

APPENDIX –B: MANUFACTURER SPECIFICATIONS

Lenovo N22:

Intel Celeron N3050 Dual-Core 1.60GHz, 4GB DDR3 SDRAM, 16GB eMMC, 11.6" HD TN Anti-glare Display, Integrated HD Graphics, Webcam, 802.11ac, Bluetooth, Google Chrome OS

Epson PowerLite X27 XGA 3LCD Projector:

Projection System: 3LCD, 3-chip technology

Projection Method: Front / rear / ceiling mount

Pixel Number: 786,432 dots (1024 x 768) x 3

Color Brightness (Color Light Output): 2700 lumens¹

White Brightness (White Light Output): 2700 lumens¹

Aspect Ratio: 4:3

Native Resolution: 1024 x 768 (XGA)

Resize: 640 x 480 (VGA), 800 x 600 (SVGA), 1280 x 800 (WXGA), 1280 x 960 (SXGA2), 1280 x 1024 (SXGA3), 1366 x 768 (WXGA60-3), 1400 x 1050 (SXGA+), 1440 x 900 (WXGA+), 1680 x 900 (WXGA++), 1600 x 1200 (UXGA60)

Lamp Type: 200 W UHE

Lamp Life:

- ECO mode: Up to 10,000 hours²
- Normal mode: Up to 5,000 hours²

Throw Ratio Range: 1.48 (Zoom:Wide), 1.77 (Zoom:Tele)

Size (projected distance): 30" to 300" (0.89 to 9.12 m)

Keystone Correction:

- Automatic: Vertical: ± 30 degrees
- Slider: Horizontal: ± 30 degrees

USB Plug 'n Play: Projector is compatible with PC and Mac® computers

Contrast Ratio: Up to 10,000:1

Color Reproduction: Up to 1.07 billion colors

Projection Lens

Type: Manual focus

F-number: 1.58 – 1.72

Focal Length: 16.9 – 20.28 mm

Zoom Ratio: Digital zoom 1.0 – 1.2

Display Performance:

- NTSC: 480 lines
- PAL: 576 lines

(Depends on observation of the multi-burst pattern)

Input Signal: NTSC / NTSC4.43 / PAL / M-PAL / N-PAL / PAL60 / SECAM

Interfaces:

- Computer / Component video x 2
- HDMI x1
- S-video: Mini DIN x 1
- Composite video: RCA (Yellow) x 1
- Audio in: RCA x 1 (L and R), Mini stereo x 2
- USB connector: Type B x 1 (USB display, audio and mouse control)
- USB connector: Type A x 1 (for USB Memory, USB document camera, wireless LAN)

- Audio out: Mini stereo x 1
- Monitor Out: D-sub 15 pin x 1
- Serial: RS-232c x 1
- Wireless LAN port: 802.11 b/g/n
(optional — module sold separately)

Speaker: 5 W mono

Operating Temperature: 41° to 95° F (5° to 35° C)

Power Supply Voltage: 100 – 240VAC ±10%, 50 / 60Hz AC

Power Consumption:

- ECO mode: 208 W
- Normal mode: 284 W
- Communication on: 2.3 W Standby
- Communication off: 0.21 W Standby

Fan Noise:

- ECO mode: 29 dB
- Normal mode: 37 dB

Security:

- Kensington®-style lock provision
- Padlock
- Security anchor bar

Eco Features:

- RoHS compliant
- Recyclable product³
- Epson America, Inc. is a SmartWaySM Transport Partner⁴

Remote Control

Features: Brightness, Contrast, Tint, Saturation, Sharpness, Input signal, Sync, Tracking, Position, Color temperature, Volume

Operating Angle:

- Right / Left: ±30 degrees
- Upper / Lower: ±15 degrees

Operating Distance: 19.7' (6 m)

Epson BrightLink 595Wi LCD Projector:

Projection System: 3LCD, 3-chip technology

Projection Method: Front/rear/wall mount/table

Driving Method: Poly-silicon TFT Active Matrix

Pixel Number: 1,024,000 dots (1280 x 800) x 3

Color Brightness (Color Light Output): 3300 lumens¹

White Brightness (White Light Output): 3300 lumens¹

Interactive Color Brightness (Color Light Output): 3300 lumens¹

Interactive White Brightness (White Light Output): 3300 lumens¹

Aspect Ratio: 16:10

Native Resolution: 1280 x 800 (WXGA)

Lamp Type: E-TORL™ 245 W UHE

Lamp Life:

- ECO mode: Up to 6,000 hours²
- Normal mode: Up to 4,000 hours²

Throw Ratio Range:

- (4:3) 0.33 – 0.44
- (16:10) 0.27 – 0.37

- (16:9) 0.27 – 0.37

Size (projected distance):

- (4:3) 53" – 88"
- (16:10) 60" – 100"
- (16:9) 59" – 97"

Keystone Correction:

- Vertical: ±3 degrees
- Horizontal: ±3 degrees

USB Plug 'n Play:

- Mac OS® 10.5 / 10.6 / 10.7 / 10.8 / 10.9
- Windows 2000 XP / Windows Vista® / Windows 7 / Windows 8.x

Contrast Ratio: Up to 10,000:1

Color Reproduction: Up to 1.07 billion colors

Color Processing: 10 bit

Projection Lens

Type: Manual focus

F-number: 1.80

Focal Length: 3.71 mm

Zoom Ratio: Digital zoom 1.0 – 1.35x

Display Performance:

- NTSC: 480 lines
- PAL: 560 lines

Input Signal: NTSC / NTSC4.43 / PAL / M-PAL / N-PAL / PAL60 / SECAM

Interfaces:

- HDMI x1
- HDMI/MHL x1
- Computer / Component video: D-sub 15 pin x 2
- S-video: Mini DIN x 1
- Composite video: RCA (Yellow) x 1
- Audio in: Mini stereo x 3
- USB connector: Type B x 1 (USB display, audio and mouse control)
- USB connector: Type A x 1 (USB memory / document camera)
- RJ-45 x 1
- Serial: RS-232c x 1
- Monitor Out: D-sub 15 pin x 1
- Audio out: Mini stereo x 1
- Microphone: Mini stereo x 1
- Wireless LAN port: 802.11 b/g/n (optional – module sold separately)
- Finger Touch serial port
- Interactive Synchronization Mini stereo In
- Interactive Synchronization Mini stereo Out

Speaker: 16 W mono

Operating Temperature: 41° to 95° F (5° C to 35° C)

Power Supply Voltage: 100 – 240V ±10%, 50 / 60Hz

Power Consumption:

- Normal mode: 376 W
- Communication on: 4.3 W standby
- Communication off: 0.33 W standby

Fan Noise:

- ECO mode: 28 dB

- Normal mode: 35 dB

Security:

- Kensington® lock provision
- Security anchor bar
- Password protection function

Remote Control

Features: Computer, video, USB, LAN, source search, power, aspect, color mode, volume, e-zoom, A / V mute, freeze, menu, help, auto, enter, esc, pointer, user

Operating Angle:

- Right / Left: -55 to +55 degrees
- Upper / Lower: +75 to +15 degrees

Operating Distance: 19.7' (6 m)

Interactive Specifications

Interactive Technology: Infrared, 940nm

Interactive Area: 60 – 100" diagonal (16:10, WXGA)

Interactive Modes: Interactive and Whiteboard modes annotation,

Pen: dual user, Finger: up to 6

Calibration Method: Automatic or Manual

Interactive Connectivity: USB cable for non-networked installs & LAN

System Compatibility:

- Microsoft Windows XP SP2, Windows XP SP3 (Home Edition/Professional), Windows Vista, Windows Vista SP1, Windows Vista SP2 (All editions except for Starter), Windows 8.x, Windows 7 SP1 (All editions except for Starter)
- Mac OS X 10.5/10.6/10.7/10.8/10.9
- **Gestures:** Requires Windows 7 or later, or Mac OS 10.X

PC-Free Annotation: two pens and two fingers

Devices: Document Cameras, DVD / Blu-Ray Disc player, iPod / iPad devices³

PC-Free Annotation Tools: Epson Easy Interactive Tools, dual user

PC-Free Annotation Sources: USB, HDMI, Computer 1, Computer 2, LAN

Interactive Software:

- Epson Easy Interactive Driver (Mac only)
- Windows and Linux: no driver required
- Macintosh: Mac OS X 10.5/10.6/10.7/10.8/10.9
- Epson Easy Interactive Tools for Windows and Macintosh
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Other Software:

SMART Notebook

- Windows: Pentium® 4 processor or better, 2 GB of RAM, 2.5 GB of free hard disk space for SMART® education software installation (an additional 600 MB is required for complete Gallery installation) Windows XP SP3, Windows 7 SP1 or Windows 8 operating system
- Macintosh: Intel® Core™ 2 Duo processor or better, 2 GB of RAM, 2 GB of free hard disk space for SMART education software installation (an additional 600 MB is required for complete Gallery installation) Mac OS X 10.7 or 10.8 operating system software

Promethean ActivInspire

- Windows: Recommended Specs: 2.0 GHz Intel Core 2 Duo or faster for HD-quality videos, 1GB of RAM is required to play HD-quality videos, 1024 x 768 resolution, 1.5 GB of free disk space;

Minimum Specs: Pentium 4 – 1GHz (800MHz for Vista), 512MB of RAM, 1024 x 768 resolution, 1.5GB of free disk space;

- Macintosh: Recommended Specs: 2.0GHz Intel Core 2 Duo, 512MB of RAM, 1024 x 768 resolution, 3.0GB of free disk space; Minimum Specs: Intel Processors (Universal Binary), 512MB of RAM, 1024 x 768 resolution, 3.0GB of free disk space

Interactive Input Device

Type of Interactive Input Device: Digital Pen or finger

Interactive Pen Functions: Mouse functions (left and right click), Electronic pen, LED battery status indicator

Interactive Pen Power: AA battery, rechargeable

Compatible Pen Battery Types: SANYO Eneloop® HR-3UTG/HR-UTGA (Eneloop batteries included, Manganese dry cell, alkaline dry cell)

Interactive Pen Dimensions: 6.4" x 0.94"

Interactive Pen Weight: 1.1 oz (without battery)

Epson PowerLite 570 Projector:

Projection System: 3LCD, 3-chip technology

Projection Method: Front / rear wall mount

Driving Method: Poly-silicon TFT Active Matrix

Pixel Number: 786,432 dots (1024 x 768) x 3

Color Brightness (Color Light Output): 2700 lumens¹

White Brightness (White Light Output): 2700 lumens¹

Aspect Ratio: 4:3

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Resize: 640 x 580 (VGA), 800 x 600 (SVGA), 1152 x 864 (SXGA), 1280 x 800 (WXGA), 1280 x 960 (SXGA2), 1280 x 1024 (SXGA3), 1280 x 768 (WXGA 60-1), 1360 x 768 (WXGA 60-2), 1440 x 900 (WXGA+), 1400 x 1050 (SXGA+), 1600 x 900 (WXGA++)

Lamp Type: E-TORL™ 215 W UHE

Lamp Life:

- ECO mode: Up to 10,000 hours²
- Normal mode: Up to 5,000 hours²

Throw Ratio Range: 0.31 – 0.42

Size (projected distance): 55.9" – 93.2" (0.348 – 0.597 m)

Keystone Correction:

- Vertical: ±3 degrees
- Horizontal: ±3 degrees

Contrast Ratio: Up to 10,000:1

Color Reproduction: Up to 1.07 billion colors

Color Processing: 10 bit

Projection Lens

Type: No optical zoom / Manual focus

F-number: 1.80

Focal Length: 3.71 mm

Zoom Ratio: Digital zoom 1.0 – 1.35

Connectivity: Projector is Mac compatible via USB, DVI to HDMI or VGA adapter (not included), DP to HDMI or VGA

Other

Display Performance:

- NTSC: 480 lines

- PAL: 576 lines

(Depends on observation of the multi burst pattern)

Input Signal: NTSC / NTSC4.43 / PAL / M-PAL / N-PAL / PAL60 / SECAM

Interfaces:

- HDMI x 2
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- Monitor Out: D-sub 15 pin x 1
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- Wireless LAN port: 802.11 b/g/n (optional – module sold separately)

Speaker: 16 W mono

Operating Temperature: 41° to 95° F (5° C to 35° C)

Power Supply Voltage: 100 – 240V \pm 10%, 50 / 60Hz

Power Consumption:

- ECO mode: 239 W
- Normal mode: 333 W
- Communication on: 4.3 W standby
- Communication off: 0.33 W standby

Fan Noise:

- ECO mode: 28 dB
- Normal mode: 35 dB

Security:

- Kensington®-style lock provision
- Padlock and security cable hole
- Password protect function

Remote Control

Features: Source search, video, LAN, computer, USB, power, aspect, color mode, volume, e-zoom, A/V mute, freeze, menu, page up and down, help, auto, mouse functions, user, esc