

# **YADAVINDRA PUBLIC SCHOOL, PATIALA**

## **Technical Specifications for IT Equipment Procurement**

### **1. Thin Clients (RDP RX) – 36 Units with Licenses**

#### **Description:**

Lightweight, centralized computing devices for academic labs and corporate offices, designed for secure access to virtual desktops while minimizing hardware maintenance overhead.

**Model: NComputing RX-RDP+**

#### **Enhanced Technical Specifications:**

- **Platform: Raspberry Pi 3+ based**
- **Operating System: LEAF OS (Linux-based, optimized for thin clients)**
- **Memory: 1 GB RAM**
- **Storage: 16 GB Internal SD Flash Storage**
- **Connectivity:**
  - **Dual-band Wi-Fi (2.4GHz/5GHz) - 802.11 b/g/n/ac**
  - **Gigabit Ethernet (10/100/1000 Mbps)**
- **Video Output: 1 x HDMI Port (Full HD 1920x1200 support)**
- **USB Ports: 4 x High-Speed USB 2.0 ports with full USB redirection**
- **Audio: 1 x 3.5mm Speaker Jack (16-bit/44kHz/Stereo)**
- **Power Supply: 5.1V Micro USB (Recommended official power supply)**
- **Dimensions: 3 x 3.7 x 1.5 inches**
- **Weight: 92 grams**
- **Multimedia Support:**
  - **Full-screen HD video playback**
  - **Microsoft RemoteFX support for smooth graphics**
- **Peripheral Support: USB redirection for printers, scanners, smart card readers, and other devices**
- **Management Software: PMC (Provisioning & Management Console)**
- **Security Features:**
  - **SSL/TLS encryption for secure communications**
  - **Auto firmware updates and remote configuration**

## **2. Workstation Computers (CPU Only) – 6 Units**

### **Description:**

**High-reliability workstations for multitasking, software development, office productivity, and departmental use.**

### **Enhanced Technical Specifications:**

- **Model: HP Workstation MOQ402 or Equivalent**
- **Processor: Intel Core i5 (12th Gen or newer preferred)**
- **Memory: 8 GB DDR4 RAM (expandable to 32 GB)**
- **Storage: 512 GB PCIe NVMe SSD (minimum read speed 2500 MB/s)**
- **Graphics: Integrated Intel UHD Graphics 770**
- **Operating System: Preinstalled Windows 11 Professional**
- **Connectivity:**
  - **Wi-Fi 6 (802.11ax)**
  - **Bluetooth 5.3**
- **Ports:**
  - **VGA and HDMI output**
  - **Minimum 6 USB ports (including 2 x USB 3.1)**
  - **RJ-45 Ethernet port**
- **Power Supply: 550W High-Efficiency PSU (80 PLUS Certified)**
- **Warranty: 3 Years On-Site Warranty**
- **Security:**
  - **TPM 2.0 support**
  - **BIOS-level password protection**
- **Form Factor: Small Form Factor (SFF) or Mini Tower**

## **3. Laptops – 2 Units (HP)**

### **Description:**

**Durable, business-class laptops with fast performance and superior portability for professional users.**

### **Enhanced Technical Specifications:**

- **Model: HP 15 or Equivalent**

- **Processor:** Intel Core i5-1334U (13th Gen or above)
- **Memory:** 8 GB DDR4/DDR5 RAM (expandable to 16 GB)
- **Storage:** 512 GB SSD (NVMe Gen4 preferred)
- **Display:**
  - 15.6-inch (39.6cm) Full HD (1920 x 1080)
  - Anti-glare coating
- **Operating System:** Windows 11 Home/Professional (with MS Office Home & Student 2021)
- **Graphics:** Intel UHD Graphics
- **Camera:** FHD Webcam (1080p)
- **Connectivity:**
  - Wi-Fi 6E (802.11ax)
  - Bluetooth 5.3
  - 1 x HDMI port, 2 x USB 3.0 ports, 1 x USB-C port
- **Battery:** Long-life battery (8+ hours backup)
- **Weight:** ≤1.75 kg
- **Warranty:** 3 Years Comprehensive Warranty

#### **4. Monitors – 20 Units**

##### **Description:**

**Energy-efficient monitors with ergonomic stands and high-definition display quality for extended office or academic usage.**

##### **Enhanced Technical Specifications:**

- **Brand:** Dell / HP / LG (or Equivalent)
- **Screen Size:** 19 inches or above
- **Resolution:** Full HD (1920 x 1080 Pixels)
- **Refresh Rate:** 75 Hz or higher
- **Display Type:** IPS Panel (Preferred for better viewing angles)
- **Ports:**
  - Minimum 1 x HDMI
  - Minimum 1 x USB port
- **Adjustability:** Tilt adjustable stand (height adjustable preferred)

- **Power Supply:** AC 100-240V, 50-60Hz
- **Compliance Certifications:** Energy Star Certified, TCO Certified
- **Accessories:** HDMI cable and power adapter included

## **5. 3D Printer – 1 Unit (Ultimaker / Stratasys / Novabeans or Equivalent)**

### **Description:**

Professional-grade 3D printer for rapid prototyping, project development, and educational use, with versatile material handling and high-precision printing.

### **Enhanced Technical Specifications:**

- **Printing Technology:** FDM (Fused Deposition Modeling)
- **Print Volume:** Minimum 220 x 220 x 250 mm
- **Nozzle Diameter:** Interchangeable (0.25mm to 0.8mm)
- **Filament Diameter:** 2.85 mm (standard)
- **Filament Compatibility:** PLA, ABS, TPU, PETG, Nylon
- **Build Plate:** Heated, removable glass plate with auto bed leveling
- **Connectivity:**
  - **Wi-Fi**
  - **Ethernet**
  - **USB**
  - **Cloud-based remote monitoring and printing (Ultimaker Digital Factory or equivalent)**
- **Filament Sensor:** Run-out detection and automatic pause
- **Noise Level:** ≤50 dB
- **Enclosure:** Optional fully enclosed chamber for temperature stability
- **Software:** Compatible with Cura or equivalent slicing software
- **Warranty:** Minimum 1 Year Manufacturer Warranty

### **Optional Add-ons for All Equipment:**

- **Installation & Setup:**  
Professional on-site installation and initial configuration for all devices.
- **Documentation:**  
Provision of user manuals, setup guides, warranty certificates in physical or digital format.
- **Technical Support:**  
Minimum 3-Year On-Site Warranty with next-business-day (NBD) service response.
- **Training Programs:**  
One-time hands-on training for:
  - Thin Client management (using PMC software)
  - Basic operation and maintenance of the 3D printer.
- **Security Compliance:**  
Devices must comply with industry-standard security protocols (e.g., TPM, BIOS lockdowns).