

Department of Education

OFFICE OF THE ASSISTANT SECRETARY FOR INFORMATION AND COMMUNICATIONS TECHNOLOGY

CERTIFICATION

The Office of the Assistant Secretary for Information and Communications Technology (OASICT), which acts as the clearing house for ICT-related equipment, confirms that the following items meet the required technical specifications:

- **OMR Hardware Scanner and Software**
- Desktop Computer Desktop for Bureau of Education Assessment

These specifications follow the standard requirements set by OASICT and are supported by a market survey conducted by the Bureau of Education Assessment (BEA). The equipment will mainly be used for the Modernization of the National Assessment System for Basic Education (NASBE) Programs.

Attached are the following documents:

- Annex A Technical Specifications (Desktop Computer)
- Annex B Technical Specifications (OMR Hardware Scanner and Software)
- Annex C Product Review Requirements
- Annex D Brand References

This certification is issued upon the request of BEA to support their procurement of the listed ICT equipment.

Issued on June 24, 2025, at the Department of Education - Central Office, Pasig City.

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Technical Specifications

- Standard Technical Requirements
- Desktop for Bureau of Education Assessment (Optical Mark Reader)

For purposes of procurement, "Manufacturer documentary proof" is explicitly defined as unamended manufacturer's sales documents / literature including brochures, official online sources, or communication from the official email address of the brand manufacturer. These are considered documents under the column labeled "Evidence of Compliance" and should be submitted as proof of compliance during the bid opening.

Standard Technical Requirements

All connected computing devices — including desktops, laptops, smartphones, tablets, and smart TVs — are subject to the common standard requirements outlined below.

Requirement	Evidence of Compliance
Product Model is certified NTC type approved with certificate and applicable registration number.	Copy of NTC Certificate
Brand manufacturer is certified ISO 9001:2015 (Quality Management System)	Manufacturer documentary proof
Brand manufacturer is certified ISO 14001:2015 (Environmental Management System)	Manufacturer documentary proof
Brand product line for device category to be procured has existed for at least three (3) years.	Manufacturer documentary proof
Product Model must be available and serviceable for at least five (5) years after delivery and acceptance. This includes parts of the product.	Certification from the brand manufacturer
Product Model must be at most three (3) years old from the date of the opening of the bid.	Manufacturer documentary proof
Product Model must be brand new upon purchase, must be current and not be "end of life" (EOL) as reflected in the current product line.	Manufacturer documentary proof
Ports must be natively available on the device and not require the use of an	Manufacturer documentary proof

external adapter or converter.	
Product Markings must be written in English.	Manufacturer documentary proof
Network supports 802.11b/g/n: Wi-Fi 4	Manufacturer documentary proof
Network supports 802.11ac: Wi-Fi 5	Manufacturer documentary proof
Screen Mirroring must be natively supported by the operating system without requiring third-party applications or external hardware.	Manufacturer documentary proof
Operating System must be actively supported by the manufacturer, demonstrated through regular security and feature updates. For newer models, proof of active support may also be shown via the manufacturer's update policy for other products of the same device category of the same brand.	Manufacturer documentary proof
Operating System must feature a built-in marketplace of apps, ensuring compatibility with a wide range of educational and/or productivity applications.	Manufacturer documentary proof
Product Manual/s must be written in English - includes all user manuals, printed and/or electronic copies.	Manufacturer documentary proof
Keyboard must be US English Layout (QWERTY)-style.	Manufacturer documentary proof

Desktop for Bureau of Education Assessment: June 21, 2025

Aside from the standard requirements set forth above, the following minimum technical requirements shall be required for Microsoft-based desktops for Optical Mark Reader:

Comprehensive Global Review

Requirement	Evidence of Compliance
Brand product line for device category to	See Product Review Requirement.
be procured must be well-reviewed.	

Quality Assurance

Requirement Evidence of Compliance	
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Brand manufacturer is a Microsoft authorized Direct OEM	Certification from Microsoft
Partner with Global Partner Agreement	and/or the brand manufacturer
	confirming the aforesaid partner status.
Brand manufacturer holds License	Certification from Microsoft and/or the
Confirmation issued by Microsoft	brand manufacturer confirming the
indicating the model and product being	aforesaid partner status.
offered to DepEd are authentic and the	
manufacturer was given the right to	
preinstall and distribute the Microsoft	
Licenses under the GPA terms.	
Brand manufacturer maintains	Manufacturer documentary proof
physical offices, service centers, or	
distribution hubs in at least five (5)	
countries other than the Philippines,	
with at least one (1) country from	
North America, one (1) country from	
Western Europe, and one (1) country	
from Asia-Pacific.	

Sustainability

Requirement	Evidence of Compliance
Product must be compliant with	Manufacturer documentary proof
ECMA-370 (The Eco Declaration)	
standard or an equivalent	
environmental specification.	
Product is certified at least TCO 9.0	Manufacturer documentary proof
Product is certified EPEAT (Electronic	Manufacturer documentary proof
Product Environmental Assessment	
Tool) – Gold Tier	
Product is certified FSC (Forest	Manufacturer documentary proof
Stewardship Council)	

Performance

Requirement	Evidence of Compliance
Processor must score at least 12000 on	Manufacturer documentary proof
Geekbench 6 Processor Multi-Core Test	
Memory must have at least 32 GB RAM	Manufacturer documentary proof
Storage must have at least 512 GB SSD	Manufacturer documentary proof

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Display

Requirement	Evidence of Compliance
Screen Size must be at least 20"	Manufacturer documentary proof
Screen Resolution must be at least 1920 x 1080 (FHD)	Manufacturer documentary proof

Device

Requirement	Evidence of Compliance
Recovery Key must be set up to initiate	Manufacturer documentary proof
restoration of the system to its original	
factory or pre-configured state.	
Ports must have at least 1x HDMI or Micro HDMI	Manufacturer documentary proof
Ports must have at least 1 x USB Type C	Manufacturer documentary proof
Ports must have at least 5 x USB 3.0	Manufacturer documentary proof
Ports must have at least 1x Combo Audio Jack	Manufacturer documentary proof
Ports must have at least 1x Ethernet Port	Manufacturer documentary proof
Ports must have at least 1x PCIe x 16 Slot	Manufacturer documentary proof

Wireless

Requirement	Evidence of Compliance
Network supports at least Bluetooth 5.3	Manufacturer documentary proof
Network supports 802.11ax: Wi-Fi 6	Manufacturer documentary proof

Operating System

Requirement	Evidence of Compliance
Operating System must be Windows 11	Manufacturer documentary proof
Pro	

Accessory

Requirement	Evidence of Compliance
Power Cord must be at least 2 meters	Manufacturer documentary proof
long	
Mouse must be optical / laser	Manufacturer documentary proof
Mouse must be wireless	Manufacturer documentary proof

Power

Requirement	Evidence of Compliance
Power Output Capacity must be at least 650 W	Manufacturer documentary proof
Power Supply Unit must be at least 80	Manufacturer documentary proof
PLUS Gold Certified	

TECHNICAL SPECIFICATIONS

OMR HARDWARE SCANNER AND SOFTWARE	
Value	
Bidders must submit supporting documents from the brand manufacturer to validate that the latter is:	
 ISO 9001:2015 (Quality Management System) certified ISO 14001:2015 (Environmental Management System) certified 	
Bidders must submit supporting documents <u>from the brand</u> <u>manufacturer</u> to validate that the latter is an authorized reseller, e.g. product distribution certificate.	
At least 1 year parts and 2 years service;	
Bidders must provide an active URL of the brand manufacturer pointing to the brand's Android mobile print application that can be downloaded via Google Play Store.	
Bidders must provide an official website domain belonging to the brand manufacturer where updated drivers and related software appropriate to the model being offered can be downloaded.	
Value	
Aside from the common standards referred to above, international products offered must be: Certified by CE (Conformité Européenne) Certified by FCC (Federal Communications Commission) Energy Star-certified	
Bidders must submit supporting documents from the brand manufacturer to validate that the brand (a) has existed for at least (3) years; and (b) maintains physical offices, service centers, or distribution hubs in at least five (5) countries other than the Philippines, with at least one (1) country from North America, one (1) country from Western Europe, and one (1) country from Asia-Pacific.	
Bidders must submit supporting documents from the brand manufacturer to validate that the brand maintains service centers from the locations previously specified (i.e. global quality) that exist for the purpose of facilitating warranty claims and technical assistance.	
nds	
Value	
Aside from the common standards referred to above, local brands must include: Philippine Standard (PS) License Philippine Standard (PS) Mark SEC registration of the brand manufacturer IPO trademark registration NTC Certificate of the offered product brand and model New Philippine Energy Label certificate or	

Local proven quality	Bidders must submit supporting documents from the brand manufacturer to validate that the brand (a) has existed for at least (3) years; and (b) maintains physical offices, service centers, or distribution hubs in at least six (6) provinces in the country, with at least one (1) province from Luzon, one (1) province from Visayas, and one (1) province from Mindanao.
Local warranty	Bidders must submit supporting documents from the brand manufacturer to validate that the brand maintains service centers from the locations previously specified (i.e. local quality) that exist for the purpose of facilitating warranty claims and technical assistance.
Demonstrable parity with international brands	Bidders must submit supporting documents from the brand manufacturer to demonstrate that such local brand is substantively at par with at least one international brand, as characterized in the categorization above, in terms of (1) print quality; (2) general aesthetic design; and (3) compliance with internet printing protocol.

On service centers

The bidder must have at least two (2) authorized service centers in different provinces per region they are bidding for. In the case of bid join for National Capital Region (NCR), the bidder must submit at least two (2) authorized service centers in two (2) different cities. Bidder shall provide the following:

- 1. List of authorized service centers;
- 2. Signed notarized contract agreement between the bidder and authorized service partner;
- 3. A valid and current Business permit of the service centers;
- 4. Authorized Service Centers contact details.

On hardware	
Spec	Value
Certifications	Product offered must either be:
Features	User Friendly Control ButtonsIntuitive Indicators
Automatic document feeder scan speed	At least 1800 sheets per hour
Auto document feeder capacity	At least 80 sheets
Scanning Resolution	At least 600x1200 dpi
Form width	50.8mm to 216 mm
Form length	50.8mm to 355.6mm
Scan file format	For text & images: PDF, PDF/A, Encrypted PDF, JPEG, PNG, BMP, TIFF, Word, Excel, PowerPoint, Text (.txt), Rich Text (.rtf), and Searchable PDF

Scanning options (ADF)	Single/double-sided-pass duplex
Memory (at least)	256 MB
Operating Systems	Microsoft® Windows® (11,10, 8.1, 7, XP: 32-bit and 64-bit,
Compatibility	2008 R2, 2012 R2, 2016, 2019); MacOS (Catalina 10.15,
	Mojave 10.14, High Sierra 10.13); Linux (Ubuntu, Fedora,
	Debian, RHEL, Linux Mint, Open Suse, Manjaro); Citrix
	ready
Connectivity Standard	Ethernet 10/100/1000 Base-T, USB 3.0
Media weights,	40 to 210 g/m2
supported, ADF	10 to 210 g/ 112
Power	100-240 volts AC (-10%, +6%): 50-60 Hz
Operating Temperature	10 to 35 degrees Celsius
Range	2 10 10 10 10 10 10 10 10 10 10 10 10 10
Interface Standards	TWAIN and ISIS
On Software	
Spec	Value
Scanner Software	Has Optical Barcode Recognition (OBR) for capturing
Capability	Barcodes
	Has Optical Mark Recognition (OMR) for Capturing
	Markings/Shades.
	Has Optical Character Recognition (OCR) for capturing
	Computerized Text
	Has Text Finder OCR Technology for flexible capturing text
	that is possible to appear in different locations
	Create a full-text index of the document content to make it
	searchable
	Able to integrate with Twain and ISIS scanner device
	Able to process a digital image from the watch folder
	With Background Processing Option (BPP) to automatically
	process and upload documents from different sources.
	Able to send output file to a Windows Folder, FTP, SFTP,
	Box, Dropbox, Google Drive, OneDrive
	Able to create output files of PDF, TIFF, Multi-Page, TIFF, JPEG, PNG, BMP
	Able to create an index output to .csv and .xml
	GUI-Based Designer and Administration Interface
	Requires User Authentication for access security
	Acquires osci figureriacation for access security
	Specifications
	Capable of applying Security Roles to limit access to specific
	configurations
	Compliance: Pass Product Testing Security (PPTS)
	assessment testing
	Compliance: Built-in industry-standard encryption
	technology,
	Built-in storage backup functions
	Able to define and expand the storage base when additional
	media is connected.
	Able to use NAS/SAN and Cloud Storage media
	Automatically compress scanned archive images
	Built-in schedule back-up function
	Can support the English language
	An unlimited number of folders/subfolders supported

	An unlimited number of Categories /Document Type/Libraries supported	
	An unlimited number of documents supported per file cabinet	
	Integrate with Microsoft Office Application (Word, Excel, Outlook)	
	File Transfer Supports HTTP/HTTPS and DCOM	
	System allows the definition of security on folder	
	access System allows the definition of security for viewing the	
	index data	
	Allows Custom Permission sets (View / Delete / Print	
	/Export)	
	Polling of file folders for automatic import of documents	
	Document Retention Function	
	Convert scanned documents to other formats	
	Keyword search via index words	
	Supports wildcard search expressions	
	Supports AND/OR searches	
	Integration with Microsoft Office Support field calculation for decimal fields	
On Software Service	Support field calculation for decimal fields	
Provider Screen		
Spec	Value	
	The winning service provider shall provide the following services upon the issuance of the Notice to Proceed (NTP):	
	 Supply, Deliver, Install, Maintain, and Host the Optical Mark Recognition (OMR) Hardware Scanner and OMR Software. 	
	 Install and configure all applications on the dedicated desktop provided by DepEd. 	
	 Provide training or knowledge transfer to the concerned regional (ROs) and Schools 	
	Division Offices (SDOs) where the OMR hardware scanner and OMR software are supplied and delivered.	
	 Provide after-sales services to the concerned regional (RO) and schools division offices (SDOs) where the OMR software/ scanning machines delivered. 	
On Accessories		
Spec	Value	
Cable	1x appropriate USB cable for direct connection to laptop / desktop	
Power	1x appropriate power cable and/or adaptor	
Packaging	Must be safely packed for transport and must permanently bear at least the brand and model of the offered unit in the packaging	
Manual	Written in English Include Operations, Safety Procedure, Maintenance	

Product Review Requirement

Smartphones, Tablets, Laptops, and Desktops

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The Requirement

To ensure the procurement of globally recognized, high-quality computing products – specifically smartphones, tablets, laptops, and desktops – the brand's product line for the specified device category must have undergone independent technical evaluation from a credible, international perspective.

As part of the bidder's Technical Specifications, suppliers must submit five (5) active web links to technical reviews that meet the following criteria:

- 1. The reviews must collectively span at least three (3) different years within the last three (3) years prior to the bid submission date; and
- 2. The reviews must originate from at least three (3) distinct sources selected from the list of pre-approved reputable review platforms.

Applicability of the Requirement

This technical review requirement shall apply exclusively to the following device categories:

- 1. Smartphones
- 2. Tablets
- 3. Laptops
- 4. Desktops

These four categories are covered because they represent widely adopted, high-value computing devices with established consumer markets and a broad base of independent, international review coverage. Unlike more specialized equipment such as smart TVs, routers, or peripherals, these core devices:

- Receive sustained attention from reputable review websites, journalists, and expert communities;
- 2. Have consistent (even annual) product cycles that are routinely evaluated through standardized testing and benchmarks;
- 3. Are often subjected to direct comparison reviews, market rankings, and performance certifications that are publicly accessible;
- 4. Play critical roles in both personal and enterprise productivity, making performance, reliability, and long-term value central to purchasing decisions.

In contrast, devices such as smart TVs or routers are more niche or use-specific, often targeting hobbyist or technical users. Reviews of these products tend to be less consistent across years, may come from more specialized or regional sources, and frequently focus on subjective use cases (e.g., media consumption or home networking environments) rather than productivity or professional workloads.

Pre-approved Reputable Sources

The use of pre-approved review websites ensures consistency, credibility, and impartiality in evaluating product quality across all bids. The following shall be considered pre-approved reputable sources as of June 15, 2025:

- 1. tomsguide.com
- 2. arstechnica.com
- 3. wirecutter.com

- 4. engadget.com
- 5. laptopmag.com
- 6. cnet.com
- 7. notebookcheck.net
- 8. anandtech.com
- 9. theverge.com
- 10. techradar.com
- 11. ZDNet.com
- 12. PCMag.com
- 13. rtings.com
- 14. wired.com
- 15. At least one Philippine-based site (e.g. yugatech.com, unbox.ph, noypigeek.com, etc.)

The following websites have been selected based on the following criteria:

- Established Reputation. These platforms are internationally recognized and have built a long-standing reputation for unbiased, data-driven, and expert-led reviews of consumer technology.
- 2. Technical Depth and Benchmarking. Many of these sites (e.g., NotebookCheck, AnandTech, RTINGS) conduct in-depth testing using industry-standard benchmarks, stress tests, and performance metrics—ensuring reviews are grounded in real-world, measurable performance.
- Editorial Independence. These sources operate with editorial independence from manufacturers and vendors, reducing the risk of promotional bias and ensuring objective evaluations.
- 4. Track Record of Continuous Coverage. These websites publish regular, ongoing reviews across product generations, helping validate the consistency and evolution of a manufacturer's product quality over time.
- Wide Industry Use and Recognition. These sites are frequently cited in consumer research and institutional decision-making worldwide, underscoring their reliability and authority.

By limiting accepted reviews to these sources, the Bids and Awards Committee (BAC) and the Technical Working Group (TWG) can confidently reference evaluations that are technically sound, independently verified, and globally trusted, thereby improving the fairness and quality of the post-qualification process.

Obligation of the Supplier

Format of the Submission

Suppliers should:

- 1. Submit a flash drive containing the list of URLs, with all links ensured to be clickable.
- Include printed screenshots of each corresponding review as part of the hard copy bid submission.

Content to be Submitted

The content of the URLs / screenshots (submitted reviews) should meet the following conditions:

- Relevant Product Line and Category. Each review must pertain to a model belonging to the same device category as the item being offered. The review does not need to cover the exact model submitted for bidding.
- 2. Source Requirement. The reviews must originate from five (5) different review websites, each selected from a list of fifteen (15) pre-approved reputable sources.
- Content Type and Quality. Each review must be a written evaluation (not video-based), grounded in actual product performance and using industry-recognized benchmarking standards. Reviews that are purely promotional, marketing-driven, or lack independent technical analysis will not be accepted.
- 4. Submission Timing. Reviews must be submitted at the time of bid opening and will form part of the documentation to be verified during post-qualification.

Effect of Failure to Submit / Qualify

The failure of the supplier to submit both the (a) mandatory number and (b) quality of reviews, during the bid opening, shall be considered a cause for disqualification.

Clarification on Scope of Reviews

It is important to emphasize that the required technical reviews are not expected to correspond exactly to the specific model being procured. Rather, the reviews serve as a form of category-level validation – demonstrating that the brand's product line within the relevant device category (i.e., smartphones, tablets, laptops, or desktops) has undergone sustained, independent evaluation by reputable third-party platforms.

This approach reflects the principle that devices from established and mature product lines tend to exhibit consistent design philosophies, build quality, performance tuning, and after-sales support, especially within the same generation or series. As such, reviews of models within the same product line provide a reasonable basis to assess the expected performance and reliability of the device being offered.

Furthermore, this ensures that the brand and device category are "reviewable" in the first place, i.e., they are sufficiently recognized in the global market to attract technical scrutiny using objective benchmarking standards. This mitigates the risk of procuring from brands or product lines that lack public validation, independent evaluation, or market maturity, and may expose government agencies to unproven or unsupported technologies.

By requiring reviews from models within the same category and product line (but not necessarily the exact unit), the policy balances due diligence with procurement flexibility, while still aligning with the intent of RA 9184 to ground specifications in functionality, performance, and market-tested reliability.

Role and Power of Independent Reviews

In both commercial and public procurement, independent technical reviews have emerged as essential tools for informed decision-making. These reviews provide objective performance insights, user experience validation, and benchmarking that help consumers – and, by extension, procuring entities – differentiate between marketing claims and real-world outcomes.

However, the growing influence of reviews has also given rise to manipulative practices, including "astroturfing" — the fabrication of fake user reviews or testimonials intended to simulate organic consumer feedback. These tactics mislead buyers, distort market perception, and can result in poor purchasing decisions.

Recognizing the growing threat posed by deceptive review practices, regulators such as the U.S. Federal Trade Commission (FTC) have introduced formal measures to safeguard the integrity of consumer information. Beginning October 2024, new FTC rules prohibit the use of fake or misleading reviews, including those attributed to non-existent individuals, artificially generated personas, or individuals without actual experience of the product or service being reviewed. These

regulatory efforts underscore the increasing global recognition that authentic, independently verifiable reviews are essential to consumer protection, market transparency, and informed decision-making.

By limiting acceptable sources to pre-approved, reputable review platforms with transparent methodologies and editorial independence, this procurement policy insulates the selection process from misleading or manipulated content. These platforms conduct controlled, replicable testing procedures, publish clearly defined scoring rubrics, and disclose potential conflicts of interest—ensuring that the evaluations used in procurement are grounded in technical credibility rather than promotional spin.

Rationale for the Requirement

Industry Best Practice Benefits Government

This requirement aligns with standard decision-making practices adopted by individual consumers and businesses when purchasing high-value devices – such as smartphones, tablets, laptops, or desktops. While many of these devices share common baseline specifications, independent reviews offer critical insights into actual long-term performance, reliability, and overall value – factors that are equally essential in public sector acquisitions. By applying the same level of diligence, the government can make procurement decisions that are both cost-effective and grounded in real-world performance.

This policy reflects best practices already widely adopted in the private sector, where corporate buyers routinely reference independent reviews to avoid vendor lock-in, assess lifecycle performance, and benchmark reliability. For government procurement, which is highly sensitive to issues of cost-efficiency, transparency, and risk mitigation, the incorporation of verified, real-world performance data is not just a technical safeguard—but a governance imperative. This approach also finds support in Section 11.1 of the IRR of RA 12009, which requires that technical specifications for goods consider the performance or functionality requirements, standards set by government or international bodies, and/or recognized industry standards and best practices.

Validating Functional and Performance-Based Specifications

Section 18 of the IRR of RA 9184 mandates that "specifications for the procurement of goods shall be based on relevant characteristics, functionality and/or performance requirements." The requirement for independent technical reviews directly supports this provision by anchoring procurement criteria in real-world, empirically validated performance data. Reviews from internationally recognized platforms apply standardized benchmarking methodologies to evaluate core performance metrics such as processor efficiency, thermal management, battery life, display accuracy, and build durability. These insights correspond directly with performance

standards for smartphones, tablets, laptops, and desktops intended for use in high-demand public sector environments.

Mitigating Information Asymmetry

One of the persistent challenges in public procurement is information asymmetry – where suppliers possess deeper technical knowledge than the government evaluators. Members of the BAC and even the TWG may not always have access to the kind of in-depth product performance data available to commercial buyers. Independent technical reviews help address this gap by serving as trusted third-party references, allowing evaluators to verify claims made by suppliers and assess product quality through professional, data-backed assessments.

Ensuring Market Validation and Product Maturity

RA 12009 (and to a certain extent RA 9184) emphasizes the importance of value for money, which includes considerations of long-term usability, reliability, and serviceability. Requiring reviews from established, independent sources ensures that only market-tested products with proven track records are eligible.

Preventing Collusion and Bid Manipulation

By mandating that reviews come from at least five different independent sources among a list of pre-approved, reputable review platforms, the policy introduces an external layer of anti-collusion protection. Suppliers cannot easily manipulate or fabricate reviews across distinct, internationally managed websites. This constraint discourages the submission of biased or promotional materials disguised as technical evaluations.

Supporting Post-Qualification Verification

Section 34.3 of the IRR of RA 9184 provides that post-qualification must include the verification of the equipment's operating conditions and required capacities. Submitted reviews serve as an additional body of evidence during this stage, enabling evaluators to: (a) assess long-term performance trends across multiple product cycles; (b) evaluate manufacturer consistency and product support history; and (c) verify the credibility of the supplier's performance claims using real-world data. For instance, multi-year rankings or extended reliability analyses from review sites provide invaluable insights into brand consistency, service quality, and post-sale support – factors that may not be visible in manufacturer brochures alone.

Clarification on Scope of Reviews

It is important to emphasize that the required technical reviews are not expected to correspond exactly to the specific model being procured. Rather, the reviews serve as a form of category-level validation – demonstrating that the brand's product line within the relevant device category (i.e., smartphones, tablets, laptops, or desktops) has undergone sustained, independent evaluation by reputable third-party platforms.

This approach reflects the principle that devices from established and mature product lines tend to exhibit consistent design philosophies, build quality, performance tuning, and after-sales support, especially within the same generation or series. As such, reviews of models within the same product line provide a reasonable basis to assess the expected performance and reliability of the device being offered.

Furthermore, this ensures that the brand and device category are "reviewable" in the first place, i.e., they are sufficiently recognized in the global market to attract technical scrutiny using objective benchmarking standards. This mitigates the risk of procuring from brands or product lines that lack public validation, independent evaluation, or market maturity, and may expose government agencies to unproven or unsupported technologies.

By requiring reviews from models within the same category and product line (but not necessarily the exact unit), the policy balances due diligence with procurement flexibility, while still aligning with the intent of RA 9184 to ground specifications in functionality, performance, and market-tested reliability.

Role and Power of Independent Reviews

In both commercial and public procurement, independent technical reviews have emerged as essential tools for informed decision-making. These reviews provide objective performance insights, user experience validation, and benchmarking that help consumers – and, by extension, procuring entities – differentiate between marketing claims and real-world outcomes.

However, the growing influence of reviews has also given rise to manipulative practices, including "astroturfing" – the fabrication of fake user reviews or testimonials intended to simulate organic consumer feedback. These tactics mislead buyers, distort market perception, and can result in poor purchasing decisions.

Recognizing the growing threat posed by deceptive review practices, regulators such as the U.S. Federal Trade Commission (FTC) have introduced formal measures to safeguard the integrity of consumer information. Beginning October 2024, new FTC rules prohibit the use of fake or misleading reviews, including those attributed to non-existent individuals, artificially generated personas, or individuals without actual experience of the product or service being reviewed. These

regulatory efforts underscore the increasing global recognition that authentic, independently verifiable reviews are essential to consumer protection, market transparency, and informed decision-making.

By limiting acceptable sources to pre-approved, reputable review platforms with transparent methodologies and editorial independence, this procurement policy insulates the selection process from misleading or manipulated content. These platforms conduct controlled, replicable testing procedures, publish clearly defined scoring rubrics, and disclose potential conflicts of interest—ensuring that the evaluations used in procurement are grounded in technical credibility rather than promotional spin.

Rationale for the Requirement

Industry Best Practice Benefits Government

This requirement aligns with standard decision-making practices adopted by individual consumers and businesses when purchasing high-value devices – such as smartphones, tablets, laptops, or desktops. While many of these devices share common baseline specifications, independent reviews offer critical insights into actual long-term performance, reliability, and overall value – factors that are equally essential in public sector acquisitions. By applying the same level of diligence, the government can make procurement decisions that are both cost-effective and grounded in real-world performance.

This policy reflects best practices already widely adopted in the private sector, where corporate buyers routinely reference independent reviews to avoid vendor lock-in, assess lifecycle performance, and benchmark reliability. For government procurement, which is highly sensitive to issues of cost-efficiency, transparency, and risk mitigation, the incorporation of verified, real-world performance data is not just a technical safeguard—but a governance imperative. This approach also finds support in Section 11.1 of the IRR of RA 12009, which requires that technical specifications for goods consider the performance or functionality requirements, standards set by government or international bodies, and/or recognized industry standards and best practices.

Validating Functional and Performance-Based Specifications

Section 18 of the IRR of RA 9184 mandates that "specifications for the procurement of goods shall be based on relevant characteristics, functionality and/or performance requirements." The requirement for independent technical reviews directly supports this provision by anchoring procurement criteria in real-world, empirically validated performance data. Reviews from internationally recognized platforms apply standardized benchmarking methodologies to evaluate core performance metrics such as processor efficiency, thermal management, battery life, display accuracy, and build durability. These insights correspond directly with performance

standards for smartphones, tablets, laptops, and desktops intended for use in high-demand public sector environments.

Mitigating Information Asymmetry

One of the persistent challenges in public procurement is information asymmetry – where suppliers possess deeper technical knowledge than the government evaluators. Members of the BAC and even the TWG may not always have access to the kind of in-depth product performance data available to commercial buyers. Independent technical reviews help address this gap by serving as trusted third-party references, allowing evaluators to verify claims made by suppliers and assess product quality through professional, data-backed assessments.

Ensuring Market Validation and Product Maturity

RA 12009 (and to a certain extent RA 9184) emphasizes the importance of value for money, which includes considerations of long-term usability, reliability, and serviceability. Requiring reviews from established, independent sources ensures that only market-tested products with proven track records are eligible.

Preventing Collusion and Bid Manipulation

By mandating that reviews come from at least five different independent sources among a list of pre-approved, reputable review platforms, the policy introduces an external layer of anti-collusion protection. Suppliers cannot easily manipulate or fabricate reviews across distinct, internationally managed websites. This constraint discourages the submission of biased or promotional materials disguised as technical evaluations.

Supporting Post-Qualification Verification

Section 34.3 of the IRR of RA 9184 provides that post-qualification must include the verification of the equipment's operating conditions and required capacities. Submitted reviews serve as an additional body of evidence during this stage, enabling evaluators to: (a) assess long-term performance trends across multiple product cycles; (b) evaluate manufacturer consistency and product support history; and (c) verify the credibility of the supplier's performance claims using real-world data. For instance, multi-year rankings or extended reliability analyses from review sites provide invaluable insights into brand consistency, service quality, and post-sale support – factors that may not be visible in manufacturer brochures alone.

Product Review Requirement

Smartphones, Tablets, Laptops, and Desktops

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The Requirement

To ensure the procurement of globally recognized, high-quality computing products – specifically smartphones, tablets, laptops, and desktops – the brand's product line for the specified device category must have undergone independent technical evaluation from a credible, international perspective.

As part of the bidder's Technical Specifications, suppliers must submit five (5) active web links to technical reviews that meet the following criteria:

- 1. The reviews must collectively span at least three (3) different years within the last three (3) years prior to the bid submission date; and
- 2. The reviews must originate from at least three (3) distinct sources selected from the list of pre-approved reputable review platforms.

Applicability of the Requirement

This technical review requirement shall apply exclusively to the following device categories:

- 1. Smartphones
- 2. Tablets
- 3. Laptops
- 4. Desktops

These four categories are covered because they represent widely adopted, high-value computing devices with established consumer markets and a broad base of independent, international review coverage. Unlike more specialized equipment such as smart TVs, routers, or peripherals, these core devices:

- Receive sustained attention from reputable review websites, journalists, and expert communities;
- 2. Have consistent (even annual) product cycles that are routinely evaluated through standardized testing and benchmarks;
- 3. Are often subjected to direct comparison reviews, market rankings, and performance certifications that are publicly accessible;
- 4. Play critical roles in both personal and enterprise productivity, making performance, reliability, and long-term value central to purchasing decisions.

In contrast, devices such as smart TVs or routers are more niche or use-specific, often targeting hobbyist or technical users. Reviews of these products tend to be less consistent across years, may come from more specialized or regional sources, and frequently focus on subjective use cases (e.g., media consumption or home networking environments) rather than productivity or professional workloads.

Pre-approved Reputable Sources

The use of pre-approved review websites ensures consistency, credibility, and impartiality in evaluating product quality across all bids. The following shall be considered pre-approved reputable sources as of June 15, 2025:

- 1. tomsguide.com
- 2. arstechnica.com
- 3. wirecutter.com

- 4. engadget.com
- 5. laptopmag.com
- 6. cnet.com
- 7. notebookcheck.net
- 8. anandtech.com
- 9. theverge.com
- 10. techradar.com
- 11. ZDNet.com
- 12. PCMaq.com
- 13. rtings.com
- 14. wired.com
- 15. At least one Philippine-based site (e.g. yugatech.com, unbox.ph, noypigeek.com, etc.)

The following websites have been selected based on the following criteria:

- Established Reputation. These platforms are internationally recognized and have built a long-standing reputation for unbiased, data-driven, and expert-led reviews of consumer technology.
- 2. Technical Depth and Benchmarking. Many of these sites (e.g., NotebookCheck, AnandTech, RTINGS) conduct in-depth testing using industry-standard benchmarks, stress tests, and performance metrics—ensuring reviews are grounded in real-world, measurable performance.
- Editorial Independence. These sources operate with editorial independence from manufacturers and vendors, reducing the risk of promotional bias and ensuring objective evaluations.
- Track Record of Continuous Coverage. These websites publish regular, ongoing reviews
 across product generations, helping validate the consistency and evolution of a
 manufacturer's product quality over time.
- Wide Industry Use and Recognition. These sites are frequently cited in consumer research and institutional decision-making worldwide, underscoring their reliability and authority.

By limiting accepted reviews to these sources, the Bids and Awards Committee (BAC) and the Technical Working Group (TWG) can confidently reference evaluations that are technically sound, independently verified, and globally trusted, thereby improving the fairness and quality of the post-qualification process.

Obligation of the Supplier

Format of the Submission

Suppliers should:

- 1. Submit a flash drive containing the list of URLs, with all links ensured to be clickable.
- Include printed screenshots of each corresponding review as part of the hard copy bid submission.

Content to be Submitted

The content of the URLs / screenshots (submitted reviews) should meet the following conditions:

- Relevant Product Line and Category. Each review must pertain to a model belonging to the same device category as the item being offered. The review does not need to cover the exact model submitted for bidding.
- 2. Source Requirement. The reviews must originate from five (5) different review websites, each selected from a list of fifteen (15) pre-approved reputable sources.
- Content Type and Quality. Each review must be a written evaluation (not video-based), grounded in actual product performance and using industry-recognized benchmarking standards. Reviews that are purely promotional, marketing-driven, or lack independent technical analysis will not be accepted.
- 4. Submission Timing. Reviews must be submitted at the time of bid opening and will form part of the documentation to be verified during post-qualification.

Effect of Failure to Submit / Qualify

The failure of the supplier to submit both the (a) mandatory number and (b) quality of reviews, during the bid opening, shall be considered a cause for disqualification.

Brand References

Inclusion of Microsoft, Android, etc.

Availment of Brand Name Exception

Under Sec. 18, of the IRR of RA 9184:

Reference to brand names shall not be allowed <u>except</u> for items or parts that are compatible with the existing fleet or equipment of the same make and brand, and to maintain the performance, functionality and useful life of the equipment. (emphasis added)

Similarly under Section 11.2 of the IRR of RA 12009:

Reference to brand name shall not be allowed <u>except</u> for reasons of technical compatibility, interoperability, servicing, maintenance, or preservation of supplier warranty in order to keep the performance, functionality, and useful life of the equipment, in which case, the Procuring Entity shall indicate the reasons or justifications for availing of the exception as part of the Technical Specifications, Scope of Work, or Terms of Reference, as the case may be. (emphasis added)

For transparency and in compliance with the last proviso of Section 11.2 of the IRR of RA 12009, the following justifications for the availment of the brand name exception are included in this opinion.

Microsoft / Office / Windows

References to Microsoft-branded products have been a consistent part of DepEd procurement documents and the Technical Specifications under the DepEd Computerization Program (DCP) for desktops and laptops from 2018 through 2024. As a result, the current DepEd ecosystem is entirely structured around the Windows operating system (OS), with all desktops and laptops procured under the DepEd Computerization Program (DCP) running on Windows. This standardization enables efficient use and long-term maintenance of equipment, as DepEd personnel – both at the central and regional levels – are specifically trained to manage and troubleshoot Windows-based systems. The ability to maintain the useful life of these devices is closely tied to this established technical capacity.

Introducing other operating systems - such as macOS, ChromeOS, Linux variants, or other emerging platforms - would increase the complexity of the ecosystem and reduce operational

efficiency unless new training, tools, and support mechanisms are put in place. Supporting a multi-OS environment would require additional manpower and the development of new skill sets, which could strain existing resources.

While transitioning to a multi-OS setup is not impossible, it must be approached through deliberate strategic planning, phased implementation, and a clear alignment of internal systems. If done properly, it may lead to innovation and operational flexibility. However, without adequate preparation, such a shift could lead to fragmentation, reduce equipment effectiveness, and complicate day-to-day operations for administrators and end users alike.

Android / iOS

As of May 2025, Android continues to lead the global mobile operating system market with a dominant share of 72.36%, followed by iOS (27.28%), which constitutes the vast majority of the remaining segment. The overwhelming prevalence of these two platforms underscores their widespread adoption, technological maturity, and long-term viability. This dominance is not only reflected in usage statistics but also in benchmarking tools such as Geekbench, where Android and iOS are the only mobile operating systems explicitly referenced – highlighting their relevance in both consumer and enterprise-grade performance assessments.

Devices powered by Android or iOS benefit from several key advantages that make them particularly suitable for institutional environments such as education. These advantages include:

- 1. Extensive developer ecosystems, which ensure a steady pipeline of high-quality applications, tools, and integrations;
- 2. Robust security frameworks that support encrypted communications, device management, and compliance with global standards;
- 3. Consistent and timely software updates, which improve performance, introduce new features, and address vulnerabilities;
- 4. Reliable global support infrastructure, including certified repair centers, widespread technical expertise, and vendor partnerships;
- 5. Seamless interoperability with existing enterprise and government IT systems, including Mobile Device Management (MDM) solutions, productivity suites, and cloud platforms;

¹ https://gs.statcounter.com/os-market-share/mobile/worldwide

² https://browser.geekbench.com/

6. Proven app compatibility, allowing for easy integration with standard institutional software and services.

Given these factors, Android and iOS are considered the de facto standards for large-scale mobile deployments.

While alternative operating systems such as Amazon's Fire OS or Huawei's HarmonyOS Next may offer niche advantages or cost efficiencies, their adoption in institutional settings must be approached with caution. These platforms typically lack the same level of third-party app support, mature developer communities, and institutional familiarity. To mitigate these limitations, any proposed inclusion of such platforms must be accompanied by a clear, documented commitment from the supplier or manufacturer. This commitment should include:

- 1. Direct and ongoing technical support;
- 2. Comprehensive product documentation;
- 3. Administrative and technical knowledge transfer;
- 4. Defined servicing procedures and escalation pathways;
- 5. Long-term software and security update guarantees.

Without these assurances, the use of non-standard operating systems could result in fragmented support, reduced compatibility, and higher lifecycle management costs. Therefore, while inclusion is possible, it must be justified through strong vendor-backed agreements and evaluated within the broader context of operational sustainability and user readiness.



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Modernization of the National Assessment System for Basic Education (NASBE) Programs

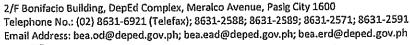
Procurement of ICT Equipment for the National Assessment Programs	
Item 1: Optical Mark Recognition (OMR) Hardware Scanner and OMR Software	Item 2: Desktop Computer

Summary of Estimated Number of Units to be Procured: ICT Equipment for the National Assessment Programs

Components of ICT Equipment	Estimated No. of Units to be Procured
Allocation of OMR Hardware Scanner and OMR Software per Island Grouping	602
Allocation of Desktop Computers and Software Applications per Island Grouping	602









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Item 1: Procurement of Hardware Scanners and OMR Software

Terms of Reference (TOR) and **Detailed Minimum Technical Specifications**

Particulars	Minimum Technical Specifications
Automatic document feeder scan speed	Up to 1800 sheets per hour
Auto document feeder capacity	Standard, 80 to 100 sheets
Form width	50.8mm to 216 mm
Form length	50.8mm to 355.6mm
Scan file format	For text & images: PDF, PDF/A, Encrypted PDF, JPEG, PNG, BMP, TIFF, Word, Excel, PowerPoint, Text (.txt), Rich Text (.rtf), and Searchable PDF
Scanning options (ADF)	Single/double-sided-pass duplex
Memory (at least)	256 MB
Operating Systems Compatibility	Microsoft® Windows® (11,10, 8.1, 7, XP: 32-bit and 64-bit, 2008 R2, 2012 R2, 2016, 2019); MacOS (Catalina 10.15, Mojave 10.14, High Sierra 10.13); Linux (Ubuntu, Fedora, Debian, RHEL, Linux Mint, Open Suse, Manjaro); Citrix ready
Connectivity Standard	USB 2.0, 3.0, Serial, or Parallel Port
Media weights, supported, ADF	40 to 210 g/m2
Power	100-240 volts AC (-10%, +6%): 50-60 Hz
Operating Temperature Range	10 to 35 degrees Celsius
Scanner Application Capability	The scanner application must have the following: Import and export capability; Must include one-time purchase of software (with perpetual enterprise license); Refer to the Terms of Reference for the OMR software.
Services to be provided by the Service Provider	The winning service provider shall provide the following services upon the issuance of the Notice to Proceed (NTP): Supply, Deliver, Install, Maintain, and Host the Optical Mark Recognition (OMR) Hardware Scanner and OMR Software







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Particulars	Minimum Technical Specifications	
	 Install and configure all applications on the dedicated desktop provided by DepEd Provide training or knowledge transfer to the concerned regional (ROs) and Schools Division Offices (SDOs) where the OMR hardware scanner and OMR software are supplied and delivered. Provide after-sales services to the concerned regional (RO) and schools division offices (SDOs) where the OMR software/ scanning machines 	

Terms of Reference General Specifications for the OMR Software

Specifications	Statement of Compliance ("Comply" or "Not Comply")
Has Optical Barcode Recognition (OBR) for capturing	
Barcodes	
Has Optical Mark Recognition (OMR) for Capturing	
Markings/Shades.	
Has Optical Character Recognition (OCR) for	
capturing Computerized Text	
Has Text Finder OCR Technology for flexible	
capturing text that is possible to appear in different	
locations	
Create a full-text index of the document content to	
make it searchable	
Able to integrate with Twain and ISIS scanner device	
Able to process a digital image from the watch folder	
With Background Processing Option (BPP) to	
automatically process and upload documents from	
different sources.	
Able to send output file to a Windows Folder, FTP,	
SFTP, Box, Dropbox, Google Drive, OneDrive	
Able to create output file of PDF, TIFF, Multi-Page,	
TIFF, JPEG, PNG, BMP	
Able to create an index output to .csv and .xml	
GUI-Based Designer and Administration Interface	
Requires User Authentication for access security	







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Specifications	Statement of Compliance ("Comply" or "Not Comply")
Capable of applying Security Roles to limit access to specific configurations	
Compliance: Pass Product Testing Security (PPTS) assessment testing	
Compliance: Built-in industry-standard encryption technology	
Built-in storage backup functions	
Able to define and expand the storage base when additional media is connected.	
Able to use NAS/SAN and Cloud Storage media	
Automatically compress scanned archive images	
Built-in schedule back-up function	
Can support the English language	
An unlimited number of folders/subfolders	
supported	
An unlimited number of Categories / Document Type/Libraries supported	
An unlimited number of documents supported per file cabinet	
Integrate with Microsoft Office Application (Word, Excel, Outlook)	
File Transfer Supports HTTP/HTTPS and DCOM	
System allows the definition of security on folder access	
System allows the definition of security for viewing the index data	
Allows Custom Permission sets (View/Delete/Print/Export)	
Polling of file folders for automatic import of	
documents	
Document Retention Function	
Convert scanned documents to other formats	
Keyword search via index words	
Supports wildcard search expressions	
Supports AND/OR searches	
Integration with Microsoft Office	
Support field calculation for decimal fields	







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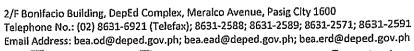
Item 2: Procurement of Desktop Computers

Detailed Minimum Technical Specifications and Terms of Reference

Item	1	Specification	
1	provided confirming available and ser acceptance of the	ng that the proposed brand viceable for at least five goods.	uct Manufacturer shall be d and product parts will be (5) years after delivery and
2	life" as reflected in official website or Manufacturer's Ce	n the current product line to official product brochure, or ertificate issued for this pur	
3	must be in English	n .	ted and/or electronic copies ers in at least two (2) different
	provinces and one (1) in the capital city of each region they are bidding for. In the case of the National Capital Region (NCR), the bidder must submit at least three (3) authorized service centers in three (3) different cities. List of Regional Centers:		
	REGION	PROVINCE	CENTER (City)
	Region I	La Union	San Fernando City Tuguegarao City
	Region II	Cagayan	San Fernando City
	Region III	Pampanga	Calamba City
	Region IV-A Region IV-B	Laguna Oriental Mindoro	Calapan City
4	Region V	Albay	Legazpi City
	Region VI	Iloilo	Iloilo City
	Region VII	Cebu	Cebu City
	Region VIII	Leyte	Tacloban City
	Region IX	Zamboanga Del Sur.	Pagadian City
	Region X	Misamis Oriental	Cagayan De Oro City
	Region XI	Davao Del Sur	Davao City
	Region XII	South Cotabato	Koronadal City
	CAR	Benguet	Baguio City
	CARAGA	Agusan Del Norte	Butuan City
	The bidder shall provide the following:		

















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Item	Specification Sp	
	6	Signed notarized contract agreement between the bidder and the authorized service partner.
	A valid and current Business permit of the Service center.	
	Authorized Service Center/s contact details.	
	All equipment components must have;	
	•	waterproof and transparent 1 X 2 inches size colored sticker bearing
		the DepEd Logo:
5		Defield
	G	2X4 inches size sticker bearing Supplier's contact information (office address, email, mobile, and landline numbers).
		DepEd will provide the placement and design of the stickers.

A. On brand	
Specification	Value
Standard Certification	Bidders must submit supporting documents from the brand manufacturer to validate that the latter is: ISO 9001:2015 (Quality Management System) certified. ISO 14001:2015 (Environmental Management System) certified
Authorized dealer	Bidders must submit supporting documents from the brand manufacturer to validate that the latter: Is a Microsoft authorized Direct OEM Partner with a Global Partner Agreement Holds a License Confirmation issued by Microsoft indicating the model and product being offered to DepEd are authentic and the manufacturer was given the right to preinstall and distribute the Microsoft Licenses under the GPA terms.
Global proven quality	The manufacturer of desktop computer line (a) has existed for at least three (3) years; and (b) maintains physical offices, service centers, or distribution hubs for at least five (5) countries other than the Philippines, with at least one (1) country from North America, one (1) country from Western Europe, and one (1) country from Asia-Pacific.
International Warranty	The manufacturer's desktop computer product line maintains sites that address warranty concerns in the previously specified locations (i.e., global quality) that exist to facilitate warranty claims and technical assistance.
Comprehensive global review	Brand manufacturer desktop computer line has been comprehensively reviewed as shown by at least five (5) active







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URLs of positive, technical reviews published, representing every year in the last three (3) years (from the time of bid submission), of any model of the manufacturer's desktop computer line from at least five (5) different desktop computer review sites of the ten (10) sites enumerated below:

- 1. tomsguide.com
- 2. arstechnica.com
- 3. wirecutter.com
- 4. engadget.com
- 5. desktop computermag.com
- 6. cnet.com
- 7. notebookcheck.net
- 8. anandtech.com
- 9. theverge.com
- 10.At least one Philippine-based site (e.g., <u>yugatech.com</u>, <u>unbox.ph</u>, <u>noypigeek.com</u>, etc.)

Technical review, for purposes of the above paragraph, shall refer to written commentary on actual performance and industry-based benchmarking of a brand manufacturer's desktop computer as opposed to a mere marketing spiel.

In the absence of an active URL, a reference to the original URL via https://web.archive.org/ shall be allowed.

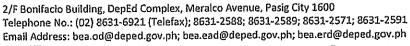
The list of URLs should be submitted; 1) in the flash drive and should be clickable; 2) a printed screenshot of the reviews, and should be part of the documentation. Both requirements should be submitted during the bid opening and verified during Post-Qualification

B. On hardware

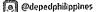
b. On naraware		
Specification	Value	
NTC Approval	Brand/model must be NTC type approved with a certificate and applicable registration number	
Ecolabel	At least ECMA 370 or its equivalent	
Certifications	On device ISO/IEC 11889:2015 (Information technology — Trusted platform module library) TCO Certified 9.0 EPEAT – Gold Tier FSC Certification	
Processor	• at least intel i7 series, 13th gen or AMD Ryzen 7 or 7000 series processor	
Memory	• 32 GB DDR5	

















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	<u>, ,</u>
Monitor	Screen Size: Min 20"
	• Resolution: Min 1920 x 1080 (Full HD), 1080p
,	• LED-Backlit OR IPS Technology
	• Ports:
	o 1 x HDMI
	o 1 x VGA Port
	• 1 x 2 Meter Power Cord
Storage	• 512 GB NVMe M.2 SSD
J	• 2 TB HDD
Connectivity	• Wireless LAN 802.11 b/g/n/ac/ax
v	Bluetooth 5.0
Motherboard	• 1 x USB - Type C
	• Minimum 5 x USB 3.0
	• 1 x Combo Audio jack
	• 1 x HDMI or Micro HDMI
	• 1 x VGA
	• 1 x Ethernet Port
	• 1 x PCIe x16 Slot
	(USB conversion, extension, or adapter is not allowed)
Keyboard	US English Layout
<i>y</i>	Standard Size
Power Supply	• 450W
	80 PLUS Bronze Certified
Peripherals	• 1 x 2.0-meter power cords (System unit)
Drives	SSD: Drive C (System) and
	HDD: Drive D (System Recovery and Data Storage)
C. On software	
Specification	Value
Operating System	Windows 11 Pro Education ("Shape the Future") SKU
Applications	Latest Microsoft Office available in the market
Recovery Key	Any function Key shall be assigned to restore to its original
	system state in case of a breakdown
D. On accessories	
Specification	Value
Headset	Either regular earphones or over-the-ear headphones
A Ja hard Collegenic State College	3.5mm standard audio jack
	Built-in microphone
Mouse	Wireless, optical, and must be rechargeable. If the mouse
TATORIOC	requires physical batteries, batteries must be included.
Copy of Software	In USB Format (bootable and capable of restoring the original
Copy of Software	system state to another hard disk) to be provided to: (a) One
	(1) USB each per Regional Office and Schools Division Office
	(through the IT Officer)





