PHILIPPINE BIDDING DOCUMENTS

Procurement of GOODS

Government of the Republic of the Philippines

Sixth Edition
July 2020

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.

Department of Trade and Industry
Regional Office III

SECTION I. INVITATION TO BID

Supply and Delivery of Fabrication Laboratory Shared Service Facility for Bataan Peninsula State University

1. The ***Department of Trade and Industry Region 3***, through the ***General Appropriations Act of the Philippines*** intends to apply the sum of ***Thirteen Million Five Hundred Thousand Pesos (PhP 13,500,000.00), tax inclusive,*** being the ABC to payments under the contract for ***BD24-002***. Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The ***Department of Trade and Industry Region 3*** now invites bids for the above Procurement Project. Delivery of the Goods is required ***within Thirty (30) days upon receipt of the Notice to Proceed***. Bidders should have completed a contract similar to the project within Two (2) years prior to the date of submission and receipt of bids. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).

3. 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) No. 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 No. 5183.

4. Prospective Bidders may obtain further information from ***Department of Trade and Industry Region 3*** and inspect the Bidding Documents at the address given below during office hours *Monday to Friday, 8:00 AM to 5:00 PM.*

5. A complete set of Bidding Documents may be acquired by interested Bidders on ***September 09, 2024*** 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* ***Twenty-Five Thousand Pesos (Php 25,000.00).***

   It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

6. The ***Department of Trade and Industry Region 3*** will hold a Pre-Bid Conference[1] on ***September 18, 2024, 9:30am*** PST at ***DTI Regional Office 3, Malikhain Street corner Maagap Street, Diosdado Macapagal Government Center, Maimpis, City of San Fernando, Pampanga*** which will be simultaneously broadcasted via zoom teleconference (zoom link to be provided), which shall be open to prospective bidders. *Prospective bidders are advised to send a letter of intent containing the names and email address of interested participants on or before the given date above.*

7. Bids must be duly received by the BAC Secretariat ***through manual submission*** at the address below on or before ***September 30, 2024,*** 9:00AM P.S.T. Late bids shall not be accepted.

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

9. Bid opening shall be on ***September 30, 2024, 9:30am*** PST at DTI Regional Office 3, Malikhain Street corner Maagap Street, Diosdado Macapagal Government Center, Maimpis, City of San Fernando, Pampanga ***which will be simultaneously broadcasted via zoom teleconference (zoom link to be provided).*** Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. The ***Department of Trade and Industry Region 3*** 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.

11. For further information, please refer to:

Nanette D. Linatoc/Ma. Providencia P. Dizon/Jan Ricardo I. Pilarca/Carla Pangan
Bids and Awards Committee Secretariat
Department of Trade and Industry – Region 3
Malikhain Street corner Maagap Street,
Diosdado Macapagal Government Center,
Maimpis, City of San Fernando, Pampanga
Telephone No. +63(45) 625-9290
E-mail Address: R03@dti.gov.ph, nanettelinatoc@dti.gov.ph,
janpilarca@dti.gov.ph,ma.providenciadizon@dti.gov.ph,
carlacunananpangan@dti.gov.ph

---

[1] May be deleted in case the ABC is less than One Million Pesos (PhP1,000,000) where the Procuring Entity may not hold a Pre-Bid Conference.

Elenita R. Ordonio

ELENITA R. ORDONIO
Chairperson
DTI- 3 Bids and Awards Committee

GERARDO MAGLALANG
Vice - Chairperson
DTI- 3 Bids and Awards Committee

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, ***DEPARTMENT OF TRADE AND INDUSTRY – REGION 3,*** wishes to receive Bids for the ***Supply and Delivery of Fabrication Laboratory Shared Service Facility for Bataan Peninsula State University,*** with identification number ***BD24-002***.

The Procurement Project (referred to herein as "Project") is composed of 1 lot, the details of which are described in Section VII (Technical Specifications).

2. Funding Information

2.1. The GOP through the source of funding as indicated in the **BDS** in the amount of ***Thirteen Million Five Hundred Thousand Pesos (PhP 13,500,000.00), inclusive of taxes and freight charges.***

2.2. The source of funding is the General Appropriations **Act of 2024**.

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 "I" 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 exceeding those allowed under the rules may participate pursuant to:

i. When a Treaty or International or Executive Agreement as provided in Section 4 of the RA No. 9184 and its 2016 revised IRR allow foreign bidders to participate;

ii. Citizens, corporations, or associations of a country, included in the list issued by the GPPB, the laws or regulations of which grant reciprocal rights or privileges to citizens, corporations, or associations of the Philippines;

iii. When the Goods sought to be procured are not available from local suppliers; or

iv. When there is a need to prevent situations that defeat competition or restrain trade.

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 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 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 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 Two (2) years prior to 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 the **BDS.**

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 the **BDS.**

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[2] 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 until one hundred twenty (120) calendar days from the bid opening. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

---

[2] In the case of Framework Agreement, the undertaking shall refer to entering into contract with the Procuring Entity and furnishing of the performance security or the performance securing declaration within ten (10) calendar days from receipt of Notice to Execute Framework Agreement.

15. Sealing and Marking of Bids

Each Bidder shall **submit one (1) original and two (2) copies** of the first and second components of its Bid. All submitted bid envelopes shall be marked, labeled and sealed.

All bidders are requested to include index tabs on the contents of the envelopes.

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.

15.1. All envelopes shall:

a. contain the name of the contract to be bid in capital letters;
b. bear the name and address of the Bidder in capital letters;
c. bear the specific identification of this bidding process indicated in the **ITB**

16. Deadline for Submission of Bids

16.1. The Bidders shall manually submit its bid on the specified date and time and at the physical address of the Procuring Entity.

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 Entity's 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. The descriptions of the lot shall be indicated in Section VII (Technical Specifications), although the ABCs of this lot 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 participated in by the prospective Bidder. NFCC must not be lower than the ABC.

19.3. The Project shall be awarded as One Project having several items that shall be awarded as one contract.

19.4. 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 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 participated in by the prospective Bidder.

20. Post-Qualification

20.2. 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 (if any) 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 (if any) are indicated in the **BDS**.

Section III. Bid Data Sheet

<table>
<tr><th>ITB Clause</th><th></th></tr>
<tr><td>5.3</td><td>For this purpose, contracts similar to the Project shall be:
a. ***Supply and Delivery of Fabrication Laboratory Shared Service Facility for Bataan Peninsula State University***.
b. completed within 2 years prior to the submission and receipt of bids which must be accompanied by a copy **of the Official Receipt (O.R.) or Certificate of Acceptance by the end-user or Sales Invoice (S.I.) issued for the Contract.**</td></tr>
<tr><td>7.1</td><td>*Sub-contracting is not allowed.*</td></tr>
<tr><td>10</td><td>Instructions regarding indexing of Eligibility and Technical Components:
The bidding shall make use of the two-envelope system; i.e., the first envelope for the Technical Component and the second envelope for the Financial Component of the bid.
The first envelope (Technical Component) shall contain the eligibility and technical documents. The bidder shall submit the documents provided in Section VIII (Checklist of Technical and Financial Documents) that must be indexed as follows:
<table>
<tr><td colspan="2">ENVELOPE NO. 1
TECHNICAL COMPONENT</td></tr>
<tr><td></td><td>CLASS “A” DOCUMENTS</td></tr>
<tr><td>INDEX TABS</td><td>LEGAL DOCUMENTS</td></tr>
<tr><td>I-1</td><td>Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages)
Or, in lieu of the Platinum PhilGEPS Certificate:</td></tr>
</table>
</td></tr>
</table>

<table>
<tr>
<td></td>
<td>
<table>
<tr>
<td></td>
<td>
<table>
<tr><td>1-
1.a</td><td>Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document,</td></tr>
<tr><td>I-1.b</td><td>Mayor’s or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas</td></tr>
<tr><td>I-1.c</td><td>Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).</td></tr>
</table>
</td>
</tr>
<tr>
<td>I-2</td>
<td>
TECHNICAL DOCUMENTS

Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid.

The statement shall be supported by the following documents:

1. Copies of the Contracts; and

(If there is no contract, the purchase order (P.O.) may be submitted as long as the terms and conditions are included therein.)

2. Copies of the Notice of Award (NOA) or Notice to Proceed (NTP)

(For private contracts, NOA or NTP shall not be required.)
</td>
</tr>
</table>
</td>
</tr>
</table>

	I-3	Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within two (2) years prior to the date of bid submission. The SLCC must be at least **Fifty percent (50%) of the approved budget for the contract (ABC) or ₱6,750,000.00.** Supporting Document/s: The statement shall be supported by a copy/(ies) of the **Official Receipt (O.R.) or Certificate of Acceptance by the end-user or Sales Invoice (S.I.) issued for the Contract**
	I-4	Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; or Original copy of Notarized Bid Securing Declaration
	I-5	Conformity with the Schedule of Requirements (Accomplish/use form in Section VI), duly signed or initialed
	I-6	Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable, duly signed or initialed (use Accomplish/use form in Section VII)
	I-6-a, I-6-b, I-6-c, Etc	Corresponding to each set of supporting documents in relation to the Bidder’s conformity with the technical specifications as enumerated and specified in Sections VI and VII, if any.

	I-7	Original duly signed Omnibus Sworn Statement (OSS) Note: The Omnibus Sworn Statement needs to be submitted under oath. The Community Tax Certificate is no longer considered competent evidence of identity. In accordance with a Resolution of the Supreme Court, the phrase "competent evidence of identity" refers to the identification of an individual based on any of the following: "at least one current identification document issued by an official agency bearing the photograph and signature of the individual, such as but not limited to, passport, driver's license, Professional Regulations Commission ID, National Bureau of Investigation clearance, police clearance, postal ID, voter's ID, Barangay Certification, Government Service and Insurance System (GSIS) e-card, Social Security System (SSS) card, Philhealth card, senior citizen card, Overseas Workers Welfare Administration (OWWA) ID, OFW ID, seaman's book, alien certificate of registration/immigrant certificate of registration, government office ID, National Council for the Welfare of the Disabled Persons (NCWDP) certification; xxx" and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder
	I-8	Company profile which shall include information on the number of years in the business and the list of its officers. Names, addresses and location sketches of main office and branch office/s if any, and warehouse and service facilities with their respective telephone numbers including photo showing the company's business name.
	I-9	Authority of the representative/signatory
		FINANCIAL DOCUMENTS
	I-10	The Supplier's audited financial statements, showing, among others, the Supplier's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission

<table>
<tr><td></td><td>
<table>
<tr><td>I-11</td><td>The prospective bidder’s computation of Net Financial Contracting Capacity (NFCC);

NFCC = [(Current Assets minus Current Liabilities) x 15] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid.

The values of the bidder’s current assets and current liabilities shall be based on the data submitted to the Bureau of Internal Revenue (BIR), through its Electronic Filing and Payment System (EFPS).

(The NFCC shall be based on the 2020 or 2021 Audited Financial Statement, whichever is the latest available. Bidders shall attach the Audited Financial Statement actually used to the NFCC Computation.)
or
A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation</td></tr>
<tr><td></td><td>Class “B” Document</td></tr>
<tr><td>I-12</td><td>If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence;

or

duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.</td></tr>
<tr><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>12</td><td>The price of the Goods shall be quoted DDP <i>within</i> <i><u>Pampanga Province</u></i> or the applicable International Commercial Terms (INCOTERMS) for this Project.</td></tr>
<tr><td>14.1</td><td>The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts:</td></tr>
<tr><td></td><td>a. The amount of not less than Two Hundred Seventy Thousand Pesos (₱270,000.00) or <i>two percent (2%) of ABC</i>, if bid security is in cash, cashier’s/manager’s check, bank draft/guarantee or irrevocable letter of credit; or</td></tr>
</table>

	b. The amount of not less than **Six Hundred Seventy-Five Thousand Five Hundred Pesos (₱675,500.00)** or *(5%) of ABC* if bid security is in Surety Bond.

Instructions re: Sealing and Marking of bids:
Each bidder shall submit three (3) copies of the technical and financial components of its bid: one (1) certified true copy of the original documents and two (2) photocopies thereof.

TECHNICAL COMPONENT

BID FOR THE

***Supply and Delivery of Fabrication Laboratory Shared Service Facility for Bataan Peninsula State University*.**

BD24-002

[COMPANY NAME]
[COMPANY ADDRESS]
[E-MAIL ADDRESS]

ELENITA R. ORDONIO
Chairperson
DEPARTMENT OF TRADE AND INDUSTRY – REGION 3
BIDS AND AWARDS COMMITTEE

DO NOT OPEN BEFORE **September 30, 2024**

Check one:
_____ Original – Technical Component
_____ Copy No. 1 – Technical Component
_____ Copy No. 2 – Technical Component

The bidders shall enclose the technical components (eligibility and technical documents) in one sealed envelope and the financial component in another sealed envelope with the following markings on each of the two envelopes:

FINANCIAL COMPONENT

BID FOR THE

***Supply and Delivery of Fabrication Laboratory Shared Service Facility for Bataan Peninsula State University*.**

BD24-002

[COMPANY NAME]
[COMPANY ADDRESS]
[E-MAIL ADDRESS]

ELENITA R. ORDONIO
Chairperson
DEPARTMENT OF TRADE AND INDUSTRY – REGION 3
BIDS AND AWARDS COMMITTEE

DO NOT OPEN BEFORE **September 30, 2024**

Check one:
_____ Original – Financial Component
_____ Copy No. 1 – Financial Component
_____ Copy No. 2 – Financial Component

The two envelopes shall be enclosed and sealed in one single envelope containing the following marking:

BID FOR THE

***Supply and Delivery of Fabrication Laboratory Shared Service Facility for Bataan Peninsula State University*.**

BD24-002

[COMPANY NAME]
[COMPANY ADDRESS]
[E-MAIL ADDRESS]

ELENITA R. ORDONIO
Chairperson
DEPARTMENT OF TRADE AND INDUSTRY – REGION 3
BIDS AND AWARDS COMMITTEE

DO NOT OPEN BEFORE **September 30, 2024**

19.2	One (1) Lot – ***Supply and Delivery of Fabrication Laboratory Shared Service Facility for Bataan Peninsula State University***
20.2	No further instructions.
21.2	No further instructions.

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.

The Contract shall be between the Procuring Entity and the Supplier for the ***Supply and Delivery of Fabrication Laboratory Shared Service Facility for Bataan Peninsula State University***.

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 is not allowed except in the instances provided in Sec. 4 of Annex D in the 2016 Revised IRR of RA 9185

2.2. The terms of payment are indicated in the **SCC**.

3. Performance Security

Successful bidder shall submit performance security within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the Contract by both parties. The performance security shall be in any forms prescribed in Section 39.2 f the 2016 revised IRR of R.A. No. 9184.

The Performance Security shall be denominated in Philippine Pesos and posted in favor of the Procuring Entity in an amount not less than the percentage of the total contract price in accordance with the following schedule:

Form of Performance Security	Amount of Performance Security (Not less than the Percentage of the Total Contract Price)

Cash or cashier’s/manager’s check issued by a Universal or Commercial Bank.	Five percent (5%)
Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	
(a) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Thirty percent (30%)

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect 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. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

5. Warranty

5.1 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.** In no case shall the warranty for goods be less than one year from the date of the delivery.

5.2 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. Upon notification of warranty claims, it is the responsibility of the supplier to replace said defective equipment or parts thereof within the warranty period, but in no case more than one month of notification.

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.

Damage to the goods being procured while in transit or in storage, before said goods are delivered and accepted by procuring entity, shall be borne by the Supplier, even during events arising out of force majeure. Prior to acceptance of goods, any insurance premiums payable shall be borne by the Supplier.

Delivery costs shall be borne by the supplier, including incidental costs of transportation and storage, before said goods are accepted by the procuring entity.

Section V. Special Conditions of Contract

GCC Clause	
1	**Delivery and Documents –**
	"The delivery terms applicable to this Contract are delivered ***within the province of Bataan***. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination."
	Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements). The schedule of delivery counts from the day the Notice to Proceed is received and acknowledged by the supplier or its representative, whether physically or electronically.
	For purposes of this Clause the Procuring Entity's Representative at the Project Site is ***DTI-Bataan Provincial Officer***. Where the Supplier refuses or fails to satisfactorily complete the work within the specified contract time, plus any extension ***which may only be granted on exceptional cases*** is hereby in default under the contract, the Supplier shall pay DTI for liquidated damages, and not by way of penalty, an amount, as provided in the conditions of the contract, equal to at least one tenth (1/10) of one percent (1%) of the cost of the unperformed portion of the works for every day of delay. Should the amount of liquidated damages reach ten percent (10%) of the contract amount, DTI may, at its own discretion, terminate the contract without prejudice to any further action it may take to recover whatever losses incurred due to non-performance of the Supplier. To be entitled to such liquidated damages, DTI does not have to prove that it has incurred actual damages. Such amount shall be deducted from any money due or which may become due the Supplier under the contract and/or shall be paid by the Supplier within five (5) days from notice of such default, whichever is convenient to the DTI.
	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:

- Complete SSF tools, machines and equipment fully installed in the identified location of the contract.
- Test-run of machines and equipment conducted/commissioned.
- Training of personnel on machine operation, maintenance and troubleshooting for at least 24 hours.
- Furnish detailed operations and maintenance manual for each appropriate unit of the supplied machine and equipment.
- Provide one-year warranty for all supplied machine/equipment except for “NAME OF MACHINE/S” wherein 2 years warranty is required.
- Provide competent and credible trainer(s)/resource persons(s) for the training services at supplier’s cost. Trainer(s) must have used said machines and equipment for at least five years. All other expenses incurred for the said training (e.g. food of both trainer(s) and participants, accommodation, and transportation expenses of trainer(s), etc.) shall be shouldered by the supplier;
- If and when possible, interrelated machines shall be supplied by a single manufacturer or subsidiary partner company.
- In case of machine/equipment breakdown, provide sufficient supply of appropriate parts and local technician for the whole duration of the contract or warranty period; in case of breakdown of equipment within warranty period, replace the defective part with a brand new one. In case of the equipment cannot be repaired, the supplier shall replace with a brand-new equipment. All within the warranty period. Repair period should not exceed 180 days.
- Ensure the availability of after sales services and prompt response of not more than 5 working days from date of Notice of Need.
- Equipment/machineries shall bear painted over, and if possible, riveted engraved metal plate markings with the text “PROPERTY OF THE DEPARTMENT OF TRADE AND INDUSTRY” in 2 designated areas. Text for painted over markings shall measure at least 1” in height. The dimension of the engraved metal plates shall be at least 2” (H) x 3” (L). Metal property tags/markings of equipment /machineries color shall be DTI blue and off-white

	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: 1. 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 2. 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 costs 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 ***three times the warranty period***. Spare parts or components shall be supplied as promptly as possible, but in any case, within ***1 month*** of placing the order.
	The items, to be delivered must be free of damaged items.
	Damaged items should be replaced one (1) week upon receipt of notice. It is also subject for inventory and inspection by the **DTI-Regional and Bataan Office Property Inspector and Supply Officer.**

	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 if applicable 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, if any 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 – 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. 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. 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. The Procuring Entity accepts no liability for the damage of Goods during transit or while in storage, prior to acceptance by the procuring entity's representative. 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. Unloading of goods, arrangement of cables or electric parts at the project site or final destination shall be the responsibility of the Supplier, in coordination with the procuring entity.
	Intellectual Property Rights – 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.
2.2	Partial payment is not allowed.
	The inspections and tests that will be conducted are ***done during the actual delivery of the equipment to ensure that they meet all the specifications as defined in the Section VII Technical Specification.***

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	Item	Place of Delivery	Date of Delivery
1	Vacuum Forming Machine	**Bataan Peninsula State University DR3AM Center, BPSU Main Campus, Bataan Provincial Capitol Compound, Balanga, Bataan**	**Delivery, installation, commissioning of machineries and equipment in the identified sites of end user FOB within 30 days from issuance and receipt of Notice to Proceed.**
2	3D Pellet Printer		
3	Desktop PC for CAD Modelling		
4	Polyetheretherketone (PEEK) 3D Printer		
5	Projector Professional Image Processing Software (Segmentation, Analysis and Simulation)		
6	High-End Desktop PC		
7	High Speed 3D Printer		
8	Desktop PCs for CAD Modelling		
9	Multi-color FDM 3d printer		
10	Desktop PCs for CAD Modelling		
11	60-seat Premium 3D CAD Software with initial 4 years Subscription Services		
12	Professional Desktop Fused Deposition Modelling/Fused Filament Fabrication 3D Printer		
13	Food 3D Printer		

14	Printed Circuit Board (PCB) Printer		
15	Computer Numerical Control (CNC) Router		
16	Desktop PC for CAD Modelling		
17	3D Scanner		
18	High-End Laptop		
19	Large Format Printer and Cutter		
20	Desktop PC for CAD Modelling		
21	Graphing Software		
22	Digital Embroidery		
23	Flatbed UV Printer with initial consumables, and other peripherals		
24	Garment / T-shirt printer		
25	CO_2 Laser Cutter / Engraver		
26	Duplicator		

Please state compliance to the Schedule of Requirements

Name of Supplier hereby states its compliance to the abovementioned Schedule of Requirements, its delivery schedule and special conditions of the contract.

____

Name of Authorized Representative/Supplier
Signed

Section VII. Technical Specifications

QUANTITY	UNIT	Item Description
1	unit	**Vacuum Forming Machine** **ITEM SPECIFICATIONS** Sheet Size: 330 mm x 250 mm Maximum Sheet Thickness: 3.0 mm Minimum Sheet Thickness: 0.2 mm Forming Area: 280 mm x 200 mm Maximum Depth Draw: 200 mm Dimensions: L400 X W335 X H405 mm Weight: 9 kg Standard Input Voltage: 100 V - 240 V Standard Frequency: 50, 60 Hz Standard Wattage: 1.32 kW Noise Level: 65 dB Heater Temperature: up to 250 deg Celsius **Inclusions:** Plastic Sheets (10pcs) Desktop Computer Desk with metal frame and wooden top English Manual Certificate of authority to sell from the manufacturer or local distributor/reseller Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	Unit	**3D Pellet Printer** **ITEM SPECIFICATIONS** Print Technology: Dual Direct Drive Pellets, Independent Extruder Build Volume: at least 290 x 185 x 200 mm (minimum) Dual Printing: at least 280 x 165 x 200 mm (minimum) Mirror Printing: at least 147 x 185 x 200 mm (minimum) Print Capability: Mirror Printing, Dual Printing Pellet diameter: 3 - 5 mm Layer Resolution: 10µm Extruder maximum temperature: 300º C Build Plate Leveling: Semi- Automatic -Manual Nozzle Diameter (mm): Direct Drive HR: 0.15 - 0.25 - 0.4 - 0.6 - 0.8 mm Pellet: 0.4 - 0.6 - 0.8 - 2.0 - 4.0 - 5.0 mm Connectivity: USB, Wifi, SD Card Display : 5" color touch screen Control devices: PC, tablet, Smartphone Control mode: Web Direct Drive: ABS, ASA, NYLON, PET-G, PLA, PP, TPU, PLA-3D870, PVA

1	Unit	Pellets: PLA, ABS, PETG, A93, WOOD, ABS+CF, PC, HDPE, Ultem, Peek Slicing Software included: Professional Software 1 Unit Print Bed 1 set Starter Material Dimensions: 550mm x 440mm x 460mm **Inclusions:** English Manual Desktop Computer Desk with metal frame and wooden top Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service **Desktop PC for CAD Modelling** ITEM SPECIFICATIONS - 3.4 GHz Eight-Core Processor # of CPU Cores: 8 # of Threads: 16 Max. Boost Clock: Up to 4.6GHz Base Clock: 3.4GHz L1 Cache: 512KB L2 Cache: 4MB L3 Cache: 32MB Default TDP: 65W Processor Technology for CPU Cores: TSMC 7nm FinFET Unlocked for Overclocking: Yes CPU Socket: AM4 Socket Count: 1P Thermal Solution (PIB): Not included Max. Operating Temperature (Tjmax): 90°C - B550M WIFI MOTHERBOARD Chipset: B550 Memory: 4 x DIMM, Max. 128GB, DDR4 4600(O.C)/ 4400(O.C)/ 4266(O.C.)/4133(O.C.)/4000(O.C.)/ 3866(O.C.)/733(O.C.)/3600(O.C.)/ 3466(O.C.)/

		3333(O.C.)/3200/3000/2800/2666/2400/ 2133 MHz Un-buffered Memory * 4 x DIMM, Max. 128GB, DDR4 4800(O.C.)/ 4600(O.C)/ 4466(O.C.)/4400(O.C)/4266(O.C.)/ 4133(O.C.)/4000(O.C.)/ 3866(O.C.)/3733(O.C.)/ 3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/ 2800/2666/2400/2133 MHz Un-buffered Memory * Dual Channel Memory Architecture ECC Memory (ECC mode) support varies by CPU. Graphic 1 x DisplayPort 1.2 1 x HDMI 2.1(4K@60HZ) *Graphics specifications may vary between CPU types. Expansion Slots Desktop Processors: 1 x PCIe 4.0 x16 (x16 mode) G-Series Desktop Processors: 1 x PCIe 3.0 x16 (x16 mode) B550 Chipset: 1 x PCIe 3.0 x16 (x4 mode) *1 1 x PCIe 3.0 x1 *1 * Support PCIe bifurcation for RAID on CPU function. Storage Total supports 2 x M.2 slot(s) and 4 x SATA 6Gb/s ports Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 4.0 x4 and SATA modes) storage devices support Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 3.0 x4 and SATA modes) storage devices support B550 Chipset : 1 x M.2_2 socket 3, with M Key, Type 2242/2260/2280/22110(PCIE 3.0 x4 and SATA modes) storage devices support 4 x SATA 6Gb/s port(s), Support Raid 0, 1, 10 LAN: 2.5Gb Ethernet Wireless Data Network: Wi-Fi 6 AX200 2x2 Wi-Fi 6 (802.11 a/b/g/n/ac/ax) support 1024QAM/OFDMA/MU-MIMO Supports up to 2.4Gbps max data rate Supports dual band frequency 2.4/5 GHz Supports channel bandwidth: HT20/HT40/HT80/HT160 Supports PCIe interface

		Bluetooth: Bluetooth v5.1* *BT 5.1 function will be ready in 10 build 19041 or later. Audio: ALC S1200A 7.1 Surround Sound High Definition Audio CODEC - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, up to 24-Bit/192kHz playback Audio Feature : - Exclusive DTS Custom for GAMING Headsets. - Optical S/PDIF out port(s) at back panel - Audio cover - Audio Shielding - Dedicated audio PCB layers - Premium Japanese audio capacitors USB Ports Rear USB Port (Total 8) 2 x USB 3.2 Gen 2 port(s)(1 x Type-A +1 x USB Type-C®) 4 x USB 3.2 Gen 1 port(s)(4 x Type-A) 2 x USB 2.0 port(s)(2 x Type-A) Front USB Port (Total 6) 2 x USB 3.2 Gen 1 port(s)(2 x Type-A) 4 x USB 2.0 port(s)(4 x Type-A) Software Features: Appropriate Software Specia Features: PROTECTION Back I/O Ports 1 x PS/2 keyboard/mouse combo port(s) 1 x DisplayPort 1 x HDMI 1 x LAN (2.5G) port(s) 2 x USB 3.2 Gen 2 (teal blue) (1 x Type-A+1 x USB Type-C®) 2 x USB 2.0 4 x USB 3.2 Gen 1 (blue) (one port can be switched to BIOS RECOVERY) 1 x Optical S/PDIF out 5 x Audio jack(s) 1 x BIOS RECOVERY Button(s) 1 x Wi-Fi Module Internal I/O Ports 1 x CPU Fan connector(s) 1 x CPU OPT Fan connector(s) 2 x Chassis Fan connector(s) 2 x RGB Strip Headers

		1 x Addressable Gen 2 header(s) 1 x USB 3.2 Gen 1(up to 5Gbps) connector(s) support(s) additional 2 USB 3.2 Gen 1 port(s) 2 x USB 2.0 connector(s) support(s) additional 4 USB 2.0 port(s) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280 storage devices support (SATA mode & X4 PCIE mode) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280/22110 storage devices support (SATA mode & X4 PCIE mode) 1 x SPI TPM header 4 x SATA 6Gb/s connector(s) 1 x 24-pin EATX Power connector(s) 1 x 8-pin EATX 12V Power connectors 1 x Front panel audio connector(s) (AAFP) 1 x Clear CMOS jumper(s) 1 x System panel connector 1 x COM port header 1 x Speaker connector Accessories User´s manual I/O Shield 2 x SATA 6Gb/s cable(s) 1 x Supporting DVD 1 x Gaming Sticker 1 x Certification card(s) 1 x Wi-Fi moving antenna 1 x M.2 SSD screw package(s) 1 x M.2 Rubber Package(s) BIOS: 256 Mb Flash ROM, UEFI AMI BIOS Operating System: latest proprietary operating system Form Factor: mATX Form Factor 9.6 inch x 9.6 inch (24.4 cm x 24.4 cm) Note: *1 PCIEX16_2 will run x2 mode when PCIEX1 is used. - 16GB DDR4 3600MHZ RAM Capacity: 16GB (2 x 8GB) Type: 288-Pin DDR4 SDRAM Speed: DDR4 3600 (PC4 28800) CAS Latency: 18 Timing: 18-22-22-42 Voltage: 1.35V ECC: No Buffered/Registered: Unbuffered Multi-channel Kit: Dual Channel Kit Chipset: XMP 2.0 Color Black

		Heat Spreader Yes - 500GB SSD Card Capacity: 500GB Form Factor: M.2 2280 Connector: M.2 Sequential Read Performance: 3500MB/s Sequential Write Performance: 2300MB/s Random Read: 360K IOPS Random Write: 390K IOPS Interface: PCIe Gen3 x4, NVMe v1.4 Warranty: 5-Year Limited Warranty Endurance (TBW): 300 Dimensions (L x W x H): 80mm x 22mm x 2.38mm Weight: 6.5gms Operating Temperature: 0°C to 70°C Non-Operating Temperature: -40°C to 85°C Certifications: BSMI, ICES-003/NMB-003, CE, FCC, KC, Maghreb, RCM, UKCA, VCCI, CB-Scheme, TUV, UL - VIDEO CARD Bus Standard: PCI Express 4.0 OpenGL: OpenGL®4.6 Video Memory: 8GB GDDR6 Engine Clock: OC Mode - 1740 MHz (Boost Clock) Gaming Mode - 1710 MHz (Boost Clock) CUDA Core: 4864 Memory Speed: 14 Gbps Memory Interface: 256-bit Resolution: Digital Max Resolution 7680 x 4320 Interface: Yes x 2 (Native HDMI 2.1) Yes x 3 (Native DisplayPort 1.4a) HDCP Support Yes (2.3) - CPU CASE Type: ATX Case Drive Space: 5:25" - 0 Drive Space: 3.25" - 2 Drive Space: 2.5" - 2 Main Board: ATX Power Supply: PS2 Expansion Slot: 7 Slots Case Dimension: 400x 185 x 440mm Fan Capacity Front: 2 x 12cm Rear: 1x12cm Top: 2 x 12cm Measurement: 1080pcs / 40' HQ Maximum Compatibility: VGA Card Length: 380mm | CPU Cooler: 160mm | M/B: 305x244mm - FSP 750W GOLD POWER SUPPLY UNIT

		- Monitor: 21.5" WIDE BLACK FHD LED MONITOR (VGA, HDMI) - MOUSE AND KEYBOARD - Desktop Computer Desk with metal frame and wooden top - Swivel Chair
1	Unit	**Polyetheretherketone (PEEK) 3D Printer** **ITEM SPECIFICATIONS**

		Printing Technology: Fused Filament Fabrication (FFF) Extruder: Single Extruder Diameter: Swappable 0.25, 0.4, 0.6 and 0.8mm nozzle, default 0.4mm Layer Resolution: 0.05-0.4mm Position Accuracy: XY:0.025mm, Z:0.0025mm Print Speed: 30-200mm/s Filament Diameter: 1.75mm Build Platform: PI + Glass Ceramics Supported Filament: PEEK, PEKK, PEI, PPSU, ABS, PC, Nylon, Carbon Fiber-Filled, PETG, PVA, PLA, TPU, HIPS, Woodfill, Metalfill, etc. Language: Chinese & English User Interface Features: Full-color Touch Screen Connectivity: SD card, USB Camera: Yes Power Failure Recovery: Yes Filament Absent Warning: Yes Build Plate Leveling: Auto Leveling, Manual Leveling Build Volume: 10.3"*10.3"*10.3"(260*260*260mm) Dimensions: 530*490*645mm Weight: 46kg Heated-Plate Temperature (MAX): 160°C Extruder Temperature (MAX): 450°C Heated Chamber (MAX): 90°C Software: Appropriate 3D printing slicing software; Compatible Software: Simplify3D & Cura Input Supported File Type: .Stl, .Obj, .Obj, .X3D Output Supported File Type: Gcode Operating Environment: Temperature: 15°C To 32°C Humidity: 30% To 70% Storage Environment Temperature: 0°C To 54°C Humidity: 10% To 85% Material Storage Environment Temperature: 13°C to 24°C Humidity: 20% To 50% Voltage Input: 100~120VAC (110V Version only, refer to the nameplate) 200~240VAC (220V Version only, refer to the nameplate) 47~63Hz Power: 1200W **Inclusions:** English Manual Desktop Computer Desk with metal frame and wooden top Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer.

1	Unit	After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service **Professional Image Processing Software (Segmentation, Analysis and Simulation)** ITEM SPECIFICATIONS An image processing software that allows the user to import, visualize and segment medical images (such as images from a CT or MRI scanner). Users can check and correct the segmentations and create digital 3D models. The models can then be used for measuring, treatment planning and producing an output file to be used for additive manufacturing (3D printing). A software that combines CAD tools with pre-processing (meshing) capabilities. It should work on triangulated (STL) files which makes it suitable for freeform 3D data, like the anatomical data coming from the segmentation of medical images. The software may be used to import anatomical data and other 3D objects in STL format. Once objects have been loaded, they can be used for many applications including measuring, designing, modeling and 3D printing. The software should allow for thorough 3D measurements, analyses, surgical planning and more. 1.Base Functionality • Importing medical images in DICOM format and other formats (BMP, TIFF, JPG and raw images) • Viewing images and DICOM data • Selecting a region of interest using generic segmentation tools • Verifying and editing a region of interest • Calculating a digital 3D model and editing the model • Measuring on images and 3D models • Exporting images, measurements, and 3D models to third-party package 1.1 Base: Image Import Load and process stacks of 2D images from several formats including DICOM 3.0 format, BMP, TIFF, JPG and raw images. The data is loaded and then stored in a file format (original input images are not modified). Both during and after import, the user can inspect not only the images but also associated DICOM data (if present in the image files).

		The software should represent and visualize the images as either gray values or Hounsfield units. CT images are always calibrated based on the Hounsfield units, with the intensity of water being 0. Background air typically has a value of –1000. The user can choose (as a preference) to offset the units by 1000 to obtain positive values in the range of 0 to 4095. 1.2 Base: Visualization After import, the images should be displayed: the original scanner images together with the two orthogonal sections. In the case of axial images, the coronal and sagittal sections are created. The software should offer features and settings to control image visualization, including the following: • Rotate, Pan, and Zoom • Fit to Screen / Full Screen • Reslice images • Fluoroscopy simulation • Contrast and brightness • Interpolation of images • Viewing direction • Image filters • Alignment image • Scatter removal filter • Pseudo color visualization • Image layouts • Navigation. • Cine Loop for 4D datasets • Overlay While the above part applies to visualization on the 2D images, features and settings related to visualization in 3D include the following: • 3D preview • 3D rendering and shading • Contour visualization • Transparency • Clipping • Colors 1.3 Base: Measurement tools Tools to measure distances (in mm), angles (in degrees), etc., as specified below. Measurements to be displayed with 4 digits behind the decimal point, however accuracy of measurements is inherently limited by the pixel size of the images. Measurements can be performed either on the 2D images or in the 3D workspace. Supported measurements include: • Distance, angle, radius, length, and diameter measurements • Minimal distance over surface • Measure ellipse and area • Centerline measurements

		• Profile Line • 3D Histogram • Intensity monitoring • Intensity measurement in Region of Interest 1.4 Base: Segmentation tools Tools to produce a binary ‘mask’ as output, representing the region of interest. A mask defines for each voxel in the image data whether it is part of the region of interest or not. Note that the original images are visualized together with the segmentation results, no original information is lost or hidden. Multiple different segmentation objects (masks) can be made in one session. Visualization of one or multiple masks can be done in 2D as well as in 3D using specific colors. The generic segmentation tools required: • Global and Local Thresholding • Region growing • Dynamic region growing • Segmentation by LiveWire • Manual editing (‘Edit Mask’) • Cavity Fill • Smooth Mask • Smart Fill and Smart Brush • Morphology operations • Boolean operations • Multiple slice edit and 3D Interpolate • Split Mask • Mask properties • Compare Masks • Segment Thin Bone • Segment Vessel • Label • Tracing thin structures • CT Bone Wizard • Calculate Part (from mask) • Calculate Mask from Object 1.5 Base: 3D editing tools After 3D objects (STL objects) are created, the software should support the editing of those objects. Supported operations include: • Edit contours • Smooth, Wrap and Reduce • Mirror, Transform and Boolean 1.6 Base: Export tools Export capabilities: • Project to DICOM • Image to DICOM • DICOM Tags • BMP/JPEG • 3D View to DICOM • 360 View to DICOM • 2D Mask area • Grayvalues

		• 3D Parts (Binary STL, ASCII STL, DICOM Encapsulated STL, DICOM SSO, MGX, DXF, 3MF, DICOM Encapsulated OBJ, Wavefront OBJ, VRML 2.0, PLY, Point Cloud) • Txt and Cloud (Share) • Media (Print, Save Screenshot, Capture Movie) 1.7 Base: Other tools • Registration tools: allows registering imported 3D models onto 3D models created in different image datasets. • Anonymize Images: anonymize the DICOM tags from the imported images. • Project Metadata: define any custom-defined metadata and store it inside the project. The tool allows to add, modify, and delete metadata. • Run Matlab script: run custom Matlab script on some of the objects in the project. • Reporting tools: Printing, Save screenshot, Capture Movie 2. Analysis Functionality Users should be able to indicate landmarks and annotate and to construct geometrical entities or ‘analytical primitives’ (points, lines, planes, circles, cylinders, spheres, splines, centerlines), which can serve to indicate anatomical landmarks, anatomical axes, anatomical planes, or planned resection planes, etc. These geometrical entities can be created by drawing, by fitting, by entering coordinates, radius, and vectors, or by creation of entities based on previously created entities using a few predefined creation methods (‘Create Primitives’ tool). On the images and 3D models, polylines can also be grown. The created entities can be exported to a CAD system in IGES format. Users should be able to perform advanced measurements, advanced measurements based on centerlines and splines, wall thickness analysis, part comparison analysis, curvature analysis, Distance to curve analysis, Distance to curve over surface analysis, midplane thickness analysis, Extrema analysis, self-supporting analysis & collision detection. 3. Simulation Functionality Users should be able to evaluate the patient’s anatomy, performing measurements, and planning osteotomies and distractions in 3D. The software should have a tool that supports 3D cephalometry and allows the user to perform several standard analyses (templates) listed in a library. Each analysis lists the landmarks that need to be defined. Planes and measurements are indicated automatically if you have defined

		all the necessary landmarks. Landmarks can be placed in 2D and 3D. New analyses can be created and saved, and points and planes can be imported from other existing cephalometric analyses. The software should also offer a 3D environment for planning certain surgical steps like cuts etc. Osteotomies and distractions are implemented (a distractor can be chosen out of an available distractor library). Attention to be paid to the user-friendliness of the software: a wizard guides the user through the steps needed to achieve bone repositioning. • Select osteotomy or distraction: Choose osteotomy (LeFort 1, LeFort 2, LeFort 3, Ramus Lengthening, Bilateral Sagittal Split, Simple Plane, Freeform) • Choose distraction (Alveolar distraction, Unilateral and bilateral Ramus lengthening, maxillary) • Define the necessary landmarks: Automatic placement of the cutting path, and possibility to adjust the suggested position cutting path • Cut and split the chosen object • Reposition the created new part to desired location During the planning process, the objects and distractors should be seen in 3D as well as in 2D. All positions of the moved parts can be saved, and it is possible at each stage to return to the home position. It should be possible to compare and analyze the virtual pre- and post-operative positions. Apart from the osteotomy wizard, the user should be able to plan resections by means of various ‘cut’ tools (planar cut, etc). The ‘soft tissue’ feature can assist the user in assessing a possible outcome by using a biomechanical model. The result is to be visualized in 3D as a computer animation. 4. Cloud-based Communication platform An online platform to upload and share software project files with different users, allowing easy navigation in the medical images and 3D files as well as basic line drawings, measurements, and annotations. The following should be possible: • Upload a case and share with different collaborators • View cases in the 3D Viewer within the browser o 3D View manipulation o Image View (Contrast change, Multiplanar reconstruction, Enlarging view and more) o Custom views o Indication tools o Measurement tools o Section tool

1	unit	o Fly-through tool to view inside a structure along the centerline • Case comments • Case management • Institution Account Management • User Management 4.1 Automatic Segmentation capabilities Software package should have complimentary access to AI-enabled Automatic Segmentation algorithms that were designed to perform segmentation without human intervention at the initial stage: • CMF CBCT Segmentation • CMF CT Segmentation • Heart CT Segmentation • Knee CT Segmentation • Knee MRI Segmentation • Shoulder CT Segmentation • Hip CT Segmentation • Torso CT Segmentation • Ankle CT Segmentation • Bone CT Segmentation Training: - Includes training for at least 4 faculty members / staff. - Training period is 1 full day **High-End Desktop PC** ITEM SPECIFICATIONS Processor 13th Generation Core™ i7-13700KF Processor (E-cores up to 4.20 GHz P-cores up to 5.30 GHz) Operating System: latest proprietary operating system Graphic Card: 16GB GDDR6X Memory: 32 GB DDR5-5200MHz (UDIMM) - (2 x 8 GB) Storage: 512 GB SSD M.2 2280 PCIe Gen4 Performance TLC Cooling System: 150W 120mm Air Cooling + 1 x Rear + 3 x Front + 2 x Top with ARGB Fan Pointing Device: USB Optical Mouse Keyboard: USB, Calliope, Black - English (US) WiFi Wireless LAN Adapters Wi-Fi 6E 2x2 AX & Bluetooth® 5.1 or above Monitor: 21.5" WIDE BLACK FHD LED MONITOR (VGA, HDMI) Desktop Computer Desk with metal frame and wooden top Swivel Chair

Desktop PCs for CAD Modelling

ITEM SPECIFICATIONS
- 3.4 GHz Eight-Core Processor
  # of CPU Cores: 8
  # of Threads: 16
  Max. Boost Clock: Up to 4.6GHz
  Base Clock: 3.4GHz
  L1 Cache: 512KB
  L2 Cache: 4MB
  L3 Cache: 32MB
  Default TDP: 65W
  Processor Technology for CPU Cores: TSMC 7nm FinFET
  Unlocked for Overclocking: Yes
  CPU Socket: AM4
  Socket Count: 1P
  Thermal Solution (PIB): Not included
  Max. Operating Temperature (Tjmax): 90°C

- B550M WIFI MOTHERBOARD
  Chipset: B550
  Memory:
  4 x DIMM, Max. 128GB, DDR4 4600(O.C)/ 4400(O.C)/ 4266(O.C.)/4133(O.C.)/4000(O.C.)/ 3866(O.C.)/733(O.C.)/3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/2800/2666/2400/ 2133 MHz Un-buffered Memory *
  4 x DIMM, Max. 128GB, DDR4 4800(O.C.)/ 4600(O.C)/ 4466(O.C.)/4400(O.C)/4266(O.C.)/ 4133(O.C.)/4000(O.C.)/ 3866(O.C.)/3733(O.C.)/ 3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/ 2800/2666/2400/2133 MHz Un-buffered Memory *
  Dual Channel Memory Architecture
  ECC Memory (ECC mode) support varies by CPU.

  Graphic
  1 x DisplayPort 1.2
  1 x HDMI 2.1(4K@60HZ)
  *Graphics specifications may vary between CPU types.

Expansion Slots
Desktop Processors: 1 x PCIe 4.0 x16 (x16 mode)
G-Series Desktop Processors: 1 x PCIe 3.0 x16 (x16 mode)
B550 Chipset:
1 x PCIe 3.0 x16 (x4 mode) *1
1 x PCIe 3.0 x1 *1
* Support PCIe bifurcation for RAID on CPU function.

Storage
Total supports 2 x M.2 slot(s) and 4 x SATA 6Gb/s ports

		Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 4.0 x4 and SATA modes) storage devices support Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 3.0 x4 and SATA modes) storage devices support B550 Chipset : 1 x M.2_2 socket 3, with M Key, Type 2242/2260/2280/22110(PCIE 3.0 x4 and SATA modes) storage devices support 4 x SATA 6Gb/s port(s), Support Raid 0, 1, 10 LAN: 2.5Gb Ethernet Wireless Data Network: Wi-Fi 6 AX200 2x2 Wi-Fi 6 (802.11 a/b/g/n/ac/ax) support 1024QAM/OFDMA/MU-MIMO Supports up to 2.4Gbps max data rate Supports dual band frequency 2.4/5 GHz Supports channel bandwidth: HT20/HT40/HT80/HT160 Supports PCIe interface Bluetooth: Bluetooth v5.1* *BT 5.1 function will be ready in 10 build 19041 or later. Audio: ALC S1200A 7.1 Surround Sound High Definition Audio CODEC - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, up to 24-Bit/192kHz playback Audio Feature : - Exclusive DTS Custom for GAMING Headsets. - Optical S/PDIF out port(s) at back panel - Audio cover - Audio Shielding - Dedicated audio PCB layers - Premium Japanese audio capacitors USB Ports Rear USB Port (Total 8) 2 x USB 3.2 Gen 2 port(s)(1 x Type-A +1 x USB Type-C®) 4 x USB 3.2 Gen 1 port(s)(4 x Type-A) 2 x USB 2.0 port(s)(2 x Type-A) Front USB Port (Total 6) 2 x USB 3.2 Gen 1 port(s)(2 x Type-A) 4 x USB 2.0 port(s)(4 x Type-A) Software Features: Appropriate Software Specia Features: PROTECTION Back I/O Ports 1 x PS/2 keyboard/mouse combo port(s)

		1 x DisplayPort 1 x HDMI 1 x LAN (2.5G) port(s) 2 x USB 3.2 Gen 2 (teal blue) (1 x Type-A+1 x USB Type-C®) 2 x USB 2.0 4 x USB 3.2 Gen 1 (blue) (one port can be switched to BIOS RECOVERY) 1 x Optical S/PDIF out 5 x Audio jack(s) 1 x BIOS RECOVERY Button(s) 1 x Wi-Fi Module Internal I/O Ports 1 x CPU Fan connector(s) 1 x CPU OPT Fan connector(s) 2 x Chassis Fan connector(s) 2 x RGB Strip Headers 1 x Addressable Gen 2 header(s) 1 x USB 3.2 Gen 1(up to 5Gbps) connector(s) support(s) additional 2 USB 3.2 Gen 1 port(s) 2 x USB 2.0 connector(s) support(s) additional 4 USB 2.0 port(s) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280 storage devices support (SATA mode & X4 PCIE mode) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280/22110 storage devices support (SATA mode & X4 PCIE mode) 1 x SPI TPM header 4 x SATA 6Gb/s connector(s) 1 x 24-pin EATX Power connector(s) 1 x 8-pin EATX 12V Power connectors 1 x Front panel audio connector(s) (AAFP) 1 x Clear CMOS jumper(s) 1 x System panel connector 1 x COM port header 1 x Speaker connector Accessories User´s manual I/O Shield 2 x SATA 6Gb/s cable(s) 1 x Supporting DVD 1 x Gaming Sticker 1 x Certification card(s) 1 x Wi-Fi moving antenna 1 x M.2 SSD screw package(s) 1 x M.2 Rubber Package(s) BIOS: 256 Mb Flash ROM, UEFI AMI BIOS Operating System: latest proprietary operating system Form Factor: mATX Form Factor 9.6 inch x 9.6 inch (24.4 cm x 24.4 cm)

		Note: *1 PCIEX16_2 will run x2 mode when PCIEX1 is used. - 16GB DDR4 3600MHZ RAM Capacity: 16GB (2 x 8GB) Type: 288-Pin DDR4 SDRAM Speed: DDR4 3600 (PC4 28800) CAS Latency: 18 Timing: 18-22-22-42 Voltage: 1.35V ECC: No Buffered/Registered: Unbuffered Multi-channel Kit: Dual Channel Kit Chipset: XMP 2.0 Color Black Heat Spreader Yes - 500GB SSD Card Capacity: 500GB Form Factor: M.2 2280 Connector: M.2 Sequential Read Performance: 3500MB/s Sequential Write Performance: 2300MB/s Random Read: 360K IOPS Random Write: 390K IOPS Interface: PCIe Gen3 x4, NVMe v1.4 Warranty: 5-Year Limited Warranty Endurance (TBW): 300 Dimensions (L x W x H): 80mm x 22mm x 2.38mm Weight: 6.5gms Operating Temperature: 0°C to 70°C Non-Operating Temperature: -40°C to 85°C Certifications: BSMI, ICES-003/NMB-003, CE, FCC, KC, Maghreb, RCM, UKCA, VCCI, CB-Scheme, TUV, UL - VIDEO CARD Bus Standard: PCI Express 4.0 OpenGL: OpenGL®4.6 Video Memory: 8GB GDDR6 Engine Clock: OC Mode - 1740 MHz (Boost Clock) Gaming Mode - 1710 MHz (Boost Clock) CUDA Core: 4864 Memory Speed: 14 Gbps Memory Interface: 256-bit Resolution: Digital Max Resolution 7680 x 4320 Interface: Yes x 2 (Native HDMI 2.1) Yes x 3 (Native DisplayPort 1.4a) HDCP Support Yes (2.3) - CPU CASE Type: ATX Case Drive Space: 5:25" - 0 Drive Space: 3.25" - 2 Drive Space: 2.5" - 2

		Main Board: ATX Power Supply: PS2 Expansion Slot: 7 Slots Case Dimension: 400x 185 x 440mm Fan Capacity Front: 2 x 12cm Rear: 1x12cm Top: 2 x 12cm Measurement: 1080pcs / 40' HQ Maximum Compatibility: VGA Card Length: 380mm | CPU Cooler: 160mm | M/B: 305x244mm - FSP 750W GOLD POWER SUPPLY UNIT - Monitor: 21.5" WIDE BLACK FHD LED MONITOR (VGA, HDMI) - MOUSE AND KEYBOARD - Desktop Computer Desk with metal frame and wooden top - Swivel Chair
4	Units	**High Speed 3D Printer** **ITEM SPECIFICATIONS** Technology: Fused Deposition Modelling (FDM) / Fused Filament Fabrication (FFF) Product Dimensions: 355x355x482mm Package Dimensions: 428x428x567mm Net Weight: 12.4kg Gross Weight: 16kg Display Screen: 4.3" color touch screen Rated Input Voltage 100-0240V~, 50/60Hz Output Voltage: 24VDC Rated Power: 350W Printing Technology: FDM Build Volume: 220x220x250mm Printing Accuracy: 100mm+-0.1mm Layer Height: 0.1-0.35mm TYpical Printing Speed 300mm/s Max. Printing Speed: 600mm/s Acceleration: 20000mm/s2 Filament Diameter: 1.75mm Nozzle Diameter: 0.4mm (Standard) Nozzle Temperature: 300C Build Surface: PEI Flexible build Dimensions: 139.76" x 139.76" x 188.98" **Inclusions:** Industrial-grade Adjustable Shelves 4 layers (only 1 shelf for the 4 units) English Manual

1	unit	Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service **Desktop PCs for CAD Modelling** ITEM SPECIFICATIONS - 3.4 GHz Eight-Core Processor # of CPU Cores: 8 # of Threads: 16 Max. Boost Clock: Up to 4.6GHz Base Clock: 3.4GHz L1 Cache: 512KB L2 Cache: 4MB L3 Cache: 32MB Default TDP: 65W Processor Technology for CPU Cores: TSMC 7nm FinFET Unlocked for Overclocking: Yes CPU Socket: AM4 Socket Count: 1P Thermal Solution (PIB): Not included Max. Operating Temperature (Tjmax): 90°C - B550M WIFI MOTHERBOARD Chipset: B550 Memory: 4 x DIMM, Max. 128GB, DDR4 4600(O.C)/ 4400(O.C)/ 4266(O.C.)/4133(O.C.)/4000(O.C.)/ 3866(O.C.)/733(O.C.)/3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/2800/2666/2400/ 2133 MHz Un-buffered Memory * 4 x DIMM, Max. 128GB, DDR4 4800(O.C.)/ 4600(O.C)/ 4466(O.C.)/4400(O.C)/4266(O.C.)/ 4133(O.C.)/4000(O.C.)/ 3866(O.C.)/3733(O.C.)/ 3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/ 2800/2666/2400/2133 MHz Un-buffered Memory * Dual Channel Memory Architecture ECC Memory (ECC mode) support varies by CPU. Graphic 1 x DisplayPort 1.2 1 x HDMI 2.1(4K@60HZ)

		*Graphics specifications may vary between CPU types. Expansion Slots Desktop Processors: 1 x PCIe 4.0 x16 (x16 mode) G-Series Desktop Processors: 1 x PCIe 3.0 x16 (x16 mode) B550 Chipset: 1 x PCIe 3.0 x16 (x4 mode) *1 1 x PCIe 3.0 x1 *1 * Support PCIe bifurcation for RAID on CPU function. Storage Total supports 2 x M.2 slot(s) and 4 x SATA 6Gb/s ports Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 4.0 x4 and SATA modes) storage devices support Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 3.0 x4 and SATA modes) storage devices support B550 Chipset : 1 x M.2_2 socket 3, with M Key, Type 2242/2260/2280/22110(PCIE 3.0 x4 and SATA modes) storage devices support 4 x SATA 6Gb/s port(s), Support Raid 0, 1, 10 LAN: 2.5Gb Ethernet Wireless Data Network: Wi-Fi 6 AX200 2x2 Wi-Fi 6 (802.11 a/b/g/n/ac/ax) support 1024QAM/OFDMA/MU-MIMO Supports up to 2.4Gbps max data rate Supports dual band frequency 2.4/5 GHz Supports channel bandwidth: HT20/HT40/HT80/HT160 Supports PCIe interface Bluetooth: Bluetooth v5.1* *BT 5.1 function will be ready in 10 build 19041 or later. Audio: ALC S1200A 7.1 Surround Sound High Definition Audio CODEC - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, up to 24-Bit/192kHz playback Audio Feature : - Exclusive DTS Custom for GAMING Headsets. - Optical S/PDIF out port(s) at back panel - Audio cover - Audio Shielding

		- Dedicated audio PCB layers - Premium Japanese audio capacitors USB Ports Rear USB Port (Total 8) 2 x USB 3.2 Gen 2 port(s)(1 x Type-A +1 x USB Type-C®) 4 x USB 3.2 Gen 1 port(s)(4 x Type-A) 2 x USB 2.0 port(s)(2 x Type-A) Front USB Port (Total 6) 2 x USB 3.2 Gen 1 port(s)(2 x Type-A) 4 x USB 2.0 port(s)(4 x Type-A) Software Features: Appropriate Software Specia Features: PROTECTION Back I/O Ports 1 x PS/2 keyboard/mouse combo port(s) 1 x DisplayPort 1 x HDMI 1 x LAN (2.5G) port(s) 2 x USB 3.2 Gen 2 (teal blue) (1 x Type-A+1 x USB Type-C®) 2 x USB 2.0 4 x USB 3.2 Gen 1 (blue) (one port can be switched to BIOS RECOVERY) 1 x Optical S/PDIF out 5 x Audio jack(s) 1 x BIOS RECOVERY Button(s) 1 x Wi-Fi Module Internal I/O Ports 1 x CPU Fan connector(s) 1 x CPU OPT Fan connector(s) 2 x Chassis Fan connector(s) 2 x RGB Strip Headers 1 x Addressable Gen 2 header(s) 1 x USB 3.2 Gen 1(up to 5Gbps) connector(s) support(s) additional 2 USB 3.2 Gen 1 port(s) 2 x USB 2.0 connector(s) support(s) additional 4 USB 2.0 port(s) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280 storage devices support (SATA mode & X4 PCIE mode) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280/22110 storage devices support (SATA mode & X4 PCIE mode) 1 x SPI TPM header 4 x SATA 6Gb/s connector(s) 1 x 24-pin EATX Power connector(s) 1 x 8-pin EATX 12V Power connectors

		1 x Front panel audio connector(s) (AAFP) 1 x Clear CMOS jumper(s) 1 x System panel connector 1 x COM port header 1 x Speaker connector Accessories User´s manual I/O Shield 2 x SATA 6Gb/s cable(s) 1 x Supporting DVD 1 x Gaming Sticker 1 x Certification card(s) 1 x Wi-Fi moving antenna 1 x M.2 SSD screw package(s) 1 x M.2 Rubber Package(s) BIOS: 256 Mb Flash ROM, UEFI AMI BIOS Operating System: latest proprietary operating system Form Factor: mATX Form Factor 9.6 inch x 9.6 inch (24.4 cm x 24.4 cm) Note: *1 PCIEX16_2 will run x2 mode when PCIEX1 is used. - 16GB DDR4 3600MHZ RAM Capacity: 16GB (2 x 8GB) Type: 288-Pin DDR4 SDRAM Speed: DDR4 3600 (PC4 28800) CAS Latency: 18 Timing: 18-22-22-42 Voltage: 1.35V ECC: No Buffered/Registered: Unbuffered Multi-channel Kit: Dual Channel Kit Chipset: XMP 2.0 Color Black Heat Spreader Yes - 500GB SSD Card Capacity: 500GB Form Factor: M.2 2280 Connector: M.2 Sequential Read Performance: 3500MB/s Sequential Write Performance: 2300MB/s Random Read: 360K IOPS Random Write: 390K IOPS Interface: PCIe Gen3 x4, NVMe v1.4 Warranty: 5-Year Limited Warranty Endurance (TBW): 300 Dimensions (L x W x H): 80mm x 22mm x 2.38mm

		Weight: 6.5gms Operating Temperature: 0°C to 70°C Non-Operating Temperature: -40°C to 85°C Certifications: BSMI, ICES-003/NMB-003, CE, FCC, KC, Maghreb, RCM, UKCA, VCCI, CB-Scheme, TUV, UL - VIDEO CARD Bus Standard: PCI Express 4.0 OpenGL: OpenGL®4.6 Video Memory: 8GB GDDR6 Engine Clock: OC Mode - 1740 MHz (Boost Clock) Gaming Mode - 1710 MHz (Boost Clock) CUDA Core: 4864 Memory Speed: 14 Gbps Memory Interface: 256-bit Resolution: Digital Max Resolution 7680 x 4320 Interface: Yes x 2 (Native HDMI 2.1) Yes x 3 (Native DisplayPort 1.4a) HDCP Support Yes (2.3) - CPU CASE Type: ATX Case Drive Space: 5:25" - 0 Drive Space: 3.25" - 2 Drive Space: 2.5" - 2 Main Board: ATX Power Supply: PS2 Expansion Slot: 7 Slots Case Dimension: 400x 185 x 440mm Fan Capacity Front: 2 x 12cm Rear: 1x12cm Top: 2 x 12cm Measurement: 1080pcs / 40' HQ Maximum Compatibility: VGA Card Length: 380mm | CPU Cooler: 160mm | M/B: 305x244mm - FSP 750W GOLD POWER SUPPLY UNIT - Monitor: 21.5" WIDE BLACK FHD LED MONITOR (VGA, HDMI) - MOUSE AND KEYBOARD - Desktop Computer Desk with metal frame and wooden top - Swivel Chair

3	Units	**Multi-color FDM 3d printer** **ITEM SPECIFICATIONS** Technology: Fused Deposition Modelling (FDM) / Fused Filament Fabrication (FFF) Build Volume (W×D×H) 256 × 256 × 256 mm³ Nozzle 0.4 mm Hardened Steel Included Hotend All-Metal Max Hot End Temperature 300 ℃ Filament Diameter 1.75 mm Supported Filament PLA, PETG, TPU, ABS, ASA, PVA, PET Ideal for PA, PC, Carbon/ Glass Fiber Reinforced Polymer Build Plate Surface Bambu Cool Plate, Bambu Engineering Plate Included Max Build Plate Temperature 110℃@220V, 120℃@110V Max Speed of Tool Head 500 mm/s Max Acceleration of Tool Head 20 m/s² Physical Dimensions 389 × 389 × 457 mm³, Package size 480 × 480 × 590 mm³, Net weight 14.13 kg, Gross weight(AMS included) 22.3 kg Electrical Requirements 100-240 VAC, 50/60 H, 1000W@220V, 350W@110V **Inclusions:** Industrial-grade Adjustable Shelves 4 layers layers (only 1 shelf for the 3 units) English Manual Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	Unit	**Desktop PC for CAD Modelling** ITEM SPECIFICATIONS

		- 3.4 GHz Eight-Core Processor # of CPU Cores: 8 # of Threads: 16 Max. Boost Clock: Up to 4.6GHz Base Clock: 3.4GHz L1 Cache: 512KB L2 Cache: 4MB L3 Cache: 32MB Default TDP: 65W Processor Technology for CPU Cores: TSMC 7nm FinFET Unlocked for Overclocking: Yes CPU Socket: AM4 Socket Count: 1P Thermal Solution (PIB): Not included Max. Operating Temperature (Tjmax): 90°C - B550M WIFI MOTHERBOARD Chipset: B550 Memory: 4 x DIMM, Max. 128GB, DDR4 4600(O.C)/ 4400(O.C)/ 4266(O.C.)/4133(O.C.)/4000(O.C.)/ 3866(O.C.)/733(O.C.)/3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/2800/2666/2400/ 2133 MHz Un-buffered Memory * 4 x DIMM, Max. 128GB, DDR4 4800(O.C.)/ 4600(O.C)/ 4466(O.C.)/4400(O.C)/4266(O.C.)/ 4133(O.C.)/4000(O.C.)/ 3866(O.C.)/3733(O.C.)/ 3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/ 2800/2666/2400/2133 MHz Un-buffered Memory * Dual Channel Memory Architecture ECC Memory (ECC mode) support varies by CPU. Graphic 1 x DisplayPort 1.2 1 x HDMI 2.1(4K@60HZ) *Graphics specifications may vary between CPU types. Expansion Slots Desktop Processors: 1 x PCIe 4.0 x16 (x16 mode) G-Series Desktop Processors: 1 x PCIe 3.0 x16 (x16 mode) B550 Chipset: 1 x PCIe 3.0 x16 (x4 mode) *1 1 x PCIe 3.0 x1 *1 * Support PCIe bifurcation for RAID on CPU function. Storage Total supports 2 x M.2 slot(s) and 4 x SATA 6Gb/s ports

		Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 4.0 x4 and SATA modes) storage devices support Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 3.0 x4 and SATA modes) storage devices support B550 Chipset : 1 x M.2_2 socket 3, with M Key, Type 2242/2260/2280/22110(PCIE 3.0 x4 and SATA modes) storage devices support 4 x SATA 6Gb/s port(s), Support Raid 0, 1, 10 LAN: 2.5Gb Ethernet Wireless Data Network: Wi-Fi 6 AX200 2x2 Wi-Fi 6 (802.11 a/b/g/n/ac/ax) support 1024QAM/OFDMA/MU-MIMO Supports up to 2.4Gbps max data rate Supports dual band frequency 2.4/5 GHz Supports channel bandwidth: HT20/HT40/HT80/HT160 Supports PCIe interface Bluetooth: Bluetooth v5.1* *BT 5.1 function will be ready in 10 build 19041 or later. Audio: ALC S1200A 7.1 Surround Sound High Definition Audio CODEC - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, up to 24-Bit/192kHz playback Audio Feature : - Exclusive DTS Custom for GAMING Headsets. - Optical S/PDIF out port(s) at back panel - Audio cover - Audio Shielding - Dedicated audio PCB layers - Premium Japanese audio capacitors USB Ports Rear USB Port (Total 8) 2 x USB 3.2 Gen 2 port(s)(1 x Type-A +1 x USB Type-C®) 4 x USB 3.2 Gen 1 port(s)(4 x Type-A) 2 x USB 2.0 port(s)(2 x Type-A) Front USB Port (Total 6) 2 x USB 3.2 Gen 1 port(s)(2 x Type-A) 4 x USB 2.0 port(s)(4 x Type-A) Software Features: Appropriate Software

		Specia Features: PROTECTION Back I/O Ports 1 x PS/2 keyboard/mouse combo port(s) 1 x DisplayPort 1 x HDMI 1 x LAN (2.5G) port(s) 2 x USB 3.2 Gen 2 (teal blue) (1 x Type-A+1 x USB Type-C®) 2 x USB 2.0 4 x USB 3.2 Gen 1 (blue) (one port can be switched to BIOS RECOVERY) 1 x Optical S/PDIF out 5 x Audio jack(s) 1 x BIOS RECOVERY Button(s) 1 x Wi-Fi Module Internal I/O Ports 1 x CPU Fan connector(s) 1 x CPU OPT Fan connector(s) 2 x Chassis Fan connector(s) 2 x RGB Strip Headers 1 x Addressable Gen 2 header(s) 1 x USB 3.2 Gen 1(up to 5Gbps) connector(s) support(s) additional 2 USB 3.2 Gen 1 port(s) 2 x USB 2.0 connector(s) support(s) additional 4 USB 2.0 port(s) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280 storage devices support (SATA mode & X4 PCIE mode) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280/22110 storage devices support (SATA mode & X4 PCIE mode) 1 x SPI TPM header 4 x SATA 6Gb/s connector(s) 1 x 24-pin EATX Power connector(s) 1 x 8-pin EATX 12V Power connectors 1 x Front panel audio connector(s) (AAFP) 1 x Clear CMOS jumper(s) 1 x System panel connector 1 x COM port header 1 x Speaker connector Accessories User´s manual I/O Shield 2 x SATA 6Gb/s cable(s) 1 x Supporting DVD 1 x Gaming Sticker 1 x Certification card(s)

		1 x Wi-Fi moving antenna 1 x M.2 SSD screw package(s) 1 x M.2 Rubber Package(s) BIOS: 256 Mb Flash ROM, UEFI AMI BIOS Operating System: latest proprietary operating system Form Factor: mATX Form Factor 9.6 inch x 9.6 inch (24.4 cm x 24.4 cm) Note: *1 PCIEX16_2 will run x2 mode when PCIEX1 is used. - 16GB DDR4 3600MHZ RAM Capacity: 16GB (2 x 8GB) Type: 288-Pin DDR4 SDRAM Speed: DDR4 3600 (PC4 28800) CAS Latency: 18 Timing: 18-22-22-42 Voltage: 1.35V ECC: No Buffered/Registered: Unbuffered Multi-channel Kit: Dual Channel Kit Chipset: XMP 2.0 Color Black Heat Spreader Yes - 500GB SSD Card Capacity: 500GB Form Factor: M.2 2280 Connector: M.2 Sequential Read Performance: 3500MB/s Sequential Write Performance: 2300MB/s Random Read: 360K IOPS Random Write: 390K IOPS Interface: PCIe Gen3 x4, NVMe v1.4 Warranty: 5-Year Limited Warranty Endurance (TBW): 300 Dimensions (L x W x H): 80mm x 22mm x 2.38mm Weight: 6.5gms Operating Temperature: 0°C to 70°C Non-Operating Temperature: -40°C to 85°C Certifications: BSMI, ICES-003/NMB-003, CE, FCC, KC, Maghreb, RCM, UKCA, VCCI, CB-Scheme, TUV, UL - VIDEO CARD Bus Standard: PCI Express 4.0 OpenGL: OpenGL®4.6 Video Memory: 8GB GDDR6 Engine Clock: OC Mode - 1740 MHz (Boost Clock) Gaming Mode - 1710 MHz (Boost Clock) CUDA Core: 4864

		Memory Speed: 14 Gbps Memory Interface: 256-bit Resolution: Digital Max Resolution 7680 x 4320 Interface: Yes x 2 (Native HDMI 2.1) Yes x 3 (Native DisplayPort 1.4a) HDCP Support Yes (2.3) - CPU CASE Type: ATX Case Drive Space: 5:25" - 0 Drive Space: 3.25" - 2 Drive Space: 2.5" - 2 Main Board: ATX Power Supply: PS2 Expansion Slot: 7 Slots Case Dimension: 400x 185 x 440mm Fan Capacity Front: 2 x 12cm Rear: 1x12cm Top: 2 x 12cm Measurement: 1080pcs / 40' HQ Maximum Compatibility: VGA Card Length: 380mm | CPU Cooler: 160mm | M/B: 305x244mm - FSP 750W GOLD POWER SUPPLY UNIT - Monitor: 21.5" WIDE BLACK FHD LED MONITOR (VGA, HDMI) - MOUSE AND KEYBOARD - Desktop Computer Desk with metal frame and wooden top - Swivel Chair
1	Unit	**60-seat Premium 3D CAD Software with initial 4 years Subscription Services** ITEM SPECIFICATIONS - Premium (3D CAD software) - Simulation Premium (FEA tools) - Flow Simulation (CFD tools) - Motion (kinematics analysis) - Plastics (part and mold filling analysis) - Sustainability (environmental impact tools) - Electrical Professional (electrical systems design tools) - Model Base Definition (define, organize, and publish 3D PMI) - Visualize (develop rich, photo-quality content) - Computer Aided Manufacturing

		Supports for Education Edition includes: - Complete Curriculum, including a Teacher Guide and Student Guide that makes teaching easier at every level. - Extensive interactive Courseware projects - Access to online educational community, plus our library of articles, tutorials, product resources, and more. - Free Access to Customer Portal. - Free Updates and upgrade to latest version. - Free installation assistance. Training: - Includes training for 5 faculty members / staff. - Training period is 4 full days - Lunch is included Terms and Conditions: 1. Warranty: Technical support during subscription 2. Delivery period: Within 90 working days 3. All prices quoted are subject to change w/o prior notice
1	unit	**Professional Desktop Fused Deposition Modelling/Fused Filament Fabrication 3D Printer** **ITEM SPECIFICATIONS** Technology: Fused Deposition Modelling (FDM) / Fused Filament Fabrication (FFF) Dimensions Build volume 330 x 240 x 300 mm (13 x 9.4 x 11.8 inches) Assembled dimensions: W 495 x D 585 x H 780 mm (W 19.5 x D 23 x H 30.7 inches) Print technology: Fused Deposition Modeling (FDM) Compatible filament diameter: 2.85 mm Weight: 29.1 kg (64.2 lbs) Maximum power output: 500 W **Printer properties** Layer resolution: 0.25 mm nozzle: 150 - 60 micron 0.4 mm nozzle: 200 - 20 micron 0.6 mm nozzle: 300 - 20 micron 0.8 mm nozzle: 600 - 20 micron XYZ resolution: 6.9, 6.9, 2.5 micron Feeder type: Dual-geared feeder, reinforced for composite materials Display: 4.7-inch (11.9 cm) color touchscreen Print core replacement: Swappable print cores Print head: Dual extrusion print head with an auto-nozzle lifting system, swappable print cores, and flood detection.

		Nozzle diameters: 0.25 mm, 0.4 mm, 0.6 mm, 0.8 mm **Operation parameters** Nozzle temperature 180 - 280 °C Nozzle heat-up time: < 2 minutes Operating sound: < 51 dBA Build plate leveling: Advanced active leveling Build plate: Glass build plate Build plate heat-up time: < 5 minutes (from 20 to 60 °C) Operating ambient temperature: 15 - 32 °C (59 - 90 °F) Non-operating temperature: 0 - 32 °C (32 - 90 °F) Ecosystem: Supplied free software - Appropriate Slicing Software - Appropriate printer management software Essential Software – enterprise-grade online software tools Supported OS: All leading industry OS Plugin integration: All leading Professional CAD software Supported file types: STL, OBJ, X3D, 3MF, BMP, GIF, JPG, PNG Printable formats: G, GCODE, GCODE.gz, UFP File transfter: Wi-Fi (2.4 GHz), Ethernet, USB Safety and compliance Certification: CE, FCC, VPAT, RoHS, REACH, CB, BIS, KC, PSE, RCM, SRRC, MIC, NCC, Safe unattended professional use Security certification: ISO/IEC 27001 certified (https://support.makerbot.com/s/article/1667411337398) **Inclusions:** English Manual Desktop Computer Desk with metal frame and wooden top Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	unit	**Food 3D Printer** **ITEM SPECIFICATIONS**

		Single syringe with 100 cubic centimeters volume (cc) capacity Print area: up to 220 x 195 x 170 mm Syringe and printbed heating Automatic calibration Dimensions: 510 x 420 x 700 mm Smarter control and monitoring with touch screen and webcam. The touchscreen is intuitively designed for an excellent user experience. The webcam gives you the freedom to keep an eye on your print job if you need to step away Motorized syringe for more accurate and controlled paste flow Inclusions: English Manual Desktop Computer Desk with metal frame and wooden top Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	unit	**Printed Circuit Board (PCB) Printer** **ITEM SPECIFICATIONS** Printing Specifications Minimum trace width 0.2 mm Minimum passive size1005 Minimum pin-to-pin pitch (conductive ink) 0.8 mml Minimum pin-to-pin pitch (solder paste) 0.5 mml Resistivity12 mΩ/sq @ 70 um height Substrate material FR4 Maximum board thickness 3 mm Soldering Specifications Solder paste alloy Sn42/Bi57.6/Ag0.4 Solder wire alloy SnBiAg1 Soldering iron temperature 180-210 °C Print Bed Print area135 x 113.5 mm Max. heated bed temperature 240 °C Heated bed ramp rate~2°C/s Footprint

		Dimensions: 390 x 257 x 207 mm (L x W x H) Weight 7 kg Computing Requirements Compatible operating systems latest proprietary operating system Compatible file format Gerber Connection type Wired USB Certification EN 61326-1:2013 EMC requirements IEC 61010-1 Safety requirements CE Marking Affixed to the printers delivered to European customers **Inclusions:** English Manual DESKTOP COMPUTER DESK with metal frame and wooden top Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	Unit	**Computer Numerical Control (CNC) Router** **ITEM SPECIFICATIONS** X axis travel 23.81" (605mm) Y axis travel= 47.63" (1210mm) Z axis travel 3.937" (100mm) Table work area = 28.4" x 61" Electro Spindle 800W (1HP) Includes Collets 1/4" & 1/8" Spindle speed 0-24,000 RPM Rapid feed rate 150 IPM (3.81 MPM) Precision Linear Guideway X/Y/Z Precision Ball Screw X/Y/Z Ball Screw Diameter 16mm Resolution +/- .00589" (0.15mm) Power requirements 115V, 50~60Hz, 13A, 1-Phase (Canada 220V, 7A) Working Table High rigidity Aluminum Extrusion Gantry bridge High rigidity Aluminum Extrusion Gantry Supports Aluminum billet machined

1	Unit	Max Gantry Clearance 5 1/2" (139.0mm) Gantry Clearance Above Spoil Brds 4 1/2" (114.3mm) Machine Base All Welded Steel Frame Machine Dimensions = 62"L x 35"W x 28"H Shipping Dimensions = 65" x 38" x 21" Machine Weight = 242 lbs Tool Touch Off Included ControllerRichAuto B11 DSP CNC motion control system USB port for easy file transfer **Inclusions:** English Manual Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service **Desktop PC for CAD Modelling** ITEMSPECIFICATIONS - 3.4 GHz Eight-Core Processor # of CPU Cores: 8 # of Threads: 16 Max. Boost Clock: Up to 4.6GHz Base Clock: 3.4GHz L1 Cache: 512KB L2 Cache: 4MB L3 Cache: 32MB Default TDP: 65W Processor Technology for CPU Cores: TSMC 7nm FinFET Unlocked for Overclocking: Yes CPU Socket: AM4 Socket Count: 1P Thermal Solution (PIB): Not included Max. Operating Temperature (Tjmax): 90°C - B550M WIFI MOTHERBOARD Chipset: B550 Memory: 4 x DIMM, Max. 128GB, DDR4 4600(O.C)/ 4400(O.C)/ 4266(O.C.)/4133(O.C.)/4000(O.C.)/

		3866(O.C.)/733(O.C.)/3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/2800/2666/2400/ 2133 MHz Un-buffered Memory * 4 x DIMM, Max. 128GB, DDR4 4800(O.C.)/ 4600(O.C)/ 4466(O.C.)/4400(O.C)/4266(O.C.)/ 4133(O.C.)/4000(O.C.)/ 3866(O.C.)/3733(O.C.)/ 3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/ 2800/2666/2400/2133 MHz Un-buffered Memory * Dual Channel Memory Architecture ECC Memory (ECC mode) support varies by CPU. Graphic 1 x DisplayPort 1.2 1 x HDMI 2.1(4K@60HZ) *Graphics specifications may vary between CPU types. Expansion Slots Desktop Processors: 1 x PCIe 4.0 x16 (x16 mode) G-Series Desktop Processors: 1 x PCIe 3.0 x16 (x16 mode) B550 Chipset: 1 x PCIe 3.0 x16 (x4 mode) *1 1 x PCIe 3.0 x1 *1 * Support PCIe bifurcation for RAID on CPU function. Storage Total supports 2 x M.2 slot(s) and 4 x SATA 6Gb/s ports Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 4.0 x4 and SATA modes) storage devices support Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 3.0 x4 and SATA modes) storage devices support B550 Chipset : 1 x M.2_2 socket 3, with M Key, Type 2242/2260/2280/22110(PCIE 3.0 x4 and SATA modes) storage devices support 4 x SATA 6Gb/s port(s), Support Raid 0, 1, 10 LAN: 2.5Gb Ethernet Wireless Data Network: Wi-Fi 6 AX200 2x2 Wi-Fi 6 (802.11 a/b/g/n/ac/ax) support 1024QAM/OFDMA/MU-MIMO Supports up to 2.4Gbps max data rate Supports dual band frequency 2.4/5 GHz Supports channel bandwidth: HT20/HT40/HT80/HT160

		Supports PCIe interface Bluetooth: Bluetooth v5.1* *BT 5.1 function will be ready in 10 build 19041 or later. Audio: ALC S1200A 7.1 Surround Sound High Definition Audio CODEC - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, up to 24-Bit/192kHz playback Audio Feature : - Exclusive DTS Custom for GAMING Headsets. - Optical S/PDIF out port(s) at back panel - Audio cover - Audio Shielding - Dedicated audio PCB layers - Premium Japanese audio capacitors USB Ports Rear USB Port (Total 8) 2 x USB 3.2 Gen 2 port(s)(1 x Type-A +1 x USB Type-C®) 4 x USB 3.2 Gen 1 port(s)(4 x Type-A) 2 x USB 2.0 port(s)(2 x Type-A) Front USB Port (Total 6) 2 x USB 3.2 Gen 1 port(s)(2 x Type-A) 4 x USB 2.0 port(s)(4 x Type-A) Software Features: Appropriate Software Specia Features: PROTECTION Back I/O Ports 1 x PS/2 keyboard/mouse combo port(s) 1 x DisplayPort 1 x HDMI 1 x LAN (2.5G) port(s) 2 x USB 3.2 Gen 2 (teal blue) (1 x Type-A+1 x USB Type-C®) 2 x USB 2.0 4 x USB 3.2 Gen 1 (blue) (one port can be switched to BIOS RECOVERY) 1 x Optical S/PDIF out 5 x Audio jack(s) 1 x BIOS RECOVERY Button(s) 1 x Wi-Fi Module Internal I/O Ports 1 x CPU Fan connector(s) 1 x CPU OPT Fan connector(s) 2 x Chassis Fan connector(s)

		2 x RGB Strip Headers 1 x Addressable Gen 2 header(s) 1 x USB 3.2 Gen 1(up to 5Gbps) connector(s) support(s) additional 2 USB 3.2 Gen 1 port(s) 2 x USB 2.0 connector(s) support(s) additional 4 USB 2.0 port(s) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280 storage devices support (SATA mode & X4 PCIE mode) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280/22110 storage devices support (SATA mode & X4 PCIE mode) 1 x SPI TPM header 4 x SATA 6Gb/s connector(s) 1 x 24-pin EATX Power connector(s) 1 x 8-pin EATX 12V Power connectors 1 x Front panel audio connector(s) (AAFP) 1 x Clear CMOS jumper(s) 1 x System panel connector 1 x COM port header 1 x Speaker connector Accessories User´s manual I/O Shield 2 x SATA 6Gb/s cable(s) 1 x Supporting DVD 1 x Gaming Sticker 1 x Certification card(s) 1 x Wi-Fi moving antenna 1 x M.2 SSD screw package(s) 1 x M.2 Rubber Package(s) BIOS: 256 Mb Flash ROM, UEFI AMI BIOS Operating System: latest proprietary operating system Form Factor: mATX Form Factor 9.6 inch x 9.6 inch (24.4 cm x 24.4 cm) Note: *1 PCIEX16_2 will run x2 mode when PCIEX1 is used. - 16GB DDR4 3600MHZ RAM Capacity: 16GB (2 x 8GB) Type: 288-Pin DDR4 SDRAM Speed: DDR4 3600 (PC4 28800) CAS Latency: 18 Timing: 18-22-22-42 Voltage: 1.35V ECC: No Buffered/Registered: Unbuffered Multi-channel Kit: Dual Channel Kit Chipset: XMP 2.0

		Color Black Heat Spreader Yes - 500GB SSD Card Capacity: 500GB Form Factor: M.2 2280 Connector: M.2 Sequential Read Performance: 3500MB/s Sequential Write Performance: 2300MB/s Random Read: 360K IOPS Random Write: 390K IOPS Interface: PCIe Gen3 x4, NVMe v1.4 Warranty: 5-Year Limited Warranty Endurance (TBW): 300 Dimensions (L x W x H): 80mm x 22mm x 2.38mm Weight: 6.5gms Operating Temperature: 0°C to 70°C Non-Operating Temperature: -40°C to 85°C Certifications: BSMI, ICES-003/NMB-003, CE, FCC, KC, Maghreb, RCM, UKCA, VCCI, CB-Scheme, TUV, UL - VIDEO CARD Bus Standard: PCI Express 4.0 OpenGL: OpenGL®4.6 Video Memory: 8GB GDDR6 Engine Clock: OC Mode - 1740 MHz (Boost Clock) Gaming Mode - 1710 MHz (Boost Clock) CUDA Core: 4864 Memory Speed: 14 Gbps Memory Interface: 256-bit Resolution: Digital Max Resolution 7680 x 4320 Interface: Yes x 2 (Native HDMI 2.1) Yes x 3 (Native DisplayPort 1.4a) HDCP Support Yes (2.3) - CPU CASE Type: ATX Case Drive Space: 5:25" - 0 Drive Space: 3.25" - 2 Drive Space: 2.5" - 2 Main Board: ATX Power Supply: PS2 Expansion Slot: 7 Slots Case Dimension: 400x 185 x 440mm Fan Capacity Front: 2 x 12cm Rear: 1x12cm Top: 2 x 12cm Measurement: 1080pcs / 40' HQ Maximum Compatibility: VGA Card Length: 380mm | CPU Cooler: 160mm | M/B: 305x244mm

		- FSP 750W GOLD POWER SUPPLY UNIT - Monitor: 21.5" WIDE BLACK FHD LED MONITOR (VGA, HDMI) - MOUSE AND KEYBOARD - Desktop Computer Desk with metal frame and wooden top - Swivel Chair
1	Unit	**3D Scanner** **ITEM SPECIFICATIONS** Scanner Type: Handheld with Built-in touchscreen interface Description: Hand-held 3D scanner meant to capture (from 30cm to 10m in length). With Built-in touchscreen for ease-of-use during scanning. 3D Point Accuracy : 0.1 mm or better 3D Resolution : 0.6 mm or better Depth of view : at least 55-95 cm Field of view: at least 280 x 360 mm (min.) to 490 x 650 mm (max.) 3D Light source: White LED Texture Resolution: 2.3 mp Frame Rate : 35 fps or better Data acquisition speed : at least 3M points /sec Multi core processing: Yes 3D Formats: OBJ, PLY, STL, etc. Interface: Built in touchscreen - 4 inches or bigger Tracking Modes: Geometry, Markers, Texture Capable of scanning: Black surfaces, Glossy objects, Sharp edges, Human hair Dimensions: At least 165 × 85 × 274 mm or equivalent Software: Include license operating software that can fill holes, simplify the mesh, apply texture. - Calibration Board - Magnetic Marker - USB Cable - Appropriate Software - Carry Case **Inclusions:** English Manual Safety Box with Security Lock (using key and pin code) Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer.

1	Unit	On-Site Training and Installation 12 Months warranty for parts and service **High-End Laptop** ITEMSPECIFICATIONS Operating System: latest proprietary operating system Processor: Core i7-10750H Processor 2.60 GHz 12M Cache, up to 5.00 GHz Graphics: GTX 1660 Ti 6GB GDDR6 VRAM Memory: 16GB DDR4 up to 3200MHz SDRAM Support up to 48GB Storage: 1TB SSD Display: 15.6-inch Full HD 12 Months warranty for parts and service Desktop Computer Desk with metal frame and wooden top Swivel Chair
1	Unit	**Large Format Printer and Cutter** **ITEM SPECIFICATIONS** Printing Method: Piezo ink-jet method Width: 11.7 to 54 in. (297 to 1,371 mm) Thickness: Max. 39.3 ml (1.0 mm) with liner, for printing Max. 15.7 ml (0.4 mm) with liner and 8.6 ml (0.22 mm) without liner, for cutting Media Roll outer diameter: Max. 9.8 in. (250 mm) Media Roll weight: Max. 77 lb. (35 kg) Media Core diameter: 3 in. (76.2 mm) or 2 in. (50.8 mm) Printing/cutting width (*1): Max. 52.9 in. (1,346 mm) Printing resolution (dots per inch): Max. 1,200 dpi Cutting speed:0.39 to 11.8 in/s (10 to 300 mm/s) Blade force (*2): 30 to 500 gf Software resolution (when cutting): 0.98 ml/step (0.025 mm/step) Dimensions: at least 103.7 in. x 29.5 in. x 52.0 in. (2,632 mm x 748 mm x 1,320 mm) Media heating system (*3): Print heater set temperature: 86 to 113 (°F 30 to 45 °C) Dryer set temperature: 86 to 131 °F (30 to 55 °C) Connectivity: Ethernet Power-saving function: Automatic sleep feature Rated input: 100-120/220-240 Va.c. 50/60 Hz 8.0/4.1 A 8 liters Ink (CMYK) - 1L per color 1 pc Cleaning Solution 1 pc AVR 2kva 1 rolls Generic Sticker Dedicated stands, power cord, media holders, replacement blade for separating

1	Unit	knife, drain bottle, User's Manual, Software **Inclusions:** English Manual Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service **Desktop PC for CAD Modelling** ITEM SPECIFICATIONS - 3.4 GHz Eight-Core Processor # of CPU Cores: 8 # of Threads: 16 Max. Boost Clock: Up to 4.6GHz Base Clock: 3.4GHz L1 Cache: 512KB L2 Cache: 4MB L3 Cache: 32MB Default TDP: 65W Processor Technology for CPU Cores: TSMC 7nm FinFET Unlocked for Overclocking: Yes CPU Socket: AM4 Socket Count: 1P Thermal Solution (PIB): Not included Max. Operating Temperature (Tjmax): 90°C - B550M WIFI MOTHERBOARD Chipset: B550 Memory: 4 x DIMM, Max. 128GB, DDR4 4600(O.C)/ 4400(O.C)/ 4266(O.C.)/4133(O.C.)/4000(O.C.)/ 3866(O.C.)/733(O.C.)/3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/2800/2666/2400/ 2133 MHz Un-buffered Memory * 4 x DIMM, Max. 128GB, DDR4 4800(O.C.)/ 4600(O.C)/ 4466(O.C.)/4400(O.C)/4266(O.C.)/ 4133(O.C.)/4000(O.C.)/ 3866(O.C.)/3733(O.C.)/ 3600(O.C.)/ 3466(O.C.)/ 3333(O.C.)/3200/3000/ 2800/2666/2400/2133 MHz Un-buffered Memory * Dual Channel Memory Architecture ECC Memory (ECC mode) support varies by CPU. Graphic

		1 x DisplayPort 1.2 1 x HDMI 2.1(4K@60HZ) *Graphics specifications may vary between CPU types. Expansion Slots Desktop Processors: 1 x PCIe 4.0 x16 (x16 mode) G-Series Desktop Processors: 1 x PCIe 3.0 x16 (x16 mode) B550 Chipset: 1 x PCIe 3.0 x16 (x4 mode) *1 1 x PCIe 3.0 x1 *1 * Support PCIe bifurcation for RAID on CPU function. Storage Total supports 2 x M.2 slot(s) and 4 x SATA 6Gb/s ports Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 4.0 x4 and SATA modes) storage devices support Desktop Processors: 1 x M.2_1 socket 3, with M Key, Type 2242/2260/2280 (PCIE 3.0 x4 and SATA modes) storage devices support B550 Chipset : 1 x M.2_2 socket 3, with M Key, Type 2242/2260/2280/22110(PCIE 3.0 x4 and SATA modes) storage devices support 4 x SATA 6Gb/s port(s), Support Raid 0, 1, 10 LAN: 2.5Gb Ethernet Wireless Data Network: Wi-Fi 6 AX200 2x2 Wi-Fi 6 (802.11 a/b/g/n/ac/ax) support 1024QAM/OFDMA/MU-MIMO Supports up to 2.4Gbps max data rate Supports dual band frequency 2.4/5 GHz Supports channel bandwidth: HT20/HT40/HT80/HT160 Supports PCIe interface Bluetooth: Bluetooth v5.1* *BT 5.1 function will be ready in 10 build 19041 or later. Audio: ALC S1200A 7.1 Surround Sound High Definition Audio CODEC - Supports : Jack-detection, Multi-streaming, Front Panel Jack-retasking, up to 24-Bit/192kHz playback Audio Feature : - Exclusive DTS Custom for GAMING Headsets. - Optical S/PDIF out port(s) at back panel - Audio cover - Audio Shielding - Dedicated audio PCB layers

		- Premium Japanese audio capacitors USB Ports Rear USB Port (Total 8) 2 x USB 3.2 Gen 2 port(s)(1 x Type-A +1 x USB Type-C®) 4 x USB 3.2 Gen 1 port(s)(4 x Type-A) 2 x USB 2.0 port(s)(2 x Type-A) Front USB Port (Total 6) 2 x USB 3.2 Gen 1 port(s)(2 x Type-A) 4 x USB 2.0 port(s)(4 x Type-A) Software Features: Appropriate Software Specia Features: PROTECTION Back I/O Ports 1 x PS/2 keyboard/mouse combo port(s) 1 x DisplayPort 1 x HDMI 1 x LAN (2.5G) port(s) 2 x USB 3.2 Gen 2 (teal blue) (1 x Type-A+1 x USB Type-C®) 2 x USB 2.0 4 x USB 3.2 Gen 1 (blue) (one port can be switched to USB BIOS RECOVERY) 1 x Optical S/PDIF out 5 x Audio jack(s) 1 x BIOS RECOVERY Button(s) 1 x Wi-Fi Module Internal I/O Ports 1 x CPU Fan connector(s) 1 x CPU OPT Fan connector(s) 2 x Chassis Fan connector(s) 2 x RGB Strip Headers 1 x Addressable Gen 2 header(s) 1 x USB 3.2 Gen 1(up to 5Gbps) connector(s) support(s) additional 2 USB 3.2 Gen 1 port(s) 2 x USB 2.0 connector(s) support(s) additional 4 USB 2.0 port(s) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280 storage devices support (SATA mode & X4 PCIE mode) 1 x M.2 Socket 3 with M Key, type 2242/2260/2280/22110 storage devices support (SATA mode & X4 PCIE mode) 1 x SPI TPM header 4 x SATA 6Gb/s connector(s) 1 x 24-pin EATX Power connector(s) 1 x 8-pin EATX 12V Power connectors 1 x Front panel audio connector(s) (AAFP) 1 x Clear CMOS jumper(s) 1 x System panel connector 1 x COM port header 1 x Speaker connector

		Accessories User´s manual I/O Shield 2 x SATA 6Gb/s cable(s) 1 x Supporting DVD 1 x Gaming Sticker 1 x Certification card(s) 1 x Wi-Fi moving antenna 1 x M.2 SSD screw package(s) 1 x M.2 Rubber Package(s) BIOS: 256 Mb Flash ROM, UEFI AMI BIOS Operating System: latest proprietary operating system Form Factor: mATX Form Factor 9.6 inch x 9.6 inch (24.4 cm x 24.4 cm) Note: *1 PCIEX16_2 will run x2 mode when PCIEX1 is used. - 16GB DDR4 3600MHZ RAM Capacity: 16GB (2 x 8GB) Type: 288-Pin DDR4 SDRAM Speed: DDR4 3600 (PC4 28800) CAS Latency: 18 Timing: 18-22-22-42 Voltage: 1.35V ECC: No Buffered/Registered: Unbuffered Multi-channel Kit: Dual Channel Kit Chipset: XMP 2.0 Color Black Heat Spreader Yes - 500GB SSD Card Capacity: 500GB Form Factor: M.2 2280 Connector: M.2 Sequential Read Performance: 3500MB/s Sequential Write Performance: 2300MB/s Random Read: 360K IOPS Random Write: 390K IOPS Interface: PCIe Gen3 x4, NVMe v1.4 Warranty: 5-Year Limited Warranty Endurance (TBW): 300 Dimensions (L x W x H): 80mm x 22mm x 2.38mm Weight: 6.5gms Operating Temperature: 0°C to 70°C Non-Operating Temperature: -40°C to 85°C Certifications: BSMI, ICES-003/NMB-003, CE, FCC, KC, Maghreb, RCM, UKCA, VCCI, CB-Scheme, TUV, UL - VIDEO CARD Bus Standard: PCI Express 4.0

		OpenGL: OpenGL®4.6 Video Memory: 8GB GDDR6 Engine Clock: OC Mode - 1740 MHz (Boost Clock) Gaming Mode - 1710 MHz (Boost Clock) CUDA Core: 4864 Memory Speed: 14 Gbps Memory Interface: 256-bit Resolution: Digital Max Resolution 7680 x 4320 Interface: Yes x 2 (Native HDMI 2.1) Yes x 3 (Native DisplayPort 1.4a) HDCP Support Yes (2.3) - CPU CASE Type: ATX Case Drive Space: 5:25" - 0 Drive Space: 3.25" - 2 Drive Space: 2.5" - 2 Main Board: ATX Power Supply: PS2 Expansion Slot: 7 Slots Case Dimension: 400x 185 x 440mm Fan Capacity Front: 2 x 12cm Rear: 1x12cm Top: 2 x 12cm Measurement: 1080pcs / 40' HQ Maximum Compatibility: VGA Card Length: 380mm | CPU Cooler: 160mm | M/B: 305x244mm - FSP 750W GOLD POWER SUPPLY UNIT - Monitor: 21.5" WIDE BLACK FHD LED MONITOR (VGA, HDMI) - MOUSE AND KEYBOARD - Desktop Computer Desk with metal frame and wooden top - Swivel Chair
1	Unit	**Graphing Software** ITEM SPECIFICATIONS - Engineering graphing software - Capable of the ff: - Linear and Polynomial Fitting - Nonlinear Fitting - Peak Analysis - Descriptive Statistics - Hypothesis Testing - Nonparametric Tests - Multivariate Analysis - Power and Sample Size - ROC Curve

		- Signal Analysis (Smoothing and Filtering, Fast Fourier Transform) - Matematics (Simple Math Operations, Interpolation, Extrapolation, Area Calculation) - Graphing (2D Graphing, 3D Graphing) - Curve Fitting - Graph Customization - Data Processing - etc
1	unit	**Digital Embroidery** **ITEM SPECIFICATIONS** Can embroider using digital designs Basic Features Accessory Storage Yes Adjustable Screen Brightness No Automatic Thread Cutter Yes Built-in Languages Yes Built-In Memory Yes Included Accessory Feet Button Fitting Foot, Zipper Foot, Overcasting Foot, Blindstich Foot, Monogramming Foot, Zigzag Foot, Embroidery Foot Needle Position Key (Up/Down) Yes Needle Threading System Advanced Number of Presser Feet 8 Presser Foot Leveling Yes Quick Set Bobbin Yes Start/Stop Button Yes Thread Sensor On/Off No Wide Table Included No Wireless Enabled Yes Dimensions Carton Dimensions (W" x D" x H") 16.500 " x 21.000 " x 15.750 " Carton Weight (lbs) 26.700 Unit Dimensions (W" x D" x H") 7.76" x 16.50" x 12.09" Unit Weight (lbs) 15.06 Embroidering Built-In Designs 135 Built-in Embroidery Lettering Alphabet Fonts 10 Embroidery Position Marker No Maximum Embroidery Area 4" x 4" Sewing Automatic Height Adjustment (AHA) No Built-In Lettering Fonts 10 Built-In Stitch Selections (Stitches) 103 Button Hole Styles 10

		Independent Bobbin Winding Motor No Knee Lifter No Maximum Sewing Speed (Stitches Per Minute) 710 Pivot Function No Speed Control Yes Carton Contents: Zigzag foot “J” (on machine), Monogramming foot “N”, Overcasting foot “G”, Zipper foot “I”, Blind stitch foot “R”, Button fitting foot “M”, Buttonhole foot “A”, Embroidery foot “Q”, Needle set, Twin needle, Bobbin (2) (One bobbin is on machine), Pre- wound bobbin (3) (60 weight white embroidery bobbin thread), Bobbin clip (4), Seam ripper, Scissors, Cleaning brush, Eyelet punch, Screwdriver, Disc-shaped screwdriver, Extra spool pin, Spool cap (large), Spool cap (medium) (on machine), Spool cap (small), Thread spool insert (mini king thread spool), Spool net, Bobbin case (on machine), Foot controller, Embroidery frame set (medium), 10 cm (H) × 10 cm (W) (4 inches (H) × 4 inches (W)), Accessory bag, Dust cover, Operation Manual, Quick Reference Guide, Embroidery Design Guide **Inclusions:** English Manual Desktop Computer Desk with metal frame and wooden top Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	unit	**Flatbed UV Printer with initial consumables, and other peripherals** **ITEM SPECIFICATIONS** Can print directly on solid materials such as woods, plastics, metals, rubber, leather, glass, and more Printer Technology: Drop-on-demand Micro Piezo Inkjet Technology Description: Print quality on a wide variety of solid materials and objects including ABS, Alu-board, PC, PET, PMMA (acrylic), PS, PVC, etc.

		Application: Prototypes, personalised gifts, packaging, souvenirs, awards, specialty industrial items as well as labels, decals, signs, etc. Print Head: 1 Max. Media Size: at least 483 mm (19") x 594 mm (23.4") Max. Media Thickness: at least 150 mm (5.9") Max. Print Area: at least 473 mm (18,6") x 584 mm (23") Media Drying System: Long-life LED-UV curing lamp Vacuum System: Standard integrated - electronically adjustable hold-down strength No. of Ink Slot: 6 Ink Type: LED-UV ink Ink Colors: KCMY, white+ varnish Print Resolutions: 1440/1080/720dpi Interface: Ethernet Power Supply: AC 100-240V - 50/60Hz±1Hz Power Consumption Operating Status: 300W or less Machine Measurements (W) x (D) x (H) : 1188 x 1533.6 x 604.3 mm (46.8"x 60.4" x 23.8") Rotary CMYK UV Ink User Manual AVR Software **Inclusions:** Consumables: 1 set CMYK + White and Varnish Peripherals or Machine parts: Vacuum table, LED Pointer, Front Cover, plus Rotary attachment Machine software English Manual Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	unit	**Garment / T-shirt printer** Prints directly on fabrics and textiles Specifications: Printing Technology: Advanced Inkjet Technology Nozzle Configuration : at least 3,200 nozzles Maximum Print Resolution: 2400 x 1200 dpi Print Speed:

		Production (2 pass), For Fabric: Up to 62sec / 21m2 (600 x 1200 dpi) Production (7 pass): For Fabric & Rigid: Up to 208sec / 7.5m2 (1200 x 1200 dpi) Production (12 pass), For Fabric & Rigid: Up to 350sec / 4.5m2 (2400 x 1200 dpi) Ink Colours: Cyan, Magenta, Yellow, Black Ink Capacity: 140ml Dimensions: 97cm 81.1cm x 24.5cm **Inclusions:** English Manual Desktop Computer Desk with metal frame and wooden top Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	unit	**CO_2 Laser Cutter / Engraver** **ITEM SPECIFICATIONS** Mechanics Work Surface area: at least 1290 x 990 mm Dimension: 1850 x 1500 x 1100 mm or equivalent Cutting speed: at least 30000 mm/min Engraving Speed: at least 60000 mm/min Laser Type: CO_2 Laser Tube Laser power Included: up to 100Watts Focus Lens: at least 2.0 in standard Resolution Ratio: at least 0.025 mm Repositioning accuracy: at least '+/- 10% Operating humidity: 5%-80% Graphic format supported: BMP,GIF,JPEG,UNITX,TGA,TIFF,PLT,CDR,DWG,DXF Software Compatibility: CorelDraw, Photoshop, AutoCAD, Tajima , CAM/CAD Cooling Method: Water Cooling (Chiller Included) Materials Compatibility: Acrylic, Wood, Fabric, Cardboard, Paper, Synthetic Granite, Natural Granite, Leather, Foam board, Glass Extendable Size: Front and Back of laser machine can be opened suitable for super length material process

		Power Requirements: 220V, 50HZ/60HZ **Package Inclusions:** 1 Unit Spare Lens 2 Units Spare Mirror 1 Unit Air Compressor 1 Unit Chiller 1 set Starter Consumable **Other Inclusions:** English Manual Desktop Computer Desk with metal frame and wooden top Swivel Chair Cabinet for Accessories, Supplies and Materials Certificate of authority to sell from the manufacturer or local distributor/reseller. Training certificate provided by manufacturer to certified trainer. After-Sales Support certificate issued by the manufacturer. Parts Availability certificate issued by the manufacturer. On-Site Training and Installation 12 Months warranty for parts and service
1	unit	**Duplicator** **ITEM SPECIFICATIONS** A3 Size Paper B4 Size Output Master Making Method: Thermal Digital Master Making Interval: 23 seconds (A4.100%) Resolution: Scan (input) resolution: 300x360 dpi Print (output) resolution: 300x600 dpi Scanning Method: ADF Scanner Document Feeder Document Weight: 45-210gsm 17-34lbs (Bond) Document Capacity: 1 sheet Printing Method: Stencil print Document Type: Sheet, Book (max) Document Size: Max: 297mmx420mm Min: 100x148mm Image Area: Max: 250x355mm Feeding Capacity: 1,300sheets (64gsm) Stacker Capacity: 1,300sheets (64gsm) Paper size: Max: 297x420mm Min: 100x148mm Paper Weight: 42-210gsm Print Speed: 60ppm/130ppm (3steps) Zoom: 50-200% Preset reduction/enlargement: 57, 70, 81, 86, 94, 115, 122, 141, 173% Margin: x94% Registration adjustment: Vertical ±15mm and Horizontal ±15mm

		Other function: Ink save mode, Multiple exposure (2, 4, 8, & 16-up, 2in1), Confidential safeguard, 90, 180 degree rotation, Master re-make (save the data from last master making), Repeat counter, Pre-print, Interval print (2 mode, by time specified), Print per set/prints per document program, Energy save mode(LCD / back light turned off /sleep LED), Ink replenishing mode, Auto- reset, Online print (USB 2.0), Double feed detection. Power source: 100-240V, 50/60Hz, 1.6-0.8A/ Max speed printing - MAX. 135WEnergy save mode -MIN. 10.2W Dimensions: 1,290mm x 620mm x 1165mm **Inclusions:** • Price is VAT Inc • Including the delivery fee • FREE LIFETIME SERVICE WARRANTY • Ink Starter Set • 1 Year Standard Warranty on Parts • Desktop Computer Desk with metal frame and wooden top • Swivel Chair • Cabinet for Accessories, Supplies and Materials Should also include additional: One (1) Black Ink: (600 cc) 10,000-15,000 copies One (1) Master Stencil Roll: (200 cuts/roll) per cut yield 10,000 - 15,000 copies

Please state compliance to the Technical Specifications

Name of Supplier hereby states its compliance to the abovementioned Technical Specifications for all items.

____

Name of Authorized Representative/Supplier
Signed

Section VIII. Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
or

☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document,
and

☐ (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and

☐ (d) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

☐ (e) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**

☐ (f) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within the relevant period as provided in the Bidding Documents; **and**

☐ (g) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration; **and**

☐ (h) Conformity with the Schedule of Requirements (Section VI); **and**

☐ (i) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable; **and**

☐ (j) Original duly signed Omnibus Sworn Statement (OSS);

and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

☐ (k) The Supplier's audited financial statements, showing, among others, the Supplier's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**

☐ (l) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC);
or
A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

Class "B" Documents

☐ (m) If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence;
or
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

☐ (n) Original of duly signed and accomplished Financial Bid Form; **and**

☐ (o) Original of duly signed and accomplished Price Schedule(s).

Other documentary requirements under RA No. 9184 (as applicable)

☐ (p) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.

☐ (q) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

Republic of the Philippines

gppb

Government Procurement Policy Board