



TERMS OF REFERENCE(S) (TOR)

FOR SELECTION/EVALUATION OF

Procurement, Installation and Commissioning of

CCTV Cameras

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1 Overview & Background

The United States Educational Foundation in Pakistan (USEFP) was established in 1950 by the governments of Pakistan and the United States. USEFP is a binational commission composed of an equal number of Pakistanis and Americans, with the Chair alternating between a Pakistani and an American Board Member. USEFP is one of 49 'Fulbright Commissions' located throughout the world. Since 1951 when the first group of Pakistani grantees travelled to America and in 1952 when the first American grantees visited Pakistan, the USEFP has fostered mutual understanding between the people of Pakistan and the United States through educational and cultural exchange. Nearly 9,000 Pakistanis and more than 900 Americans have participated in USEFP administered exchange programs.

The Foundation receives support and counsel from both the Pakistan and U.S. Governments, but it is not an agency of either. The Foundation supervises a variety of programs that send Pakistani students and scholars to American campuses while bringing American scholars to universities in Pakistan. The goal of all USEFP programs is to help Pakistanis learn more about the U.S. and to help Americans learn more about Pakistan and its people.

2 Purpose of this Document

The purpose of this document is to specify the approach that USEFP will use to select the vendor/firm interested in providing **CCTV Cameras** for the United States Educational Foundation in Pakistan.

This document also describes the requirements that the contractor has to fulfill in order to be selected.

3 Scope of Work

The United States Educational Foundation in Pakistan (USEFP) is undertaking the construction of their Head Office Building in Islamabad. USEFP would like to invite quotations for the following items from vendors specializing in the provision and services of these items.

1. Procurement, Installation and Commissioning of CCTV Cameras

Functional Requirements:

2. The system should provide comprehensive surveillance and monitoring of USEFP premises.
3. The system should include high-definition CCTV cameras with features such as Color Vu night vision, motion detection, and remote viewing capabilities.
4. The system should support real-time video streaming and recording with high-quality resolution.
5. Integration with USEFP's existing IT infrastructure for seamless monitoring and footage storage.
6. The system should provide an Automated Time-Lapse Recording System for archival purposes.
7. The system should be accessible via a mobile app for remote monitoring and management.
8. The system should have real-time alert and notification capabilities for detected incidents.
9. The system must feature event logging for real-time analysis and historical review of footage.
10. The system should support centralized configuration and management of cameras and recording settings.
11. The system must be operational 24/7 with provisions for continuous monitoring and recording.
12. The system should provide scalability for future expansions, including additional cameras or integration with other security systems.

Technical Requirements:

1. Provide a brief overview of the company specializing in CCTV camera systems, including years of service.
2. Detail the company's expertise, including professionals with their experience in CCTV systems and certifications obtained.
3. List companies or projects where CCTV camera systems have been successfully deployed.
4. Describe the specifications of CCTV hardware, including types of cameras, recording devices, and supporting hardware.
5. Outline the support and maintenance services provided, including schedules, technical support availability, and service level agreements.

6. Provide information on the proposed project team, including roles, professional expertise, education, tenure with the company, and current positions.
7. Share details of the software development, customization, and implementation team separately if applicable.
8. Include a project execution plan with timelines for CCTV system deployment, customization, and integration; roles and responsibilities; risk identification and mitigation; operation and support plans; project deliverables; and any staffing or dependencies from USEFP.
9. Confirm compliance with all requirements in the Terms of Reference (TOR) provided by USEFP, specifying any that cannot be met.
10. Identify any third-party software or hardware requirements, including associated license fees.
11. Ensure system compatibility with various web browsers (e.g., Chrome, Firefox, Edge, Safari) and operating systems (e.g., Windows, Mac, OS, Linux).
12. Configure regular backups, provide a disaster recovery plan, and support secure remote access for off-site monitoring.
13. Provide comprehensive reporting and analytics capabilities for monitoring and evaluating footage.
14. Complete job including supply, commissioning, testing, transportation and training to USEFP technical staff is included.

The details of CCTV Camera System along with Monitoring & Recording Modules are listed at the end of this document. Proposals for Hikvision or equivalent models are invited for CCTV Camera System Solution.

4 Selection Criteria

The agency will be selected based on following criteria:

Criteria		Marks
1	Company Information	20
1.1	Legal structure of company (Proprietorship, Private Ltd, Public Ltd)	
1.2	Expertise and experience in the field, year of establishment etc. (more than 15 years)	

1.3	Geographical Coverage – in the case of all provinces, especially in Islamabad.	
1.4	(Manufacturer) In case of Authorized Dealer, Authorization Letter must be attached with the technical bid in favor of End Users.	
1.5	1 Years comprehensive warranty including parts and onsite support and installation with free services and Training to End users.	
1.6	Bidder should have trained engineers/technicians on the proposed CCTV/ Network/Servers/Storage Devices.	
1.7	Qualified IT / NETWORK/Electronics/Electrical Engineer minimum 6 from recognize university. Qualified IT / NETWORK/Electronics/Electrical Diploma Holder minimum 4 from recognize institute.	
1.8	A valid PEC Registration Certificate in Category C3, along with expertise in the following Engineering Codes: EE02, EE04, EE07, EE08, and EE09, is required for the CCTV Surveillance Project.	
1.9	The firm is required to furnish a comprehensive plan detailing the execution strategy for the Project on a turnkey basis. The Bidder / Firm shall be liable for all expenses pertaining to Test / Trial during Evaluation process.	
2	Technical Functionality	20
2.1	Prior / present experience of working with NGOs, Embassies, national & international organizations	
	A) List past (not exceeding 15 years) clientage with names & period of engagement	
	B) List present clientage with names & date of business engagement	
2..2	Affiliated Services / One Window Services	
	A) Partnerships status with Vendor (Principle) if any.	

	B) After Sales Support and Services	
3	Pricing	50
3.1	Product Pricing	
3.2	Volume discounts and other incentives to USEFP	
4	Delivery & Installation Timeline	10
	Grand Total	100

5 Other Terms and Conditions

Registration & Taxes: The applicant firms must be registered companies having complete postal address, telephone, fax, National Tax Number (attach copy). The quoted price shall be inclusive of all applicable taxes and duties. Income tax and sales tax will be withheld from payment, as applicable, under the relevant laws. In case of any exemptions, attach proof.

General Conditions: USEFP reserves the right to reject all or a part of this (TOR) WITHOUT NOTICE. Any changes to the proposal requirements will be made by written addendum. USEFP is under no obligation to select any of bidder(s) submitting the proposal and has right to cancel the assignment without any cause.

Pricing and Currency: PKR prices will be preferred. USEFP reserves the right to negotiate separate preferential rates with the third-party supplier etc. If prices are not in PKR, USEFP exchange rate on the date of cheque preparation will be used for conversion. The US Dollar exchange rate of USEFP for September 2024 is Rs. 278.74.

Payment Terms: 100% upon delivery. All payments will be made in PKR by cheque. Payment processing time will be 30 working days after delivery has completed and invoice has been submitted.

Warranty: Vendor/firm should provide undertaking on company's letterhead that all warranties will be claimed at site and will be vendor/firm responsibility. USEFP will not contact manufacturers or official warranty centers for warranty claims. All warranty services will be provided on site at the USEFP office in Islamabad, where equipment is installed. All transportation along with parts will be vendors responsibility without any cost to USEFP during the warranty period.



Liability of Costs and Responsibility: USEFP shall not be liable for any costs incurred in preparing response to this TOR. The Respondent hereby indemnifies to hold USEFP harmless from all liability(ies), claim(s) or expense(s) incurred in any manner whatsoever by or on its behalf of that person or organization in connection with or relative to this process.

Validity: All responses must be valid for at least 90 days commencing on the Due Date, during which USEFP may request clarification or elaboration of the response for the purpose of evaluation. Such clarifications or elaborations shall not affect the remainder of the response except for the portion so amended or clarified.

Information Only: The information provided within this TOR is intended to help prospective respondents in creating a viable proposal. However, it shall be the sole and absolute responsibility of those responding to this TOR to complete their own due diligence.

5 Undertaking

I/We declare that the information provided in the “CCTV Cameras” is accurate and can be proved whenever required. I/We further declare that if in case the information provided by me/us in this “Expression of Interest” proved to be incorrect at any point, USEFP reserves the right to take any action deemed feasible by the USEFP authorities against me/us. I/We further declare that our company (***** Company Name here *****) is not blacklisted by any division, department or organization of Government of Pakistan. The decision of USEFP shall be regarding the acceptance or rejection of the bid shall be final and binding and will not be challenged in the court of law.

Signature and Seal

6 Proposal

The Proposal should clearly detail all the required information against the selection criteria mentioned above.

The sealed proposals in marked envelope “**Proposal for the CCTV Cameras**” complete in all respects should reach latest by **4:30 pm on October 18, 2024, to:**

**Director Alumni
United States Educational Foundation in Pakistan
House # 5, St # 17, F-6/2
Islamabad.**

An e-mail must be sent to procurement@usefp.org informing that proposal has been submitted to USEFP.



8 Contact information

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CCTV Camera System along with Monitoring & Recording Modules

Sr No	Product	Minimum Specifications	Quantity
1	Core Switch	Providing and fixing of 54 Port 10G L3 Switch <input type="checkbox"/> 24 × 1 Gigabit RJ45 port <input type="checkbox"/> 24 × 1 Gigabit fiber optical port <input type="checkbox"/> 6 × 10 Gigabit fiber optical port <input type="checkbox"/> MAC Address Table: 32K <input type="checkbox"/> Forwarding Mode: Store-and-forward switching <input type="checkbox"/> Switching Capacity: <ul style="list-style-type: none"> • Whole-Device Performance: 216 Gbps • Port Performance: 216 Gbps <input type="checkbox"/> Packet Forwarding Rate: <ul style="list-style-type: none"> • Whole-Device Performance: 160.71 Mpps • Port Performance: 160.71 Mpps <input type="checkbox"/> Device Maintenance <input type="checkbox"/> VLAN <input type="checkbox"/> Link Aggregation <input type="checkbox"/> Operating Temperature: 0°C to 50°C Model: DS-3E3754TF, Make Hikvision or equivalent	1
2	SAN Storage	Providing and Fixing of 24-slot Cost-efficient Cluster Storage <input type="checkbox"/> Data network interface <input type="checkbox"/> MiniSAS interface <input type="checkbox"/> Network Protocols <input type="checkbox"/> Interface/capacity: SSD up to 16 TB <input type="checkbox"/> RAID: <ul style="list-style-type: none"> • RAID0, 1, 3, 5, 6, 10, 50 • JBOD • Hot-Spare <input type="checkbox"/> Direct Streaming Mode: video (2 Mbps) + picture <input type="checkbox"/> IPSAN Mode: 256-ch (recording + playback) <input type="checkbox"/> Processor: 64-bit multi-core processor <input type="checkbox"/> Cache: 8 GB (extendable to 32 GB)/controller <input type="checkbox"/> Disk inspection, alarm, and repair <input type="checkbox"/> Downloading mode <input type="checkbox"/> Device Maintenance <input type="checkbox"/> Power supply: Redundant <input type="checkbox"/> Operating Temperature: +5°C to +35°C Model: DS-A82024D (C) , Make Hikvision or equivalent	2
3	Hard Drives	DS-AIoT HDD HK7210AH/10T*1, 10TB SAS HDD	48
4	HikCentral	DS-VE11D-C/HW01 or equivalent	1
5	HikCentral	HikCentral-P-VSS-Base/0Ch or equivalent	1
6	HikCentral	HikCentral-P-VSS-1Ch or equivalent	181

7	HikCentral	HikCentral-P-SmartWall-Module or equivalent	1
8	Controller	<p>Providing and Fixing of Video Wall Controller Casing</p> <ul style="list-style-type: none"> <input type="checkbox"/> 10 Gigabit network switching <input type="checkbox"/> Sub board slot (service board) × 11 <input type="checkbox"/> Switching board slot × 1 <input type="checkbox"/> Main control board slot × 2 <input type="checkbox"/> Management Network Interface <input type="checkbox"/> Dual Device Hot Backup support <input type="checkbox"/> Screen Size: 105.42 mm (length) × 67.07 mm (width), 480 × 272 <input type="checkbox"/> Chassis Height: 4.5 U <input type="checkbox"/> Signal Source Live View support <input type="checkbox"/> Operating Temperature: 0°C to 50°C <p>Model: DS-C30S-S11 (V2), Make Hikvision or equivalent</p>	1
9	Output Card	<p>Providing and Fixing of HDMI Output Board</p> <ul style="list-style-type: none"> <input type="checkbox"/> 4 × HDMI output board (each board supports 4 × HDMI and 444 output) <input type="checkbox"/> Maximum Video Output Resolution: 1080P <input type="checkbox"/> Single mesh port with load: 2,600,000 <input type="checkbox"/> Width: 288-3840 <input type="checkbox"/> Height: 288-2160 <input type="checkbox"/> Supports LED screen and custom resolution output <input type="checkbox"/> Can be configured with a maximum area (length × width) less than 260 W <p>Model: DS-C30S-04HO (V2), Make Hikvision or equivalent</p>	2
10	Input Card	<p>Providing and Fixing of HDMI Input Board</p> <ul style="list-style-type: none"> <input type="checkbox"/> 4 × HDMI input board (supports 4 HDMI inputs for a single output) <input type="checkbox"/> 444 acquisition <input type="checkbox"/> Supported Resolutions: <ul style="list-style-type: none"> • 720P@50Hz • 720P@60Hz • 1080P@50Hz • 1080P@60Hz <p>Model: DS-C30S-04HI (V2), Make Hikvision or equivalent</p>	2
11	Decoder	<p>Providing and Fixing of 4K Decoder</p> <ul style="list-style-type: none"> <input type="checkbox"/> HDMI (adaptable to DVI-D) and BNC output interfaces <input type="checkbox"/> RJ45 interface × 2 (10/100/1000 Mbps adaptive) <input type="checkbox"/> Optic interface × 2 (100 base-FX/1000 base-X) <input type="checkbox"/> Combo: RJ45 interface and optic interface <input type="checkbox"/> RS-232 (RJ45) × 1 <input type="checkbox"/> RS-485 × 1 	5

		<input type="checkbox"/> Two-way Audio Out 1 (3.5 mm connector, 2.0 Vp-p, 1 K Ω) <input type="checkbox"/> Two-way Audio In <input type="checkbox"/> Supports up to 24MP (only for 3 encoder tracks mode) <input type="checkbox"/> Decoding Channel: 128-ch <input type="checkbox"/> Split Screen: 1/4/6/8/9/12/16/25/36 <input type="checkbox"/> Input Resolution: <ul style="list-style-type: none"> • VGA, DVI-I: <ul style="list-style-type: none"> ○ 1080p: 1920 × 1080@50/60 Hz ○ 720p: 1280 × 720@50 Hz/60 Hz <input type="checkbox"/> Output: <ul style="list-style-type: none"> • HDMI × 16 • BNC × 8 (DB15 × 2) <input type="checkbox"/> Power Supply: 100 to 240 VAC <input type="checkbox"/> Operating Temperature: -10°C to 55°C Model:DS-6916UDI(B),Make Hikvision or equivalent	
12	LCD Screens	Providing and Fixing of 55-inch 1.8mm LCD Display Unit <input type="checkbox"/> 4K signal input <input type="checkbox"/> Auto loop up to 30 screens with HDMI interfaces <input type="checkbox"/> Factory calibration for color and brightness uniformity <input type="checkbox"/> Resolution: 1920 × 1080 <input type="checkbox"/> Viewing angle: 178° <input type="checkbox"/> Extreme-narrow 1.8 mm bezel design <input type="checkbox"/> Active Display Area: 1209.6 (H) mm × 680.4 (V) mm <input type="checkbox"/> Pixel Pitch: 0.63 mm <input type="checkbox"/> Physical Seam: 1.8 mm <input type="checkbox"/> Brightness: 700 cd/m ² <input type="checkbox"/> Video & Audio Input: <ul style="list-style-type: none"> • VGA × 1 • HDMI × 1 • DVI × 1 • DP × 1 • USB × 1 <input type="checkbox"/> Control Interface: <ul style="list-style-type: none"> • RS232 IN × 1 • RS232 OUT × 1 <input type="checkbox"/> Power Supply: 100-240 VAC, 50/60 Hz <input type="checkbox"/> Operating Temperature: 0°C to 40°C Model:DS D2055HE-G,Make Hikvision or equivalent	8
13	Wall Mount	Providing and Fixing of Wall-mounted Bracket <input type="checkbox"/> Solid steel structure (prevents screen bending or twisting)	8

		<input type="checkbox"/> Cold-rolled steel plate (SPCC) <input type="checkbox"/> VESA: 600 (H) mm × 400 (V) mm <input type="checkbox"/> Surface Treatment: Electrostatic spraying Model:DS-DN5501W,Make Hikvision or equivalent	
14	Connectors	RJ-45 connectors.	3
15	Accessories	HDMI Cables 15 Meter 4K	8
16	Outdoor Camera	Providing & fixing of 8MP camera <input type="checkbox"/> Sensor: 1/1.8" CMOS <input type="checkbox"/> Maximum Resolution: 3840 × 2160 <input type="checkbox"/> Color: 0.0028 Lux @ <input type="checkbox"/> Varifocal lens, motorized <input type="checkbox"/> Lens: 2.7 to 13.5 mm <input type="checkbox"/> Aperture: F1.2 <input type="checkbox"/> IR, White Light up to 60m <input type="checkbox"/> Memory: 40 MB <input type="checkbox"/> Smart RAM: 350 MB <input type="checkbox"/> eMMC: 2 GB <input type="checkbox"/> Features: <ul style="list-style-type: none"> • Target Cropping • WDR 130 dB • BLC (Backlight Compensation) • HLC (Highlight Compensation) • 3D DNR (Digital Noise Reduction) • Defog <input type="checkbox"/> Network: <ul style="list-style-type: none"> • 1 RJ45 (10M/100M) <input type="checkbox"/> Storage: SD card up to 512GB <input type="checkbox"/> Advanced Functions: <ul style="list-style-type: none"> • Face Capture • People Counting <input type="checkbox"/> Protection: IP67 Model:DS-2CD3686G2HT-LIZS,Make Hikvision or equivalent	66
17	Mount	Providing and Fixing of Wall mount bracket suitable for various outdoor cameras <input type="checkbox"/> Designed for durability and weather resistance <input type="checkbox"/> Appearance: stainless Steel <input type="checkbox"/> Material: Aluminum Alloy <input type="checkbox"/> Dimension: 126 mm × 105 mm × 250 mm <input type="checkbox"/> Range of Application: Suitable for Bullet camera mounting Model:DS-1276ZJ-SUS,Make Hikvision or equivalent	66
17	Indoor Camera	Providing & fixing of 6MP <input type="checkbox"/> Sensor: 1/1.8" CMOS <input type="checkbox"/> Maximum Resolution: 3200 × 1800 <input type="checkbox"/> Color: 0.0028 Lux @	103

		<ul style="list-style-type: none"> <input type="checkbox"/> Lens: <ul style="list-style-type: none"> • Varifocal, motorized • 2.7 to 13.5 mm <input type="checkbox"/> Aperture: F1.2 <input type="checkbox"/> IR and White Light <input type="checkbox"/> Supplement Light Range: Up to 40 m <input type="checkbox"/> Smart Supplement Light <input type="checkbox"/> Memory: <ul style="list-style-type: none"> • RAM: 40 MB • Smart RAM: 350 MB • eMMC: 2 GB <input type="checkbox"/> Features: <ul style="list-style-type: none"> • Target Cropping • Day, Night, Auto, Schedule modes • WDR (Wide Dynamic Range): 120 dB • BLC (Backlight Compensation) • HLC (Highlight Compensation) • 3D DNR (Digital Noise Reduction) • Defog <input type="checkbox"/> Network: 1 RJ45 (10 M/100 M) <input type="checkbox"/> Audio: 2 built-in microphones <input type="checkbox"/> Storage: MicroSD Card up to 512 GB <input type="checkbox"/> Advanced Functions: <ul style="list-style-type: none"> • Face Capture • People Counting <input type="checkbox"/> Operating Temperature: -30°C to 60°C <input type="checkbox"/> Protection: IP67 <p>Model:DS-2CD3766G2HT-LIZS/ES or equivalent</p>	
18	Mount	<p>Providing and Fixing of Wall mount bracket suitable for various outdoor cameras</p> <ul style="list-style-type: none"> <input type="checkbox"/> Designed for durability and weather resistance <input type="checkbox"/> Weight: 440g <input type="checkbox"/> Appearance: Hikvision White <input type="checkbox"/> Material: Aluminum Alloy <input type="checkbox"/> Dimension: $\Phi 120 \times 122 \times 173.5$ mm <input type="checkbox"/> Range of Application: Suitable for dome camera wall mounting <input type="checkbox"/> Description: $\Phi 120$ Wall Mounting Bracket for Mini Dome Camera <p>Model:DS-1272ZJ-120,Make Hikvision or equivalent</p>	111

19	POE Switch	<p>Providing and Fixing of 16 Port Gigabit Smart POE Switch</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ports: <ul style="list-style-type: none"> • 16 × Gigabit PoE ports • 2 × Gigabit fiber optical ports <input type="checkbox"/> MAC Address Table: 8K <input type="checkbox"/> Switching Capacity: 56 Gbps <input type="checkbox"/> Packet Forwarding Rate: 41.66 Mpps <input type="checkbox"/> Internal Cache: 4.1 Mbits <input type="checkbox"/> Ports 1 to 16: Up to 300m long-range performance (may vary depending on camera model or cable condition) <input type="checkbox"/> Features: <ul style="list-style-type: none"> • Link Aggregation • Loop Prevention • VLAN • HPP (High Priority Port) • Port Rate-Limiting <input type="checkbox"/> Power Supply: 100 to 240 V AC <input type="checkbox"/> Operating Temperature: 0°C to 45°C <p>Model:DS-3E1518P-SI,Make Hikvision or equivalent</p>	16
20	SFP Module	<p>Providing and Fixing of SFP Module</p> <ul style="list-style-type: none"> <input type="checkbox"/> Form Factor: Small Form Factor Pluggable (SFP), MSA compatible <input type="checkbox"/> Single Power Supply: 3.3V <input type="checkbox"/> Supported Ethernet: 1.25G <input type="checkbox"/> Data Rate: 1250 Mbps <input type="checkbox"/> Operating Temperature: 0~70°C <p>Model:HK-SFP-1.25G-20-1550,Make Hikvision or equivalent</p>	16
21	SFP Module	<p>Providing and Fixing of SFP Module</p> <ul style="list-style-type: none"> • Form Factor: Small Form Factor Pluggable (SFP), MSA compatible • Connector: Single fiber bi-directional LC • Cost-effective SFP solution • Supports higher port densities and greater bandwidth • Supported Ethernet: 1.25G • Data Rate: 1250 Mbps • Power Supply: DC 3.3V • Operating Temperature: 0~70°C <p>Model:HK-SFP-1.25G-20-1310, Make Hikvision or equivalent</p>	16
22	PTZ Camera	<ul style="list-style-type: none"> <input type="checkbox"/> Providing & fixing of 8MP camera <input type="checkbox"/> Sensor: 1/1.2" CMOS <input type="checkbox"/> Color: 0.002 Lux @ <input type="checkbox"/> Zoom: 	

		<ul style="list-style-type: none"> • 42x optical • 16x digital <p><input type="checkbox"/> Maximum Resolution: 3840 × 2160</p> <p><input type="checkbox"/> Zoom Speed: 7.5s</p> <p><input type="checkbox"/> Aperture: Max. F1.6</p> <p><input type="checkbox"/> Smart Supplement Light</p> <p><input type="checkbox"/> Supplement Light Range: up to 500 m</p> <p><input type="checkbox"/> Presets: 300</p> <p><input type="checkbox"/> Patrols: 8 (up to 32 presets for each patrol)</p> <p><input type="checkbox"/> Pattern Scans: 4</p> <p><input type="checkbox"/> Record Time: Over 10 minutes for each scan</p> <p><input type="checkbox"/> Modes:</p> <ul style="list-style-type: none"> • Day • Night • Auto • Scheduled-switch <p><input type="checkbox"/> Features:</p> <ul style="list-style-type: none"> • BLC (Backlight Compensation) • HLC (Highlight Compensation) • 3D DNR (Digital Noise Reduction) • WDR (Wide Dynamic Range): 140dB • Optical Defog • Built-in gyroscope to improve EIS (Electronic Image Stabilization) performance • Regional Exposure • Regional Focus <p><input type="checkbox"/> Storage: MicroSD Card up to 256GB</p> <p><input type="checkbox"/> Tracking:</p> <ul style="list-style-type: none"> • Manual tracking • Auto-tracking <p><input type="checkbox"/> Advanced Functions:</p> <ul style="list-style-type: none"> • Face Capture • Face Comparison • Road Traffic License Plate Number • Vehicle Model • Vehicle Color Recognition <p><input type="checkbox"/> Protection: IP67</p> <p><input type="checkbox"/> Model: DS-2DF8C842IXS-AEL(T5), Make Hikvision or equivalent</p>	4
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	<p>23</p>	<p>Providing & fixing of 6MP camera</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sensor: 1/1.8" CMOS <input type="checkbox"/> Maximum Resolution: 3200 × 1800 <input type="checkbox"/> Color: 0.0028 Lux @ <input type="checkbox"/> Lens: <ul style="list-style-type: none"> • Varifocal, motorized • 2.7 to 13.5 mm • Modes: Auto, Semi-auto, Manual <input type="checkbox"/> Aperture: F1.2 <input type="checkbox"/> IR and White Light <input type="checkbox"/> Supplement Light Range: Up to 40 m <input type="checkbox"/> Smart Supplement Light <input type="checkbox"/> Memory: <ul style="list-style-type: none"> • RAM: 40 MB • Smart RAM: 350 MB • eMMC: 2 GB <input type="checkbox"/> Features: <ul style="list-style-type: none"> • Target Cropping • Day, Night, Auto, Schedule modes • WDR (Wide Dynamic Range): 130 dB • BLC (Backlight Compensation) • HLC (Highlight Compensation) • 3D DNR (Digital Noise Reduction) • Defog <input type="checkbox"/> Network: 1 RJ45 (10 M/100 M) <input type="checkbox"/> Storage: MicroSD Card up to 512 GB <input type="checkbox"/> Audio: <ul style="list-style-type: none"> • 2 built-in microphones • 221 built-in speaker <input type="checkbox"/> Advanced Functions: <ul style="list-style-type: none"> • Face Capture 	<p>8</p>
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		<ul style="list-style-type: none"> • People Counting <input type="checkbox"/> Operating Temperature: -30°C to 60°C <input type="checkbox"/> Flashing Light: White Light <input type="checkbox"/> Protection: IK10 <p>Model: DS-2CD3766G2HT-LIZSU/SL, Make Hikvision or equivalent</p>	
	24	42U Rack Imported Size 600x1000 With 5 fix 1 sliding shelves and 4 fans Make Kotohira systems or equivalent	1
	25	15U Rack Imported Toten Size 600x600 Make toten or equivalent	2
	26	6U Rack Imported 600x600 Make Toten or equivalent	5