



REQUEST FOR QUOTATION

Date: 17 August 2023
RFQ No.: 100-23-03-607

Name of Company: _____
Address: _____
Name of Store/Shop: _____
Address: _____
TIN: _____
PhilGEPS Registration Number: _____



The City Government of Pasig, through the Bids and Awards Committee (BAC), intends to procure **Supply, Delivery, Configuration, Testing, Commissioning, Installation, Upgrading and Additional Closed-Circuit Television (CCTV) Surveillance System - Pamantasan ng Lungsod ng Pasig** with an Approved Budget for the Contract (ABC) of **Php 450,000.00**, in accordance with **Section 53.9** of the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184. Please quote your best offer for the item in the table below.


The Project shall be awarded as One Project having several items that shall be awarded as one contract. Quotations received exceeding each total Cost per Item and/or the total Approved Budget for the Contract shall be rejected.

Item No.	Item Description	Brand Name <small>(PLEASE DO NOT LEAVE BLANK)</small>	QTY	UOM	Approved Budget		Price Offer	
					Unit Cost	Total Cost	Unit cost	Total Cost
1	Supply, Delivery, Configuration, Testing, Commissioning, Installation, Upgrading / Additional Closed-Circuit Television (CCTV) Surveillance System-Pamantasan ng Lungsod ng Pasig, TECHNICAL SPECIFICATIONS: 1. Bullet IP Camera Video Imaging Sensor: 2-4MP Full HD Progressive Scan CMOS Sensor Size: 1 / 2.7 -1/2.8 mm Produce a resolution of 1920×1080 pixels at up to 30 fps with a 16:9 aspect ratio Lens Focal Length: Vari-focal, f3.3 - 12 mm / F1.6. up to 30 m IR range Dual stream Digital WDR (Wide Dynamic Range) 3D DNR (Digital Noise Reduction) Video Compression: H.264/H.265MPEG-4 SP/MJPEG Interface PoE (Power over Ethernet) Protection IP67		1	lot	450,000.00	450,000.00		

<p>2. Dome IP Camera Video Imaging Sensor: 2-4MP Full HD Progressive Scan CMOS 2-4 MP IR Network Dome Camera Sensor Size 1/2.7mm-1/2.8mm 1920 × 1080@30fps Iris: Fixed iris H.265+/H.265/H.264+/H.264 Black and White: 0 Lux (IR LED on). Digital WDR (Wide Dynamic Range) Video Compression: H.264/H.265MPEG-4 SP/MJPEG Focus: Manual focus / Auto Network PoE (Power over Ethernet) Protection IP67, IK10</p> <p>3. PTZ Camera 2MP-4MP Pan-Tilt-Zoom Camera 1/2.7 - 1/2.8" progressive scan CMOS Up to 1920 × 1080@30fps resolution 16:9 aspect ratio Offer built-in IR illumination to produce a clear monochrome image in zero lux conditions with 30m (100feet) irradiation distance Up to 25× optical zoom, 15× digital zoom 120dB wide dynamic range based on Enhanced Super Dynamic High light compensation (HLC) function Up to 100 m IR distance High light compensation (HLC) function Support H.264/H.265MPEG-4 SP/MJPEG video compression</p> <p>4. Video Recorder Manage up to 32 IP cameras or video encoders Must have at least 32 channels with 1080p real time view H.265+/H.265/H.264+/H.264 video formats Up to 2-ch @ 8MP or 4-ch @ 4MP or 8-ch @ 1080P decoding capacity Interface: Serial ATA (SATA) independent video output 4 HDDs for continuous video recording Up to 256 Mbps incoming bandwidth</p> <p>5. Storage 4TB HDD 4TB / SATA 6 Gb/s / Rotational Speed - Up to 32-ch IP camera inputs H.265+/H.265/H.264+/H.264 video formats Up to 2-ch @ 8MP or 4-ch @ 4MP or 8-ch @ 1080P decoding capacity 1 HDMI and 1 VGA interfaces: both interfaces support IntelliPower / Buffer Size - 64 MB / Form Factor - 3.5 Inch</p> <p>6. Storage</p>						
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<p>4TB HDD 4TB / SATA 6 Gb/s / Rotational Speed IntelliPower / Buffer Size - 64 MB / Form Factor - 3.5 Inch</p> <p>7. Network Switch 8 Port POE Gigabit Switch - 8 × Gigabit PoE ports, 1 × Gigabit RJ45 port 1 × Gigabit SFP fiber optical port Gigabit SFP fiber optical port IEEE 802.3at/af standard, IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, and IEEE 802.3z standard 6 KV surge protection for PoE ports PoE power management Gigabit network access Wire-speed forwarding and non-blocking design Store-and-forward switching Solid high-strength metal shell Reliable fan-free design</p> <p>8. Network Switch 16 Port POE Gigabit Switch - 16 × Gigabit PoE ports, 1 × Gigabit RJ45 port 2 × Gigabit SFP fiber optical port IEEE 802.3at/af standard, IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, and IEEE 802.3z standard 6 KV surge protection for PoE ports PoE power management Gigabit network access Wire-speed forwarding and non-blocking design Store-and-forward switching Solid high-strength metal shell</p> <p>9. Monitor with Bracket 55-inch-wide screen Smart TV 1080P Full HD 1920 x 1080 px Contrast Ratio: 3,000,000:1 Refresh Rate: 60Hz Response Time: 6ms Wireless Connectivity Web Browser Remote Control</p> <p>10. Media Converter 10/100/1000 Media Converter SM Feature Auto negotiation function allows UTP ports to auto select 10/100/1000M and Full Duplex or Half Duplex UTP port supports MDI / MDI-X auto crossover Supporting the max 1536-byte Ethernet packet Supporting flow control Adopting internal power supply IEEE802.3z/AB 1000Base-T, 1000Base-SX/LXMAC address table 4K Data Buffer: 256K Connector UTP: RJ-45, 10/100/1000MbpsFiber: SC,1000MbpsCable:</p>					
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<p>UTP: Cat 5e or Cat 6 (the max distance up to 100m) Fiber (multimode): 50/125, 62.5/125m (the max distance up to 550/224m) Fiber (Single mode): 8.3/125, 8.7/125, 9/125m (the max distance up to 100km) Flow Control Full Duplex: IEEE802.3x flow control Half Duplex: back pressure flow control Power Power: AC110-240V to DC5V; DC 48V to DC5V. Ambient temperature: 0 ~ 50?Storage temperature: -40 ~ 70 degree Humidity: 5% ~ 90%</p> <p>11. UTP Cable Cat6e UTP Cable Outdoor UTP CABLE CAT6E 305 METER Inner Conductor thickness: 0.5mm CCA Conductor size: 24AWG Conductor Material: CCA No. of Conductor: 4P Insulator Material: HDPE Jacket: PVC+HDPE Shield: Unshielded twisted pairs Filler: PE CROSS Insulation Thickness: 0.18mm Jacket Thickness: 0.65mm(±0.02mm) Stretching Resistance: (max)400N Impedance: 100±15%? at 1~250MHz Transmission Velocity: 66% Working Capacitance: 5.4nf/100m Insulation Resistance: 10000Mf@.km Operating Temperature: ~40 °C - +70 °C</p> <p>12. HDMI Cable HDMI Cable 50 Meters HDMI A Male to A Male Cable: Supports Ethernet, 3D, 4K video and Audio Return Channel (ARC) Connects Blu-ray players, Fire TV, TV, PS4, PS3, Xbox one, Xbox 360, computers and other HDMI-enabled devices to TVs, displays, A/V receivers and more Cable allows you to share an Internet connection among multiple devices</p> <p>13. CCTV Box CCTV Box White 100x100x70mm IP65 Waterproof Outdoor Electrical CCTV Enclosure Square Junction Box White ABS</p> <p>14. Four (4) Core FTTH Drop Cable SM Singlemode Fiber Optic Indoor and Outdoor Application</p> <p>15. Two (2) Port ODF Indoor FTTH Plastic Fibre Optical Cable Access Termination Box 2 Port SC Simplex/ LC Duplex Slots</p> <p>16. SC-SC Patchcord</p>					
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<p>Single mode 3M manufactured by using OFNR riser rate cable, OFNP Plenum rate, LSZH and customize cable. With 100% factory tested to ensure the perfect performance to meet TIA/EIA-568-B-2 ISO11801:2002 and EN 50173-1 standards. All assemblies are tested to meet Telcordia GR326-CORE.</p> <p>17. Royal Cord The conductor suitable for applications at temperature not exceed 60 OC and voltage not exceed 600 Volts. Bare, soft annealed copper per ASTM B-3, Bunched-Stranded per ASTM B172 & ASTM B 174 standard. (PNS 163) Lead Free Flame Retardant PVC per UL 62 standard</p> <p>18. TTC Cabinet Made of high quality electro-galvanized steel sheet of 1.2mm thickness Epoxy polyester coated in RAL7032 Standard mounting plate, orange painted, 2mm thickness Easily removable hinges for changing the door opening Direction Degree of protection: IP66, Nema 4 and 12 Complies with IEC60529</p> <p>19. 4 Gang Outlet 4 Gang Surface Outlet High Quality Standard Compatible with Flat Pin or Round Pin Outlet Rated Current: 10A Rated Voltage: 250V</p> <p>20. Circuit Breaker with Housing 20 AMP</p> <p>21. Omada Gigabit VPN Router Protocols IEEE 802.3, 802.3u, 802.3ab, IEEE 802.3x, IEEE 802.1q TCP/IP, DHCP, ICMP, NAT, PPPoE, NTP, HTTP, HTTPS, DNS, IPSec, PPTP, L2TP, OpenVPN, SNMP Interface 1 Fixed Gigabit WAN Port 1 Fixed Gigabit LAN Port 3 Changeable Gigabit WAN/LAN Ports Network 10BASE-T: UTP category 3, 4, 5 cable (Max 100m) EIA/TIA-568 100? STP (Max 100m) 100BASE-TX: UTP category 5, 5e cable (Max 100m) EIA/TIA-568 100? STP (Max 100m) 1000BASE-T: UTP category 5, 5e, 6 cable (Max 100m) DRAM 128 MB Functions ACL, Advanced Routing, Bandwidth Control, Load Balance, NAT, Security, Session</p>					
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<p>Limit, VPN, IPsec VPN, PPTP VPN, L2TP VPN and Open VPN Security Filtering, ARP Inspection, Attack Defense, Access Control and Web Authentication Management Omada App, Centralized Management, Cloud Access</p> <p>22. Rough-In Materials Protocols PVC Pipes, Mouldings and Connectors Consumable Materials Ties, Tapes and Clamps</p> <p>23. Labor Cost</p> <p>III. VIDEO RECORDING REQUIREMENTS: 1. Must be continuous recording. 2. Twenty (20) Days with 4 TB storage at 4th floor cameras setup and Fifteen (15) Days with 8 TB storage at Quadrangle, 1st, 2nd, 3rd floors 3. Viewing room will be placed in the PLP main lobby and Network Video Recorder will be placed in the server room.</p> <p>IV. INSTALLATION - The Contractor shall perform the installation, testing and commissioning of all equipment. All necessary tests, services and inspections to assure the system functions shall be checked and approved before the acceptance test. Consideration shall be given to the fact that installation or tests of other systems within the same building may be carried out during the same period. - The Contractor shall prepare and furnish fully dimensioned scaled drawings of builder's work arising from the installation of the equipment and system as well as for the equipment layout plans at various locations. - The work drawings shall show: - The general arrangement of cabinets and other facilities in the equipment areas as well as the operational area - The general arrangement of cabling within the system. - As soon as the commissioning of the equipment and system have been completed, the Contractor shall amend or correct all his Approved Drawings, if so required, furnish three (3) sets of prints of all "As-built" drawings showing the works as finally installed and commissioned. These drawings shall be furnished in hard binding cover/covers. - The "As-built" drawings shall show the general arrangement of all equipment's and auxiliaries, positions of all electrical outlets, fittings, switches, switch-boards and control panels, cables, pipes, ducts runs, markers and underground ducts, inter-wiriness, schedules, plant manufacturers name plates, models and type numbers and other information necessary to facilitate routine inspection and maintenance of installation. - Two (2) sets of the "As-built drawings" shall be delivered on CD ROM media, The Contractor shall</p>						
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<p>also provide licensed and updated software used in the preparation of the drawings.</p> <ul style="list-style-type: none"> - Outdoor cables shall be, in principle, installed underground through galvanized steel pipe or of EMT conduit. The cable conduits shall be sealed properly at both ends for protection of cables against rodents and inner edge at both ends shall be chamfered to avoid damage to cables during installation. - No cables shall be installed until the inside of the conduit pipes have been cleaned. - Roughing-ins including supports, boxes, fittings, cover plates, mounting brackets should be provided by the contractor. <p>V. PROVISION OF DOCUMENTATION</p> <p>A. General Requirements</p> <ul style="list-style-type: none"> - It is essential that documentation is of high standard, and that text is presented in a clear and correct language. Where possible, diagrams, pictures etc. shall be used as supplement to the text. - Three (3) sets of documents on each piece of equipment delivered shall be submitted for review and approval by PLP one (1) month before each equipment is ready for testing. ? All documents and manuals shall be delivered both in printed form and in computer readable files. The requirement for computer readable files is mandatory for software documentation. If the Contractor has used word processor for production of other equipment is ready for site testing. <p>B. Manual</p> <ul style="list-style-type: none"> - Manuals shall give a full overview of the integration of the various sub-systems. The manuals shall follow the outline structure given below, to the extent considered relevant by the Contractor and approved by PLP. - Documents and manuals shall give an outline of the complete system as delivered. It shall be adapted to the engineering and maintenance staff and described how the system is composed and functions. - System Operator's Manual - This manual shall give a detailed description of all system operation functions, including input actions and error response. <p>C. User's Manual</p> <ul style="list-style-type: none"> - This manual shall give a detailed description of all functions, seen from the user's point of view. <p>D. Equipment Manual</p> <ul style="list-style-type: none"> - The Equipment Manual shall give full details of sub-systems or units on the following subjects as a minimum; general description; complete block diagrams; complete logical and schematic diagrams; mechanical and electrical data; interface data; configurations and parameter/switch settings; test points and corresponding 					
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<p>waveforms.</p> <p>VI. TRAINING AND TECHNOLOGY TRANSFER</p> <ul style="list-style-type: none"> - The technical staff shall give the trainees detailed knowledge of the technical functions. On completion of the courses, the trainees shall be able to perform tests of the system, to maintain the system. - For the training purpose, preliminary handbooks may be used if the content is identical to the handbooks belonging to the system. If the training documents do not fully correspond with the system handbooks it shall be so stated in the proposal and the students shall be informed at each occasion, - The training material consisting of the documentation to be delivered with the final supply shall be of the format specified in the Documentation. - The Contractor shall supply each trainee with one complete set of relevant training documentation (both hard copies and electronic copies in CD ROM) before the start of each course. - All test equipment used under training shall be of the same kind as contracts. Maintenance of the training and the test equipment is the Contractor's responsibility. - Operator's training shall not be less than two (2) training days and with certificates to be issued after the completion of training. - Maintenance Training shall not be less than two (2) training days with certificates to be issued after training. <p>VII. INSPECTION AND TESTING</p> <ul style="list-style-type: none"> - Before the final acceptance of the work, the Contractor shall test the system to demonstrate compliance with contract requirements. - The whole system shall be subjected to complete functional and operational tests. - When these tests have been completed and corrections made as necessary, the Contractor shall submit a signed and dated certificate with a request for formal inspection and test. <p>VIII. PROJECT TIMEFRAME</p> <p>The contractor shall deliver the installation of the Video Surveillance system within Thirty (30) calendar days from receipt of Notice to Proceed.</p> <p>IX. WARRANTY</p> <ul style="list-style-type: none"> - Upon completion and before final acceptance of the work, the contractor/supplier shall furnish PLP a written guarantee, stating that all works executed under this project are free from material defects and workmanship; and - The guarantee for supplied equipment shall have a period of at least one (1) year inclusive labor, transportation and expenses that are needed for the repair/replacement of defective equipment. - Provision of maintenance and technical support 					
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onsite on the workmanship warranty for a period of two (2) years from the date of acceptance for the passive devices.							
Note: Other terms and conditions are stipulated in the attached Terms of Reference, if any.	Total	450,000.00					
DELIVERY TERM: Please refer to the Terms of Reference.							

**Indicate the BRAND NAME or MANUFACTURER NAME and the specific MODEL to be offered or attach a BROCHURE for the offered item; items including but not limited to clothing, vehicle, equipment, devices, electronics, machines, drugs, medicines, medical supplies must be branded or at the very least, manufacturer shall be indicated.*

Submit this Quotation (Accomplished and duly signed by the Owner or the respective Authorized Representative indicated in the Secretary's Certificate/Special Power of Attorney) not later than the closing date specified in the Bid Notice Abstract posted in PhilGEPS website along with the following documents:

- **Mayor's/Business Permit** (or a recently expired Mayor's/Business permit together with the official receipt as proof that the prospective bidder has applied for renewal within the period prescribed by the concerned local government unit subject to submission of the Mayor's Permit before the award of contract). The nature of business as stated in the Mayor's/Business Permit should at the very least be similar or related to the project to be bid.
- **PhilGEPS Registration Number**
- **Income Tax Return** - Latest Income or Business Tax Returns filed and paid through the BIR Electronic Filing and Payment System (EFPS).

In accordance with Revenue Regulation No. 3-2005, the above-mentioned tax returns shall refer to the following:

1. Latest Income Tax Return (ITR) - For participants already with an Annual ITR, latest ITR shall refer to the ITR for the preceding Tax Year be it on a calendar or fiscal year. For new establishments which, therefore, have no annual ITR yet, it shall refer to the most recent quarter's ITR.
 2. Latest Business Tax Return - refers to the Value Added Tax (VAT) or Percentage Tax returns covering the previous six (6) months.
- Accomplished and notarized **Omnibus Sworn Statement** ([https://www.gppb.gov.ph/assets/forms/Omnibus%20Sworn%20Statement\(Revised\).docx](https://www.gppb.gov.ph/assets/forms/Omnibus%20Sworn%20Statement(Revised).docx))
 - **Proof of Authorization: Secretary's Certificate** if corporation, or **Special Power of Attorney**, if individual.

ADDITIONAL REQUIREMENTS:



For Procurement of Drugs and Medicines:


Documents from the Food and Drug Administration (FDA):

- a. Certificate of Product Registration;
- b. Certificate of Good Manufacturing Practice;
- c. License to Operate;
- d. Batch Release Certificate (*for vaccines, toxoids and immunoglobulins only*) [to be submitted upon delivery]; and
- e. Certificate of Analysis (*for anesthesia and antibiotics*) [to be submitted upon delivery].

If the Supplier is not the Manufacturer, a certification from the Manufacturer that the supplier is an authorized distributor/dealer of the products/items.

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PAMANTASAN NG LUNGSOD NG PASIG
Alcalde Jose St. Kapasigan, Pasig City
Tel No. 86281013 loc. 101



Management Information System Office

PROJECT NAME: Supply, Delivery, Configuration, Testing, Commissioning, Installation, Upgrading / Additional Closed-Circuit Television (CCTV) Surveillance System – Pamantasan ng Lungsod ng Pasig (PLP)

TO: All Prospective Bidders
Members of the Bids and Awards Committee
Other Concerned

TERMS OF REFERENCE

I. Total Number of Network Nodes

Below is the total number of required CCTV Cameras as distributed (2nd flr, 5th to 8th flr.) of PLP main building:

Location	Number of CCTV Camera
2ndFloor (GSO-Storage) PLP Main bldg.	3
5th Floor PLP Main Building	5
6 th Floor PLP Main Building	6
7 th Floor PLP Main Building	6
8 th Floor (Auditorium & Gym) PLP bldg.	7
Total	27

II. GENERAL SCOPE OF WORK AND DELIVERABLES

A. Scope of Work

1. The work includes the furnishings of materials, consumable materials, facilities, civil works, labor, tools, equipment, test instruments, apparatus, specialties and other services necessary to complete the installation and commissioning of the Intelligent Video Solution system at Pamantasan ng Lungsod ng Pasig which includes all peripherals equipment system necessary for the completion of the project.
2. Contractor shall be responsible for any additional electrical power requirements with the coordination and approval of PLP Building Administrator.
3. The Contractor will have access to the site five (5) days a week (Mon. to Fri.) starting the date of receipt of the notice to proceed, however, all works should be coordinated with the Building Administrator and MISO on a weekly basis and can be revoked or suspended at any time in case of urgent operational need.
4. The contractor shall submit a weekly progress report.
5. The contractor shall submit the following documentation to PLP upon completion of the project.
 - ✓ System brochures/documentation for systems operational & Maintenance/User Manuals-one [1] original and three [3] copies.
 - ✓ Detailed equipment list stating the location, make model, serial numbers, firmware among others.
 - ✓ Result of system test as per manufacturer standards
 - ✓ System and Workmanship Warranty/Guarantee
 - ✓ One [1] year maintenance proposals
 - ✓ Certification of Parts availability and support for One [1] year
 - ✓ Training Certification of attendees for Operations and Maintenance of the system.
 - ✓ For the horizontal cables it should run at cable trays with hanger and support and the vertical cables will use PVC pipes and plastic mouldings.

B. Deliverables:

2nd floor to 8th floor CCTV requirements – the materials listed below are the minimum requirements for the cabling installation:

	Item Description	Quantity
1.	2MP Bullet IP CCTV Camera	20 pcs.
2.	2MP Dome IP CCTV Camera	5 pcs.
3.	2MP PTZ Camera	2 pcs.
	32 CH Network Video Recorder	1 unit
5.	4TB HDD	2 units
6.	4 Port POE Gigabit Switch	2 units
7.	8 Port POE Gigabit Switch	2 units
8.	16 Port POE Gigabit Switch	1 unit
9.	55" Monitor with Bracket	1 unit
10.	10/100/1000 Media Converter SM	16 pieces
11.	Cat6e UTP Cable Outdoor	5 rolls
12.	HDMI Cable 50 Meters	1 pc.
13.	CCTV Box White	24 pcs.

14.	4 Core FTTH Drop Cable SM	200 mtr.
15.	2 Port ODF	6 pcs.
16.	SC-SC Patchcord 3M	6 pcs.

17.	Royal Cord 16/2	1 Roll
18.	TTC Cabinet	2 pcs.
19.	4 Gang Outlet	2 pcs.
20.	20AMP Circuit Breaker with Housing	2 pcs.
21.	Omada Gigabit VPN Router	2 units
22.	Roughing Ins Materials (PVC Pipes, Mouldings, Connectors) and Consumable Materials (Ties, Tapes, Clamps)	1 Lot
23.	Labor Cost	1 Lot

TECHNICAL SPECIFICATIONS:

1. Bullet IP Camera	
Video	2.0 MP IR Network

	1/2.8" progressive scan CMOS
	1920 × 1080@30fps
	2.8 mm/4 mm fixed lens
	up to 30 m IR range
	Dual stream
	Digital WDR (Wide Dynamic Range)
	3D DNR (Digital Noise Reduction)
Video	H.265+/H.265/H.264+/H.264
Interface	PoE (Power over Ethernet)
Protection	IP67

2. Dome IP Camera	
Video	2MP Dome IP CCTV Camera
	2.0 MP IR Network Dome Camera
	Must be 1/2.8" progressive scan CMOS
	1920 × 1080@30fps
	2.8 mm/4 mm fixed lens
	H.265+/H.265/H.264+/H.264
	Dual stream
	Digital WDR (Wide Dynamic Range)
Video	3D DNR (Digital Noise Reduction)
	Up to 30 m IR range
Network	PoE (Power over Ethernet)

Protection	IP67, IK10
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3. PTZ Camera	
	2MP PTZ Camera
	1/2.8" progressive scan CMOS
	Up to 1920 × 1080@30fps resolution
	Excellent low-light performance with powered-by-DarkFighter technology
	25× optical zoom, 16× digital zoom
	WDR, HLC, BLC, 3D DNR, Defog, EIS, Regional
	Exposure, Regional Focus
	Up to 100 m IR distance
	12 VDC & PoE (802.3 at, class4)
	Support H.265+/H.265 video compression

4. Video Recorder	
	32 CH Network Video Recorder
	Up to 32-ch IP camera inputs
	H.265+/H.265/H.264+/H.264 video formats

	Up to 2-ch @ 8MP or 4-ch @ 4MP or 8-ch @ 1080P
	decoding capacity
	1 HDMI and 1 VGA interfaces: both interfaces support
	independent video output
	4 HDDs for continuous video recording
	Up to 256 Mbps incoming bandwidth

5. Storage	
	4TB HDD 4TB / SATA 6 Gb/s / Rotational Speed -
	Up to 32-ch IP camera inputs
	H.265+/H.265/H.264+/H.264 video formats
	Up to 2-ch @ 8MP or 4-ch @ 4MP or 8-ch @ 1080P
	decoding capacity
	1 HDMI and 1 VGA interfaces: both interfaces support

	IntelliPower / Buffer Size - 64 MB / Form Factor - 3.5 Inch
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6. Storage	
	4TB HDD 4TB / SATA 6 Gb/s / Rotational Speed
	IntelliPower / Buffer Size - 64 MB / Form Factor - 3.5 Inch

7. Network Switch	
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	8 Port POE Gigabit Switch -
	8 × Gigabit PoE ports, 1 × Gigabit RJ45 port
	1 × Gigabit SFP fiber optical port
	Gigabit SFP fiber optical port
	IEEE 802.3at/af standard, IEEE 802.3, IEEE 802.3u,
	IEEE 802.3x, IEEE 802.3ab, and IEEE 802.3z standard
	6 KV surge protection for PoE ports
	PoE power management
	Gigabit network access
	Wire-speed forwarding and non-blocking design
	Store-and-forward switching
	Solid high-strength metal shell
	Reliable fan-free design

8. Network Switch	
	16 Port POE Gigabit Switch -
	16 × Gigabit PoE ports, 1 × Gigabit RJ45 port
	2 × Gigabit SFP fiber optical port
	IEEE 802.3at/af standard, IEEE 802.3, IEEE 802.3u,
	IEEE 802.3x, IEEE 802.3ab, and IEEE 802.3z standard
	6 KV surge protection for PoE ports
	PoE power management
	Gigabit network access

	Wire-speed forwarding and non-blocking design
	Store-and-forward switching
	Solid high-strength metal shell

9. Monitor with Bracket	
	55-inch wide screen
	Smart TV 1080P
	Full HD 1920 x 1080 px
	Contrast Ratio: 3,000,000:1
	Refresh Rate: 60Hz
	Response Time: 6ms
	Wireless Connectivity
	Web Browser
	Remote Control

10. Media Converter	
	10/100/1000 Media Converter SM Feature
	Auto negotiation function allows UTP ports to auto select 10/100/1000M and Full Duplex or Half Duplex
	UTP port supports MDI / MDI-X auto crossover
	Supporting the max 1536-byte Ethernet packet Supporting flow control Adopting internal power supply
	IEEE802.3z/AB 1000Base-T, 1000Base-SX/LXMAC address table
	4K Data Buffer: 256K Connector

	UTP: RJ-45, 10/100/1000Mbps Fiber: SC, 1000Mbps Cable:
	UTP: Cat 5e or Cat 6 (the max distance up to 100m)
	Fiber (multimode): 50/125, 62.5/125 μ m (the max distance up to 550/224m) Fiber
	(Single mode): 8.3/125, 8.7/125, 9/125 μ m (the max distance up to 100km) Flow Control
	Full Duplex: IEEE802.3x flow control
	Half Duplex: back pressure flow control Power
	Power: AC110-240V to DC5V; DC 48V to DC5V.
	Ambient temperature: 0 ~ 50 $^{\circ}$ C Storage temperature: -40 ~ 70 $^{\circ}$ C Humidity: 5% ~ 90%

11. UTP Cable	
	Cat6e UTP Cable Outdoor
	UTP CABLE CAT6E 305 METER
	Inner Conductor thickness: 0.5mm CCA
	Conductor size: 24AWG
	Conductor Material: CCA
	No. of Conductor: 4P
	Insulator Material: HDPE
	Jacket: PVC+HDPE
	Shield: Unshielded twisted pairs
	Filler: PE CROSS

	Insulation Thickness: 0.18mm
	Jacket Thickness: 0.65mm(±0.02mm)
	Stretching Resistance: (max)400N
	Impedance: 100±15%Ω at 1~250MHz
	Transmission Velocity: 66%
	Working Capacitance: 5.4nf/100m
	Insulation Resistance: 10000Mf@.km
	Operating Temperature: ~40 °C – +70 °C

12. HDMI Cable	
	HDMI Cable 50 Meters
	HDMI A Male to A Male Cable:
	Supports Ethernet, 3D, 4K video and Audio Return Channel (ARC) Connects Blu-ray players, Fire TV, TV, PS4, PS3, XBox one, Xbox 360, computers and other HDMI-enabled devices to TVs, displays, A/V
	receivers and more Cable allows you to share an Internet connection among multiple devices

13. CCTV Box	
	CCTV Box White
	100x100x70mm IP65 Waterproof Outdoor Electrical CCTV Enclosure Square Junction Box White ABS

14. Four (4) Core FTTH Drop Cable SM	
	Singlemode Fiber Optic
	Indoor and Outdoor Application

15. Two (2) Port ODF	
	Indoor FTTH Plastic Fibre Optical Cable Access
	Termination Box 2 Port SC Simplex/ LC Duplex Slots

16. SC-SC Patchcord	
	Single mode 3M manufactured by using OFNR riser rate cable, OFNP Plenum rate, LSZH and customize cable.
	With 100% factory tested to ensure the perfect performance to meet TIA/EIA-568-B-2
	ISO11801:2002 and EN 50173-1 standards.
	All assemblies are tested to meet Telcordia GR326-CORE.

17. Royal Cord	
	The conductor suitable for applications at temperature not exceed 60 OC and voltage not exceed 600 Volts.
	Bare, soft annealed copper per ASTM B-3,
	Bunched-Stranded per ASTM B172 & ASTM B 174 standard. (PNS 163) Lead Free Flame Retardant PVC per UL 62 standard

18. TTC Cabinet	
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	Made of high quality electro-galvanized steel sheet of 1.2mm thickness
	Epoxy polyester coated in RAL7032
	Standard mounting plate, orange painted, 2mm thickness
	Easily removable hinges for changing the door opening Direction
	Degree of protection: IP66, Nema 4 and 12
	Complies with IEC60529

19. 4 Gang Outlet	
	4 Gang Surface Outlet
	High Quality Standard
	Compatible with Flat Pin or Round Pin Outlet
	Rated Current: 10A
	Rated Voltage: 250V

20. Circuit Breaker with Housing	
	20 AMP

21. Omada Gigabit VPN Router	
Protocols	IEEE 802.3, 802.3u, 802.3ab, IEEE 802.3x, IEEE 802.1q TCP/IP, DHCP, ICMP, NAT, PPPoE, NTP, HTTP, HTTPS, DNS, IPSec, PPTP, L2TP, OpenVPN, SNMP

Interface	1 Fixed Gigabit WAN Port 1 Fixed Gigabit LAN Port 3 Changeable Gigabit WAN/LAN Ports
Network	10BASE-T: UTP category 3, 4, 5 cable (Max 100m) EIA/TIA-568 100Ω STP (Max 100m) 100BASE-TX: UTP category 5, 5e cable (Max 100m) EIA/TIA-568 100Ω STP (Max 100m) 1000BASE-T: UTP category 5, 5e, 6 cable (Max 100m)
DRAM	128 MB
Functions	ACL, Advanced Routing, Bandwidth Control, Load Balance, NAT, Security, Session Limit, VPN, IPsec VPN, PPTP VPN, L2TP VPN and Open VPN
Security	Filtering, ARP Inspection, Attack Defense, Access Control and Web Authentication
Management	Omada App, Centralized Management, Cloud Access

22. Rough-In Materials	
Protocols	PVC Pipes, Mouldings and Connectors
	Consumable Materials Ties, Tapes and Clamps

23. Labor Cost

III. VIDEO RECORDING REQUIREMENTS:

1. Must be continuous recording.
2. Twenty (20) Days with 4 TB storage at 4th floor cameras setup and Fifteen (15) Days with 8 TB storage at Quadrangle, 1st, 2nd, 3rd floors
3. Viewing room will be placed in the PLP main lobby and Network Video Recorder will be placed in the server room.

IV. INSTALLATION

- ✓ The Contractor shall perform the installation, testing and commissioning of all equipment. All necessary tests, services and inspections to assure the system functions shall be checked and approved before the acceptance test. Consideration shall be given to the fact that installation or tests of other systems within the same building may be carried out during the same period.
- ✓ The Contractor shall prepare and furnish fully dimensioned scaled drawings of builder's work arising from the installation of the equipment and system as well as for the equipment layout plans at various locations.
- ✓ The work drawings shall show:
 - The general arrangement of cabinets and other facilities in the equipment areas as well as the operational area
 - The general arrangement of cabling within the system.
- ✓ As soon as the commissioning of the equipment and system have been completed, the Contractor shall amend or correct all his Approved Drawings, if so required, furnish three (3) sets of prints of all "As-built" drawings showing the works as finally installed and commissioned. These drawings shall be furnished in hard binding cover/covers.
- ✓ The "As-built" drawings shall show the general arrangement of all equipment's and auxiliaries, positions of all electrical outlets, fittings, switches, switch-boards and control panels, cables, pipes, ducts runs, markers and underground ducts, inter-wiriness, schedules, plant manufacturers name plates, models and type numbers and other information necessary to facilitate routine inspection and maintenance of installation.
- ✓ Two (2) sets of the "As-built drawings" shall be delivered on CD ROM media, The Contractor shall also provide licensed and updated software used in the preparation of the drawings.
- ✓ Outdoor cables shall be, in principle, installed underground through galvanized steel pipe or of EMT conduit. The cable conduits shall be sealed properly at both ends for protection of cables against rodents and inner edge at both ends shall be chamfered to avoid damage to cables during installation.

- ✓ No cables shall be installed until the inside of the conduit pipes have been cleaned.
- ✓ Roughing-ins including supports, boxes, fittings, cover plates, mounting brackets should be provided by the contractor.

V. PROVISION OF DOCUMENTATION

A. General Requirements

- ✓ It is essential that documentation is of high standard, and that text is presented in a clear and correct language. Where possible, diagrams, pictures etc. shall be used as supplement to the text.
- ✓ Three (3) sets of documents on each piece of equipment delivered shall be submitted for review and approval by PLP one (1) month before each equipment is ready for testing.
- ✓ All documents and manuals shall be delivered both in printed form and in computer readable files. The requirement for computer readable files is mandatory for software documentation. If the Contractor has used word processor for production of other equipment is ready for site testing.

B. Manual

- ✓ Manuals shall give a full overview of the integration of the various sub-systems. The manuals shall follow the outline structure given below, to the extent considered relevant by the Contractor and approved by PLP.
- ✓ Documents and manuals shall give an outline of the complete system as delivered. It shall be adapted to the engineering and maintenance staff and described how the system is composed and functions.
- ✓ System Operator's Manual
- ✓ This manual shall give a detailed description of all system operation functions, including input actions and error response.

C. User's Manual

- a. This manual shall give a detailed description of all functions, seen from the user's point of view.

D. Equipment Manual

- a. The Equipment Manual shall give full details of sub-systems or units on the following subjects as a minimum; general description; complete block diagrams; complete logical and schematic diagrams; mechanical and electrical data; interface data; configurations and parameter/ switch settings; test points and corresponding waveforms.

VI. TRAINING AND TECHNOLOGY TRANSFER

- ✓ The technical staff shall give the trainees detailed knowledge of the technical functions. On completion of the courses, the trainees shall be able to perform tests of the system, to maintain the system.
- ✓ For the training purpose, preliminary handbooks may be used if the content is identical to the handbooks belonging to the system. If the training documents do not fully correspond with the system handbooks it shall be so stated in the proposal and the students shall be informed at each occasion,
- ✓ The training material consisting of the documentation to be delivered with the final supply shall be of the format specified in the Documentation.
- ✓ The Contractor shall supply each trainee with one complete set of relevant training documentation (both hard copies and electronic copies in CD ROM) before the start of each course.
- ✓ All test equipment used under training shall be of the same kind as contracts. Maintenance of the training and the test equipment is the Contractor's responsibility.
- ✓ Operator's training shall not be less than two (2) training days and with certificates to be issued after the completion of training.
- ✓ Maintenance Training shall not be less than two (2) training days with certificates to be issued after training.

VII. INSPECTION AND TESTING

- ✓ Before the final acceptance of the work, the Contractor shall test the system to demonstrate compliance with contract requirements.
- ✓ The whole system shall be subjected to complete functional and operational tests.
- ✓ When these tests have been completed and corrections made as necessary, the Contractor shall submit a signed and dated certificate with a request for formal inspection and test.

VIII. PROJECT TIMEFRAME

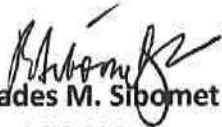
The contractor shall deliver the installation of the Video Surveillance system within Sixty (60) calendar days from receipt of Notice to Proceed.

IX. WARRANTY

- ✓ Upon completion and before final acceptance of the work, the contractor/supplier shall furnish PLP a written guarantee, stating that all works executed under this project are free from material defects and workmanship; and
- ✓ The guarantee for supplied equipment shall have a period of at least **one (1) year** inclusive labor, transportation and expenses that are needed for the repair/replacement of defective equipment.
- ✓ Provision of maintenance and technical support onsite on the **workmanship warranty for a period of two (2) years from the date of acceptance for the passive devices.**

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