QuickSpecs

Technical Specifications

HP N220 21.5-inch Monitor

1.	Power indicator LED	**6.**	OSD Menu
2.	Power Button	**7.**	Security lock slot
3.	OK	**8.**	Power In
4.	Minus ("-")	**9.**	VGA
5.	Plus ("+")	**10.**	HDMI

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Models: Y6P09A / 3ML20A

Panel		
	Type	21.5-inch, IPS
	Viewable Image Area (diagonal)	**54,61 cm (21.5-inches)** widescreen; diagonally measured
	Panel Active Area (W × H)	**47,60 x 26,77 cm** (18.74 x 10.51 in)
	Resolution	1920 x 1080 @ 60 Hz* *The video card of the connected PC must be capable of supporting 1920 x 1080 at 60 Hz.
	Aspect Ratio	16:9
	Viewing Angle	Up to 178° horizontal / 178° vertical typical
	Brightness*	250 cd/m²
	Contrast Ratio* (Typical)	1000:1 Static; 5,000,000:1 Dynamic (DCR)
	Response Times*	5 ms typical gray to gray
	Pixel Pitch	.248 x .248 mm
	Pixels Per Inch (PPI)	102.46
	Pixel Clock	170 MHz
	Default Color Temperature	6500K
	Backlight Lamp Life (to half brightness)	30,000 hours minimum
	Color Support	Up to 16.7 million colors
	Color Gamut (Typical)	72% sRGB

* All performance specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

User Controls		
	Buttons or Switches	Menu, Minus ("-"), Plus ("+"), OK, Power
	Languages	10 (English, Spanish, German, French, Italian, Netherlands, Portuguese, Japanese, T-Chinese and S-Chinese)
	On Screen Display (OSD) **User Controls**	Brightness, Contrast, Color Control, Input Control, Image Control, Power Control, Menu Control, Management, Language, Information

Signal Interface/ Performance		
	Horizontal Frequency	30-80 kHz
	Vertical Frequency	50-60 Hz
	Native Resolution	1920 x 1080 @ 60 Hz
	Preset Graphic Modes (non-interlaced)	640 x 480 @ 60Hz 720 x 400 @ 70 Hz 800 x 600 @ 60 Hz 1024 x 768 @ 60 Hz

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		1280 x 720 @ 60 Hz	
		1280 x 1024 @ 60 Hz	
		1440 x 900 @ 60 Hz	
		1600 x 900 @ 60 Hz	
		1920 x 1080 @ 60 Hz	
	Anti-Glare	Yes	
Video/Other Inputs	**Plug and Play**	Yes	
	Input Connectors	(1) VGA, (1) HDMI (with HDCP)	
	USB	N/A	
	Video Cables Included	(1) VGA cable **1,5 m** (4.9 ft)	
Multimedia	**Speakers**	N/A	
Power	**Power Supply**	External	
	Input Power	100 - 240 VAC 50/60 Hz	
	Maximum Power	40 W	
	Typical Power	17 W	
	Sleep Power	0.5 W	
	Power Cable Length	**1,9 m** (6.23 ft)	
Energy Star Data	**Operational Mode at 100 VAC**	50.59 KwH/year	
	Operational Mode at 115 VAC	50.59 KwH/year	
	Operational Mode at 230 VAC	50.59 KwH/year	
EU Energy Efficiency Class (EC1062)	**On-mode Power Consumption (EC 1062/2010)**	17 W	
	Annual Power Consumption (EC 1062/2010)	26 kwH	
	Energy Efficiency Class (EC 1062/2010)	A	
	Visible Screen Size (Diagonal)	54,61 cm (21.5-inches)	
Mechanical	**Dimensions (W × D × H)**	**Unpacked with stand**	**49,866 x 15,194 x 38,049 cm** (19.63 x 5.98 x 11.83 in)
		Unpacked without stand (head only)	**49,866 x 3,6 x 30,146 cm** (19.63 x 1.42 x 11.87 in)
		Packaged	**57,4 x 12,4 x 40 cm** (22.59 x 4.88 x 15.75 in)
	Weight	**Head Only**	**2,5 kg** (5.5 lb)
		Unpacked with stand	**3 kg** (6.6 lb)

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		Packaged	4,6 kg (10.12 lb)
Ergonomic Features Not available on head only model	**Detachable Stand**	Yes, ships detached	
	Height Adjustment	N/A	
	Tilt Range	-5° to + 22° vertical	
	Swivel	N/A	
	Pivot	N/A	
Environmental	**Temperature - Operating**	**5° to 35° C** (41° to 95° F)	
	Temperature - Non-operating	**–20° to 60° C** (-4° to 140° F)	
	Humidity - Operating	20% to 80% non-condensing	
	Humidity - Non-operating	5% to 95%	
	Altitude - Operating	**0 to 5,000 m** (0 to 16,400 ft)	
	Altitude – Non-operating	**0 to 12,192 m** (0 to 40,000 ft)	
	White LED Backlights	Yes	
	CCFL Panel	No	
	Arsenic-Free Display Glass	Yes	
	Low Halogen	Yes	
	Mercury-Free Display Backlighting	Yes	

Environmental Data	**Eco-Label Certifications & declarations**	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- IT ECO declaration
- US ENERGY STAR®
- TCO or TCO Certified Edge
- EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country

Energy Consumption (in accordance with US ENERGY STAR® test method)	**115VAC, 50Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation	14.72 W	15.62 W	15.06 W
Sleep	0.43 W	0.45 W	0.46 W
Off	0.29 W	0.27 W	0.27 W
Heat Dissipation*	**115VAC, 50Hz**	**230VAC, 50Hz**	**100VAC, 50Hz**
Normal Operation	50 BTU/hr	53 BTU/hr	52 BTU/hr
Sleep	1 BTU/hr	2 BTU/hr	2 BTU/hr
Off	1 BTU/hr	1 BTU/hr	1 BTU/hr

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*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the <Gold> level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043. • This product contains 0.0% post-consumer recycled plastic (by wt.) • This product is 98.7% recycle-able when properly disposed of at end of life.

Packaging Materials	**External:**	PAPER/Corrugated	518 g
		PAPER/Paperboard	20 g
		PAPER/Paper	28 g
	Internal:	COMPOSITE/paper/carton+plastic	3 g
		PLASTIC/Other	1 g
		PLASTIC/Polyethylene high density - HDPE	28 g
		PLASTIC/Polystyrene Expanded - EPS	230 g
		PLASTIC/Polyester - PET	12 g

RoHS Compliance	HP, Inc. is committed to compliance with all applicable environmental laws and regulations, including the European Union Restriction of Hazardous Substances (RoHS) Directive. HP's goal is to exceed compliance obligations by meeting the requirements of the RoHS Directive on a worldwide basis. By July 1, 2006, RoHS substances will be virtually eliminated (virtually = to levels below legal limits) for all HP electronic products subject to the RoHS Directive, except where it is widely recognized that there is no technically feasible alternative (as indicated by an exemption under the EU RoHS Directive).

Technical Specifications

Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants – may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

Packaging

HP follows these guidelines to decrease the environmental impact of product packaging:
- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

Technical Specifications

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

HP, Inc. Corporate Environmental Information		For more information about HP's commitment to the environment:
		
		Global Citizenship Report
		    http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html
		Eco-label certifications
		    http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html
		  ISO 14001 certificates:
		    http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842
		    and
		    http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf

Options	**HP Adjustable Dual Display Stand—**Part Number AW664AA	Premium space-saving dual screen solution provides access to more monitor real estate and makes it possible to manage multiple applications simultaneously. Weight adjustable for dual monitors from 17-24". Rotate displays into portrait/landscape positions.
	HP USB Graphics Adapter—Part number NL571AA	Enables connection of up to six simultaneous displays to help you boost productivity and multi-task across several open applications. Use one adapter to bridge between a notebook or desktop PC and second monitor or use multiple adapters to connect several displays to each other.
	HP Business PC Security Lock Kit — Part number PV606AA	Attaches to the rear of the PC with a six-foot steel cable that can be used to secure a PC or peripherals such as mice, keyboards, monitors or USB security devices to protect them against unauthorized removal by physically connecting the system to an anchor point.
What's in the box?	**Monitor and Accessories**	HP N220 21.5-inch Monitor, AC power cord **1,9 m** (6.23 ft), VGA cable **1,5 m** (4.9 ft)
	Documentation	CD (includes user guide, warranty, drivers)
	Software	HP Display Assistant
Other	**User Guide Languages**	English, Arabic, S. Chinese, T. Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Kazakh, Korean, Norwegian, Polish, Brazilian Portuguese, Russian, Slovenian, Spanish, Swedish and Turkish.
	Warranty Languages	English, Arabic, S. Chinese, T. Chinese, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Kazakh, Korean, Norwegian, Polish, Brazilian Portuguese, Russian, Slovenian, Spanish, Swedish and Turkish.

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Color	Black
VESA Mounting	N/A
Security Lock-Ready	Yes
Country of Origin	China

Certification and Compliance	CEL Grade 1, Microsoft WHQL Certification (Windows 10, Windows 8.1, and Windows 7), ENERGY STAR® 7.0 Qualified, EPEAT® Silver[2], CE,CB,KC/KCC/NOM/PSB/ICE/TUV-S/ISO 9241-307/EAC/UL/CSA/PSB/ISC/CCC/CEL/CECP/SEPA/TCO/Energy Star/ISC/VCCI/FCC/BSMI/Vietnam MEPS/Australian-New Zealand MEPS/WEEE
Compatibility	Recommended for use with HP products.
Service and Warranty	Protected by HP, including a 3 year standard limited warranty (may vary by region). Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties

Technical Specifications

ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency.

Change Log

Change Log

V1 to V2	Models Updated