

Budgetary quote may be submitted by OEMs or their Authorised dealers by email to: sgeddkbg@gmail.com on or before 12.05.2026 for the following specified NAS storage for Doordarshan Kendra, Bengaluru Specification of Professional Ten Bays Network-attached storage

1. **SCOPE:**

This specification lays down the performance requirement of **Professional Ten Bays Network-attached storage** for DDK Bengaluru.

2. **ESSENTIAL FEATURES:**

- 2.1 The offered product should be **Professional Ten Bays Network-attached storage** solution.
- 2.2 It should have Intel Denverton-based Atom C3538 Quad-Core CPU.
- 2.3 It should have 8GB DDR4-2133 SO-DIMM Ram, upgradable upto 64GB & 4GBeMMC Flash Memory.
- 2.4 It should have M.2 Drive Slots for 2x M.2 PCIE (NVMe) or SATA3.
- 2.5 It should have Dual Intel 10-Gigabit Ethernet ports - Supports up to 20 Gbps under Link Aggregation.
- 2.6 It should have Dual Realtek 2.5-Gigabit Ethernet ports - Supports up to 5 Gbps under Link Aggregation
- 2.7 It should have Dual M.2 NVMe SSD ports for fast caching with Tool-Free M.2 SSD Installation.
- 2.8 It should Support an extra **144 TB with the additional 4 Bay extension Unit.**
- 2.9 It should Supports Wake on LAN and Wake on WAN
- 2.10 It should have minimum 3-year warranty.
- 2.11 It should support 10 X 3½" SATA hard drives and SSDs.
- 2.12 It should have Ten Bays with Flexible M.2 SSD Caching.
- 2.13 It should have PWM fans with smart speed controls and heat sinks with push-pin mounting to achieve optimal airflow, enhancing stability and maintaining high performance even under high loads.
- 2.14 It should be able to Edit videos directly with Adobe Premiere or Final Cut Pro.
- 2.15 It should have Comprehensive Backup and Virtualization Solution.
- 2.16 It should be suitable for 24/7 use.
- 2.17 It should have My Archive and up-to-date version of ADM various backup tools to help protect against ransomware attacks.
- 2.18 It should have ability to create one or more replacement administrator accounts.
- 2.19 It should have Cold Backup Technology Unlimited Capacity Expansion.
- 2.20 It should support up to 256 snapshots of a volume and can be done every five minutes, creating a backup that can be restored easily if data is damaged or lost.
- 2.21 It should support multiple RAID levels Single, JBOD, Raid 0, Raid1, Raid5, Raid6, Raid10
- 2.22 It should Supports capacity expansion to easily swap out all old hard drives or SSDs for higher capacity ones without deleting the volume and increases the storage capacity of NAS
- 2.23 It should have folder based military grade AES 256bit encryption to secure the data.
- 2.24 It should have five 7200 RPM 20TB enterprise 3.5" Internal SATA HDD drives rated for up to 550TB/year workload rate.
- 2.25 It should have HDD drives rated for up to 2.5M hours MTBF and include a 5-year limited warranty for hassle-free data storage and best-in class total cost of ownership.
- 2.26 The HDD Should have up to 6,00,000 Load/Unload cycles (at 40°C) & 291/277 Sustained transfer rate.
- 2.27 A **point-to-point** compliance statement as highlighting deviations, if any, on all the clauses of specification duly signed by the bidder or OEM should be uploaded at the time of bidding.
- 2.28 Bidder has to upload the Bid Specific OEM authorization while bidding.

3. TECHNICAL SPECIFICATIONS:

Sr. No.	Parameters	Values
3.1	NAS Specification	
3.1.1	CPU	Intel ATOM C3538 2.1GHz Quad-Core Processor
3.1.2	Memory	8GB SO-DIMM DDR4 (Expandable. Max 64GB)
3.1.3	Drive Bays	10 x SATA 3 6Gb/s; 3.5"/2.5" HDD/SSD
3.1.4	M.2 Drive Slots	2x M.2 PCIe (NVMe) or SATA SSD for SSD Caching *Support M.2 2280, 2260 and 2242.
3.1.5	M.2 Drive Slots	2
3.1.6	LCD Panel	Yes
3.1.7	Maximum Drive Bays with Expansion Unit	16
3.1.8	Expansion	2x USB 3.2 Gen 1
3.1.9	Network	2x 10 Gigabit Ethernet (10G/1G); 2 x 2.5 Gigabit Ethernet (2.5G/1G/100M)
3.1.10	Flash Memory	4GB eMMC
3.1.11	Compatible Drive Type	3.5" SATA HDD, 2.5" SATA HDD, 2.5" SATA SSD, M.2 2280 NVMe, M.2 2280 SATA 3, M.2 2260 SATA 3, M.2 2242 SATA 3
3.1.12	M.2 PCIe Interface	PCIe 3.0 x2
3.1.13	Supports Hot Swappable Drives	Yes
3.1.14	Size	215.5(H) x 293(W) x 230(D) mm
3.1.15	Power Consumption	48.5 W (Operation); 27.7 W (Disk Hibernation); 0.81 W (Sleep Mode)
3.1.16	Noise Level	22dB (HDD idle)
3.1.17	System Fan	2x 120mm
3.1.18	Certification	FCC, CE, VCCI, BSMI, C-TICK
3.1.19	Power Supply Unit / Adapter	250W x1
3.1.20	Operating System	ADM 4.1 Onwards
3.1.21	Supported OS	Windows XP, Vista, 7, 8, 10, 11, Server 2003, Server 2008, Server 2012, Server 2016, Server 2019, Server 2022, mac OS 10.6 Onwards, UNIX, Linux, and BSD
3.1.22	iSCSI Read/Write (5GB file, 1GbE x 1)/IP-SAN	Maximum Targets: 256, Maximum LUNs: 256, Maximum Snapshot Versions of a Single LUN: 256, Target Masking, LUN Mapping, ISO File Mounting, Supports MPIO, Persistent (SCSI-3) Reservations
3.1.23	Supported Browsers	FireFox, Chrome, Safari, Microsoft Edge
3.1.24	Network Protocols	CIFS / SMB, SMB 2.0 / 3.0, AFP, NFS, FTP (Unicode Supported), TFTP, WebDAV, Rsync, SSH, SFTP, iSCSI/IP-SAN, HTTP, HTTPS, Proxy, SNMP, Syslog
3.1.25	File System	Internal Disk: EXT4 ,Btrfs External Disk: FAT32, NTFS, EXT3, EXT4, HFS+, exFAT ,Btrfs

3.1.26	Linux Center	Integrating NAS operating system with Linux, Easy installation with just one click
3.1.27	Disk Management	Scheduled Bad Block Scans, Scheduled S.M.A.R.T Scan
3.1.28	Energy Control	Configurable Disk Hibernation Wait Time
3.1.29	Connection and transmission	TCP/IP (IPv4 & IPv6), Link Aggregation: Supports 802.3ad and Six Other Modes for Load Balancing and/or Network Failover, SMB Multichannel, Jumbo Frame (MTU), VLAN, EZ Connect, Wireless Network ³ , DDNS and EZ-Router, 2.5 GbE Supports Wake-on-LAN (WOL), 2.5 GbE Supports Wake-on-WAN (WOW)
3.1.30	Backup Solutions	Rsync (Remote Sync) Backup, Cloud Backup, FTP Backup, External Backup, One Touch Backup, EZ Sync, SMB Backup
3.1.31	System Administration	Log Type: System Log, Connection Log, File Access Log, Real-time Online User Monitor, Real-time System Monitor, User Quota, Virtual Drive (ISO Mounting, Maximum 16), UPS Support
3.1.32	Download Center	Supports BT(Torrent & Magnet Link), HTTP and FTP Downloads, Torrent Search, Choose Files Before a BT Task Starts, Customizable Download Schedule, Bandwidth Control, RSS Subscription and Automatic Downloading (Broadcatching), ASUSTOR Download Assistant for Windows & Mac, Ai Download for Android with Push Notification, Smart Download Function.
3.1.33	Security	AES 256-Bit Encryption, Firewall: Prevent Unauthorized Access, Alert Notifications: E-mail, SMS, Encrypted Connections: HTTPS, FTP over SSL/TLS, SSH, SFTP, Rsync over SSH Built-in Hardware Encryption Engine: AS10/11/31/32/33/40/52/ 53/54/6/61/62/63/64/65/66/67/70/71/FS67 Series RAID Scrubbing: detects the integrity and consistency of RAID 5 and RAID 6 drive data.
3.1.34	Network Recycle Bin	Share folder-based, maintains original directory structure and file permission, On-click restore, Supports scheduled emptying, Filtering rules, File size, File extension, Deletion Settings, File size, File date
3.1.35	Access Control	Minimum Number of Users: 4096, Minimum Number of Groups: 512, Minimum Number of Shared Folders: 512, Minimum Number of Concurrent Connections: 512 Supports Windows Active Directory Supports Windows Active Directory / LDAP
3.1.36	Data Sync Center	Support OneDrive, OneDrive Business, Google Drive, Dropbox, and Baidu Wangpan, Yandex, Supports file filter and bandwidth limitation, Supported backup methods: Sync, Directly upload files to Cloud from NAS, Directly download files from Cloud to NAS
3.1.37	VPN Server	Supported VPN Protocols: PPTP, OpenVPN, and L2TP/IPsec View Current Connections & Ability to Disconnect Suspicious Connections Comprehensive Connection Log
3.1.38	FTP Explorer	Directory Structure View with Drag & Drop Transfers Task Monitor Stopping of Transmission Task & Resumption of Connection Encrypted Connections: Explicit over TLS, Implicit over TLS FTP Site Manager, Bandwidth Control Maximum Simultaneous Transfer Control

3.1.39	File Explorer	Web-based File Management, ISO File Mounting, Share Links Task Monitor, Browse Files on Local PC, Thumbnail Previews Data Access via External Optical Drive, Supports video playback
3.1.40	Supported RAID levels	Single, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10
3.1.41	Supported RAID migration methods	Single to RAID 1, Single to RAID 5, Single to RAID 6, Single to RAID 10, RAID 1 to RAID 5, RAID 1 to RAID 6, RAID 1 to RAID 10, RAID 5 to RAID 6
3.1.42	UPnP Media Server	Supports PS3 and other Digital Media Player Capable Devices Supports On-The-Fly Transcoding for Most RAW Images and Audio(OGG, FLAC) Supported Image Formats: BMP, GIF, ICO, JPG, PNG, PSD, TIF, RAW Image ⁴ (3FR, ARW, CR2, CRW, DCR, DNG, ERF, KDC, MEF, MOS, MRW, NEF, NRW, ORF, PEF, RAF, RAW, RW2, SR2, X3F)
3.2	20 TB HDD Specification	
3.2.1	Capacity	20TB x 5
3.2.2	Interface	3.5" Internal SATA 6Gb/s HDD
3.2.3	Drive Bays Supported	Unlimited
3.2.4	Recording Technology	EAMR, TSA
3.2.5	Workload Rate Limit (WRL)	Up to 550 TB/year
3.2.6	Cache (MB)	256
3.2.7	Mean Time Between Failures (MTBF, hours)	2,500,000
3.2.8	Sector Size (Bytes per Logical Sector)	4Kn: 4096, 512e: 512
3.2.9	Spindle Speed (RPM)	7200
3.2.10	Shock, Operating 2ms (Read/Write) (G)	50/50Gs
3.2.11	Sustained transfer rate ⁴ (MB/s, max) / (MiB/s, max)	291
3.2.12	Vibration (G RMS, 5 to 500Hz)	0.7 (XYZ)

4. ACCESSORIES: All the essential accessories required to complete the system should be provide by the bidder. The bidder should certify the completeness of the system in all respect.

5. Warranty: Three years from the date of Supply & 5 years for the hard disk drives.

Bill of Material (BOM)

Sr. No.	Description of the Item	Make	Model	HSN/ SAC	QTY.	Unit Price Incl. GST	Total Price Incl. GST
1	10-bay Network Attached Storage with 100TB (20TB x 5)SATA HDD 7200 rpm				01 Set.		