

TECHNICAL SPECIFICATIONS FOR WORKSTATION (1 Nos)			
WORKSTATION MAKE		HP / DELL	
WORKSTATION MODEL		Bidder require to mention the make & model	
Sl. No.	PARAMETER	REQUIRED SPECIFICATIONS	Compliance (Yes / No)
1	Processor	Intel® Core™ i9- 14900 Processor (36 MB Cache, 24 Core , 2 GHz to 5.4 GHz (65W) or Better.	
2	Chipset	Intel® W680 chipset	
3	RAM	32 GB DDR5 ECC Memory & speed should be 4800MHz or better 4 DIMM slots, supporting up to 128 GB ECC / nECC DDR5 4800 MT/s	
4	BIOS	BIOS of the Workstation to have tool for Enhanced security features like self healing, regular checks.	
5	Drive Controllers	Integrated SATA controller with minimum 4 x 6Gbps ports & SATA Controller should support RAID 0,1 .	
6	HDD	2 x512 GB PCIe SSD M.2 SSD Drive and 2 x 2TB HDD 7200 RPM . System should support additional 3 SATA / M.2 SSD drives .	
7	Optical Drive	Slim DVD+/-RW Double Layer SuperMulti (SATA) drive.	
8	Graphics Card	NVIDIA T400 4GB 3mDP PCIe x16 Graphics (Mini DisplayPort™) 1.4 Connectors & System should support up to NVidia RTX A5000 24GB CARD in future ready. Certified drivers for CAD applications to be supplied	
9	Keyboard and Mouse	Minimum 104 keys USB Keyboard and USB Optical Scroll mouse - Same make as that of the workstation	
10	Audio	High Definition Integrated Audio with Internal speaker.	
11	Communications	Integrated Intel® I219LM GbE Controller with Intel® vPro™ with Intel® AMT 16.0 support	
12	Wireless	Intel AX211 Wi-Fi 6 +Bluetooth 5.3 WW WLAN with Internal Antennae	
14	Bays/Slot	2 x Internal 3.5" bays 1 x External 5.25" bay 1 x Internal 2.5" bay (for SSD only) 1 xDedicated 9.5mm slim optical disk drive bay 1 x PCI Express Gen5 slot x16 mechanical/ x16 electrical (full height, full length) 1 x PCI Express Gen3 slot x4 mechanical/ x1 electrical (full height, full length, open-ended) 1 x PCI Express Gen3 slot x16 mechanical/ x4 electrical (full height, full length) 1 x PCI Express Gen3 slot x4 mechanical/ x4 electrical (full height, full length, open-ended) 1 x M.2 2280 Storage (PCIe Gen4 x4) 1 x M.2 2280 Storage (PCIe Gen4 x4) 1 x M.2 2280 Storage (PCIe Gen4 x4)	
15	Security	Optional for BIOS controlled electro-mechanical internal chassis lock for the system.	
16	Ports	Front I/O - 2 x Type-A SuperSpeed USB 10Gbps signalling rate port (1 charge port supports up to 5V/2.1A), 2 x Type-A SuperSpeed USB 10Gbps signalling rate port, 1 universal audio jack Internal I/O – 1 x Hi-Speed USB 480Mbps signalling rate header for SD card reader , 1 x serial port available with header , 1 x serial and PS/2 available with header Rear I/O - 2 x DisplayPort 1.4 [3], 1 x Audio Line out, 1 x Audio Line in, 1 x RJ-45, 3 x Hi-Speed USB 480Mbps signalling rate port, 2 x Type-A SuperSpeed USB 10Gbps signalling rate port, 1 x Type-A SuperSpeed USB 5Gbps signalling rate port, 1 x 1Gbps Fiber LC single port.	
17	Operating System	Genuine windows 11 Pro (Not Pre-installed, Box Pack Required) All drivers required for proper integration of components should be supplied by the vendor. All latest drivers should be available to download from vendor's website. System should support for Red Hat® Enterprise Linux Desktop 8.3 or Higher	

18	Form Factor	Tower	
19	Power Supply	Min 500W wide-ranging, active Power Factor Correction, 90% Efficient EPEAT GOLD INDIA or Higher	
20	Additional Software	<p>1. The hardware vendor should supply an automatic system performance tuning and monitoring software on Windows.</p> <p>2. The tuning software should have modules for resource monitoring over a long period of time, and should be capable of showing GPU utilisation (GPU, Graphics memory and Codec activity) for both Graphics and GPU Compute cards.</p> <p>3. A complete Offline Diagnostics and Asset Discovery software suite should be supplied along with the system.</p>	
21	Warranty	5 years onsite parts and labour warranty for system	
22	Hardware OEM Status	The hardware OEM vendor should be a reputed concern, having global presence in multiple countries. Vendor should have ISO certifications.	
23	Dust Filter	OEM should provide serviceable dust filter for avoid workstation failures due to dust and it should be connected into the workstation	
24	Certifications	Windows & Linux Certification, EPEAT Gold India Registered , Leading ISV's, RoHS, BIS, UL & EPR Required from OEM.	
25	Global Presense & Market leader	OEM should have global presense & Top 3 WS OEM certified by IDC or Gartner	
26	Additional Terms & Condition	<p>1. OEM authorization letter must be submitted against specific to this tender enquiry.</p> <p>2. Bidder & OEM Must have a dedicated toll free number & Service.</p> <p>3. Specific Data Sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents. And should be available in the public domain.</p> <p>3. Average Turnover Should be minimum 1000 Core in last 3 Year OEM presence should be in India for at least 10 years or more, Letter of Incorporation to be attached</p> <p>4. Bidder Shall submit the Technical Compliance on OEM letterhead with sign & stamp.</p> <p>5. Bidder and OEM must have a Functional Office in the State of Consignee's Location, Bidder and OEM should have their business operation in India at least 7 years (Continuance Proofs are Required).</p> <p>6. Vendor Certification -ISO 9001, ISO 14001, ISO 20001, ISO 27001</p> <p>7. "Non-end-of-life", "Malicious code" and "Warranty Undertaking" Declaration Required from the OEM.</p> <p>8. Vendor and OEM both should have their service office in the state of Consignee for better support.</p> <p>9. All Item should be of same OEM make and color, OEM should have same made of CPU, Mouse and Keyboard.</p>	

TECHNICAL SPECIFICATIONS FOR ATIVIRUS (2 Nos)			
Sl. No.	PARAMETER	REQUIRED SPECIFICATIONS	Compliance (Yes / No)
	ANTIVIRUS MAKE	QUICK HEAL	
	ANTIVIRUS MODEL	QUICK HEAL TOTAL SECURITY	
1	Antivirus	Antivirus with single user 3 years License.	

TECHNICAL SPECIFICATIONS FOR WORKSTATION (1 Nos)			
WORKSTATION MAKE		HP / DELL	
WORKSTATION MODEL		Bidder require to mention the make & model	
Sl. No.	PARAMETER	REQUIRED SPECIFICATIONS	Compliance (Yes / No)
1	Processor	Intel® Core™ i7- 14700 Processor (33 MB Cache, 20 Core , 2.1 GHz to 5.3 GHz (65W) or Better.	
2	Chipset	Intel® W680 chipset	
3	RAM	32 GB DDR5 nECC Memory & speed should be 4800MHz or better 4 DIMM slots, supporting up to 128 GB ECC / nECC DDR5 4800 MT/s	
4	BIOS	BIOS of the Workstation to have tool for Enhanced security features like self healing, regular checks.	
5	Drive Controllers	Integrated SATA controller with minimum 4 x 6Gbps ports & SATA Controller should support RAID 0,1 .	
6	HDD	512 GB PCIe SSD M.2 SSD Drive and 1 TB HDD 7200 RPM . System should support additional 3 SATA / M.2 SSD drives .	
7	Optical Drive	Slim DVD+/-RW Double Layer SuperMulti (SATA) drive.	
8	Graphics Card	NVIDIA T400 4GB 3mDP PCIe x16 Graphics (Mini DisplayPort™) 1.4 Connectors & System should support up to Nvidia RTX A5000 24GB CARD in future ready. Certified drivers for CAD applications to be supplied	
9	Keyboard and Mouse	Minimum 104 keys USB Keyboard and USB Optical Scroll mouse - Same make as that of the workstation	
10	Audio	High Definition Integrated Audio with Internal speaker.	
11	Communications	Integrated Intel® I219LM GbE Controller with Intel® vPro™ with Intel® AMT 16.0 support	
12	Wireless	Intel AX211 Wi-Fi 6 +Bluetooth 5.3 WW WLAN with Internal Antennae	
13	Bays/Slot	2 x Internal 3.5" bays 1 x External 5.25" bay 1 x Internal 2.5" bay (for SSD only) 1 x Dedicated 9.5mm slim optical disk drive bay 1 x PCI Express Gen5 slot x16 mechanical/ x16 electrical (full height, full length) 1 x PCI Express Gen3 slot x4 mechanical/ x1 electrical (full height, full length, open-ended) 1 x PCI Express Gen3 slot x16 mechanical/ x4 electrical (full height, full length) 1 x PCI Express Gen3 slot x4 mechanical/ x4 electrical (full height, full length, open-ended) 1 x M.2 2280 Storage (PCIe Gen4 x4) 1 x M.2 2280 Storage (PCIe Gen4 x4) 1 x M.2 2280 Storage (PCIe Gen4 x4) 1 x M.2 2230 WLAN (PCIe Gen3 x1+ Intel CNVi	
14	Security	Optional for BIOS controlled electro-mechanical internal chassis lock for the system.	
15	Ports	Front I/O - 2 x Type-A SuperSpeed USB 10Gbps signalling rate port (1 charge port supports up to 5V/2.1A), 2 x Type-A SuperSpeed USB 10Gbps signalling rate port, 1 universal audio jack Internal I/O – 1 x Hi-Speed USB 480Mbps signalling rate header for SD card reader , 1 x serial port available with header , 1 x serial and PS/2 available with header Rear I/O - 2 x DisplayPort 1.4 [3], 1 x Audio Line out, 1 x Audio Line in, 1 x RJ-45, 3 x Hi-Speed USB 480Mbps signalling rate port, 2 x Type-A SuperSpeed USB 10Gbps signalling rate port, 1 x Type-A SuperSpeed USB 5Gbps signalling rate port, 1 x 1Gbps Fiber LC single port.	
16	Operating System	Genuine windows 11 Pro (Not Pre-installed, Box Pack Required) All drivers required for proper integration of components should be supplied by the vendor. All latest drivers should be available to download from vendor's website. System should support for Red Hat® Enterprise Linux Desktop 8.3 or Higher	
17	Form Factor	Tower	
18	Power Supply	Min 500W wide-ranging, active Power Factor Correction, 90% Efficient EPEAT GOLD INDIA or Higher.	

19	Additional Software	<p>1. The hardware vendor should supply an automatic system performance tuning and monitoring software on Windows.</p> <p>2. The tuning software should have modules for resource monitoring over a long period of time, and should be capable of showing GPU utilisation (GPU, Graphics memory and Codec activity) for both Graphics and GPU Compute cards.</p> <p>3. A complete Offline Diagnostics and Asset Discovery software suite should be supplied along with the system.</p>	
20	Warranty	5 years onsite parts and labour warranty for system	
21	Hardware OEM Status	The hardware OEM vendor should be a reputed concern, having global presence in multiple countries. Vendor should have ISO certifications.	
22	Dust Filter	OEM should provide serviceable dust filter for avoid workstation failures due to dust and it should be connected into the workstator	
23	Certifications	Windows & Linux Certification, EPEAT Gold India Registred , Leading ISV's, RoHS, BIS, UL & EPR Required from OEM.	
24	Global Presense & Market leader	OEM should have global presense & Top 3 WS OEM certified by IDC or Gartner	
25	Additional Terms & Condition	<p>1. OEM authorization letter must be submitted against specific to this tender enquiry.</p> <p>2. Bidder & OEM Must have a dedicated toll free number & Service.</p> <p>3. Specific Data Sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents. And should be available in the public domain.</p> <p>3. Average Turnover Should be minimum 1000 Core in last 3 Year OEM presence should be in India for at least 10 years or more, Letter of Incorporation to be attached</p> <p>4. Bidder Shall submit the Technical Compliance on OEM letterhead with sign & stamp.</p> <p>5. Bidder and OEM must have a Functional Office in the State of Consignee's Location, Bidder and OEM should have their business operation in India at least 7 years (Continuance Proofs are Required).</p> <p>6. Vendor Certification -ISO 9001, ISO 14001, ISO 20001, ISO 27001</p> <p>7. "Non-end-of-life", "Malicious code" and "Warranty Undertaking" Declaration Required from the OEM.</p> <p>8. Vendor and OEM both should have their service office in the state of Consignee for better support.</p> <p>9. All Item should be of same OEM make and color, OEM should have same made of CPU, Mouse and Keyboard.</p>	

Technical Specification of 4K UHD Monitor (3 Nos)			
Monitor Make		HP / DELL	
Monitor Model		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Screen Size (diagonal)	27 inch or higher.	
2	Resolution	4K UHD, 3840 x 2160 or higher.	
3	Panel	IPS, 3-sided microedge or higher.	
4	Brightness	350 Nits or higher.	
5	Contrast Ratio	1000:1 static or higher.	
6	Panel Features	HP Eye Ease (TÜV Low Blue Light Hardware Solution certified), Ambient Light Sensor	
7	Special Features	99% sRGB , Single Power On, Up to 1.07 billion colors supported, 2*3W speakers or higher.	
8	Ports	1 DP 1.4,1 HDMI 2.0, 1 RJ 45; 3 USB-A 3.2 (1 with battery charging); 1 USB-C® (upstream, DP 1.4 alt mode, power delivery up to 65W); 1 USB-C® 3.2 (downstream, 15W);	
9	Certificate	EPEAT, Energystar, TCO Certified	
10	Ergonomics	Height, tilt, pivot & swivel.	
11	Warranty	3 Years onsite warranty.	

TECHNICAL SPECIFICATIONS FOR A4 COLOR INKJET PRINTER (1 Nos)			
PRINTER MAKE		HP	
PRINTER MODEL		HP SMART TANK 790 ALL-IN-ONE A4 PRINTER	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Functions	Print, Copy, Scan, ADF and Wireless.	
2	Print technology	Thermal Inkjet.	
3	Print speed black (ISO, A4) Draft black (A4)	Up to 15 ppm or higher. Up to 23 ppm or higher.	
4	Print Speed Color (ISO,A4) ; Draft colour (A4	Up to 9 ppm or higher. Up to 22 ppm or higher.	
5	Duty cycle (monthly, A4)	Up to 5,000 pages or higher.	
6	Duplex printing	Automatic.	
7	Wireless capability	Yes, 2.4/5G dual band Wi-Fi, Wi-Fi Direct or better.	
8	Inbox Page Yield (K/CMY)	Up to 12,000 Black/8000 color or higher,	
9	Borderless printing	Yes (up to 8.5 x 11 in, 210 x 297 mm) or better.	
10	Print resolution black (best)	Up to 1200 x 1200 rendered dpi or higher.	
11	Print resolution color (best)	Up to 4800 x 1200 optimized dpi color when printing from a computer and 1200 input dpi or higher.	
12	Processor speed	800 MHz or higher.	
13	Number of print cartridges	4 (1 each black bottle, set of 3 color bottles)	
14	Display	2-line LCD Smart guided buttons (50.8 x 10.16mm)	
15	Connectivity, standard	Hi-Speed USB 2.0; Wi-Fi; LAN	
16	Maximum Memory	256 MB or higher.	
17	Input capacity	Up to 250 sheets or higher.	
18	Output capacity	Up to 100 sheets or higher.	
19	Paper trays, standard	1 or higher.	
20	Media sizes supported	A4; A5; A6; B5 (JIS); Envelope (DL, C5, C6, Chou #3, Chou #4); Card (Hagaki, Ofuku Hagaki); legal or higher.	
21	Media sizes, custom	88.9 x 127 mm to 215.9 x 355.6 mm or higher.	
22	Scan resolution, hardware	Up to 1200 x 1200 dpi	
23	Scan resolution, optical	Up to 1200 dpi	
24	Bit depth	24-bit	
25	Scan file format	JPG, BMP, TIFF, PDF, PNG	
26	Scan size, maximum	216 x 297 mm	
27	Scan input modes	Front Panel Copy	
28	Scan technology	Contact Image Sensor (CIS)	
29	Scanner type	Flatbed and ADF	
30	Copy resolution (black text)	Up to 600 dpi	
31	Copy resolution (black graphics)	Up to 600 dpi	
32	Copy resolution (color text and graphics)	Up to 600 x 600 dpi	
33	Copies, maximum	Up to 99 copies	

34	Minimum System Requirements	Windows 10, 7: 32-bit or 64-bit, 2 GB available hard disk space, Internet connection, Internet Explorer.	
35	Compatible Operating Systems	Windows 11; Windows 10; Windows 7; macOS 10.14 Mojave; macOS 10.15 Catalina; macOS 11 Big Sur	
36	Warranty	3 years on-site warranty.	
37	Additional Terms & Condition	a) Bidder to submit BID Specific authorization with name, address, and email id of the Signatory to ensure their support for this work.	
		b) Specific Data Sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents. Buyer will match and verify the Data Sheet with the product specifications offered. Such offered specifications must outline the offered parameters. In case of any unexplained mismatch of technical parameters, the bid is liable for rejection.	
		c) Technical Feature & Brochure should be available in the OEM website.	
		d) Product registration information with product serial number, warranty information, and product specific drivers and security patches should be available on OEM website for easy maintenance and real time updates as and when required.	
		e) Technical Compliance must be provided in OEM Letterhead with company seal & sign.	
		f) Declaration required from OEM regarding “No end-of-life before completion of warranty period”	
		g) OEM Warranty Undertaking for the item is to be submitted along with the bid.	
		h) The items delivered by the seller should be in new condition and sealed box packaging as packed by the OEM.	

TECHNICAL SPECIFICATIONS FOR A3 COLOR INKJET PRINTER (1 Nos)			
PRINTER MAKE		EPSON	
PRINTER MODEL		EPSON L15150A3 COLOR PRINTER	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Functions	Print, Copy, Scan Fax with ADF.	
2	Print technology	Precision Core Printhead.	
3	Nozzle Configuration	800 x 1 Nozzles Black, 256 x 1 Nozzles per color (Cyan, Magenta, Yellow)	
4	Print Direction	Bi-Directional Printing.	
5	Max. Resolution	4800 x 2400 dpi.	
6	Min. Ink droplet volume	3.8pl	
Print			
7	Draft Text - Memo, A4(Black / Color) ISO24734, (A4 Black / Color)	Up to 32.0 ppm/ 22.0 ppm or higher. Simplex: up to 25.0 ipm / 12.0 ipm Duplex up to 16.0 ipm / 9.0 ipm	
8	ISO24734, (A3 Black / Color)	Simplex: up to 13.5 ipm / 6.0 ipm Duplex up to 10.0 ipm / 5.0 ipm	
9	First Page Out Time (Black / Color), A4	Simplex: up to 5.5 Sec / 8.5 Sec Duplex up to 11 Sec / 17 Sec.	
10	Print Language	ESC/P-R, ESC/P Raster	
11	Automatic 2 sided Print	Yes (up to A3)	
Copy			
12	Copy Speed ISO 29183, A4 (Black / Color), Flatbed ISO 24735, A4 (Black / Color), ADF	Simplex upto 23.0 ipm / 10.0 ipm; Simplex upto 22.5 ipm / 10.0 ipm Duplex: Up to 15.5 ipm / 7.5 ipm;	
13	ISO 24735, A4 (Black / Colour), ADF Maximum Copies from Standalone	999 copies	
14	Maximum Copy Resolution	600 x 600 dpi	
15	Maximum Copy Size	A3	
Scan			
17	Scanner Type	Flatbed colour image scanner	
18	Sensor Type	CIS	
19	Optical Resolution	1200 x 2400 dpi	
Scanner Bit Depth			
21	Colour	48-bit input, 24-bit output	
22	Grayscale	16-bit input, 8-bit output	
23	Black & White	16-bit input, 1-bit output	
24	Scan Speed (Flatbed / ADF)		
25	Monochrome 200dpi	Flatbed: 5 sec ADF (Simplex / Duplex): Up to 26.0 ipm / 11.5 ipm	
26	Colour 200dp	Flatbed: 10 sec ADF (Simplex / Duplex): Up to 9.0 ipm / 6.0 ipm	
27	Type of Fax	Walk-up Black-and-white and Colour Fax Capability	
28	Receive Memory / Page Memory	6MB, Page memory up to 550 pages	
29	FAX Resolution	Up to 200 x 200 dpi	
Transmission Paper Size			
30	Flatbed	A5, A4, A3, B5, B4, Half Letter, Letter, Legal, 11 x 17	
31	ADF	A5, A4, A3, B5, B4, Half Letter, Letter, Legal, 11 x 17	
32	ADF Capacity	50 sheets	
33	Type of Direct Printing	USB Memory	
Paper Handling			
34	Paper Feed Method	Friction Feed	

35	Number of Paper Trays	3 (Front 2, Rear 1)	
36	Input Capacity (Paper Hold Capacity)	Cassette 1: 250 sheets for A4 Plain paper (80 g/m ²), 50 sheets for Premium Glossy Photo Paper; Cassette 2: 250 sheets for A4 Plain paper (80 g/m ²); Rear Slot: 50 sheets for A4 Plain paper (80 g/m ²), 20 sheets for Premium Glossy Photo Paper;	
37	Output Capacity (Paper Hold Capacity)	125 sheets for A4 Plain paper, 20 sheets for Premium Glossy Photo Paper	
38	Paper Size	A3, Super B (13 x 19"), Indian Legal, Letter, A4, 16K (195 x 270mm), 8K (270 x 390mm), Executive (7.25 x 10.5"), B4, B5, A5, B6, A6, 8.5 x 13", 5 x 7", 4 x 6", 8 x 10", Legal (8.5 x 14"), 16:9 wide, Envelopes: #10, DL, C6, C4	
39	USB	USB 2.0	
40	Network	Ethernet, Wi-Fi IEEE 802.11b/g/n, Wi-Fi Direct	
41	Network Management Protocols	SNMP, HTTP, DHCP, BOOTP, APIPA, PING, DDNS, mDNS, SNMP, SLP, WSD, LLTD	
42	LCD Screen	4.3" Colour LCD Touch Screen	
43	Operating System Compatibility	Windows XP / Vista / 7 / 8 / 8.1 / 10, Windows Server 2003 / 2008 / 2012 / 2016 / 2019 Mac OS X 10.6.8 or later	
44	Warranty	3 years on-site warranty.	
45	Additional Terms & Condition	a) Bidder to submit BID Specific authorization with name, address, and email id of the Signatory to ensure their support for this work. B) Specific Data Sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents. Buyer will match and verify the Data Sheet with the product specifications offered. Such offered specifications must outline the offered parameters. In case of any unexplained mismatch of technical parameters, the bid is liable for rejection. c) Technical Compliance must be provided in OEM Letterhead with company seal & sign. d) OEM Warranty Undertaking for the item is to be submitted along with the bid.	

Technical Specification of Server (1 Nos)			
Server Make		HP / DELL	
Server Model		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Make and Model	To be specified	
2	Form factor	Tower	
3	Processors	2 x Intel® Xeon® Gold 5415+ Processor ,2.9G, 8C(16T, 16GT/s, 22.5M Cache, Turbo, HT (150W) or higher	
4	Memory	64 GB (2 x 32 GB) 4800MT/s Dual Rank RDIMM or more. Server should have min 8 DIMMs per processor and 16 DIMMs per system, upgradable to atleast	
5	HDD Bays	Atleast 8x 3.5-inch SAS/SATA HDD bays or higher.	
6	RAID controller	12Gbps PCIe 4.0 controller,8GB nonvolatile cache supporting RAID 1,5 or better	
7	Hard Disk Drives	Atleast 2 x 960 GB SSD vSAS ISE, up to 24Gbps 512e 2.5in with 3.5in HYB CARR, AG Drive or higher. Atleast 4 x 1.9TB SSD SAS ISE, RI, up to 24Gbps 512e 2.5in with 3.5in HYB CARR, AG Drive or higher.	
8	PCIe slots and ports	System should support atleast 6nos. PCIe slots out of which 2nos. x16 Gen5 Full-Height, Full Length slots; 3 nos x16 Gen4 Full height, Half length. Front : 1 x USB 2.0; 1 x USB 3.0; 1 x iDRAC Direct (Micro-AB USB) port or higher. Rear : 1 x USB 2.0; 1 x USB 3.0; 1 x Dedicated iDRAC (RJ45) port; 1 x VGA port;	
9	Ethernet	Broadcom 5720 Dual Port 1Gb On-Board LOM, V2 or higher	
10	Out of Band access controller	EAL2+ certified controller for secure local and remote server management	
11	Operating System	Microsoft Windows Server 2022 Standard with License Not Pre-loaded.	
12	OS certification	Certified for latest version of Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Microsoft Windows Server & VMWare	
	RPS	Dual, Hot Plug, Redundant Power Supply (1+1), 800W, Mixed Mode or higher.	
15	Management	Support for virtual media, virtual folders, remote file share & virtual console	
16	Alerting	Monitoring fan, power supply, memory, CPU, RAID, NIC for impending failure	
17	Access control	Directory services (AD, LDAP), two-factor authentication & single sign-on	
18	Security	Silicon-based Hardware Root of Trust Automatic BIOS recovery Firmware drift detection & alerting Cryptographically signed firmware updates Cryptographically-verified trusted booting meeting NIST SP 800-147B and NIST SP 800-155 standards System lockdown feature to lock down configuration and firmware, protecting the server from inadvertent or malicious changes Factory set unique default password for server for transit security Persistent event logging including user activity Drive security, including secure system erase for HDD & SSD Dynamically enabled / disable USB ports to protect from USB-based attacks Protection against compromised firmware execution UEFI secure boot with custom certificates Intrusion alert in case chassis being opened	
19	Accessories	USB Keyboard, USB Mouse, 23.8" FHD Monitor (Same as OEM of Server).	
20	Optical Drive	DVD +/-RW, SATA, Internal	
21	Warranty	5 years comprehensive warranty with 24x7x365 remote hardware support & next business day on-site support.	
22	Bill of material	Bill of material for quoted hardware, system management & security software should be provided with the bid.	

23	OEM Criteria	OEM must have 10 years presence in India. OEM must have service center details in C.G. OEM must be certified for ISO 9001, ISO 14001, ISO 45001, ISO	
23	Reference	Reference documents for server, RAID controller, management controller, management software, security whitepaper etc. must be submitted to enable complete technical evaluation of the bid.	
24	Land border clause	Rule 144 (xi) of GFR 2017 & subsequent amendments: Bidders (bidder, OEM, manufacturer, holding company etc.) having beneficial ownership from countries sharing land border with India should submit declaration from OEM confirming being registered with the Competent Authority.	
25	Other parameters	<p>The bidder should have executed the similar order from any reputed Govt. organization/ PSU in India.</p> <p>Bidders are required to submit Tender Specific Manufacturer Authorization Form (MAF)</p> <p>Data sheet of the product(s) offered in the bid is also are to be uploaded along with the bid documents. Buyer can match and verify the Data Sheet with the product specifications offered. In case of any unexplained mismatch of the technical parameters, the offer is liable for rejection.</p>	

TECHNICAL SPECIFICATIONS FOR ATIVIRUS (1 Nos)			
ANTIVIRUS MAKE		QUICK HEAL	
ANTIVIRUS MODEL		QUICK HEAL ANTIVIRUS - SERVER EDITION	
Sl. No.	PARAMETER	REQUIRED SPECIFICATIONS	Compliance (Yes / No)
1	Antivirus	Server edition Antivirus with 3 years license.	

TECHNICAL SPECIFICATIONS FOR 24 Port Manageable L2 Switch With SFP Module 10G			
MAKE :		ARUBA	
MODEL NO :		ARUBA 1960	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	I/O ports and slots	24 RJ-45 autosensing 10/100/1000 Mbps ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 SFP+ 10GbE ports 2 10GBASE-T ports	
2	CPU	Single-Core ARM v7 Cortex-A9 @800MHz	
3	100 Mb Latency	< 4.4 uSec	
4	1000 Mb Latency	< 2.2 uSec	
5	10000 Mb Latency	< 1.1 uSec	
6	Throughput (Mpps)	95 Mpps	
7	Capacity	128 Gbps	
8	Routing Table size (# of static entries)	32 IPv4/IPv6	
9	MAC Address table size (# of entries)	16,000 entries	
10	Reliability MTBF (years)	123	
Electrical Characteristics			
11	Frequency	50Hz/60Hz	
12	AC voltage	100-127VAC / 200-240VAC	
13	Current	0.6A/0.2A	
14	Maximum power rating	100-127V: 60W 200-220V: 80W	
15	Idle power	100-127V: 30W 200-220V: 40W	
16	Power Supply	Internal power supply	
17	Safety	EN/IEC 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 +	
18	Emissions	EN 55032:2015/CISPR 32, Class A FCC CFR 47 Part 15: 2018 Class A	
19	Generic	EN 55035, CISPR 35, KN3	
20	EN	EN 55035, CISPR 35	
21	ESD	EN/IEC 61000-4-2	
22	Radiated	EN/IEC 61000-4-3	
23	EFT/Burst	EN/IEC 61000-4-4	
24	Surge	EN/IEC 61000-4-5	
25	Conducted	EN/IEC 61000-4-6	
26	Power frequency magnetic field	EN/IEC 61000-4-8	
27	Voltage dips and interruptions	EN/IEC 61000-4-11	
28	Harmonics	EN/IEC 61000-3-2	
29	Flicker	EN /IEC 61000-3-3	
30	Device Management	Instant On Cloud; Web browser; SNMP Manager	
31	Warranty	3 Years Warranty	

TECHNICAL SPECIFICATIONS FOR Fiber Optic LIU 6 Port loaded with LC Adapter			
MAKE :		MOLEX	
MODEL NO :		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Fiber optic patch Panel	The 1U Multi-Function Fibre Enclosure is a configurable rack mount unit for storing and terminating incoming fibre cable.	
		The fibre enclosure has been designed to accommodate various termination types and adapter configurations. Accommodates up to 4 Modlink Cassettes or up to 4 nos of 6 or 12-Pak adapter plates.	
		The enclosure must, have a sliding drawer for ease of reconfiguring fibers, incorporates a heavy-duty ball bearing slide mechanism, allowing easy access to fibers	
		The adapter plates must be an interchangeable front plate which can facilitates upgrades as & when required required.	
		Copper grounding stud tie down points at each cable entrance point.	
		The enclosure must have front cable management to properly route patch cords.	
		Fibre management enclosures that can be used as rack mount enclosure for integrated applications.	
2	Material	Powder coated Mild Steel	
		Rugged steel construction in graphite finish	
		Rear, side & base access for Incoming / Outgoing fiber cables	
3	Cable Management rings	Management rings within the system to accommodate excess fibre cordage behind the through adapters and maintain fibre	
4	Sliding cover	Panel cover is of slide out for easy maintenance. Incorporates heavy-duty ball bearing slides for smooth and limited extension of the drawer unit, allowing for patch cable access while protecting installed patch and trunk cables from damage during re-entry of the enclosure	
5	Optical Fibre Adapter Plates	SC Adapter SM Plate - loaded with 6 Nos SC Adapter	
6	Pigtails	SC/APC, Singlemode, 9/125 µm - 1.5 mtrs (6 Nos)	
7	Splice Tray	Splice Tary - 1 No	

TECHNICAL SPECIFICATIONS FOR UTP CAT6A CABLE			
MAKE :		MOLEX	
MODEL NO :		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Type	Cat 6A U/FTP Cable is specifically designed to support high speed data network	
		applications such as 10-Gigabit Ethernet (10GBASE-T). The cable is constructed of 4 screened pairs and adrain wire. This cable minimizes alien crosstalk , provides excellent signal isolation and provides superior electromagnetic interference (EMI) protection.	
2	Technical Characteristics	Primary Insulation: Polyolefin	
		Screen material: Laminated Aluminum	
		Sheath Type: LSOH (Flame Test IEC 60332-1)	
		Nominal OD: 7.2	
		NVP: 75-77%	
		Screen: Each pair enclosed in laminated aluminum foil	
		Drain Wire: tin-coated copper	
3	Electrical Characteristics	Capacitance: 40 pF/m nom. @1 KHz.	
		DC Resistance: 72 /Km max.	
		Propagation Delay: 514 + 36f ^{1/2} ns/100m max @1-500 MHz	
		Propagation Delay Skew: 45 ns/100 max @ 1-500 MHz	
		Mean Impedance: 100 ± 6 @ 1-500 MHz	
		Resistance Unbalance: 2% max.	
		Coupling Attenuation: 45dB min @30-100 MHz	
		40-20 Log (f/100) @ 100-500 MHz	
4	Applications	Category 6A U/FTP Cable is intended for high speed data applications up to 500MHz including:	
		IEEE 802.3 10GBASE-T 10Gb/s	
		IEEE 802.3 1000GBASE-T 1Gb/s	
		TIA/EIA-854 1000BASE-TX 1Gb/s	
		ATM 155Mb/s 155Mb/s	
5	Operating Temperature	Storage: -20°C to +75°C	
		Operation: -20°C to +60°C	
6	Commercial Standards:	ANSI/TIA/EIA-568-C.2	
		ISO/IEC 11801 A1.1, ETL independent testing	
7	ETL Certification	Compliant	

TECHNICAL SPECIFICATIONS FOR FACE PLATE	
MAKE :	MOLEX
MODEL NO :	Bidder require to mention the make & model

Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Feature	Single Gang square plate, 86mmx86mm, Port - Single / Dual / Quad as per req.	
		Write on labels in transparent plastic window – supplied with plate	
		Screw hole covers – to be supplied with plate	
		Plug in Icons – Icon tree – to be supplied with plate	
		Should be able to support variety of jacks – UTP, STP, Fiber, Coax etc.	

TECHNICAL SPECIFICATIONS FOR CAT 6A Information Outlet			
MAKE :		MOLEX	
MODEL NO :		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Type	Cat 6A Jack offers superior alien crosstalk suppression, excellent insertion loss, and provides enhanced electromagnetic interference (EMI) protection by utilizing robust die cast zinc alloy jack body housing.	
2	Mechanical Characteristics	RJ45 Connector	
		Housing: Zinc Alloy plated Bright Ni/Cu	
		Operating Life: Minimum 750 insertion cycles	
		Contact Material: Copper Alloy	
		Contact Plating: 1.25 micrometers Au/Ni	
		Contact Force: 100g minimum	
		Plug Retention Force: 6.8kg minimum	
		Housing: Thermoplastic, UL94V-0	
		Operating Life: Minimum 20 reterminations	
		Contact Material: Copper Alloy	
		IDC Contact Plating: Matte Tin	
		Contact Force: 100g minimum	
Wire Accommodation: 22-24 AWG solid			
3	Electrical/Optical Characteristics	Interface Resistance: 20mΩ	
		Initial Contact Resistance: 2.5mΩ	
		Insulation Resistance: >100MΩ	
4	Modular Jack Housing	Zinc Alloy	
5	IDC Connecting blocks	polycarbonate, 94V-0 rated	
6	Commercial Standards	TIA-568-C.2 Augmented Category 6	
		ISO 11801 Amd 1 Class EA	
		IEC 60603-7	
		FCC Subpart F 68.5	
		Approvals:	
		ETL independent testing	
7	ROHS/ELV	Compliant	
8	ETL Certification	Compliant	

TECHNICAL SPECIFICATIONS FOR CAT 6A RJ-45 Patch Cord -1 Mtr			
MAKE :		MOLEX	
MODEL NO :		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Type	Cat 6A Patch Cords, specifically designed to support high speed data networks for 10-Gigabit Ethernet (10GBASE-T) applications.	
2	Conductor	26 AWG stranded bare copper	
3	Length	1 Meter	
4	Screen material	Aluminum/polyester shield with tinned copper drain wire	
5	Warranty	25-year component warranty	
6	Construction	Pairs in Metal Foil , 4 pair stranded S/FTP cable & Outer Sheath should be LSZH	
7	Plug Housing	Clear polycarbonate	
8	Commercial Standards	TIA/EIA-568-C.2 , ISO/IEC 11801 A1.1, FCC Subpart F 68.5, IEC-603-7, UL Listed, UL-1863, CSA C2.2	
9	Electrical Characteristics	Electrical Characteristics	
		Max Voltage: 150 VAC (max)	
		Max Current: 1.5A @ 25°C	
10	Mechanical Characteristics	Operating temperature: -40° to 85°C	
		Operating Life: Minimum 750 insertion cycles	
		Contact Material: Copper Alloy	
11	ROHS/ELV	Contact Plating: 1.25 micrometers Au/Ni	
		Compliant	
12	ETL Certification	Compliant	
13	Colour	White	

TECHNICAL SPECIFICATIONS FOR CAT 6A RJ-45 Patch Cord - 2 Mtr			
MAKE :		MOLEX	
MODEL NO :		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Type	Cat 6A Patch Cords, specifically designed to support high speed data networks for 10-Gigabit Ethernet (10GBASE-T) applications.	
2	Conductor	26 AWG stranded bare copper	
3	Length	2 Meter	
4	Screen material	Aluminum/polyester shield with tinned copper drain wire	
5	Warranty	25-year component warranty	
6	Construction	Pairs in Metal Foil , 4 pair stranded S/FTP cable & Outer Sheath should be LSZH	
7	Plug Housing	Clear polycarbonate	

8	Commercial Standards	TIA/EIA-568-C.2 , ISO/IEC 11801 A1.1, FCC Subpart F 68.5, IEC-603-7, UL Listed, UL-1863, CSA C2.2	
9	Electrical Characteristics	Electrical Characteristics	
		Max Voltage: 150 VAC (max)	
		Max Current: 1.5A @ 25°C	
10	Mechanical Characteristics	Operating temperature: -40° to 85°C	
		Operating Life: Minimum 750 insertion cycles	
		Contact Material: Copper Alloy	
		Contact Plating: 1.25 micrometers Au/Ni	
11	ROHS/ELV	Compliant	
12	ETL Certification	Compliant	
13	Colour	White	

TECHNICAL SPECIFICATIONS FOR Single Mode OFC 6 Core Cable			
MAKE :		MOLEX	
MODEL NO :		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	Cable Type	6 fiber Single Mode, Armored, Unitube, Gel filled cable complying to ISO.IEC 11801 - 2nd Edition, type OS2; AS/ACIF S008; AS/NZS 3080,ITU-T REC G 652D, IEC 60793/60794, TIA 568, EIA 455; suitable for use in direct burial, outdoor ducts and backbone cabling.	
2	Armour	Corrugated Steel Tape Armor -Thickness > 0.125mm	
3	Water Blocking	Thixotropic Gel (Tube), Petroleum Jelly (Interstices)	
4	Attenuation	,@ 1310nm <=0.35 db/Km MAX ,@1550nm <=0.22 db/Km MAX	
5	Numerical Aperture	0.14	
6	Attenuation Discontinuity	Both Windows <0.10dB	
7	Core/Mode-Field (um)	9	
8	Clad Diameter (um)	125 + - 1	
9	Coat Diameter	245 + - 10	
10	Loose tube material	Single PBTP Loose tube filled with water blocking Thixotropic gel	
11	Jacket material	UV Stabilized Polyethylene (HDPE)	
12	Peripheral Strength Member	Two Steel wires / E-yarns	
13	Tensile Strength	1000N	
14	Crush Resistance	1800N/10 cm	
15	Cable Diameter	9mm	
16	Max. Bending Radius (during installation)	20 X Overall diameter	

17	Max. Bending Radius (during full load)	10 X Overall diameter	
18	Cable weight Kg/Km	80 kg/km	
19	Operating Temperature	-10 Degree C to +70 Degree C	

TECHNICAL SPECIFICATIONS FOR LC – LC Single mode Duplex Fiber Patch Cords 5 Mtr			
MAKE :		MOLEX	
MODEL NO :		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	LC – LC Single mode Duplex Fiber Patch Cords	Shall be Single mode (OS2), LC to LC, Duplex Fiber patch cords.	
		Standards Compliance: OS2 Regulatory Compliance: RoHS 2011/65/EU	
		Cable Qualification Standards: ANSI/ICEA S-83-596 and Telcordia GR-409	
		Optical Components Standard: ANSI/TIA-568-C.3	
		Connector Interface: LC & LC	
		Operating Temperature: -10 degree Celsius to +60 degree Celsius Length Shall be 5 meters	
		Connector Optical Performance insertion loss Typical:0.15dB	

TECHNICAL SPECIFICATIONS FOR PVC CONDUIT			
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
1	PVC CONDUIT	Standard	

TECHNICAL SPECIFICATIONS FOR 3 KVA with 60 Minutes Backup (1 Nos)			
MAKE :		APC	
MODEL NO :		Bidder require to mention the make & model	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
INPUT			
1	Input Voltage Range @ full load	140 to 280V	
2	Input Voltage Range @ half load	100 to 280V	
3	Input Frequency Range	40 - 70 Hz	
4	Input Power Factor	0.99	
5	Protection	Thermal Circuit Breaker (250VAC /30A)	
6	Input Connection	Hard Wire 3 wire (1PH+N+G)	
7	Input Surge Protection	Yes	
8	Input Voltage THD (Generator Compatibility)	Upto 40%	
9	High Voltage Withstand Capability	420 Vac	
10	Green Mode	210-250VAC	
OUTPUT			
11	Output VA/ Watts	3000/ 2400 W	
12	Online Efficiency @ Full Load	93%, > 96% in green mode	
13	Output Wave Form	Pure Sine Wave	
14	Output Voltage	230VAC	
15	Output Voltage Settings	220V, 230V, 240V	
16	Output Voltage THD with Linear Load	<3%	
17	Output Voltage THD without Linear Load	<7%	
18	Output Frequency	50/60 Hz+-3Hz	
19	Overload Capability (% and Duration)	102% infinite (VA), 110% infinite (watts), 125% 1 minute, 150% half minute	
20	Output Short Circuit Protection	Yes	
21	Current Crest Factor	3:1 (full load)	
22	Parallel Redundancy	1+1	
23	Output Connection	(1) Hard Wire 3-wire (H N + G) (2) IEC 320 C13	
24	Surge Protection and Filtering	Filtering Full time multi-pole noise filtering : 0.3% IEEE surge let-through : zero clamping response time : meets UL 1449	
BYPASS			
25	Bypass Type	Relay	
26	Bypass Voltage Range	160-264 VAC (default), Can be set to 160-270VAC	
27	Transfer Time from line to bypass	<4 ms	
28	Bypass is "Self -Powered "w/o Battery	Yes	
29	Auto- retransfer from Bypass after fault cleared	Yes	
Battery			
30	Battery System Voltage	72V, SMF or Flooded battery compatible, internal charger 2A - 12A programmable	

31	Battery VAH	4680 AH (SMF Battery)	
Interface - Communication			
32	Interface Ports	RJ45	
33	Remote monitoring Slot Available	SNMP Card (optional), but slot available	
34	UPS Management Software	Free Available with UPS	
35	Emergency Power Off (Remote)	Yes	
Display & Controls			
36	Symbolic Display	Yes	
37	7 Seg Display	Yes	
38	LED indication	Yes	
39	Operating Buttoms	5	
40	indications of UPS Parameters	6 Previous Faults	
41	Fault Indications	7 Previous Faults	
42	Warnings	8 Previous Faults	
	Programmable Parameters	9 Previous Faults	
43	Fault history	10 Previous Faults	
44	Audible Alarms	Yes	
Environmental			
45	Operating Temperature	0-50 Degree C(De-rate above 40 Degree C)	
46	Operating Humidity	0-95% RH non-condensing	
47	Operating Altitude	3000m	
48	Dust & Humidity Protection	Acrylic Conformal Coating for Critical PCBs	
49	Audible Noise	<45 dB upto 70% load 55 dBA Max	
Mechanical			
50	Dimention W x H x D (mm)	483 x 432 x 85	
51	Rack Height	2U	
52	Configuration	Rack Mountable / Tower	
53	Warranty	Standard Onsite Replacement Warranty for 2 years (repair or replace)	
54	Certification	BIS / NABL / ISO	
55	Additional Terms & Condition	Bidder to submit BID Specific authorization with name,address, and email id of the Signatory to ensure their support for this work.	

Technical Specification of 1100 VA Offline UPS (2 Nos)			
UPS MAKE		APC	
UPS MODEL		Bidder require to mention the make & model	
SI No	PARAMETER	REQUIRED SPECIFICATIONS	Compliance (Yes / No)
1	Rating	1100VA	
2	Power Backup	30 min or Above	
3	Input Voltage Range	140V to 300V	
4	Input Frequency	50Hz (Auto Sensing)	
5	output Sockets	3 pin Sockets	
6	Automatic Voltage Regulation	Yes, Trim & Boost. Built in Automatic Voltage Regulator Which not only Protects connected equipment but lets it run even when line voltage is too low or too high	
7	Automatic Re start of UPS	In case the UPS backup is totally drained and automatic switched off, when the grid power resumes the UPS Should Auto Start without human interference.	
8	Battery Charging	90% in 4-6hrs	
9	Peak short circuit current on output	300A	
10	Input Surge Protection	480V,255J	
11	Charging current (CC mode)	0.8A - 1.2A	
12	Nominal Output Voltage	230V +/- 8%	
13	Waveform	Stepped Sinewave	
14	Output Frequency	On Line: Same as Input & On Battery 50/60Hz+/- 1Hz	
15	Surge Protection	UPS Should be with Surge Protection	
16	Battery Voltage & Rating	12V, 7.2ah *2Nos	
17	Visual Indicators	Online, Replace battery	
18	Environmental	0-40C 0-95% RH Non Condensing.	
19	Audible Alarms	On Battery, Overload, Low Battery & Replace Battery	
20	Regulatory Approvals	ISO 9001, ISO14001 & ISO50001	
21	UPS Protection	Surge, Drop in line voltsge, brownouts, blackouts and other critical hazards	
22	Features	No. load Shutdown Prevents Battery Deep Discharge Generator Compatible	
23	Certifications	ROHS Compliant, ISO 14001 : 2004, ISO Quality Certified 9001:2008	
24	Warranty	1 year Warranty on UPS & Battery	
25	Sevice Center	In Odisha, Preferably covering all districts of Odisha.	
26	Battery Saver Option	UPS Should have Battery Saver Option to increase the life of the Battery upto 5 years	
27	Battery Saver (to save on battery life)	Thruh toggle button on front panel	
28	Additional Terms & Condition	Bidder to submit BID Specific authorization with name,address, and email id of the Signatory to ensure their support for this work.	

TECHNICAL SPECIFICATIONS FOR A0 Plotter			
PLOTTER MAKE		HP	
PLOTTER MODEL		HP Designjet T908	
Sl. No.	PARAMETERS	REQUIRED SPECIFICATIONS	Compliance (Yes/No)
Print			
1	Print speed	21 sec/page on A1, 120 A1 prints per hour	
2	Print resolution	Up to 2400 x 1200 optimized dpi	
3	Technology	HP Thermal Inkjet	
4	Margins	Roll: 5 x 5 x 5 x 5 mm Sheet: 5 x 5 x 5 x 5 mm	
5	Ink types	Dye-based (C, M, Y); pigment-based (mK)	
6	Ink drop	6 pl (C, M, Y); 12.6 pl (mK)	
7	Printheads	1 (C, M, Y, mK)	
8	Printhead nozzles	1376 per color; 5504 in total	
9	Line accuracy	±0.1% ²	
10	Minimum line width	0.02 mm (via raster driver)	
11	Max optical density	24 L* min/1.4 D ³	
Multifunction capabilities			
12	Scan speed	Up to 3.81 cm/sec (color, 200 dpi) Up to 11.43 cm/sec (grayscale, 200 dpi)	
13	Scan resolution	Up to 600 dpi	
14	Technology	Sheetfed, CIS (Contact Image Sensor), media jam detection sensor, front feed scanning method	
15	Scan format	JPEG, PDF, TIFF	
16	Scan destinations	Scan to email, network, and USB. Scan to cloud, computer, and mobile through app.	
17	Thickness	Up to 0.8 mm	
Media			
18	Handling	Sheet feed, roll feed, media bin, automatic horizontal cutter	
19	Roll size	369 to 914 mm	
20	Maximum roll diamete	140 mm	
21	Sheet size	Manual feed: 210 x 279 to 914 x 1676 mm	
22	Standard sheets	Manual feed: A4, A3, A2, A1, A0	
23	Grammage	60 to 280 g/m ² (roll/manual feed)	
24	Thickness	Up to 0.3 mm	
25	Applications	Line drawings; Maps; Posters; Presentations; Renderings	
26	Memory	2 GB	
Connectivity			
27	Interfaces	Gigabit Ethernet (1000Base-T), Wi-Fi 802.11b/g/n	
28	Native print languages	TIFF, JPEG, URF, PDF, HP-GL/2, HP-RTL, CALS G4	

29	Printing paths	Wi-Fi Direct, remote printing, Apple AirPrint , Windows and macOS printer drivers,printing support for Chrome OS, print from USB pen drive	
30	Drivers	Raster driver for macOS and Windows.	
31	Security features	Secure Boot, whitelisting, Security event logging, Disable network ports and protocols, SNMPv3, 802.1x compatibility, TLS/SSL, Semi-permanent-queue Erase, NTLM v2, HP Web JetAdmin,Security Manager, SIEM Integration	
32	Operating temperature	5 to 40°C	
33	Power	35 W (printing), <11 W (ready), <3.5 W (sleep), <0.1 W (standby). Auto-scheduled printer on/off usage	
34	Warranty	3 Years Onsite Warranty or more	