



PROCUREMENT FOR THE DEVELOPMENT OF FACIAL RECOGNITION FOR CONTACTLESS ATTENDANCE TRACKING WITH MOBILE AND EVACUATION APPLICATION AND VISITOR MANAGEMENT SYSTEM

**BID DOCS
BAC-PGCS-018-2021**

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Glossary of Acronyms, Terms, and Abbreviations

ABC – Approved Budget for the Contract.

BAC – Bids and Awards Committee.

Bid – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

Bidder – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

Bidding Documents – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

Consulting Services – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

CDA - Cooperative Development Authority.

Contract – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

CIF – Cost Insurance and Freight.

CIP – Carriage and Insurance Paid.

CPI – Consumer Price Index.

DDP – Refers to the quoted price of the Goods, which means “delivered duty paid.”

DTI – Department of Trade and Industry.

EXW – Ex works.

FCA – “Free Carrier” shipping point.

FOB – “Free on Board” shipping point.

Foreign-funded Procurement or Foreign-Assisted Project– Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

Framework Agreement – Refers to a written agreement between a procuring entity and a supplier or service provider that identifies the terms and conditions, under which specific purchases, otherwise known as “Call-Offs,” are made for the duration of the agreement. It is in the nature of an option contract between the procuring entity and the bidder(s) granting the procuring entity the option to either place an order for any of the goods or services identified in the Framework Agreement List or not buy at all, within a minimum period of one (1) year to a maximum period of three (3) years. (GPPB Resolution No. 27-2019)

GFI – Government Financial Institution.

GOCC – Government-owned and/or –controlled corporation.

Goods – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

GOP – Government of the Philippines.

GPPB – Government Procurement Policy Board.

INCOTERMS – International Commercial Terms.

Infrastructure Projects – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

Supplier – refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.

UN – United Nations.



INVITATION TO BID

FOR THE PROCUREMENT FOR THE DEVELOPMENT OF FACIAL RECOGNITION FOR CONTACTLESS ATTENDANCE TRACKING WITH MOBILE AND EVACUATION APPLICATION AND VISITOR MANAGEMENT SYSTEM

The Philippine Ports Authority, through the Corporate Budget of the Authority for CY 2021, intends to apply the sum of **P118,000,000.00** being the Approved Budget for the Contract (ABC) to payments under the contract for the Procurement for the Development of Facial Recognition for Contactless Attendance Tracking with Mobile and Evacuation Application and Visitor Management System (BAC PGCS-018-2021). Bids received in excess of the ABC shall be automatically rejected at bid opening.

The Philippine Ports Authority now invites bids for the above Procurement Project. Completion of the Work is required within **One Hundred Twenty (120) calendar days** from the receipt by the successful bidder of the Notice to Proceed. Bidders should have completed, within five (5) years from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).

Bidding will be conducted through open competitive bidding procedures using a non-discretionary "pass/fail" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184. Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.

Prospective Bidders may obtain further information from the Philippine Ports Authority Bids and Awards Committee (BAC) and inspect the Bidding Documents at the address given below during 8:00 a.m. to 5:00 p.m., Monday to Friday.

A complete set of Bidding Documents may be acquired by interested Bidders on **18 October 2021** from the given address and website(s) below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **Fifty Thousand (P50,000.00) Pesos**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees in person.

The Philippine Ports Authority's Bids and Awards Committee will hold a Pre-Bid Conference on **26 October 2021 at 10:00 a.m.** at the PPA Function Room, 7th Floor, PPA Bldg., Bonifacio Drive, South Harbor, Port Area, Manila, and/or through video conferencing or webcasting via zoom, which shall be open to all prospective bidders.

Bids must be duly received by the BAC Secretariat through manual submission at the office address indicated below on or before **09 November 2021 at 9:00 a.m.** Late bids shall not be accepted.

All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 14.

Bid opening shall be on **09 November 2021 at 10:00 a.m.** at the 7th Floor, PPA Building, A. Bonifacio Drive, South Harbor, Port Area, Manila. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

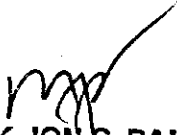
The Philippine Ports Authority reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

For further information, please refer to:

BAC Secretariat, Philippine Ports Authority
5th Floor, PPA Bldg., A. Bonifacio Drive,
South Harbor, Port Area, Manila
Telephone Nos. 527-47-35
527-83-56 to 83 loc. 539

PPA Website: www.dps.com.ph

PhilGEPS Website: www.philgeps.gov.ph



MARK JON S. PALOMAR
Chairperson, PPA Head Office Bids and Awards
Committee for the Procurement of Goods and
Consultancy Services (HO-BAC-PGCS)

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, PHILIPPINE PORTS AUTHORITY wishes to receive Bids for the **Procurement for the Development of Facial Recognition for Contactless Attendance Tracking with Mobile and Evacuation Application and Visitor Management System**, with identification number **BAC-PGCS-018-2021**.

The Procurement Project (referred to herein as “Project”) is composed of a single lot, the details of which are described in Section VII (Technical Specifications).

2. Funding Information

2.1. The Philippine Ports Authority through its corporate budget for the Calendar Year (CY) 2021 in the amount of **ONE HUNDRED EIGHTEEN MILLION PESOS (Php118,000,000.00)**.

2.2. The source of funding is the Corporate Budget of the PHILIPPINE PORTS AUTHORITY.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “T” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

- 5.2 Foreign ownership limited to those allowed under the rules may participate in this Project.
- 5.3 Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA's CPI, must be at least equivalent to at least fifty percent (50%) of the ABC.
- 5.4 The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

7. Subcontracts

- 7.1 The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project.

The Procuring Entity has prescribed that:

Subcontracting is not allowed.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address at the PPA Function Room, 7th Floor, PPA Building, Bonifacio Drive, South Harbor, Port Area, Manila and/or through videoconferencing/webcasting as indicated in paragraph 6 of the **IB**.

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents comprising the Bid: Eligibility and Technical Components

- 10.1 The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 10.2 The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed within five (5) years prior to the deadline for the submission and receipt of bids.

- 10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

11. Documents comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.
- 11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Bid Prices

- 12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:
- a. For Goods offered from within the Procuring Entity's country:
- i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);
 - ii. The cost of all customs duties and sales and other taxes already paid or payable;
 - iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and
 - iv. The price of other (incidental) services, if any, listed in e.
- b. For Goods offered from abroad:
- i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination

in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.

- ii. The price of other (incidental) services, if any, as listed in **Section VII (Technical Specifications)**.

13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in Philippine Pesos.

14. Bid Security

14.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

14.2. The Bid and bid security shall be valid for One Hundred Twenty (120) calendar days from the date of the opening of bids. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. Sealing and Marking of Bids

Each bidder shall submit one copy of the first and second components of the Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

16. Deadline for Submission of Bids

16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

17. Opening and Preliminary Examination of Bids

- 17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

18. Domestic Preference

- 18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*," using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 15 shall be submitted for each lot or item separately.
- 19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.
- 19.4. The Project shall be awarded as one Project having several items that shall be awarded as one contract.
- 19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

20. Post-Qualification

- 20.1. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.

21. Signing of the Contract

- 21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

Bid Data Sheet

ITB Clause	
5.3	<p>For this purpose, contracts similar to the Project shall be:</p> <ul style="list-style-type: none"> a. contract for the Supply and delivery of any Information Communication Technology equipment and systems such as mini pc, thin client, zero client, facial recognition and smart security systems. b. completed within five (5) years prior to the deadline for the submission and receipt of bids.
7.1	Subcontracting is not allowed.
12	The price of the Goods shall be quoted DDP <i>[Manila]</i> or the applicable International Commercial Terms (INCOTERMS) for this Project.
14.1	<p>The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts:</p> <ul style="list-style-type: none"> a. The amount of not less than Two Million Three Hundred Sixty Thousand Pesos (Php2,360,000.00), if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b. The amount of not less than Five Million Nine Hundred Thousand Pesos (Php5,900,000.00) if bid security is in Surety Bond.
15	<p>Each Bidder shall submit ONE (1) original and SIX (6) copies of its Technical and Financial Components of its Bid in two (2) separate sealed bid envelopes, which should be submitted simultaneously. Each of the bid documents should be individually sealed.</p> <p>All bid documents shall be book-bound with hard cover and properly labelled with index tabs. Failure to comply with the said requirements is a ground for automatic disqualification of the bidder.</p>
19.3	Partial bid is not allowed. The goods are grouped in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
20.1	No additional requirements.
21.1	No additional requirements.

Section IV. General Conditions of Contract

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC)**.

2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex “D” of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the SCC.

3. Performance Security

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184.

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the SCC, **Section IV (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

5. Warranty

- 6.1. In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.
- 6.2. The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

6. Liability of the Supplier

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

Section V. Special Conditions of Contract

Special Conditions of Contract

GCC Clause	
1	<p>Delivery and Documents –</p> <p>For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:</p> <p><i>[For Goods supplied from abroad, state:]</i> “The delivery terms applicable to the Contract are DDP delivered <i>[indicate place of destination]</i>. In accordance with INCOTERMS.”</p> <p><i>For Goods supplied from within the Philippines, state:]</i> “The delivery terms applicable to this Contract are delivered <i>[indicate place of destination]</i>. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.”</p> <p>Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements).</p> <p>For purposes of this Clause the Procuring Entity’s Representatives at the Project Site are the Philippine Ports Authority – Head Office and the Port Managers of the following Port Management Offices:</p> <ol style="list-style-type: none"> 1 PMO EASTERN LEYTE/SAMAR <ol style="list-style-type: none"> 1.1 TMO-Liloan 1.2 TMO-Calbayog (PTB) 1.3 TMO-Catbalogan 1.4 TMO-Borongan 1.5 TMO-Guiuan 1.6 TMO-San Isidro 1.7 TMO-San Isidro - Port of San Jose 2 PMO BICOL <ol style="list-style-type: none"> 2.1 TMO Bulan 2.2 TMO Camarines 2.3 TMO Matnog/PTB Matnog 2.4 TMO Pioduran/PTB Pioduran 2.5 TMO Tabaco/PTB Tabaco 2.6 TMO Catanduanes 2.7 PTB Catanduanes 3 PMO BOHOL <ol style="list-style-type: none"> 3.1 TMO-Jagna 3.2 TMO-Ubay

	3.3 TMO-Talibon
	3.4 TMO-Getafe
	3.5 TMO-Tubigon
	3.6 TMO-Loon
4	PMO MASBATE
	4.1 TMO MASBATE
5	PMO PALAWAN
	5.1 Palawan
	5.2 ELNIDO
	5.3 Brooke's Point
	5.4 Coron
6	PMO WESTERN LEYTE/BILIRAN
	6.1 PMO WLB TMO Isabel
	6.2 PMO WLB TMO Palompon
	6.3 PMO WLB TMO Naval
	6.4 TMO Hilongos
	6.5 PMO WLB TMO Maasin
	6.6 PMO WLB TMO Baybay
7	PMO SURIGAO
	7.1 TMO Lipata
	7.2 TMO Siargao
	7.3 TMO Tandag
	7.4 TMO Dinagat
8	PMO ZAMBOANGA
	8.1 TMO-SIBUGAY
	8.2 TMO-ISABELA
	8.3 TMO-ZAMBOANGA DEL SUR
9	PMO MISAMIS OCCIDENTAL/OZAMIZ
	9.1 TMO Plaridel
10	PMO MISAMIS ORIENTAL/CDO
	10.1 TMO Balingoan
	10.2 TMO Benoni
11	PMO NCR NORTH
	11.1 TMO VITAS
	PTB North Harbor
12	PMO BATANGAS
	12.1 TMO Bauan
	12.2 TMO Romblon
13	PMO NCR SOUTH
	13.1 TMO Pasig

	14 PMO NEGROS ORIENTAL/SIQUIJOR 14.1 TMO TANDAYAG 14.2 TMO SIQUIJOR, SIQUIJOR 14.3 TMO LARENA, SIQUIJOR 15 PMO NEGROS OCCIDENTAL/BACOLOD 15.1 TMO - Malalag 15.2 SAN CARLOS 15.3 HINOBA-AN 15.4 PULUPANDAN 15.5 DANA O 15.6 BREDCO 16 PMO MARQUEZ 16.1 TMO Tablas 16.2 TMO Balanacan 16.3 TMO Sta Cruz 17 PMO NORTHERN LUZON 17.1 TMO Pangasinan 17.2 TMO Zambales 17.3 TMO Batanes 17.4 TMO Cagayan/ Isabela/ Ilocos 18 PMO DAVAO 18.1 TMO - Babak 18.2 TMO – Mati 19 PMO MINDORO 19.1 TMO Roxas 19.2 TMO San Jose 19.3 TMO Roxas, Bulalacao Port 19.4 TMO Lubang 19.5 TMO Abra De Ilog 20 PMO PANAY/GUIMARAS 20.1 Port of Lipata - Culasi, Antique 20.2 Port of Dumaguait - Aklan 20.3 Port of Estancia - Iloilo 20.4 Port of Culasi - Roxas City, Capiz 20.5 Port of Jordan – Guimaras 21 PMO AGUSAN 21.1 TMO Masao & 21.2 TMO Butuan 22 PMO SOCSARGEN 22.1 TMO SULTAN KUDARAT
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22.2 TMO SARANGANI
22.3 TMO COTABATO

23 PMO LANA DEL NORTE/ILIGAN
23.1 TMO Tubod

24 PMO BATAAN/AURORA
24.1 TMO- Capinpin
24.2 TMO- Casiguran
24.3 TMO- Dingalan

25 PMO ZAMBOANGA DEL NORTE
25.1 TMO-SINDANGAN
25.2 TMO-LILOY

(Total of 109 PMO/TMO/PTB: 25 PMOs, 84 TMOs)

Incidental Services –

The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements:

1. performance or supervision of on-site assembly and/or start-up of the supplied Goods;
2. furnishing of tools required for assembly and/or maintenance of the supplied Goods;
3. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; and
4. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract.

The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

Spare Parts –

The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- a. such spare parts as the Procuring Entity may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under this Contract; and
- b. in the event of termination of production of the spare parts:

- i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and
- ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested.

The spare parts and other components required are listed in **Section VI (Schedule of Requirements)** and the cost thereof are included in the contract price.

The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for a period of five (5) years from the purchase of the subject units.

Spare parts or components shall be supplied as promptly as possible, but in any case, within seven (7) days of placing the order.

Packaging –

The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity.

The outer packaging must be clearly marked on at least four (4) sides as follows:

Name of the Procuring Entity

Name of the Supplier

Contract Description

Final Destination

Gross weight

Any special lifting instructions

Any special handling instructions

Any relevant HAZCHEM classifications

A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.

Transportation –

	<p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.</p> <p>Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price.</p> <p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure.</p> <p>The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination.</p> <p>Intellectual Property Rights –</p> <p>The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.</p>										
2.2	<p>The terms of payment shall be as follows:</p> <p>Payment, which shall be made in Philippine Currency, shall be per services delivered according to the following schedule:</p> <table><tr><th>Deliverables</th><th>Percentage</th></tr><tr><td>1. Inception Report/Requirements Specification</td><td>10% of the contract price</td></tr><tr><td>2. Delivery of Hardware Components</td><td>60% of the contract price</td></tr><tr><td>3. User Acceptance Training and Testing</td><td>20% of the contract price</td></tr><tr><td>4. Full deployment to production</td><td>10% of the contract price</td></tr></table>	Deliverables	Percentage	1. Inception Report/Requirements Specification	10% of the contract price	2. Delivery of Hardware Components	60% of the contract price	3. User Acceptance Training and Testing	20% of the contract price	4. Full deployment to production	10% of the contract price
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4. Full deployment to production	10% of the contract price										
4	<p>Burn-in tests will be conducted on the servers. It will be a series of hardware intensive tests for a period of 12 to 24 hours or more, any component that is defective would show up during the burn-in period.</p>										

Section VI. Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item Number	Description¹	Quantity	Total	Delivered, Weeks/Months
	Procurement for the Development of Facial Recognition for Contactless Attendance Tracking with Mobile and Evacuation Application and Visitor Management System, subject to the following schedule:			Within one hundred twenty (120) calendar days from receipt by the winning bidder of the Notice to Proceed (NTP).
	1. Project Management Plan / Inception / Requirements Specification			NTP + 15 Days
	2. Delivery of Hardware Components / Equipment / Trainings Materials			NTP + 60 days
	3. User Acceptance Training and Testing			NTP + 90 days
	4. Full deployment to production (Connected to HRIS)			NTP + 100 days

¹ Subject to the Technical Specifications and Delivery Schedule under Item Nos. 7 and 4, respectively, of the Terms of Reference

Section VII. Technical Specifications

Technical Specifications

Item	Specification	Statement of Compliance
		<p><i>[Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false]</i></p>

		<i>either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.]</i>
	<p>DELIVERY</p> <p>The winning bidder must supply, deliver, install, test and commission all the equipment in the period of one hundred and twenty (120) calendar days from receipt of the Notice to Proceed (NTP) at the Philippine Ports Authority, Bonifacio Drive, South Harbor, Manila. Delivery of equipment intended for the PMOs must be the responsibility of the winning bidder. This includes delivery to site, site inspection and preparation, setup, installation, and configuration of all hardware (host server or virtual machines) and software components, as well as project management.</p> <p style="text-align: center;">NAME OF PMO/TMO</p> <p>1 PMO EASTERN LEYTE/SAMAR</p> <p>1.1 TMO-Liloan 1.2 TMO-Calbayog (PTB) 1.3 TMO-Catbalogan 1.4 TMO-Borongan 1.5 TMO-Guiuan 1.6 TMO-San Isidro 1.7 TMO-San Isidro - Port of San Jose</p> <p>2 PMO BICOL</p> <p>2.1 TMO Bulan 2.2 TMO Camarines 2.3 TMO Matnog/PTB Matnog 2.4 TMO Pioduran/PTB Pioduran 2.5 TMO Tabaco/PTB Tabaco 2.6 TMO Catanduanes 2.7 PTB Catanduanes</p> <p>3 PMO BOHOL</p> <p>3.1 TMO-Jagna 3.2 TMO-Ubay</p>	

	3.3 TMO-Talibon 3.4 TMO-Getafe 3.5 TMO-Tubigon 3.6 TMO-Loon	
4	PMO MASBATE	
	4.1 TMO MASBATE	
5	PMO PALAWAN	
	5.1 Palawan	
	5.2 EL NIDO	
	5.3 Brooke's Point	
	5.4 Coron	
6	PMO WESTERN LEYTE/BILIRAN	
	6.1 PMO WLB TMO Isabel	
	6.2 PMO WLB TMO Palompon	
	6.3 PMO WLB TMO Naval	
	6.4 TMO Hilongos	
	6.5 PMO WLB TMO Maasin	
	6.6 PMO WLB TMO Baybay	
7	PMO SURIGAO	
	7.1 TMO Lipata	
	7.2 TMO Siargao	
	7.3 TMO Tandag	
	7.4 TMO Dinagat	
8	PMO ZAMBOANGA	
	8.1 TMO-SIBUGAY	
	8.2 TMO-ISABELA	
	8.3 TMO-ZAMBOANGA DEL SUR	
9	PMO MISAMIS OCCIDENTAL/OZAMIZ	
	9.1 TMO Plaridel	
10	PMO MISAMIS ORIENTAL/CDO	
	10.1 TMO Balingoan	
	10.2 TMO Benoni	
11	PMO NCR NORTH	
	11.1 TMO VITAS	
	11.2 PTB North Harbor	
12	PMO BATANGAS	

	12.1	TMO Bauan	
	12.2	TMO Romblon	
13		PMO NCR SOUTH	
	13.1	TMO Pasig	
14		PMO NEGROS ORIENTAL/SIQUIJOR	
	14.1	TMO TANDAYAG	
	14.2	TMO SIQUIJOR, SIQUIJOR	
	14.3	TMO LARENA, SIQUIJOR	
15		PMO NEGROS OCCIDENTAL/BACOLOD	
	15.1	TMO - Malalag	
	15.2	SAN CARLOS	
	15.3	HINOBA-AN	
	15.4	PULUPANDAN	
	15.5	DANAO	
	15.6	BREDCO	
16		PMO MARQUEZ	
	16.1	TMO Tablas	
	16.2	TMO Balanacan	
	16.3	TMO Sta Cruz	
17		PMO NORTHERN LUZON	
	17.1	TMO Pangasinan	
	17.2	TMO Zambales	
	17.3	TMO Batanes	
	17.4	TMO Cagayan/ Isabela/ Ilocos	
18		PMO DAVAO	
	18.1	TMO - Babak	
	18.2	TMO – Mati	
19		PMO MINDORO	
	19.1	TMO Roxas	
	19.2	TMO San Jose	
	19.3	TMO Roxas, Bulalacao Port	
	19.4	TMO Lubang	
	19.5	TMO Abra De Ilog	
20		PMO PANAY/GUIMARAS	
	20.1	Port of Lipata - Culasi, Antique	
	20.2	Port of Dumaguait - Aklan	
	20.3	Port of Estancia - Iloilo	
	20.4	Port of Culasi - Roxas City, Capiz	
	20.5	Port of Jordan – Guimaras	

	<p>21 PMO AGUSAN</p> <p>21.1 TMO Masao 21.2 TMO Butuan</p> <p>22 PMO SOCSARGEN</p> <p>22.1 TMO SULTAN KUDARAT 22.2 TMO SARANGANI 22.3 TMO COTABATO</p> <p>23 PMO LANAo DEL NORTE/ILIGAN</p> <p>23.1 TMO Tubod</p> <p>24 PMO BATAAN/AURORA</p> <p>24.1 TMO- Capinpin 24.2 TMO- Casiguran 24.3 TMO- Dingalan</p> <p>25 PMO ZAMBOANGA DEL NORTE</p> <p>25.1 TMO-SINDANGAN 25.2 TMO-LILOY</p> <p>Total of 109 PMOs/TMOs/PTBs – 25 PMOs: 84 TMOs</p>	
	<p>TRAINING</p> <p>Training of designated Users and Stakeholders In the concepts / usage / administration / monitoring / maintenance of the Supply, Delivery, Installation and Commissioning of Facial Recognition For Contactless Attendance Tracking With Mobile And Evacuation Application And Visitor Management System, its system/ administration, basic hardware installation and maintenance.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> a) Training syllabi and materials; b) Installation, Troubleshooting, Process & Procedure Manual; c) 50 hours of training for identified Users and Stakeholders personnel shall be conducted <i>via</i> Zoom, or any other similar online training platform, within the period of sixty (60) and ninety (90) days from receipt of the Notice to Proceed (NTP); d) Training Certificates; e) Course and Instructors evaluations made by the participants; and f) Helpdesk Portal where Self-help user guides shall also be made available and accessible. 	
	<p>DOCUMENTATION</p>	

	<p>SOFTWARE/HARDWARE REQUIREMENTS</p> <p>A. System Documentation: Provide documentation for the purpose of operation and maintenance of all hardware and software delivered. This documentation Includes all hardware and software manuals, and complete documentation of all installation, customization and performance tuning steps undertaken.</p> <p>B. Submit the following documents:</p> <ul style="list-style-type: none"> i. Project Implementation Plan which contains detailed timelines in the form of work breakdown structure (User Acceptance Test Plan, Configuration Management Plan, Service Level Agreement and Non-Disclosure Agreement). ii. Standard Operating Procedures (SOPs) and policies relevant to the project maintenance and operations. iii. Complete documentation of software and licenses, user manuals and other technical materials included in the whole package of the equipment and devices. iv. Drawings/Plans - as-built drawing duly signed and sealed by the Electronics Engineer (ECE). v. Records - must be hard bound marked as "Operations and Maintenance Manual". It must be created by the installation contractor and turn-over at the completion of works. vi. Monthly Preventive Maintenance and Reports – Preventive maintenance and status check of equipment and submission of monthly operation reports. Included in the reports are Health Status of equipment, Intrusion Prevention Reports, Downtime Logs, etc. vii. Configuration and System Backup wherein there should be a twice a month backup of equipment and system configuration. <table border="1" data-bbox="300 1198 1061 1594"> <thead> <tr> <th>Deliverables / Milestone</th><th>Schedule</th><th>Payment</th></tr> </thead> <tbody> <tr> <td>Project Management Plan / Inception / Requirements Specification</td><td>NTP + 15 Days</td><td>10%</td></tr> <tr> <td>Delivery of Hardware Components / Equipment / Trainings Materials</td><td>NTP + 60 days</td><td>60%</td></tr> <tr> <td>User Acceptance Training and Testing</td><td>NTP + 90 days</td><td>20%</td></tr> <tr> <td>Full deployment to production (Connected to HRIS)</td><td>NTP + 100 days</td><td>10%</td></tr> </tbody> </table> <p>C. Provide technical training as specified in this TOR.</p>	Deliverables / Milestone	Schedule	Payment	Project Management Plan / Inception / Requirements Specification	NTP + 15 Days	10%	Delivery of Hardware Components / Equipment / Trainings Materials	NTP + 60 days	60%	User Acceptance Training and Testing	NTP + 90 days	20%	Full deployment to production (Connected to HRIS)	NTP + 100 days	10%	
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	<p>TECHNICAL SPECIFICATIONS</p>																
	<p>SOFTWARE REQUIREMENTS</p> <p>A. System Specification:</p> <ul style="list-style-type: none"> 1. Facial Recognition Manager 																

	<ul style="list-style-type: none"> a. The system shall capture, in real-time, the clock-in and clock-out of employees using the Facial Recognition Camera with a 1:1 two factor authentication using RFID. In addition, a notification must be sent to the employee on the mobile app to confirm the clock-in and clock-out. b. The system shall save the captured photo for auditing of time logs. c. The system must be capable to send notifications with the mobile app to all employees who did not clock-in and/or clock-out using the facial recognition camera and remind them of the incomplete in/out logs within that day. d. The system shall send a notification to employees who have no clock-in by 9 am and no clock-out by 8 pm every work day. <p>2. Emergency and Evacuation App</p> <ul style="list-style-type: none"> a. The system administrator shall have a facility to trigger an emergency alarm to be sent to the mobile app to notify all employees. b. The system administrator shall have the facility to reset the alarm. c. The application should have a real-time headcount of employees identified by facial recognition cameras, unaccounted employees, and employees who needs assistance. d. Employees can tag themselves within the app if they were able to evacuate, declare safe, or need help/assistance. e. Administrator can tag employees who have evacuated safe or need help/assistance. f. Mobile app should have a facility to upload and view evacuation maps of the building. <p>3. Visitation Web and mobile app</p> <ul style="list-style-type: none"> a. The mobile app should have a facility where authorized employees or persons to be visited can book an appointment, set the number of attendees from visitors, agenda, and send a notification and link <i>via</i> email and text message to the visitor. b. Send visitors and hosts a friendly email reminder prior their visit c. The Web app should have a facility wherein the visitor can pre-register and acknowledge a booked appointment. 	
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- d. The visitor should be able to print the one-time QR Code pass of the approved appointment.
- e. The one-time QR Code pass should be validated at the reception, an equivalent gate-pass should be printed with the name of the visitor, area of the meeting, and person to be visited.
- f. A Visitor's RFID allowing access to the floor where the meeting is to be held must be generated.
- g. The mobile app should have a facility to start and end the meeting.
- h. The app should have a facility to check if the visitor left the premise.

4. System Integration

- a. The System must be capable to link seamlessly with the existing HRIS for the list of employees and other data to minimize the re-encoding of data.
- b. The System must be capable to seamlessly link with the existing Timekeeping and HRIS for attendance processing.
- c. Data transmitted from and to existing HRIS shall be encrypted using Advanced Encryption Standard (AES) and the decryption should be done in the server-side ensuring the security of data during transmission.
- d. Facial Recognition System as an input to HRIS with two factor authentication using RFID – Timekeeping for the processing of Daily Time Report (DTR) and other timekeeping related reports such as Official Business, Travel Order, etc. and must be able to generate a Certificate of Appearance on demand by the employees.

5. Report Generation

- a. Generates List of Employees with Time-In
- b. Generates List of Employees with Time-In/Out
- c. Generates List of Employees who are Absent (No Time-In/Out)
- d. Generates List of Employees who left and did not return during office hours.
- e. Generates List of Unidentified Persons with Matching Time Logs
- f. Summary of Employees' Detected Logs
- g. Automatic determination of employees for the generation of Certificate of Appearance
- h. Daily/Weekly/Monthly Appointment Report
- h. Summary of Visitors
- i. Summary of Cancelled Appointments

	<div>6. ID Maker app and ID Database</div> <div><div>a. Provide ID System</div><div>b. Provide facility to Print all RFID</div></div> <div>7. Backup and Restore</div> <div><div>a. Provide facilities for the automatic backup system and restore.</div></div>																																													
	<div>HARDWARE REQUIREMENTS</div> <div>Item 1: Facial Recognition Camera (232 Units)</div> <div>The Facial Recognition Camera must have the following minimum specifications:</div> <table><tr><td>Camera</td><td></td></tr><tr><td>Image Sensor</td><td>1/1.8" 4Megapixel progressive CMOS</td></tr><tr><td>Max. Resolution</td><td>2688 (H) × 1520 (V)</td></tr><tr><td>ROM</td><td>16 GB</td></tr><tr><td>RAM</td><td>2 GB</td></tr><tr><td>Scanning System</td><td>Progressive</td></tr><tr><td>Electronic Shutter Speed</td><td>Auto/Manual 1/3 s–1/100000 s</td></tr><tr><td>Min. Illumination</td><td>0.001 Lux@F1.2 (Color, 30IRE) 0.0002 Lux@F1.2 (B/W, 30IRE) 0 Lux (Illuminator on)</td></tr><tr><td>S/N Ratio</td><td>> 56 dB</td></tr><tr><td>Illumination Distance</td><td>40 m (131.23 ft)</td></tr><tr><td>Illuminator On/Off Control</td><td>Auto</td></tr><tr><td>Illuminator Number</td><td>3 (IR LED)</td></tr><tr><td>Pan/Tilt/Rotation Range</td><td>Pan: 0°–355° Tilt: 0°–80° Rotation: 0°–355°</td></tr><tr><td>Lens</td><td></td></tr><tr><td>Lens Type</td><td>Motorized vari-focal</td></tr><tr><td>Mount Type</td><td>Module interface</td></tr><tr><td>Focal Length</td><td>2.7mm–12 mm</td></tr><tr><td>Max. Aperture</td><td>F1.2</td></tr><tr><td>Field of View</td><td>Horizontal: 114°(W)–47°(T) Vertical: 59°(W)–27°(T) Diagonal: 141° (W–55°(T)</td></tr><tr><td>Iris Type</td><td>Auto; Precise iris control</td></tr><tr><td>Close Focus Distance</td><td>W: 1 m (3.28 ft) T: 2.5 m (8.20 ft)</td></tr><tr><td>Lens</td><td>Detect, Observe, Recognize, Identify</td></tr></table>	Camera		Image Sensor	1/1.8" 4Megapixel progressive CMOS	Max. Resolution	2688 (H) × 1520 (V)	ROM	16 GB	RAM	2 GB	Scanning System	Progressive	Electronic Shutter Speed	Auto/Manual 1/3 s–1/100000 s	Min. Illumination	0.001 Lux@F1.2 (Color, 30IRE) 0.0002 Lux@F1.2 (B/W, 30IRE) 0 Lux (Illuminator on)	S/N Ratio	> 56 dB	Illumination Distance	40 m (131.23 ft)	Illuminator On/Off Control	Auto	Illuminator Number	3 (IR LED)	Pan/Tilt/Rotation Range	Pan: 0°–355° Tilt: 0°–80° Rotation: 0°–355°	Lens		Lens Type	Motorized vari-focal	Mount Type	Module interface	Focal Length	2.7mm–12 mm	Max. Aperture	F1.2	Field of View	Horizontal: 114°(W)–47°(T) Vertical: 59°(W)–27°(T) Diagonal: 141° (W–55°(T)	Iris Type	Auto; Precise iris control	Close Focus Distance	W: 1 m (3.28 ft) T: 2.5 m (8.20 ft)	Lens	Detect, Observe, Recognize, Identify	
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DORI Distance (W)	60.1 m (D), 24 m (O), 12 m I, 6 m (I)
Smart event	
IVS	Abandoned object, moving object
Professional, intelligent	
IVS (Perimeter Protection)	Tripwire, intrusion, fast moving (the three functions support the classification and accurate detection of vehicle and human); parking detection, loitering detection, and people gathering.
Face Recognition	Face recognition, track, priority, snapshot, face enhancement, face exposure, face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, sadness, disgust, fear, surprise, calm, happiness and confusion), mask, beard Face matting setting: face, single inch photo Two snapshot strategies: priority snapshot, recognition Face angle filter Priority time setting Management of 5 group face libraries Single person register and person register in batch Face recognition and similarity setting Max supports face contrast in face library with 200,000 faces ; Support Duration Optimal, Non-living Filtering
Video Metadata	Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.
People Counting	Support tripwire number counting, people counting in area, and displaying and outputting yearly/monthly/daily reports. Support queue management, and displaying and outputting monthly/daily reports. Support 4 tripwire rules configuration, people counting in 4 areas, and 4 queue management functions
Intelligent Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos
Video	
Video Compression	H.265, H.264, H.264H, H.264B, MJPEG (only supported by sub stream)
Smart Codec	Smart H.265+ / Smart H.264+
Video Frame Rate	Main Stream: 2688 × 1520 (1–50/60 fps) Sub stream: 704 × 576 (1–25fps); 704 × 480 (1–30fps) Third stream: 1920 × 1080 (1–25/30 fps) Fourth stream: 1920 × 1080 (1–25/30 fps) Fifth stream: 704 × 576 (1–25fps); 704 × 480 (1–30fps)
Stream Capability	5 streams
Resolution	4M (2688 × 1520), 3M (2304 × 1296), 1080p (1920 × 1080), 1.3M (1280 × 960), 720p (1280 × 720), D1 (704 × 576/704 × 480), VGA (640 × 480), CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR

	Video Bit Rate	H.264: 32–10240 kbps
		H.265: 12–10240 kbps
	Day/Night	Auto (ICR)/Color/B/W
	BLC	Yes
	HLC	Yes
	WDR	140dB
	Scene Self-adaptation	Yes
	White Balance	Auto/natural/streetlamp/outdoor/manual/regional custom
	Gain Control	Auto/ Manual
	Noise Reduction	3D NR
	Motion Detection	OFF/ON (4 areas, rectangular)
	Region of Interest(RoI)	Yes (4 areas)
	Electronic Image Stabilization(EIS)	Yes
	Smart Illumination	Yes
	Defog	Yes
	Image Rotation	0°/90°/180°/270° (Supports 90°/270° with 1080p resolution or below.)
	Mirror	Yes
	Privacy Masking	4 areas
	Audio	
	Audio Compression	G.711a; G.711Mu; G.726; G.723
	Alarm Event	Alarm Event such as No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; scene changing; audio detection; defocus detection; external alarm; Face Recognition; people counting in area; stay alarm; people counting; people counting exception detection; safety exception, Queue Management
	Network	
	Network	RJ-45 (10/100/1000 Base-T)
	Cyber Security	Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade
	Protocol	IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; 802.1x; SNMP; Bonjour

Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; Genetec; P2P; RTMP
User/Host	20 (TOTAL BANDWIDTH: 80M.)
Storage	FTP; Micro SD card (256 G); NAS; SFTP
Browser	Internet Explorer 9 or later; Chrome: Chrome 42 and later Firefox: Firefox 48.0.2 and later
Management Software	Smart PSS, DSS, DMSS
Mobile Phone	iOS, Android
Certification	
Certifications	CE-LVD: EN62368-1,EN60950-22 (optional) CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07,UL 50E NEMA Type 4X (optional)

Port	
RS-485	1 (Bit rate: 1200 bps~115200 bps)
Audio Input	Audio Interface: 1/1 channel In/ Out
Audio Output	
Alarm Input	3 channel In: 5mA 5V DC
Alarm Output	2 channel Out: 1000mA 30V DC/500mA 50V AC
Power	
Power Supply	12V DC/24V AC/PoE+ (802.3at); ePoE
Power Consumption	Basic power consumption: 5.4W (12V DC); 5W(24V AC); 4.9W (PoE) Max. power consumption (Max. stream + intelligent function + IR LED + focus): 16.7W (12V DC);15.7W(24V AC); 15.6W (PoE) Heat power consumption: 3.3W (12V DC);5.5W(24V AC); 5.5W (PoE)
Environment	
Operating Conditions	-40°C to +60°C (-40°F to +140°F)/Less than 95% RH
Storage conditions	-40°C to +60°C -40°F to +140°F)
Protection Grade	IP67, IK10, Anti-Corrosion Protection: NEMA 4X (optional)
Structure	
Casing	Metal + Plastic

Item 2: Facial Recognition Manager	
The Facial Recognition Manager must have the following minimum specifications:	

	High Scalability	High access performance of a single server and easy upgrading via distributed hardware extension and cascading
	High Reliability	Up to 300,000 Face database by single device
		Automatic load balancing to the appropriate data node when add devices
	High Compatibility	All devices included: network camera, network speed dome, decoder, NVR, DVR, Face Recognition, ANPR, etc.
	Features	
	Easy Expansion	· Easy performance upgrade via distributed hardware extension.
		· Easy multi-site management through cascading.
		· Easy function upgrade via add-ons.
	High Reliability	· Back up and restore database.
		· Support hot standby for master server.
		· Support N + M redundancy .
	High Compatibility	· Connect third-party devices via standard ONVIF protocol.
		· SDK for third-party platform or mobile development.
	Device Management	· Device initialization
		· Add devices via auto search, IP, Domain, IP segment, auto register (for 3G, 4G, DHCP device).
		· Add third-party devices via ONVIF protocol.
		· Modify device's IP address.
		· Modify the added devices' password.
	Storage	· Support edge storage and central storage.
		· Central storage: Extend storage via iSCSI.
		· Server disk configuration for picture storage involving face detection and recognition, alarms, and object detection.
	Face Database	· Face database management.
		· Add faces one by one.
		· Import faces in batches.
		· Set person type.
		· Send face database to face recognition devices, and configure similarity.
	System Maintenance	
	Backup and Restore	· Automatically back up system database (daily, week, month).
		· Manually back up system database.
		· Restore system database from server or local file.
	System Dashboard	· Overview and detail system information.
		· Running status: CPU, storage, bandwidth.
		· Service, device and user online information, device health report.

		<ul style="list-style-type: none"> · Event information statistics: Total events and processed. · Source information: Video channel, alarm channel. 	
	System Configuration	<ul style="list-style-type: none"> · Configure the data retention duration of logs, alarms, heatmap, face recognition records, and people counting data. · Time synchronization: Timed synchronization and device connection synchronization. · Email server configuration. 	
	Cascading Management	<ul style="list-style-type: none"> · Add subordinate site for cascading. · Superior level can view the live video and video record of subordinate site. 	
	Face Recognition	<ul style="list-style-type: none"> · Automatically capture faces in the camera field of view. · Extract face attribute information from captured face. · Real-time face comparison. · Quickly register face to face database. · Search for face via face attribute. · Search for face via uploading a face image. · Search for comparison records. · Generate daily, weekly, monthly attribute report based on the gender and age. 	
	Performance Specification		
	Video Device and Channel	5000	
	Auto-Register	1000	
	ANPR Device	1000 Channels	
	Face Recognition Channel	1000 Channels	
	Object Detection Channel	2000 Channels	
	Heatmap Channel	500 Channels	
	People Counting Channel	500 Channels	
	Media Transmission per Server		
	Video Input per Server	600 Mbps	
	Video Output per Server	600 Mbps	
	Playback, Storage and Download		
	Download Playback Bandwidth per Server	100 Mbps	
	Maximum Capacity per Storage Server	15PB	
	Download Task	5	
	Maximum Record Plan	100	
	Alarm		

Alarm Rules	2000
Map	
Hierarchy	8 Hierarchies
Submap	32 per Hierarchy
Spots per Map (Camera Alarm Input and cet.)	300 (GIS and Raster)
Face Recognition	
Face Database	50 face databases with 300,000 face images in total
Import Face image per Time	10,000
ANPR	
Vehicle Restricted List	1000
Number of Sections	1000
Data Info	
Alarm Records	500,000,000
Captured Face Pictures Record	500,000,000
License Plate Recognition Record	500,000,000
Violation Record	500,000,000
People Counting Records	50,000,000
Heatmap Records	50,000,000
Log	500,000,000
Face Capture Ability	
Capture Ability	100,000/ day
Appearance and Dimensions	
Appearance	1U rack
Dimensions	728.4mm×482.0mm×42.8mm (28.68"×18.98"×1.69") (L×W×H, suspension loop included)
System	
Main Processor	Two 8- core Intel Xeon 3106 processors
Operating System	LINUX
Controller	Single Controller
RAM	64 GB DDR4, up to 512 GB, ECC memory
Power Redundancy	1+1 redundant power
RAID Controller	H330
Port	
Network	8 Gigabits ports
Serial Port	1
VGA	2

USB	3 USB3.0 ports
Hard Drive	
Quantity of Hard Drive	Standard: Two 3.5- inch SATA 1 TB enterprise-level HDDs; two 2.5- inch SATA 480GB data center- level SSDs
General	
Power Supply	550W high efficiency platinum 110V- 240 V AC
Power Consumption	Less than 450 W in full load
Operating Temperature	0°C to +40°C (+32°F to +104°F)
Operating Humidity	10%–80% (no condensation)
Storage Temperature	–40°C to +65°C (–40°F to +149°F)
Storage Humidity	5%–95% (no condensation)
Operating Altitude	–60 m to 5000 m (–196.9 ft to 6561.7 ft)
Net Weight	16.7 kg (36.8 lb)
Gross Weight	19.9 kg (43.9 lb)

Item 3: STORAGE

Facial Recognition Manager

The Facial Recognition Manager must have the following minimum specifications:

Functions	
Modular Design	Brand new design for HDD carrier, ensures good cooling, stability and safety for hard disks.
Storage Extension Capacity	Local extension, connect to ESS extension storage by mini SAS interface. Extension storage support redundant power and RAID.
RAID 0/1/5/6/10/50/60	Offering a balance between storage performance, storage capacity, and data integrity, the NVR features fruitfull RAID 0/1/5/6/10/50/60 for faster and safer recording.
N+M Hot Standby	The highly reliable redundancy N+M Hot Standby design provides a secure, failover technique ensuring immediate backup. In the event of a system failure, the slave instantly takes over the master ensuring no data is lost.
ANR (Automatic Network Replenishment Technology)	Video record in SD card in IP cameras when the network breaks down, and after the network recovered, the video will be transferred to NVR and the n recorded in it.
Technical Specification	
System	
Main Processor	64-bit high-performance Intel processor
Controller	Single controller

Memory	4GB by default
Operating System	Embedded LINUX
User Interface	Web
Working Mode	
Video Stream Mode	320-channel (640Mbps) incoming and recording, 160-channel (320Mbps) forwarding, 32-channel (64Mbps) playback
IP SAN Mode	Storage bandwidth ≤ 2.7 Gbps Write-through: 320Mbps; Write-back: 480Mbps
Storage	
HDD Amount	9 HDDs, Up to 10TB capacity for each HDD SATA HDD composite connection
miniSAS	1 mini SAS ports, for storage extension
HDD Installation	Additional HDD bracket, HDD hot-swap, HDD online replacement
HDD Mode	Single, RAID 0/1/5/6/10/50/60(Enterprise-level HDDs are recommended), JBOD, hotspare
Storage Management	
HDD Manager	Non-working HDD hibernation to guarantee sound ventilation, reduce power consumption and enhance HDD life span HDD bad track mapping to enhance HDD life span
RAID Rebuild	Dynamically adjust RAID rebuild speed to guarantee system load balance
Logic Volume Manager	Support iSCSI volume management, NAS(SMB/NFS/ FTP) volume management
Snapshot	Support snapshot function, create user volume to back data.
Extract Frame	Support extracting P frame function. Customized extracting period and frame rate setup.
Cluster Service	N+M cluster service
ANR	After disconnection, system can download the record file from the SD card on the network camera to maintain the full record file.
Shortcut RAID Creation	Click one button to create RAID conveniently.
Playback and Backup	
Search Mode	Time/Date, Channel, Alarm, MD and Exact Search (accurate to second)
Playback Function	Play, Pause, Stop, Fast play, Slow play, Full screen, Backup selection, Digital zoom
Backup Mode	USB Device/Network/ eSATA Device
Recording	
IP Camera Input	320 Channel

Record Rate	640Mbps
Record Mode	Manual, Schedule (Regular, Continuous), Motion Detection, Alarm
Record Interval	1 ~ 120 min (default 60 min)
	Pre-record 1 ~ 30 sec, Post-record 10 ~ 300 sec.
	1 frame storage by period.
Auxiliary Interface	
USB	1 USB 3.0
Multiplex Interface	1 USB 2.0 & eSATA multiplex interface
RS232	1 Port, for PC communication and Keyboard
Network	
Interface	2 data RJ-45 ports (10/100/1000Mbps)
Network Mode	Multi-address, Fault-tolerance, Load balance, Link aggregation
Network Function	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTP, RTCP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, iSCSI, SMB, NFS, FTP, Alarm Server, IP Search (Support IP camera, DVR, NVS, etc.)
Max. User Access	128 users
Smart Phone	iPhone, iPad, Android
Interoperability	ONVIF 2.4, CGI Conformant
Electrical	
Power Supply	AC100V ~ 240V, 47 ~ 63 Hz, 1 + 1 Redundant power
Power Consumption	< 200W (With HDD)
Environmental	
Working Conditions	0°C ~ +40°C (+32°F ~ +104°F), 10 % ~ 80% RH
Storage Conditions	-20°C ~ +70°C (-4°F ~ +158°F), 5% ~ 90% RH
Working Altitude	-60m ~ 3000m
Construction	
Chassis	1.2mm extra-thickness hot-dip galvanized steel.
	High accuracy aluminum alloy slider.
	Self-developed patent removable HDD bracket.
Dimensions (W x D x H)	3U, 484.6mm x 473.6mm x 133.2mm ; (19.1" x 18.6" x 5.2")
Net Weight	11kg (24.3 lb) (without HDD)
Gross Weight	16kg (35.3 lb)
Certifications	
CE	EN55022, EN55024, EN50130-4, EN60950-1
FCC	Part 15 Subpart B, ANSI C63.4-2009
UL	UL 60950-1 and CAN/CSA C22.2 No.60950-1

Item 4: POE Switch (114 Units)

The POE Switch must have the following minimum specification:

System Overview	<p>The 9-Port Unmanaged Desktop Switch with 8-Port PoE is a type of layer 2 commercial switch, which supports long distance Ethernet power supply.</p> <p>Must provide eight 10/100 Mbps Ethernet ports and one 10/100/1000 Mbps uplink port and must be equipped with two types of transmission modes (Default/Extend), which are controlled by DIP switch.</p> <p>Must have a solid and sealed all-metal case design, low power consumption, fan less and efficient surface heat dissipation make it work in the environment from -10°C to 55°C.</p>
FUNCTION	
Intelligent PoE	<p>Adopt PoE power consumption management strategy, and supply power to important ports first. When total power consumption exceeds the set threshold value of the system, power down the ports from large port number to small port number. Adopt smart detection to prevent outage.</p> <p>Supply power with ultra-wide power range, and adapt to IPC power consumption fluctuations in severe environment.</p>
Eight-PIN Assignment PoE Power Supply	<p>The Eight-PIN Ethernet port supports power supply, to enhance frontend and rear-end compatibility.</p> <p>Reduce cable loss and promote loading capacity.</p>
Hi-PoE 60W (Orange Port)	<p>Besides IEEE802.3af and IEEE802.3at, orange port also supports max. 60W output.</p>
Long Distance PoE	250 m long distance PoE transmission.
	Layer 2 commercial switch
	· Supports IEEE802.3, IEEE802.3u, IEEE802.3ab and IEEE802.3x standards
	· MAC auto study and aging, MAC table size is 2K
	· MDI/MDIX self-adaption.
	· Adopts metal enclosure
	· Port 1 supports Hi-PoE 60W power supply
	· Wall-mount installation
	· Anti-theft lock hole
Easy Installation	· Long distance PoE
	Support desktop and wall mounting. The anti-theft lock hole supports mechanical anti-theft function.

Wide Working Temperature	With operating temperature ranging from -10°C to +55°C (+14°F to +131°F), the switch is designed for relatively severe temperature environments.	
Technical Specification		
Hardware		
Ethernet Port	Port 1-8: 8 × RJ45 10/100M(PoE) Port 9: 1 × RJ45 10/100/1000M(Uplink)	
PoE Budget	Port 1 ≤ 60W(Hi-PoE), Port2-8 ≤30W, total≤96W	
Power Consumption (static)	2.7W	
Standards Compliance	IEEE802.3, IEEE802.3u, IEEE802.3x	
PoE Standard	IEEE802.3af, IEEE802.3at, Hi-PoE	
PoE Pin Assignment	PoE/Hi-PoE: 1, 2, 4, 5 (V+), 3, 6, 7, 8 (V-)	
Long Distance	250 m, 10 Mbps	
PoE Management	Support	
Switching Capacity	3.6 Gbps	
Packet Forwarding Rate	2.678 Mpps	
Packet Buffer Memory	1 Mbit	
MAC Table Size	2K	
Flow Control	Enable by default	
Operating Humidity	5%~95%	
Power Supply	External power adapter: 53V DV	
Thunderproof	Common mode: 4kV Differential mode: 2kV	
ESD	Air discharge: 8kV Contact discharge: 6kV	
Mounting	Support desktop and wall mounting	
Anti-theft Lock Hole	Support	
Operating Temperature	-10°C to 55°C (14°F to 131°F)	
Weight	Net weight: 0.47 kg (1.04 lb) Box weight (with accessory): 1.28 kg (2.82 lb) Protective box weight (with accessory): 10.98 kg (24.21 lb)	
Dimensions (W × D × H)	190 × 100 mm × 30 mm (7.48" × 3.94" × 0.9")	
Item 5: SD WAN Controller (16 Units)		
The SD WAN Controller must have the following minimum specification:		
WAN Interface	1x GE 2x LTE Modems	
LAN Interface	4x GE	
Router Throughput	120Mbps	

	Hot Failover	Yes
	WAN Smoothing	Yes
	Bandwidth Bonding	Yes
	Number of VPN Peers	2/5
	Throughput (No Encryption)	40Mbps
	Throughput (256-bit AES)	20Mbps
	Recommended Users 1-100Recommended Users	1-60
	LTE Modem	Downlink/Uplink Datarate: 150Mbps/50Mbps
	Wi-Fi Standard	2.4GHz: 802.11b/g/n OR 5GHz: 802.11a/n
	Wi-Fi as WAN	Yes
	Antenna Connectors	4x SMA Cellular, 2x Wi-Fi, 1x SMA GPS
	Power Input	Device: 12V – 28V DC AC Adapter: AC Input 100V – 240V / DC Output 12V Terminal Block: 12V – 28V DC
	Power Consumption	24W (max.)
	Dimensions	5.1 x 4.3 x 1.6 inches
	(L x W x H)	130 x 110 x 41 mm
	Weight	1.2 pounds / 515 grams
	Operating Temperature	-40° – 149°F / -40° – 65°C
	Humidity	15% – 95% (non-condensing)
	Warranty	1-Year Limited Warranty
	Certifications	IC, FCC, CE, RoHS

Item 6: SD WAN Platform (1 Unit)	
The SD WAN Platform must have the following minimum specification:	
Base Chassis	
WAN Interface	2x 10G SFP+ Ports
	2x GE Ports
	2x USB 3.0 Ports
	1x Expansion Module (Option)
LAN Interface	8x GE Ports with PoE+ Output
Router Throughput	12 Gbps
VPN	No Encryption: 1 Gbps
Throughput	256-bit AES: 600 Mbps
Recommended Users	500-2000
Max VPN/ Peers	300
Power Input	AC Input 100V - 240V
PoE Output	8x 802.3at PoE+ Output
Power Consumption	80W System*

	<table><tr><td></td><td>330W PoE+ Power Budget</td></tr><tr><td>Dimensions</td><td>17.2 x 13.3 x 1.7 inches 438 x 340 x 44 mm</td></tr><tr><td>Weight (No Modules)</td><td>11.7 pounds 5.3 kg</td></tr><tr><td>Operating Temperature</td><td>32° – 104°F (0° – 40°C)</td></tr><tr><td>Humidity</td><td>5% – 90% (non-condensing)</td></tr><tr><td>Certifications</td><td>FCC, IC, CE</td></tr></table>		330W PoE+ Power Budget	Dimensions	17.2 x 13.3 x 1.7 inches 438 x 340 x 44 mm	Weight (No Modules)	11.7 pounds 5.3 kg	Operating Temperature	32° – 104°F (0° – 40°C)	Humidity	5% – 90% (non-condensing)	Certifications	FCC, IC, CE													
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Item 7: Server (1 Unit)																										
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Item 8: RFID Reader (232 units)																										

The RFID Reader must have the following minimum specification:

Physical Characteristics	
Dimensions	102.8 mm(L) x 102.8 mm(W) x 28 mm(H)
Weight	329 g / 11.6 oz. (without antenna)
Material	Aluminum alloy
Input Voltage	DC 9V – 12V
Standby Current	< 30mA
Comm Interface	RS-232 / RJ45
GPIO	2 channel input optical coupling, 1 channel output electric relay, 1 channel output optical coupling (in reserve)
Baud Rate	115200 bps
Cooling Mode	Air cooling
Work Current	800mA +/-5% @ DC 12V Input
Ethernet interface	10/100 Base-T Ethernet (RJ45)
User Environment	
Operating Temp.	-25 °C to 65 °C
Storage Temp.	-40 °C to 85 °C
Humidity	10%- 95%
Frequency	865-868 MHz / 920-925 MHz / 902-928 MHz
Protocol	EPC Class 1 Gen 2 / ISO 18000-6C
Antenna	Supporting a variety of antennas, such as 6dBic, 9dBic
Output Power	1W (30dBm, support +5~+30dBm adjustable) 2W Optional (33dBm, , for Latin America, etc.)
Output Power Precision	+/- 1dB
Output Power Flatness	+/- 0.2dB
Receive Sensitivity	< -88 dBm
RSSI	Supported
Ambient Temp Monitor	Supported
Fastest Read Rate	900+ tags/sec
Antenna Detector	Supported
Antenna Port	4 channel 50Ω SMA port
RFID Antenna	
Electrical	
Frequency Range	902-928MHz / 865-868MHz
Polarization Type	RHCP
Gain	5dBi
3dB Beam-Width. H-Plan	80°

	<table><tr><td>3dB Beam-Width. E-Plan</td><td>70°</td></tr><tr><td>VSWR</td><td>≤1.3</td></tr><tr><td>Front to back Ratio</td><td>≥17dB</td></tr><tr><td>Input Impedance</td><td>50Ω</td></tr><tr><td>Max Input Power.</td><td>20W</td></tr><tr><td>Lightning Protection</td><td>DC Grounded</td></tr><tr><td>Mechanical</td><td></td></tr><tr><td>Connector Type</td><td>SMA male</td></tr><tr><td>Dimensions H*W*D (mm)</td><td>145*145(mm)</td></tr><tr><td>Radome Material</td><td>ABS</td></tr><tr><td>Cable</td><td>LMR200</td></tr><tr><td>Radome color</td><td>white</td></tr><tr><td>Operating Temperature Rang</td><td>-40°C/+60°C</td></tr></table>	3dB Beam-Width. E-Plan	70°	VSWR	≤1.3	Front to back Ratio	≥17dB	Input Impedance	50Ω	Max Input Power.	20W	Lightning Protection	DC Grounded	Mechanical		Connector Type	SMA male	Dimensions H*W*D (mm)	145*145(mm)	Radome Material	ABS	Cable	LMR200	Radome color	white	Operating Temperature Rang	-40°C/+60°C	
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	<p>Item 9: RFID Card (5,000 pcs for Regular Employee only)</p> <p>The RFID must have the following minimum specification:</p> <table><tr><td>Working Frequency</td><td>LF: 125kHz and UHF: 860-960MHz</td></tr><tr><td>Printer</td><td>Printing of RFID</td></tr></table>	Working Frequency	LF: 125kHz and UHF: 860-960MHz	Printer	Printing of RFID																							
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	<p>Item 10: 43” LED TV (116 units)</p> <p>The 43” LED TV must have the following minimum specification:</p> <table><tr><td>Panel Size</td><td>43”</td></tr><tr><td>Display Ratio</td><td>16:9</td></tr><tr><td>Maximum Resolution</td><td>1920 x 1080</td></tr><tr><td>Brightness</td><td>260 cd/m²</td></tr><tr><td>Contrast</td><td>1200:1</td></tr><tr><td>View Angle</td><td>178°/178°</td></tr><tr><td>Backlight</td><td>LED</td></tr></table>	Panel Size	43”	Display Ratio	16:9	Maximum Resolution	1920 x 1080	Brightness	260 cd/m²	Contrast	1200:1	View Angle	178°/178°	Backlight	LED													
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	<p>Item 11: Mini PC (116 units)</p> <p>The Mini PC must have the following minimum specification:</p> <table><tr><td>CPU</td><td>Intel® Core™ i5-1145G7 Processor (8M Cache, up to 4.40 GHz)</td></tr><tr><td>CPU Cores / Thread</td><td>4/8</td></tr><tr><td>Graphics</td><td>Intel® UHD Graphics</td></tr><tr><td>Memory</td><td>2 x 4GB DDR4 3200</td></tr><tr><td>Storage</td><td>500GB Gen 4 NVMe SSD</td></tr></table>	CPU	Intel® Core™ i5-1145G7 Processor (8M Cache, up to 4.40 GHz)	CPU Cores / Thread	4/8	Graphics	Intel® UHD Graphics	Memory	2 x 4GB DDR4 3200	Storage	500GB Gen 4 NVMe SSD																	
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CPU Cores / Thread	4/8																											
Graphics	Intel® UHD Graphics																											
Memory	2 x 4GB DDR4 3200																											
Storage	500GB Gen 4 NVMe SSD																											

	Connectivity	Integrated LAN: Intel® Ethernet Controller i225-LM Integrated Wireless†: Intel® Wi-Fi 6 AX201 Integrated Bluetooth: Yes Thunderbolt: 1x Thunderbolt™ 4, 1x Thunderbolt™ 3	
	IO Ports and Connectivity	Front: 2x USB 3.2 Rear: 2x USB 4 (type C), 1x USB 3.2, 1x USB 2.0 Internal: 1x USB 3.2 on m.2 22x42 (pins), 2x USB 2.0 (headers)	
	Advanced Technologies	Intel® Virtualization Technology for Directed I/O (VT-d) Intel vPro® Platform Eligibility Intel® ME Firmware Version Intel® Virtualization Technology (VT-x)	
	OS	Windows 10	

Item 12: Door Access Control Stainless Steel Mount (12 Units)			
The Door Access Control must have the following minimum specification:			
Authentication Method		Card	
	Max Users	200,000	
Log Capacity	Event Logs	1,000,000	
	Images	15,000	
Communication	With Server	TCP/IP	
	Other	Bluetooth/USB	
	Wireless LAN(Wi-Fi)	Optional	
	Wiegand OUT	Yes	
	RS232	Yes	
	RS485	Yes	
	Wiegand IN	Yes	
Display	LCD	4"Color Touch	
	Backlight	Yes	
Embedded Camera		Yes	
Card	125khz-EM	Yes	
Keypad		Touch Screen	
Function keys		SOFT	
Door Phone		Voip	
Dimension	(W) X (H) X (D) mm	80 X 153 X 18.2	
Operating Temperature		-20 ~ 60°C	

Item 13: Flap Barrier Turnstile (2 sets)			
The Flap Barrier must have the following minimum specification:			