

PUBLIC INTERNATIONAL TENDER

TABLETS 10''2022

TECHNICAL ANNEX

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1. Call Aim

Centro Ceibal calls for a public international tender for the acquisition of up to 70,000 tablets of 10 '' for delivery to beneficiaries of Plan Ceibal.

The products that the successful bidders must deliver to Ceibal are the following:

1. Tablet with cover plus software image developed according to Ceibal's requirements and certified by Google, installed in the devices during the production process.
2. Spare parts.

The bidder must separately quote the development and certification of an additional software image, which Ceibal may request due to changes in requirements or due to the evolution of Android versions. This image is not the one that will be shipped with the device at the factory, but rather **a maintenance software image**. See *Annex V: Price tables*.

The bidder must quote the spare parts in FOB Origin mode.

The offer must be submitted in accordance with the specifications in section 2. OFFER. Centro Ceibal reserves the right to reject an offer that is not presented in accordance with this quotation and price scheme.

All products purchased from the bidder and / or all the services provided by the bidder are governed by the confidentiality and data protection considerations specified in *Annex VI: Confidentiality and data protection*.

2. Offer

Each bidder may offer a maximum of 2 models. All the documentation presented must be segmented identifying each product by its corresponding model in the technical and economic offers.

2.1. Presentation

The technical offer will be included in a file with a password, this file will be presented segmented into the following folders:

1. Folder with factory background specification. It should be detailed:
 - Factory that will produce the devices offered.
 - General production volume of the factory in the last 12 months.
 - Production volume of tablets at the factory in the last 12 months.
 - Client list.
 - Average daily production of tablets.
 - Slot time to start production of a standard Android tablet (acquisition of raw material and preparation of production line).
2. Folder with bidder background. It should be detailed:
 - History of provision of similar consumer electronic devices in the last 12 months.
 - Background of educational projects in which you have participated.
 - Background work with the factory that will produce the devices indicated in 1., detailing time of joint work, projects and volume of devices.
 - List of clients and respective contacts.
3. Folder with the complete tables in *Annex I: Requirements*.
4. Folder with complete table in *Annex III: Spare parts*.
5. Folder with the documentation requested as *mandatory with the offer* in section 2.2 *Documentation* for each model of device offered
6. (Optional) Folder with additional warranty specifications to those set out in section 3. *Warranty*.
7. (Optional) Folder with specification of delivery terms in case of not meeting the desirable delivery terms specified in section 4. *Delivery terms and conditions*.
8. (Optional) Folder with the complementary technical information that the bidder considers pertinent to provide.

The economic offer will be presented segmented in the following folders, **in a separate file and with a password**:

1. Folder with the complete tables in *Annex V: Price tables*.
2. (Optional) Folder with the quotation of additional guarantee, in case of offering them.
3. (Optional) Folder with additional quotes to those specified above, if applicable.

2.2. Documentation

The documentation that must be included in the technical offer documentation folder, for each model offered, is the following:

| DOCUMENTATION | | |
|--------------------------|--|--|
| MANDATORY WITH THE OFFER | | |
| 2.2.1 | TECHNICAL SPECIFICATIONS | Technical specifications of each model offered. |
| 2.2.2 | DISASSEMBLY TECHNICAL DOCUMENTATION | Technical document detailing the complete disassembly procedure for the device. |
| 2.2.3 | TECHNICAL DOCUMENTATION TO INSTALL AND CUSTOMIZE FIRMWARE AND OPERATING SYSTEM | Technical document that details tools and procedures to customize and install the firmware and operating system of the device. You must also specify what type of customizations can be made (see Annex I: Requirements as a reference of the necessary customizations). |
| 2.2.4 | INSTALLATION OF OPERATING SYSTEM ON VARIOUS EQUIPMENT | Technical document that details the tool and procedure for installing the operating system on several computers simultaneously, for example, through a removable device or a PC. Alternatives that facilitate operations and minimize the use of external resources are preferred. |
| 2.2.5 | FREE SPACE | Specify free space in internal storage for a device with a standard image certified by Google with the Android version offered. |
| 2.2.6 | SERIAL NUMBER CONFIGURATION | Serial number configuration tool and procedure (see requirement 6.38 SERIAL NUMBER AND BAR CODE). |
| 2.2.7 | AVAILABILITY OF OTA METHOD FOR UPDATES | Indicate if there is an OTA (Over The Air) method for updating software images. If it exists, specify it. |
| 2.2.8 | UPDATES THROUGH REMOVABLE MEDIA | Specify procedure for the end user to update or reinstall the tablet software image using removable media. |
| OPTIONAL WITH THE OFFER | | |
| 2.2.9 | WIFI ALLIANCE CERTIFICATIONS | WiFi Alliance certifications of the network card offered. |

Once awarded, the following documentation will be mandatory with each shipment of equipment, or with each change of hardware, as applicable:

| DOCUMENTATION | | |
|--|------------------|---|
| MANDATORY WITH EACH SHIPMENT and / or HARDWARE CHANGE, if applicable | | |
| 2.2.10 | RoHS CERTIFICATE | RoHS standard compliance certificate. (It is NOT required to present the detailed documents with the test protocols applied). |
| 2.2.11 | FCC CERTIFICATE | Certificate of compliance with FCC standard. (It is NOT required to present the detailed documents with the test protocols applied). |

| | | |
|--------|-------------------------------|--|
| 2.2.12 | BILL OF MATERIALS (BOM) | Worksheet with all the hardware components that make up the device, each with a code that identifies it, including the casing and any other individual component that can be replaced in case of failure. |
| 2.2.13 | SCHEMATICS, LAYOUT and BAI | Schematics, layout and board assembly information (BAI) of the motherboard in digital format. This information will be delivered once production has started (or at the latest prior to the first shipment) and each time the successful bidder notifies a hardware change. |
| 2.2.14 | EXPLODED VIEW DRAWING | Technical drawing of the assembly and relationship between all the atomized parts of the equipment, each one identified with a code. This information will be delivered once production has started (or at the latest prior to the first shipment) and each time the successful bidder notifies a hardware change. |
| 2.2.15 | DATA SHEETS | Datasheets of main components of the device such as battery, screen, camera, etc., and of main components of the motherboard such as integrated circuits and connectors. |
| 2.2.16 | MSDS BATTERIES | Battery Material Safety Data Sheet (MSDS). |
| 2.2.17 | CHARGER: ROHS CERTIFICATE | Certificate of compliance with the RoHS standard of the charger, in case it is not included in the RoHS certificate of the device. (It is NOT required to present the detailed documents with the test protocols applied). |
| 2.2.18 | EN60950 CERTIFICATE | Certificate of compliance with standard EN60950 (or its updates), Information technology equipment - Safety, tablets and charger. (It is NOT required to present the detailed documents with the test protocols applied). |
| 2.2.19 | CERTIFIED IEC61000 | Certificate of compliance with standard IEC 61000 (or its updates), Electromagnetic compatibility (EMC), tablet and charger. (It is NOT required to present the detailed documents with the test protocols applied). |
| 2.2.20 | EN55022 CERTIFICATE | Certificate of compliance with standard EN55022 (or its updates), Information technology equipment Radio disturbance characteristics, of tablets and charger. (It is NOT required to present the detailed documents with the test protocols applied). |
| 2.2.21 | DEVICES SHEET | Device information sheet (see description in this section). |
| 2.2.22 | LOGISTICS SHEET | Logistics information sheet (see description in this section). |
| 2.2.23 | FINAL PRODUCT HARDWARE DETAIL | Information sheet of components of the final product (see description in this section). |

The information required in requirements 2.2.21, 2.2.22, and 2.2.23 is described below:

- 2.2.21. DEVICES SHEET
 - Part number.
 - Serial number.
 - Pallet number / master box number in which the device is shipped.
 - MAC addresses of all network cards that the device has.

- Part number and serial number of the main components (minimum: motherboard, display and battery).
- Identifier obtainable by software with the method specified by the bidder.
- IMEI (if applicable).

● 2.2.22 LOGISTICS SHEET

- Individual box measurements.
- Individual box weight.
- Master box measurements.
- Master box weight.
- Number of individual boxes per master box.
- Number of master boxes per pallet.
- Pallet height.

● 2.2.23 FINAL PRODUCT HARDWARE DETAIL

| FINAL PRODUCT HARDWARE DETAIL | |
|---------------------------------------|--|
| Bidder: | |
| Model | |
| Processor | |
| Brand | |
| Model | |
| Frequency | |
| Architecture (ARM / X86) | |
| No. of physical cores | |
| RAM Memory | |
| Brand | |
| Model or Part number | |
| Capacity (GB) | |
| Technology (LPDDR2 / LPDDR3 / others) | |
| Mounting (Removable / OnBoard) | |
| Internal Storage | |



| | |
|--|--|
| Brand | |
| Model or Part number | |
| Technology (eMMC / SSD) | |
| Capacity (GB) | |
| Mounting (Removable / OnBoard) | |
| GPU | |
| Brand | |
| Model | |
| Screen | |
| Size (inches) | |
| Brand | |
| Technology (LCD / IPS / OLED) | |
| Resolution (Px) | |
| Interface (EDP / LVDS / other) | |
| Attachment to the housing (Glued / inserts / brackets / other) | |
| Touchscreen | |
| Touchscreen (Number of recognized dots: 5/10) | |
| Camera | |
| Front Resolution (Mpix) | |
| Rear Resolution (Mpix) | |
| Audio | |
| Built-in microphone (Yes / No, Onboard / Removable) | |
| Integrated speakers (Yes / No, Quantity, Mounting: Glued / With bracket / With screws) | |
| Connectivity | |
| Bluetooth (Version) | |
| WIFI (Brand and model or Part number of the module) | |
| No. of antennas | |

| Ports I/O | |
|--|--|
| USB (2.0 / 3.0, Type B / Type C, Mini / Micro, quantity) | |
| SD (uSDHC) | |
| HDMI (Connector size: Mini / Micro) | |
| Built-in microphone with headphones (Yes / No) | |
| Others | |
| Battery | |
| Voltage (V) | |
| Capacity(mAh) | |
| Brand | |
| With thermal protection terminal to PCB (Yes / No) | |
| Fixing method (Tapes / Screws / Bracket) | |
| AC / DC source (Charger) | |
| Cable Length (cm) | |
| Input voltage and frequency (VAC, Hz) | |
| Output voltage (VDC) | |
| Output current / power (A, W) | |
| Charger: DC connector (Barrel, USB) | |
| Thermal Dissipation System | |
| Shielding Heatsink (Yes / No) | |
| Pad / Thermal Paste / None | |

2.3. Samples

At the time of submission of the offers, **TEN identical samples of each model of tablet offered must be delivered, with their chargers.**

In exceptional cases and when there are justified reasons in the opinion of Ceibal, the bidder may defer the delivery of samples for a reasonable period that Ceibal will evaluate.

A fundamental part of the technical evaluation will be carried out on these samples (see Annex IV. Technical Evaluation Criteria). **The specifications and performance of the final product delivered cannot be less than the sample. This aspect will be verified in the quality controls that determine the acceptance of the product.**

Some samples will be used in destructive testing. Those that are not destroyed may be returned in different conditions with respect to which they were delivered. The bidder will have 4 weeks from the award to collect the submitted samples. Once the previous term has expired without having withdrawn them, Centro Ceibal may freely dispose of them, without the right to claim on the part of the bidder.

For the delivery of samples, they must be delivered to *Proveeduría de Ceibal* (Av Italia 6201, Predio LATU, edificio Los Ceibos, CP 11500). The hours of attention to the public due to the health emergency are Tuesdays and Thursdays, from 10 am to 4 pm. In case of not being able to go during these hours, we request to previously coordinate with Ceibal at the email almacenes@ceibal.edu.uy, day and time for the delivery of the samples.

3. Warranty

The following warranty conditions are mandatory:

3.1 Dead on Arrival

Warranty for replacement of devices with failure due to DOA for a period of 90 days from arrival:
10 tablets every 1000.

3.2 Systemic failures

Ceibal may request from the successful bidder the necessary spare parts or the replacement of equipment in the event that a systemic failure attributable to the design or manufacture of the equipment is detected. The costs derived from the execution of this guarantee are the sole responsibility of the supplier.

In the event that the bidder presents **additional** guarantees, they must be detailed in their technical proposal. If the additional guarantee conditions proposed by the bidder imply additional costs, these must be presented in the economic offer, quoted separately.

The bidder will guarantee that the products supplied under the contract are new, complete, unused and free from defects attributable to design, materials, manufacture, storage conditions (packaging, appropriate temperature and humidity), transfer or any other act or omission of the bidder that could manifest itself on the occasion of the normal use of the products under the prevailing conditions in the country.

4. Delivery time period and conditions

4.1. Delivery time period

TWENTY devices of the awarded model must be delivered before February 1, 2022 for use in repair training. **These 20 samples are not part of the awarded lot and are at the supplier's cost.**

It is desirable that the supplier meets the following delivery schedule:

- ETA of 50% of the awarded lot: 120 calendar days after the award resolution is communicated.
- ETA of the remaining 50% of the awarded lot: within 30 calendar days after delivery of the first 50%, or April 15, 2022, whichever occurs before.

The specified delivery times include the following milestones:

1. Software image development. The development takes an estimated period of four weeks. The possibility of having Ceibal technicians attend the factory can be evaluated to reduce development times.
2. Software image certification developed. The software image referred to in 1., to be installed at the factory, must be a Google certified image.
3. Definition of hardware specifications, in case the final product presents minor changes in components, internal design, etc., with respect to the samples presented. **It is a condition for**

the beginning of production that Ceibal validates the equivalence of the final product with the samples presented.

4. Production
 - 4.1. Final Product:
 - 4.1.1. Centro Ceibal will agree with the successful bidder on the device's production schedule. The successful bidder will send Ceibal 10 golden samples of each production batch (see section 5. QUALITY CONTROLS.).
 - 4.1.2. Quality control at source (see section 5. QUALITY CONTROLS).
 - 4.1.3. Verification of availability of all requested documentation of the product.
 - 4.2. Spare Parts:
 - 4.2.1. Centro Ceibal will agree with the successful bidder the quantity of spare parts for each part that the latter must provide and how they must be sent.
5. Delivery of documentation requested in section as *mandatory with each shipment and / or hardware change* in section 2.2 DOCUMENTATION.
6. Shipping and quality control upon arrival in Uruguay (see section 5. QUALITY CONTROLS).

In case of not being able to comply with the established delivery schedule (quantities and / or deadlines), the bidder must specify the alternative schedule taking into account Ceibal's delivery commitment during the first quarter of 2022. **The same delivery deadlines apply both for the final product (tablet + accessories) and for spare parts..**

4.2. Delivery conditions

All devices sent to Ceibal must be made up of the same components. In the event that this cannot be fulfilled, the successful bidder must notify Ceibal in writing within a period of no less than 60 days and Ceibal may validate the new BOM.

The successful tenderer must deliver the devices in compliance with the following specifications:

- Each pallet must be labeled with the following information:
 - Device model / lot / batch (**pallets containing more than one device model will not be accepted**).
 - Pallet number / total pallets in the lot.
 - Number of master boxes on pallet.
 - List of the master boxes that make up the pallet.
- Each master box must be labeled with the following information:
 - Device model / lot / batch
 - Number of master boxes / total of master boxes in the batch.
 - Serial number (barcode and alphanumeric) of each device in the master box.

- Product description.
- Each individual box should be labeled with the following information:
 - Device model.
 - Serial number (barcode and alphanumeric) of the device.

The design of each individual box and each master box must be customized according to specifications that will be agreed between Centro Ceibal and the successful bidder.

Centro Ceibal may request the inclusion of a printed brochure with recommendations for use and care of the equipment in each individual box.

5. Quality control

Centro Ceibal will carry out three quality controls on the awarded products that may partially or totally reject the inspected lots. These three inspections are:

1. Inspection at origin prior to shipment.
2. Validation of *golden samples* that the successful bidder will send to be evaluated at Centro Ceibal (10 devices from each batch produced, sent by air freight at the winner's expense).
3. Final inspection at Ceibal after receiving the shipment.

Centro Ceibal, or a representative designated by it, may visit the factory before and / or during batch production for Ceibal, after coordination between the parties and independent of the quality controls. Centro Ceibal may also request a visit to the manufacturer to work together during the software image development process.

6. Annex I: Requirements

| HARDWARE | | | |
|------------------------|----------|----|--------------|
| MANDATORY REQUIREMENTS | COMPLIES | | OBSERVATIONS |
| | YES | NO | |
| | | | |

| | | | | | |
|-------------------------------|--------------------------------|--|--|--|--|
| 6.1 | PROCESSOR | Minimum: Quad Core. 64 bits. | | | |
| 6.2 | RAM MEMORY | DDR3 or higher. Minimum capacity according to Google's requirement for the Android version offered (see requirement 6.14 OPERATING SYSTEM) | | | |
| 6.3 | INTERNAL STORAGE | Minimum: 32GB | | | |
| 6.4 | SCREEN | Size 10 ". Minimum resolution: 1280x800p. | | | |
| 6.5 | TOUCHSCREEN | P + G technology, or other technology that is safe for the user. (Glass touchscreen is not accepted) | | | |
| 6.6 | CONNECTIVITY | Minimum: 802.11n 1x1 dual band network card (2.4GHz and 5GHz). WPA2 Personal / Enterprise security. Specify card to motherboard connection interface | | | |
| | | Bluetooth | | | |
| 6.7 | MULTIMEDIA | Headphone output and external microphone input through the same connector. | | | |
| | | Built-in microphone and speakers. | | | |
| | | Front camera: minimum resolution 2MP. | | | |
| | | Rear camera: minimum resolution 5MP. | | | |
| 6.8 | PORTS | MicroSD card reader. | | | |
| 6.9 | BATTERY ATTACHMENT AND REMOVAL | The battery must not be attached to any component of the equipment, except to a support designed for that purpose. | | | |
| 6.10 | NOT SOLDERED PERIPHERALS | Peripherals (screen, touchscreen, speakers, battery, antennas, etc.) NOT soldered to the motherboard. Peripherals must be connected to the motherboard using removable connectors. | | | |
| 6.11 | REINFORCED USB CONNECTOR | Reinforced metal body structure of USB connectors (type micro B or type C), for example, by spot welding or by its constitutive design. | | | |
| 6.12 | HARDWARE TEST | Software or firmware tool that allows verification of the device's integrated peripherals and ports. This tool must be available in Spanish and / or English. For details of the characteristics sought, see Annex V: Technical evaluation criteria. | | | |
| DESIRABLE REQUIREMENTS | | | | | |
| 6.13 | VIDEO | Video ports (mini HDMI or micro HDMI) | | | |

| SOFTWARE | | | | | |
|------------------------|--|--|----------|----|---------------------------------|
| MANDATORY REQUIREMENTS | | | COMPLIES | | SPECIFICATIONS AND OBSERVATIONS |
| | | | YES | NO | |
| | | | | | |

| | | | | | |
|---|---|---|--|--|--|
| 6.14 | OPERATING SYSTEM | Android 11 or later. ANDROID GO IS NOT ACCEPTED. | | | |
| 6.15 | LANGUAGE | Operating system and all its interfaces and configuration options in Spanish. | | | |
| 6.16 | INSTALLATION TOOLS | The bidder must deliver the tools detailed in the documentation requirements 2.2.4 and 2.2.5 for the installation of the operating system on various computers. | | | |
| 6.17 | DISC IMAGE | The tablet will be delivered to the end user with a software image developed in conjunction with Ceibal, which must be certified by Google. | | | |
| 6.18 | IMAGE AVAILABILITY WITH ROOT OR USER DEBUG PRIVILEGES | The bidder must deliver a software image of the device that has root or user debug privileges. | | | |
| SOFTWARE PICTURE - ANDROID SETTINGS | | | | | |
| 6.19 | LANGUAGE AND KEYBOARD | Spanish - (Spain) | | | |
| 6.20 | DISPLAY SUSPENSION | 5 minutes | | | |
| 6.21 | DATE AND TIME | Time zone GTM-03: 00, Montevideo, Uruguay | | | |
| 6.22 | WIFI | Enabled by default | | | |
| 6.23 | BROWSER | Default website: www.ceibal.edu.uy | | | |
| 6.24 | SAFETY | Disable screen lock | | | |
| SOFTWARE IMAGE - OTHER CONFIGURATIONS | | | | | |
| 6.25 | BOOT | Include a boot image. | | | |
| | | Include boot animation | | | |
| 6.26 | WALLPAPER | Set wallpaper of ceibal | | | |
| 6.27 | REBOOT | Add restart option when pressing power button. | | | |
| 6.28 | GOOGLE APPLICATIONS | Include Google applications that are mandatory in Uruguay. | | | |
| 6.29 | USB PORT | Create a soft-link to the USB port under the name / sdcard / usbc card / or rename it that way. | | | |
| 6.30 | SD CARD | Include read and write permissions on SD card. | | | |
| SOFTWARE IMAGE - CONTENTS TO INCLUDE | | | | | |
| 6.31 | LIBRARIES | Include libraries in / system / lib | | | |
| 6.32 | NO APP CONTENT | Create CEIBAL folder in / sdcard and include content in it | | | |
| 6.33 | INITIALIZATION FILES | Copy folder with device initialization content to / sdcard folder that is preserved in case of factory reset of device | | | |
| SOFTWARE PICTURE - APPLICATIONS INSTALLED | | | | | |

| | | | | | |
|--|-------------------|---|--|--|--|
| 6.34 | APPS | Install applications that Centro Ceibal will specify | | | |
| SOFTWARE IMAGE - OTHER REQUIREMENTS | | | | | |
| 6.35 | SYSTEM PRIVILEGES | Ceibal must be able to sign applications so that they have system privileges. This can be done by the bidder whenever Ceibal requests it, but it will be valued if Ceibal can do it. For this, indicate if the delivery of the System Platform Key is possible. | | | |
| 6.36 | DEVELOPMENT | Specify the request response time and iteration time for each development cycle of the software image. For the purpose of sizing development cycles, these may include the following tasks: | | | |
| | | * Modification of basic settings such as default language, time zone, among others. | | | |
| | | * Installation of Ceibal applications as system applications. | | | |
| | | * Disk partitioning | | | |
| | | * Upload of digital certificates in specific directories. | | | |
| | | * Configure applications to be launched once the device starts | | | |

| LOGISTICS | | | | | |
|-------------------------------|---|--|-----------------|----|--|
| MANDATORY REQUIREMENTS | | | COMPLIES | | SPECIFICATIONS AND OBSERVATIONS |
| | | | YES | NO | |
| 6.37 | CEIBAL LOGO, FANTASY NAME AND GRAPHIC REPRESENTATION OF THE MODEL | Ceibal will specify the Ceibal logo, fantasy name and graphic representation of the model, which must be printed on the casing using laser, silkscreen or another printing method. For reference, see Acrux and Betelgeuse model designs at the following link: https://www.ceibal.edu.uy/es/dispositivos/tablets) | | | |
| | | Labels will NOT be accepted. This print must meet the following durability criteria: | | | |
| | | - Clearly visible on housing. | | | |
| | | - Indelible before the application of alcohol. | | | |
| | | - Not removable when gluing and peeling packing tapes. | | | |
| 6.38 | SERIAL NUMBER and BARCODE | Unique Serial Number (SN) and corresponding barcode printed on housing by laser, silkscreen or other printing method. The same considerations apply as for requirement 6.37 CEIBAL LOGO, FANTASY NAME AND GRAPHIC REPRESENTATION OF THE MODEL. | | | |

| | | | | | |
|------|----------------------|---|--|--|--|
| | | The barcode must have sufficient contrast to be read by barcode readers. Labels will NOT be accepted. | | | |
| | | The serial number must be obtainable by software following the Android standard and must be accessible through the command 'adb shell getprop grep ro.boot.serialn '. | | | |
| | | The serial number obtainable by software must be configurable using a tool and procedure that the bidder will specify. This requirement is necessary so that the serial number printed on the housing and the serial number obtained by software match on a machine after a repair in which the motherboard was changed (See requirement 2.2.6 SERIAL NUMBER CONFIGURATION) | | | |
| 6.39 | PARTS IDENTIFICATION | The following components must have a barcode or QR code that allows the part number to be scanned (applies both to the parts included in the equipment and to individual spare parts): | | | |
| | | Battery | | | |
| | | Motherboard and Screen. Additionally, they must have a similar label or engraved by laser or silkscreen (with scannable codes) with the part number and serial number information. | | | |
| | | Touchscreen | | | |
| 6.40 | PACKING ECO FRIENDLY | The design of the packing must be eco friendly, cardboard and biodegradable nylon. | | | |

| CHARGERS | | | | | |
|------------------------|-------------------------|--|----------|----|---------------------------------|
| MANDATORY REQUIREMENTS | | | COMPLIES | | SPECIFICATIONS AND OBSERVATIONS |
| | | | YES | NO | |
| 6.41 | TYPE OF CONNECTOR | Europlug connector (CEE 7/16). Detachable cable. | | | |
| 6.42 | INSULATION IN 220v PINS | The connecting pins to the electrical network must have insulation at the base. View photo (*) | | | |
| 6.43 | SEALED CHARGER | The charger can only be opened by a destructive process. It must not have screws that allow it to be opened by the user. | | | |
| 6.44 | PINS REMOVAL FORCE | The pins can only be removed from the body of the charger if a force greater than 40kgf is exerted. | | | |
| 6.45 | CEIBAL LOGO | Ceibal will specify the model's logo and fantasy name. In addition to this information, the production lot and charger electrical specifications must be printed on the housing by laser, silkscreen or other printing method, labels will NOT be accepted. The same | | | |

| | | | | | |
|--|--|---|--|--|--|
| | | considerations apply as for requirement 6.37 CEIBAL LOGO, FANTASY NAME AND GRAPHIC REPRESENTATION OF THE MODEL. | | | |
|--|--|---|--|--|--|

| TABLET CERTIFICATIONS | | | | | |
|------------------------|---|--|----------|----|---------------------------------|
| MANDATORY REQUIREMENTS | | | COMPLIES | | SPECIFICATIONS AND OBSERVATIONS |
| | | | YES | NO | |
| 6.46 | Restriction of Hazardous Substances | Documentation supporting the RoHS certification of the device or all of its components will be required as a requirement for acceptance of production batches. | | | |
| 6.47 | Federal Communications Commission Declaration of Conformity | Documentation supporting FCC certification will be required as a requirement for acceptance of production batches | | | |

| CHARGER CERTIFICATIONS | | | | | |
|------------------------|--|---|----------|----|---------------------------------|
| MANDATORY REQUIREMENTS | | | COMPLIES | | SPECIFICATIONS AND OBSERVATIONS |
| | | | YES | NO | |
| 6.48 | Restriction of Hazardous Substances | Documentation proving the RoHS certification of the charger will be required, in case the charger is not included in the RoHS certification of the device, as a requirement for acceptance of production batches. | | | |
| 6.49 | Information technology equipment - Safety | Documentation proving compliance with the EN60950 standard (or its updates) will be required as a requirement for acceptance of production batches | | | |
| 6.50 | Electromagnetic compatibility (EMC) | Documentation proving compliance with the IEC61000 standard (or its updates) will be required as a requirement for acceptance of production batches | | | |
| 6.51 | Information technology equipment. Radio disturbance characteristics. | Documentation proving compliance with the EN55022 standard (or its updates) will be required as a requirement for acceptance of production batches | | | |

| COVER | | | | | |
|------------------------|-------|--|----------|----|--------------|
| MANDATORY REQUIREMENTS | | | COMPLIES | | OBSERVATIONS |
| | | | YES | NO | |
| PROTECTION | | | | | |
| 6.52 | COVER | The product must include a cover according to the specifications of Annex II: Cover. | | | |

7. Annex II: Cover

Material

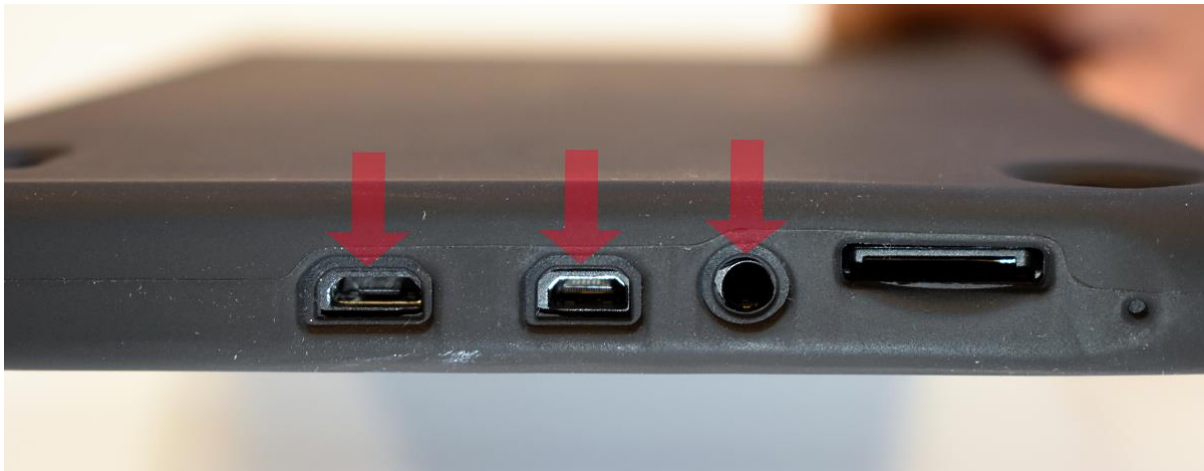
Silicone.

Color

Black.

Connector hole

The cut-out of the holes for the side connectors of the tablet (micro USB, audio, HDMI, etc.) must be adequate to ensure that all external accessories and cables can be reliably connected.



Connector legends

In addition to the logo on the back, the indication legends corresponding to frequently used connectors (at least the USB charging connector) and buttons must be incorporated.



Logo and fantasy name of the model

The cover must incorporate the ceibal logo on its back along with the identification of the device model. Ceibal will define this identification, which can be the model name specified by the supplier, a fantasy name selected by Ceibal, or both. Below is an example of a cover of a model currently in the Ceibal tablet park.



Edges

1- Contact surface clearance

The edges of the front frame are thickened to achieve greater clearance of the screen-touchscreen assembly from a contact plane in the event of horizontal impacts or falls.



2- Touchscreen retention

The inner edges of the cover should advance as far as possible on the touchscreen / screen. In this way, the cover would be tighter, preventing part of the touchscreen or screen from lifting, or fragments of the same from detaching in cases of breakage.



Corners

The cover must present thickened corners, in order to have greater resistance to shocks in these sectors of the device that are the most frequent.



Texturing of the back

The back of the cover must incorporate a texturing that makes it difficult for the device to slide.



8. Annex III: Spare Parts

The life cycle of the product in the Ceibal park will be 2 years. During this period, the successful bidder must guarantee the support of their product and, in the event of an End of Life (EOL) of a spare part, they must inform Centro Ceibal 120 days in advance.

The bidder must complete the following spare parts specification table for each model offered:

| SPARE PARTS | | | | | |
|-------------|-------------|--|---------------|----------------------|------------------|
| Spare part | Part number | Estimated percentage of factory failures | Minimum batch | Delivery time period | Observations (*) |
| Touchscreen | | | | | |
| Screen | | | | | |

| | | | | | |
|-------------|--|--|--|--|--|
| Battery | | | | | |
| Motherboard | | | | | |
| Charger | | | | | |
| ... | | | | | |
| ... | | | | | |
| ... | | | | | |
| | | | | | |

(*) Specify if the original spare part includes other parts of the device. For example, touchscreen with / without frame, motherboard with / without integrated peripherals, etc.

9. Annex IV: Technical evaluation criteria

The evaluation of the technical offer includes the following device evaluation criteria:

- Background evaluation.
- Evaluation of compliance with mandatory requirements.
- Evaluation of samples:
 - Performance evaluation
 - User experience evaluation
 - Maintenance evaluation
- Evaluation of compliance with software requirements.

9.1. Background evaluation

The evaluation of the technical offer includes the following device evaluation criteria:

- Background evaluation. It will be evaluated:
 - The Factory background
 - The Background of the bidder
- Factory visit. Centro Ceibal may request a visit to the factory that the bidder specifies in his offer. The objective of this visit is to check the capacity of the factory to meet the production volume in terms of quality and deadlines. When presenting itself, the bidder guarantees that the factory will allow access to Ceibal, or to a representative designated by it, so that the corresponding evaluation can be carried out, if Ceibal requests it. For this evaluation, the following will be needed:
 - Free access to the company's manufacturing facilities and offices.
 - Free access to take photographic and videographic records of the facilities, both inside and outside the factory buildings.
 - Free access to documentation linked to current quality and management certificates.
 - Free access to documentation related to legal records of the company.

9.2. Compliance with mandatory requirements

Any offer that does not meet any of the mandatory requirements requested in the corresponding category of section 6. REQUIREMENTS will be discarded.

9.3. Sample evaluation

9.3.1. Performance and user experience

Hardware performance and overall device usage experience will be evaluated. The evaluated aspects are: camera, screen, audio, video, WiFi, response of the device in interaction with the user, autonomy of the device in battery operation, disk reading / writing, CPU performance, among others.

9.3.2. Maintenance

The maintenance evaluation analyzes the suitability of the device for the user and the characteristics of the support service provided by Ceibal, and the quality of the documentation associated with maintenance requested in section 2.2 DOCUMENTATION

As general characteristics, a robust and easy-to-repair device is sought, both in terms of the time it takes to repair and its technical complexity.

Among the aspects to be evaluated, the following stand out:

Hardware Test

The suitability of the software or firmware tool presented will be evaluated for the Ceibal operating procedures (see mandatory requirement 7.12 *Hardware test*). Described below, as a reference, the characteristics of the tool sought:

- Features:
 - Sequential mode where all the tests are executed.
 - Manual mode where it is allowed to run a specific test.
 - At the end of each test, it allows the technician to decide if the result is acceptable or not.
 - Allows you to skip Test or go back to the previous one manually.
 - Has a LOG with the results of all the tests.

- Tests:
 - Keyboard Test: Allows verification of the following keys:
 - Volume +
 - Volume -
 - Power.
 - Bluetooth test: Activate Bluetooth and recognize nearby devices.
 - WiFi test: Activate WiFi, recognize nearby access points and connect.
 - Display Test: Shows color sequence in full screen.
 - Audio Test: Allows verification of the following components:
 - Speakers
 - Earphones
 - Microphone.
 - Backlight Test: Shows variation in screen brightness.
 - Touchscreen Test: Displays a matrix to review by touch.
 - Camera Test: Activates the cameras and allows you to take and save a photo.
 - Battery Test: Displays the Battery information
 - Tension
 - Charge level
 - Current capacity and design capacity
 - Storage test

- Check microSD card
- Check storage read by OTG adapter
- Device Information:
 - Name of the device
 - Firmware version
 - Serial number
- SIM test (in 3G / LTE models): Allows detection and validation of the SIM
- Flash Test (if applicable to the model): Allows the LED used as the camera flash to turn on

Fragile module assembly

Easy to disassemble fragile modules, for example screen, internal battery, antennas, etc., in order to minimize the risk of breakage. It is desirable that the assembly of these modules is not done with adhesive materials.

Disassembly and assembly complexity

Design that allows a simple assembly and disassembly process, with minimal risks on the components that are removed and replaced. For example, the following considerations contribute to the ease of the process:

- Presence of guides for the conduction of internal cables that avoid the use of adhesive tapes.
- Low diversity of screws and easily identifiable, for example, by color coding and / or printing the screw size on PCB.
- Modularity: design that allows removal and replacement of modules without the need to remove other modules.

Screw anchors

Robust screw anchors to withstand wear and tear from multiple removals.

Safety

Design that prioritizes user safety. For example, safety mechanisms due to excess battery temperature.

Length of internal cables

Appropriate length of internal cables in order to avoid unnecessary tension in the connection to the motherboard or excessive dispersion of the cables inside the equipment.

External connectors

The external connectors are accessible by the user so it is important that they are robust to withstand external pressure. Some aspects to consider are:

- Connectors fully contained inside the device to avoid greater pressure than necessary, or even reinforced by the plastic of the housing itself.
- Assembly of the connectors on independent boards that are connected to the motherboard, so that when the connector breaks, it is not necessary to remove and replace the entire motherboard.
- Small SMD connectors such as micro USB, audio connectors, micro HDMI, etc, with four anchor points to the motherboard.
- Connectors assembled in a board-cut configuration that make contact with the motherboard at the rear of the connector, providing an additional point of support for the connector.
- Reversible connectors, such as micro USB type C (see optional requirements in Annex I. Requirements)

External buttons

External buttons are prone to breakage, so it is desirable that they are not assembled on the motherboard but on a separate module.

On the other hand, external plastic parts, such as the power and volume buttons, are desirable to remain assembled on the device's plastic casing so that they are not lost during repairs.

Internal assembly

To avoid breakage during tablet repair processes, it is desirable to:

- Speakers not assembled on removable parts of the case. This avoids cable strains when opening the devices.
- Motherboard components separated from the device opening points, so that when using tools to open the computer there is no risk of component breakage.
- PCB shield not soldered to the board so it can be removed during repairs.

Cards

Some tablets have removable plastic parts in the case to hide cards (SIM, microSD, etc.) prone to breakage or loss, which has a direct impact on the operation of the equipment. It is desirable that the device does not include these types of parts.

Spare parts compatibility

The compatibility of spare parts of the models offered with existing models in the Ceibal equipment park will be evaluated.

9.4. Evaluation of compliance with software requirements

The supplier's ability to meet the development requirements of a software image will be evaluated. This evaluation also includes the evaluation of compliance with other requirements that are associated with the image, for example, some logistical aspects (Serial number, procedures, etc.).

Centro Ceibal may request the prototyping of a software image if it deems it necessary. **This process may not exceed 3 weeks.**

The development process will be iterative and incremental, so the bidder must specify in its bid the estimated prototyping time as requested in *Annex I: Requirements*.

The joint work schedules will be agreed in the definitive work plan.

10. Annex V: Price tables

| PRODUCT: TABLET WITH COVER + CERTIFIED SOFTWARE IMAGE | | | | |
|---|--------------|---------------------------|---------------------------|--------------|
| PRODUCT: TABLET WITH COVER + CERTIFIED SOFTWARE IMAGE | TABLET MODEL | VOLUME | UNIT PRICE, US \$ CIF MVD | OBSERVATIONS |
| | | Up to 10.000 | | |
| | | between 10.001 and 30.000 | | |
| | | between 30.001 and 50.000 | | |
| | | More than 50.000 | | |

| DEVELOPMENT AND CERTIFICATION OF MAINTENANCE SOFTWARE IMAGE – MANDATORY QUOTATION | |
|---|--|
| PRICE US\$ | |

| SPARE PARTS – MANDATORY QUOTATION | | |
|-----------------------------------|---------------------------|---------------|
| SPARE PART | UNIT PRICE, US \$ FOB MVD | MINIMUM BATCH |
| Touchscreen | | |

| | | |
|-------------|--|--|
| Screen | | |
| Battery | | |
| Motherboard | | |
| Charger | | |
| ... | | |
| ... | | |
| ... | | |

11. Annex VI: Confidentiality and data protection

The Company that is the successful bidder, expressly undertakes to keep in the strictest confidentiality all the information that it processes or uses during its relationship with Centro Ceibal. Confidential Information includes, among others, by way of example, the following information: all commercial strategy, plan and procedure, proprietary information, software, tool, process, images, personal data, methodology, information and trade secret, and other information and material Ceibal, as well as the students, beneficiaries, teachers, study centers, which could be obtained by the Company from any source or could be developed as a result of this contract.

In the event that the bidder accesses personal data, they must inform in their offer where they host the data as well as their privacy and data security policy. In this case, it is obliged to process the personal data to which they have access in accordance with Law No. 18,331, of August 11, 2008 and Decree No. 414/2009, of August 31, 2009, only for the provision and in the framework of the contracted service, not being able to use them for any other purpose, or for their own benefit, be it free or onerous, nor assign them, communicate them or transfer them to third parties, except with the prior authorization of Centro Ceibal.

In no case may access to personal data be understood as an assignment or permission for its free use by the selected bidders.

Likewise, they are obliged to adopt the necessary security measures to guarantee the security and confidentiality of personal data and to avoid its adulteration, loss, consultation or unauthorized treatment, as well as to detect deviations of information.

In the event that personal data is housed, even temporarily, outside the national territory, the importer must be in countries considered to have adequate levels of European data protection standards, in accordance with Directive 95/46 / CE, of the European Parliament and of the Council, modifying, concordant and complementary.

At the end of this contract, they are obliged to return or delete from all their systems and physical and logical files, whether they are their own or contracted to third parties, the personal data accessed, obtained or processed under this contract, as well as the associated metadata, in if applicable.

Information of any type referring to specific or determinable natural or legal persons, by way of example, any numerical, alphabetical, graphic, photographic, acoustic or any other type of information that refers to them directly or indirectly, in accordance with the provisions, is considered personal data. provided in Article 4 of Law No. 18,331 and Articles 1 and 4 of Decree No. 414/009.