9 Processor and 16GB of RAM, 500GB SSD.

3D Printers

- Dremel 3D45-EDU

Ergonomic Options

Especially when spending long hours in front of a computer, ergonomics can be very important. Ergonomic options are handled through the site itself, as they are usually tailored to the user's unique requirements. These are some examples of what has been utilized:

- Vertical-button Mouse
- Wireless Mouse
- Logitech or Microsoft Brand Ergonomic Keyboard (Split Key or Raised Key)
- Sit/ Stand on-desk Workstation
- 2-Monitor VESA Pole-Style Mount
- High-refresh Monitors