

## **Item 1.1:**

### **18U Wall Mounted Data Cabinet 600 x 600:**

- 19" standard installation, welded frame, reliable structure
- Frame structure intended for self-assembly, easy handling, transportation, to maximize save shipping cost
- Standing or wall mounting installation
- Easy mounting installation (patent)
- Removable side panels
- Holes for entering cable on both of top cover and bottom panel
- Toughened glass front door, turning angle is over 180 degrees

## **Item 1.2:**

### **Cat 6 UTP patch panel:**

- 24 Port Cat6 Shielded Fully Loaded Punch Down Patch Panel
- Keystone Type with Shutter
- 1U
- Black Color

## **Item 1.3:**

### **Organizer:**

These special cables organizing patch panels. Model 24 Ports – Modular, has a unique loop cable organizing system to enable easy and secure cable management. The cable holders suit cable diameter up to 9.4mm. Made from hard plastic with a good bending capability the holder contracts around the cable to hold it in place securely.



## Item 1.4:

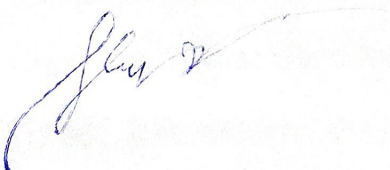
NVR 64 channel including the needed storage:

- H.265+/H.265/H.264+/H.264 video formats
- Up to 64-ch IP camera inputs
- Up to 2-ch@32 MP/2-ch@24 MP/4-ch@12 MP/8-ch@8 MP/16-ch@4 MP/32-ch@1080p decoding capacity
- Up to 400 Mbps incoming bandwidth and 400 Mbps outgoing bandwidth
- 2 HDMI and 1 VGA interfaces, 8K or dual 4K video outputs
- Up to 8-ch IP speakers can be connected

## Item 1.5:

IP indoor/ outdoor camera 4 MP

- 1/3" progressive scan CMOS
- 2560 × 1440@20fps
- 2.8mm fixed lens
- H.265+, H.265, H.264+, H.264
- Dual stream
- 120 dB WDR (Wide Dynamic Range)
- 3D DNR (Digital Noise Reduction)
- Up to 30 m IR range
- PoE (Power over Ethernet)
- IP67





## Item 1.6:

cables and wiring required for the setup and operation of surveillance cameras, including the supply and installation of plastic conduits (PVC) and all accessories needed to ensure the full and safe functionality of the surveillance system:

- **Ethernet Cable:** Typically uses Cat6 cables for data transmission and Power over Ethernet (PoE).
  - **PoE Switch:** Provides power and data to multiple cameras from a single point.
  - **DC Power Cable:** May be used for some cameras, especially if PoE is not supported.
2. Plastic Conduits (PVC):
- **Purpose:**  
To protect and route cables, keeping them safe from damage and environmental factors.
  - **Types:**
  - **Rigid PVC Conduit:** Suitable for exposed installations, providing mechanical protection and a neat appearance.
  - **Flexible PVC Conduit:** Easier to install in tight spaces and under floors.
  - **Sizes:**  
Select the appropriate conduit size based on the number and type of cables being routed, allowing for easy cable installation and future maintenance.
3. Accessories:
- **Connectors:** BNC connectors for coaxial cables, RJ45 connectors for Ethernet cables, and appropriate power connectors.
  - **Connection Boxes:** Provide a clean and organized way to connect cables and make repairs.
  - **Cable Clamps/Straps:** Securely attach cables to the PVC conduit or walls.
  - **Crimping Tools:** Used for connecting cables to connectors.
  - **Tools:** Screwdrivers, drill, ladder, fish tapes, and other tools for installation.
4. Installation Considerations:



- **Safety:**

Ensure all connections are secure and grounded according to electrical codes.

- **Route Planning:**

Carefully plan cable routes, avoiding areas where they might be damaged or interfere with other systems.

- **Maintenance:**

Consider future maintenance needs when selecting cable and conduit types and routing them.

5. Specific Requirements:

- **System Type:** The requirements for analog versus IP systems differ significantly.
- **Camera Power:** Ensure that the power supply is adequate for all cameras in the system.
- **Network Infrastructure:** If using IP cameras, a robust network infrastructure is essential.
- **Environmental Conditions:** Consider factors like temperature, humidity, and potential exposure to sunlight or water.

## Item 1.7:

### POE Switch 24 port 10/100/1000:

- 24x 1000Mbps auto-sensing PoE+ ports, 4x 10/100/1000M combo ports, 1 console.
- Compatible with IEEE802.3at (30W) and IEEE802.3af (15.4w).
- Ethernet port supports 10/100/1000M adaptive and POE+ functions.
- Finless design, natural cooling, 10 rack mounts.
- Supports WEB, TELNET, CLI, SSH, SNMP, and RMON management.
- Supports PoE+ power management.





## Item 1.8:

Fiber cable 4 core MM OM3 with cabling and splicing 200m:

Excel OM3 50/125  $\mu\text{m}$  tight buffered optical fiber cables have been designed specifically for internal and external applications. These compact, lightweight cables are extremely flexible and are quick and easy to install.

The cables are constructed around an E-Glass strength member containing up to 24 color coded 900  $\mu\text{m}$  tight buffered fibers, covered with a flame retardant, low smoke zero halogen, outer sheath.

## Item 1.9:

ODF:

The swing ODF-A is used connecting optical fiber and Equipment of central office. 19" 1U 24 core standard. The front panel can be swing and the patch panel is removable for operation and maintenance. The front panel can install SC and FC adapter. It is mainly used in the Telecom, CATV equipment room and network equipment room.

Optical fibers storage Set: residual fiber length no less 1.6m



## Item 2:

Fiber patch cord:

Connector type	LC/UPC-LC/UPC
Fiber type	OM3
Cable Diameter	2.0 or customized duplex
Insertion loss	$\leq 0.3$ dB
Return loss	MM $\geq 35$ dB
Repeatability	$\leq 0.1$
Durability	$\leq 0.2$ dB
Interchangeability	$\leq 0.2$ dB
Tensile strength	$>70$ N
Operating Temperature	$-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$
Storage Temperature	$-40^{\circ}\text{C} \sim 80^{\circ}\text{C}$
Outer Sheath Material	PVC、LSZH
Bending radius (Static/Dynamic)	10D/20D
Length	Customized

