

PUBLIC INTERNATIONAL TENDER
TABLETS LTE
TECHNICAL SPECIFICATIONS

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1. Aim

Centro Ceibal calls for a public international tender for the acquisition of up to 20,000 8" tablets with connectivity to cellular networks.

These terms of reference are divided in two categories, one for tablets without video output (mini or micro HDMI) and the other one with video output. Except for this, the requirements are exactly the same for each category.

The products that the awardees must deliver to Ceibal are the following:

1. Tablet with software image developed according to the requirements of Ceibal and certified by Google, installed on the devices during the production process.
2. User manual.
3. Spare parts.
4. Documentation requested in section 2.2.

The bidder must quote headphones (in-ear headphones or earbuds) and submit samples. **It is mandatory to quote this item but its award is optional. If the headphones are awarded, they must be delivered inside the individual tablet case, as an integral part of the product.**

The bidder must obligatorily quote the spare parts, in FOB Origin mode. Optionally, the bidder may quote the spare parts in CIF Montevideo mode (port or free zone). In addition a motherboard test bench for plate diagnosis in repairs must be quoted. **It is mandatory to quote the test bank but its award is optional.** The product must be delivered with a user manual that Ceibal will specify (see section 6. Requirements).

The bidder must quote separately 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 included in the device at the factory, but an **image of maintenance software**. See *Annex I: Price tables*. **It is mandatory to quote this development but its award is optional.**

The offer should be presented according to the specifications in section 2. *OFFER*. Centro Ceibal reserves the right to refuse an offer that is not presented in the agreement to this quotation and pricing scheme.

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

2. Offer

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

2.1. Presentation

The technical offer will be presented segmented in the following folders:

1. Folder with the documentation requested in section 2.2 DOCUMENTATION for each tablet model offered.
2. Folder with warranty specifications as requested in section 3. WARRANTY.
3. Folder with the specification of delivery times as requested in section 4. DEADLINE AND DELIVERY CONDITIONS.
4. Folder with all the tables in section 6. Complete REQUIREMENTS, for each product offered.
5. Folder with factory information that will produce the devices and background specification. For this, the bidder must complete the tables in section 7. FACTORY AND BIDDER INFORMATION AND BACKGROUND.
6. (Optional) Folder with the complementary technical information that the bidder considers pertinent to provide.

The economic offer will be presented in a sealed envelope, with the following segmentation of folders:

1. Folder with the tables in *Annex I: Complete price tables*.
2. (Optional) Folder with the quotation of additional guarantee, if offered.
3. (Optional) Folder with additional quotes to those specified above, if applicable.
4. Documentation

The information to be included in the documentation folder of the technical offer, for each model offered, is as follows:

DOCUMENTATION		
MANDATORY WITH THE OFFER		
2.2.1	TECHNICAL SPECIFICATIONS	Technical specifications of each model offered.
2.2.2	TECHNICAL DOCUMENTATION OF DISARMAMENT	Technical document detailing the complete disarmament procedure of the device.
2.2.3	PROVISION OF MOTHERBOARDS COMPONENTS	Indicate if the bidder can provide the electronic components of the motherboard to be used in the plate repair processes.
2.2.4	TECHNICAL DOCUMENTATION TO INSTALL AND PERSONALIZE FIRMWARE AND OPERATING SYSTEM	Technical document detailing tools and procedures to customize and install the firmware and software image of the device. Specify the type of modifications that can be made at the firmware level. (See section 6. REQUIREMENTS for reference of the necessary customizations).
2.2.5	INSTALLATION OF OPERATING SYSTEM IN VARIOUS EQUIPMENT	Technical document detailing 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 the operation and minimize the use of external resources are preferred.
2.2.6	FREE SPACE	Specify free space in internal storage for a device with a standard image certified by Google with the Android version offered.

2.2.7	SERIAL NUMBER CONFIGURATION	Procedure and serial number configuration tool. In addition, it is desirable that the tool allows you to configure other parameters such as MAC, IMEI, BT, etc.
2.2.8	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.
2.2.9	UPDATES BY MEANS OF REMOVABLE MEDIA	Specify procedure to update or reinstall the tablet software image using a removable medium.
2.2.10	MOTHERBOARDS TEST BENCH	Document detailing the characteristics of the motherboard test bench, including photographs.
2.2.11	SOFTWARE IMAGE DEVELOPMENT	Specify response time to requests and the iteration time of each development cycle. Interaction with the bidder and responses to requests will be required from 9 am to 5 pm in Uruguay. For sizing purposes, see section 6. REQUIREMENTS.
2.2.12	CIF MODE SPARE PARTS	Indicate if the bidder quotes spare parts in the optional CIF Montevideo modality (port or free zone)

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

DOCUMENTATION		
MANDATORY WITH EACH SHIPMENT AND / OR CHANGE OF HARDWARE, as applicable		
2.2.12	RoHS CERTIFICATE	Certificate of compliance with RoHS standard. (It is NOT required to

		present the detailed documents with the test protocols applied).
2.2.13	FCC CERTIFICATE	Certificate of compliance with FCC standard. (It is NOT required to present the detailed documents with the test protocols applied).
2.2.14	BILL OF MATERIALS (BOM)	Form with all the hardware components that make up the device, each with a code that identifies it, including the housing and any other individual component that can be replaced in case of failure.
2.2.15	SCHEMATICS, LAYOUT and BAI	Schematic, layout and board assembly information (BAI) of the motherboard in digital format. This information will be delivered once production has begun (or at most prior to the first shipment) and each time the successful bidder notifies a hardware change.
2.2.16	EXPLODED VIEW DRAWING	Technical drawing of the assembly and relationship between all the atomized parts of the equipment, each identified with a code. This information will be delivered once production has begun (or at most prior to the first shipment) and each time the successful bidder notifies a hardware change.
2.2.17	DATA SHEETS	Data sheets of main components of the device such as battery, display, camera, etc., and of main components of the motherboard such as integrated circuits and connectors.
2.2.18	MSDS BATTERIES	Material Safety Data Sheet (MSDS) of batteries.
2.2.19	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).
2.2.20	EN60950 CERTIFICATES	Certificate of compliance with 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).
2.2.21	IEC61000 CERTIFICATES	Certificate of compliance with IEC 61000 standard (or its updates), Electromagnetic compatibility (EMC), tablet and charger. (It is NOT required to present the detailed documents with the test protocols applied).
2.2.22	EN55022 CERTIFICATES	Certificate of compliance with EN55022 standard (or its updates), Information technology equipment Radio disturbance characteristics, tablets and charger. (It is NOT required to present the detailed documents with the test protocols applied).
2.2.23	TEMPLATE DEVICES	Device information form (see description in this section).
2.2.24	LOGISTICS FORM	Logistics information sheet (see description in this section).

The information sheets required with each shipment are described below:

- **DEVICE FORM (Requirement 2.2.23)**
 - Part number.
 - Serial number.
 - International Mobile Equipment Identity Number (IMEI)
 - Pallet number / master box number in which the device is sent.
 - MAC addresses of all network cards that the device has (for example, WLAN, Bluetooth, etc.).
 - Part number and serial number of the main components (minimum: motherboard, display, touchscreen and battery).
 - Identifier obtainable by software with the method specified by the bidder.
- **LOGISTICS FORM (Requirement 2.2.24)**
 - Individual cash measures.
 - Individual box weight.

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

2.3. Samples

At the time of submission of tenders, **ten identical samples of each tablet model offered with their chargers must be delivered**, independently from the fact that Ceibal may have samples delivered by the same bidder in another context (other tenders, supplier records, expression of interest calls, technological prospective, etc.), **and TWO samples of each of the models of headphones being offered.**

A fundamental part of the technical evaluation will be carried out on these samples (see section 7. TECHNICAL EVALUATION CRITERIA), validating the fulfillment of the requirements as well as the fulfillment of the requirements of cellular service. **The specifications and performance of the final product cannot be lower than the one of the sample. This aspect will be verified in the quality controls that determine the acceptance of the product.**

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

Upon completion of the bidding process, the bidders awarded must deliver **within a maximum period of 14 days after the award** TWENTY identical samples of the model awarded for development of the Ceibal software image. The hardware of these samples should be as close as possible to the final product. In addition, another twenty identical samples of the model awarded for repair training must be delivered within a maximum period of 60 days after the award. **These 40 samples are not part of the lot awarded and are at the cost of the supplier.**

Some tests to be carried out with the samples may result in their destruction, and those that are not destroyed may be returned under different conditions in respect of which they were delivered. The bidder will have 4 weeks from the award to withdraw the submitted samples. Upon expiration of the previous term without having withdrawn them, Centro Ceibal may freely dispose of them, without the right to claim by the bidder.

3. Warranty

The following warranty conditions are mandatory:

3.1 Dead on Arrival

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

3.2 Systemic failures

Ceibal may request from the successful tenderer 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 exclusive responsibility of the supplier.

In the event that the bidder presents additional guarantees, he must detail them in the 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 shall ensure that the products supplied under the contract are new, complete, unused and free of defects attributable to the design, materials, manufacture, storage conditions (appropriate packaging, temperature and humidity), transfer or any act or omission of the bidder that could be manifested on the occasion of normal use of the products in the conditions prevailing in the country.

4. Delivery time period and conditions

4.1. Delivery time period

The following maximum delivery time periods are desirable:

- ETA of 50% of the awarded lot: 120 calendar days after the award resolution has been communicated.

- ETA of the remaining 50% of the awarded lot: within 30 calendar days after the delivery of the first 50%, or June 15, 2020, the condition that occurs before.

The specified delivery time periods include the following milestones:

1. Software image development. Once awarded, the bidder must provide at their cost samples to develop, together with Ceibal, the software image of the device. The development takes an estimated period of four weeks once the samples are available (see section 2.3. SAMPLES). The possibility of Ceibal technicians attending the factory to reduce development time periods may be evaluated.
2. Software image certification developed. The software image to be installed at the factory must be an image certified by Google.
3. Definition of hardware specifications, in case the final product presents minor changes of components, internal design, etc., with respect to the samples presented, **it is a condition for the start of production that Ceibal validates the equivalence of the final product (which cannot be inferior in specifications and performance to the sample), with the samples presented.**
4. Production
 - 4.1. Final product:
 - 4.1.1. Centro Ceibal will agree with the awardee the production schedule of the device. The awardee will send Ceibal 10 golden samples of each production lot (see section 5. QUALITY CHECKS.).
 - 4.1.2. 4.1.2. Quality control at source (see section 5. QUALITY CONTROLS).
 - 4.1.3. 4.1.3. Availability check of all requested product documentation.
 - 4.2. Spare parts:
 - 4.2.1. Centro Ceibal will agree with the awardee the quantity of spare parts of each part that they must provide and how they should send them.
5. Delivery of documentation requested in the section as *mandatory with each shipment and / or change of hardware in section 2.2 DOCUMENTATION*.
6. Shipment and quality control upon arrival in Uruguay (see section 5. QUALITY CONTROLS).

In case of not being able to comply with these maximum desirable deadlines, the bidder must specify the delivery times in his offer, otherwise the expected deadlines considered will be the ones states above. **The same delivery time periods apply for both the final product (tablet + accessories) and the spare parts.**

4.2. Delivery conditions

All equipment sent to Ceibal must be composed of the same components. In the event that this cannot be fulfilled, the awardee must notify Ceibal in writing with a term not less than 60 days and Ceibal must validate the new BOM.

The awardee must deliver the devices in compliance with the following specifications:

- Each pallet must be labeled with the following information:
 - Device model / lot / item (**pallets containing more than one device model will not be accepted**).
 - Number of pallets / total pallets in the lot.
 - Amount of master boxes on pallet.
 - List of the master boxes that constitute the pallet.
- Each master box must be labeled with the following information:
 - Device model / lot / heading.
 - Master box number / total master boxes of the lot.
 - Serial number (barcode and alphanumeric) of each device in the master box.
 - Product description.
- Each individual box must 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 should be customized according to specifications that will be agreed between Centro Ceibal and the awardee.

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

5. Quality controls

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 awardee will send to be evaluated at Centro Ceibal (10 devices of each lot produced, sent by air freight at the cost of the awardee).
3. Final inspection at Ceibal after receipt of shipment.

Centro Ceibal, or a representative designated by it, may visit the factory before and / or during the production of the lots for Ceibal, prior 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. Requirements

6.1. Tablets 8''

HARDWARE					
MANDATORY REQUIREMENTS			COMPLIES		SPECIFICATIONS AND OBSERVATIONS
			YES	NO	
6.1.1	PROCESSOR	Minimum: Quad Core. 64 bits.			
6.1.2	RAM	Minimum: 2GB DDR3.			
6.1.3	INTERNAL STORAGE	Minimum: 16GB			
6.1.4	SCREEN	8 '' size. Minimum resolution: 1280x800p.			

6.1.5	TOUCHSCREEN	P + G technology or other technology that does not involve security risks for the user. See section 8. EVALUATION CRITERIA.			
6.1.6	CONNECTIVITY	Minimum WiFi: 802.11 a / b / g / n 1x1 network card.			
		Bluetooth			
		NO dual SIM			
		Comply with cellular network specifications. See table CELLULAR NETWORK REQUIREMENTS.			
6.1.7	MULTIMEDIA	Built-in microphone and speaker / s.			
		3.5mm jack connector for headphone output.			
		Front camera: minimum resolution 2MP.			
		Rear camera: minimum resolution 5MP.			
		FLASH on rear camera			
6.1.8	PORTS	MicroSD card reader.			

		Video output (mini HDMI or micro HDMI)			
6.1.9	BATTERY HOLD AND REMOVAL	The battery must not be attached to any component of the equipment, except for any support intended for this purpose, and only with side belts, without transfer adhesive.			
6.1.10	NOT SOLDED PERIPHERALS	Peripherals (screen, touchscreen, speakers, battery, antennas, etc.) NOT welded to the motherboard. Peripherals must be connected to the motherboard using removable connectors.			
6.1.11	REINFORCED MICRO USB CONNECTOR	Reinforced metal body structure of micro USB connectors, for example, by spot welding or by its constituent design.			
6.1.12	HARDWARE TEST	Software or firmware tool that allows verification of integrated peripherals and device ports. This tool must be available in Spanish and / or English. For details of the characteristics sought, see section 8: TECHNICAL EVALUATION CRITERIA.			
OPTIONAL REQUIREMENTS					
6.1.13	CHARGE CONNECTOR TYPE	Barrel type charging connector. It must be quoted separately.			
		Type C micro USB charging connector. It must be quoted separately.			



6.1.14	INTERNAL STORAGE	Internal storage of 32GB. It must be quoted separately.			
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CELLULAR NETWORK REQUIREMENTS					
MANDATORY REQUIREMENTS			COMPLIES		SPECIFICATIONS AND OBSERVATIONS
			YES	NO	
6.1.15	GSM (EDGE/GPRS)	Operating bands: EGSM (900 MHz) - DCS (1800 MHz)			
6.1.16	UMTS	Operating bands: 5 (850 MHz)			
6.1.17	LTE	Operating bands: 4 (AWS), 5 (850 MHz), 28 (APT700), DCS (1800 MHz), 1 (2100 MHz), 7 (2600 MHz)			
		Carrier Aggregation Support:			
		B1-B3			
		B3-B28			

		B4-B28			
		B1-B3-B28.			
DESIRABLE REQUIREMENTS					
6.1.18	LTE	Carrier Aggregation Support:			
		B1-B3-B7			
		B1-B7-B28			
		B3-B7-B28			
		B1-B3-B7-B28			
		B4-B7			
		B7-B28			

SOFTWARE					
MANDATORY REQUIREMENTS			COMPLIES		SPECIFICATIONS AND OBSERVATIONS
			YES	NO	
6.1.19	OPERATING SYSTEM	Android Pie (9) or later.			
6.1.20	LANGUAGE	Operating system and all its interfaces and configuration options in Spanish language.			
6.1.21	INSTALLATION TOOLS	The bidder must deliver the tools detailed in the documentation requirements 2.2.4 and 2.2.5 for installation of the operating system on several computers.			
6.1.22	DISK 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.			
6.1.23	AVAILABILITY OF IMAGE WITH PRIVACY OF ROOT OR USER DEBUG	The bidder must deliver a software image of the device that has root or user debug privileges.			
SOFTWARE IMAGE – ANDROID SETTINGS					
6.1.24	LANGUAGE AND	Spanish (Spain)			

	KEYBOARD				
6.1.25	DISPLAY SUSPENSION	5 minutes			
6.126	SOURCE SIZE / DISPLAY ELEMENTS	Set "Very large"			
6.1.27	DATE AND TIME	Time zone GTM-03: 00, Montevideo, Uruguay			
6.1.28	WIFI	Enabled by default			
6.1.29	BROWSER	Default page: www.google.com.uy			
6.130	SECURITY	Disable screen lock			
6.131	APN	Configure APN according to Ceibal's requirement			
SOFTWARE IMAGE – OTHER SETTINGS					
6.132	BOOT	Include an image provided by ceibal in the boot.			
6.1.3 2	REBOOT	Include boot animation provided by Ceibal			

6.1.33	WALLPAPER	Set wallpaper provided by Ceibal			
6.134	REBOOT	Add reset option by pressing power button.			
6.135	GOOGLE APPS	Include Google applications that are mandatory in Uruguay.			
6.136	APPS	Install system applications that Centro Ceibal will specify			
		Enable permissions that are necessary for the proper functioning of those applications			
SOFTWARE IMAGE- OTHER REQUIREMENTS					
6.137	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 that Ceibal can do it. For this, indicate whether it is possible to deliver the Platform Key of the system or access to a computer system that allows the signing of applications autonomously by Centro Ceibal.			

LOGISTICS

MANDATORY REQUIREMENTS			COMPLIES		SPECIFICATIONS AND OBSERVATIONS
			YES	NO	
6.1.38	LOGO AND FANTASY NAME OF THE MODEL	Ceibal will specify logo and fantasy name of the model, which must be printed on the housing by laser, silkscreen or other printing method, labels will NOT be accepted. This print must meet the following durability criteria:			
		Clearly visible in housing.			
		Indelible when applying alcohol.			
		Not removable when pasting and peeling packing tapes.			
6.1.39	SERIAL NUMBER and BAR CODE	Unique serial number (SN) and its corresponding barcode printed on the housing by laser, silkscreen or other printing method. The same considerations apply to requirement 6.1.32. 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 through a procedure that the bidder will indicate.			
		The serial number obtainable by software must be configurable by means of 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 2.2.7 SERIAL NUMBER CONFIGURATION)			
6.1.40	PARTS IDENTIFICATION	The following components must have a barcode or QR code that allows you to scan your part number (applies to both the parts included in the equipment and to the individual spare parts):			
		Drums			
		Motherboard and Screen. Additionally they must have a similar label or engraved by laser or silkscreen (with scannable code) with the serial number information.			
		Touchscreen			
6.1.41	PACKING ECO FRIENDLY	The packing design must be ecofriendly, cardboard and biodegradable nylon.			

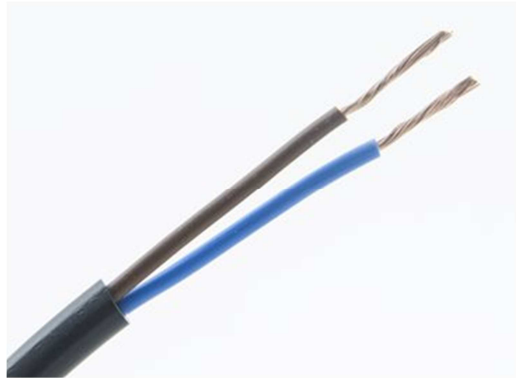

CHARGERS		
MANDATORY REQUIREMENTS	COMPLIES	SPECIFICATIONS



			YES	NO	AND OBSERVATIONS
6.1.42	CONNECTOR TYPE	Europlug (CEE 7/16).			
6.1.43	220v PIN INSULATION	The connection pines to the power grid must have insulation in the base.			
6.1.44	SEALED CHARGER	The charger can only be opened by a destructive process. It must not have screws that allow its opening by the user.			
6.1.45	PIN EXTRACTION FORCE	The pins can only be removed from the body of the loader if a force greater than 40kgf is exerted			
6.1.46	LOGO	Ceibal will specify logo and fantasy name of the model. In addition to this information, the production lot and the electrical specifications of the charger must be printed on the housing by laser, silkscreen or other printing method, labels will NOT be accepted. The same considerations apply to requirement 6.1.32.			
6.1.47	REINFORCED DC CABLE	The DC cable must be reinforced, see description below.			

Description of Requirement 6.1.47: REINFORCED DC CABLE:

TABLET CERTIFICATIONS

Reinforced cable (complies with the mandatory requirement)	NOT reinforced cable (It DOES NOT comply with the mandatory requirement)
	

MANDATORY REQUIREMENTS			COMPLIES		SPECIFICATIONS AND OBSERVATIONS
			YES	NO	
6.1.48	Restriction of Hazardous Substances	Proof of the RoHS certification of the device or all its components will be required as a requirement for acceptance of the production lots.			
6.1.49	Federal Communications Commission Declaration of Conformity	Proof of FCC certification documentation will be required as a requirement for acceptance of production lots			
6.1.50	Information technology equipment - Safety	Proof of compliance with the EN60950 standard (or its updates) will be required as a requirement for acceptance of production lots			
6.1.51	Electromagnetic compatibility (EMC)	Proof of compliance with the IEC61000 standard (or its updates) will be required as a requirement for acceptance of production lots			
6.1.52	Information technology equipment. Radio disturbance characteristics.	Proof of compliance with EN55022 (or its updates) will be required as a requirement for acceptance of production lots			

CHARGERS CERTIFICATIONS					
MANDATORY REQUIREMENTS			COMPLIES		SPECIFICATIONS AND OBSERVATIONS
			YES	NO	
6.1.53	Restriction of Hazardous Substances	Proof of 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 the production lots.			
6.1.54	Information technology equipment Safety	Proof of compliance with the EN60950 standard (or its updates) will be required as a requirement for acceptance of production lots			
6.1.55	Electromagnetic compatibility (EMC)	Proof of compliance with the IEC61000 standard (or its updates) will be required as a requirement for acceptance of production lots			
6.1.56	Information technology equipment. Radio disturbance characteristics.	Proof of compliance with EN55022 (or its updates) will be required as a requirement for acceptance of production lots			

USER MANUAL		
MANDATORY REQUIREMENTS	COMPLIES	SPECIFICATIONS

			YES	NO	AND OBSERVATIONS
6.1.57	User manual	The product must include a user manual that Ceibal will specify prior to production. The manual will be of approximate dimensions to those of the tablet, printed in color and approximately 15 sheets.			

SPARE PARTS		
Spare part	Estimated percentage of factory failures	Observations (*)
Screen		
Battery		
Motherboard. All motherboards sent as spare parts must be delivered with the firmware version specified by Ceibal and all manufacturing data (MAC addresses, BT, etc.) loaded at source.		
Touchscreen		
Charger		
...		
...		
...		
...		

(*) Specify if the source replacement includes other parts of the device. For example, motherboard with / without integrated peripherals, etc. In the case of the plates, indicate if the spare parts contain accessories such as: heatsinks, pads, insulating sheets or the like.

6.2. 6.2 Category 2 – Tablets 8” with video output

The same requirements asked for category 1 considering video output (mini or micro HDMI).

6.3. Motherboard test bench

MOTHERBOARD TEST BENCH					
MANDATORY REQUIREMENTS			COMPLIES		SPECIFICATIONS AND OBSERVATIONS
			YES	NO	
6.2.1	MOTHERBOARD TEST BENCH	Equipment that allows the connection of the motherboard to all peripherals for diagnosis (screen, touchscreen, battery, charger, WiFi, audio and cameras.)			
		Accessories: the test bench must be delivered with all the necessary accessories for the connection of peripherals.			

7. Information and background of factory and bidder



At the time of submitting the offer, the following information of the factory that will produce the devices and the bidder must be included

INFORMATION AND BACKGROUND		
FACTORY		
7.1	Name in English	
7.2	Name in Mandarin Chinese	
7.3	General production volume of the factory in the last 12 months	
7.4	Production volume of factory tablets in the last 12 months.	
7.5	Customer Summary	
7.6	Average daily production of devices	
7.7	Slot time for start of production (acquisition of raw material and preparation of production line)	
7.8	Factory name of the product offered	

7.9	Mandarin Chinese Address	
7.10	Line phone	
7.11	Contact Name in English	
7.12	Contact name in Mandarin Chinese	
7.13	Contact person's mail	
7.14	Contact person's cell phone	
BIDDER		
7.14	Background of provision of similar consumer electronic devices in the last 12 months	
7.15	Background of educational projects in which you participated	
7.16	Background of work with the factory that will produce the devices indicated in 1., detailing working time together, projects and volume of devices.	
7.17	Summary of clients and respective contacts	

8. Technical Evaluation Criteria

The technical offer evaluation includes the following device evaluation criteria:

- Background evaluation.
- Evaluation of compliance with requirements.
- Evaluation of the development process times specified in 2.2.11.
- Sample evaluation:
 - Performance evaluation
 - User experience evaluation
 - Maintenance evaluation

8.1. Background Evaluation

It will be evaluated:

- Factory background. Ceibal will request a visit to those factories that it deems necessary to relieve during the bid evaluation process. If Ceibal requests a factory visit, the factory must provide:
 - 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 quality and management certificates.
 - Free access to documentation linked to the existence, constitution and line of business of the company.

The visit will take place on a date to be coordinated between the parties. Centro Ceibal will not compromise the expected deadlines for the completion of the technical

evaluation, so if it is not possible to coordinate the visit before closing the corresponding reports, this will have an impact on the background evaluation.

Ceibal reserves the right to discard an offer if the factory does not allow the visit.

- Bidder Background

8.2. 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.

8.3. Development Time Evaluation

Response and iteration times will be evaluated to obtain versions during the software image development process.

8.4. Sample Evaluation

8.4.1 Compliance with cell bands

Compliance with mandatory requirements 6.1.15 to 6.1.18 will be assessed through the submitted samples.

8.4.2 Performance and user experience

The performance of the hardware and the overall user experience of the device will be evaluated. The aspects to be evaluated are: camera, sharpness of screen, audio, video, autonomy, WiFi (throughput and roaming), response of the device in the interaction with the user, autonomy of the devices in battery operation, reading / writing in memory, performance CPU, among others.

8.4.3 Maintenance

Maintenance is a fundamental aspect in the life cycle of the device, having important consequences in the current repair procedures and their associated costs, and in the availability times of the device in the hands of the end user.

The maintenance evaluation analyzes the adequacy of the device to the user and the characteristics of the support service provided by Ceibal (including the compatibility of spare parts with the existing equipment park), and the quality of the documentation associated with maintenance requested in the section 2.2 DOCUMENTATION, for example, description of disarmament procedures, and procedures for installation and configuration of firmware and operating system. In addition, the maintenance of the equipment also requires the delivery of additional documentation that will be requested at the time of production of the devices (BOM, Exploded-view drawing, schematics, etc.)

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

Among the aspects to evaluate, the following stand out:

Hardware Test

The adequacy to the Ceibal operating procedures of the presented software or firmware tool will be evaluated (see mandatory requirement 6.1.12 Hardware test).

By way of reference, below it is described the desired characteristics of the tool:

- Functionalities:
 - Sequential mode where all the tests are executed.
 - Manual mode where a punctual test is allowed to run.
 - At the end of each test, it allows the technician to decide whether the result is acceptable or not.
 - It allows to skip Test or go back to the previous one manually.
 - It has a LOG with the results of all the tests.
- Tests:

- Touchscreen test: It allows functional verification as well as range of action and sensitivity to the actuation over the entire surface of the touchscreen.
- Bluetooth test: It activates Bluetooth and recognizes nearby devices.
- WiFi test: It activates WiFi, recognizes nearby access points and connects.
- Display Test: It shows sequence of colors and patterns in full screen, to detect defects in the image.
- Audio Test: It allows verification of the following components:
 - Speakers
 - Hearing aids
 - Microphone.
- Backlight test: it shows variation in screen brightness.
- Button Test: It checks the operation of the power and volume buttons.
- Camera Test: it activates the camera (s) allowing you to take and save a photo.
- Battery Test: it displays the relevant information to know battery health. Some parameters are:
 - Tension
 - Level and state of loading or unloading
 - Current capacity and design capacity
 - Current flow to or from the battery.
- SD card and USB port Test: it checks correct reading and writing on removable media.
- Video output test: it generates video patterns through the HDMI port to verify its operation. .
- Storage Test: it checks correct reading and writing to internal Disk.

- Device information: it displays device manufacturing information, such as:
 - Device Name
 - Firmware version
 - Serial number
- Flash test (if applicable to the model): it allows the LED used as the camera flash to light

Fragile modules set up

Easy to set up fragile modules, for example screen, internal battery, antennas, etc., in order to minimize the risk of breakage. It is desirable that the setup of these modules is not carried out with adhesive materials.

Complexity of disassembly and assembly

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 screw diversity and easily identifiable, for example, by color codes and / or PCB size screw printing.
- Modularity: design that allows removal and replacement of modules without the need to remove other modules.

Screw anchors

Robust screw anchors so that they support the wear of multiple removals.

Safety

Design that prioritizes the user's safety. For example, safety mechanisms for excess temperature of batteries and protection against breakage of the screen or touchscreen glass.

Internal Cable Length

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

External Connectors

External connectors are those 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 housing plastic itself.
- Mounting the connectors on independent boards that connect to the motherboard, so that in case of a broken connector 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 board-cut configuration that make contact with the motherboard at the back of the connector, which gives an additional point of support to 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 mounted to the motherboard but a separate module.

On the other hand, external plastic parts, such as the power and volume buttons, it is desirable that they remain mounted on the plastic housing of the device so that they are not lost during repairs.

Internal assembly

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

- Speakers be not mounted on removable parts of the housing. This avoids cable tension when opening the devices.
- Components of the motherboard be separated from the opening points of the device, so that when using tools to open the device there is no risk of component breakage.
- PCB shield be not welded 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 generates a direct impact on the operation of the equipment. It is desirable that the device does not include this type of parts.

9. Annex II: Price Tables

CATEGORY 1 – TABLET (without HDMI) + CERTIFIED SOFTWARE IMAGE + USER MANUAL				
PRODUCT: TABLET + CERTIFIED SOFTWARE IMAGE + USER	TABLET MODEL	VOLUME	UNIT PRICE, US \$ CIF MVD	OBSERVATIONS
		Up to 5.000		



MANUAL		between 5.001 and 10.000		
		between 10.001 and 15.000		
		above 15.000		
OPTIONAL REQUIREMENTS		VOLUME	UNIT PRICE, US \$ CIF MVD	OBSERVATIONS
6.1.13	Barrel type charging connector	Up to 5.000		
		between 5.001 and 10.000		
		between 10.001 and 15.000		
		above 15.000		
	Type C micro USB charging connector	Up to 5.000		
		between 5.001 and 10.000		





		between 10.001 and 15.000		
		above 15.000		
6.1.14	32GB internal storage	Up to 5.000		
		between 5.001 and 10.000		
		between 10.001 and 15.000		
		above 15.000		

CATEGORY 2 – TABLET (with HDMI) + CERTIFIED SOFTWARE IMAGE + USER MANUAL				
PRODUCT: TABLET + CERTIFIED SOFTWARE IMAGE + USER MANUAL	TABLET MODEL	VOLUME	UNIT PRICE, US \$ CIF MVD	OBSERVATIONS
		Up to 5.000		
		between 5.001 and 10.000		





		between 10.001 and 15.000		
		above 15.000		
OPTIONAL REQUIREMENTS		VOLUME	UNIT PRICE, US \$ CIF MVD	OBSERVATIONS
6.1.13	Barrel type charging connector	Up to 5.000		
		between 5.001 and 10.000		
		between 10.001 and 15.000		
		above 15.000		
	Type C micro USB charging connector	Up to 5.000		
		between 5.001 and 10.000		
between 10.001 and 15.000				





		above 15.000		
6.1.14	32GB internal storage	Up to 5.000		
		between 5.001 and 10.000		
		between 10.001 and 15.000		
		above 15.000		

MOTHERBOARDS TEST BENCH (CIF MVD) - MANDATORY QUOTATION, OPTIONAL AWARD

6.2.1	Motherboards Bench Test	Up to 10		
		between 10 and 30		
		above 30		

DEVELOPMENT AND CERTIFICATION OF MAINTENANCE SOFTWARE IMAGE - MANDATORY QUOTATION, OPTIONAL AWARD

PRICE US \$	
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HEADPHONES - MANDATORY QUOTATION, OPTIONAL AWARD			
Headphones (IN-EAR EARPHONES OR EARBUDS type)	VOLUME	UNIT PRICE, US \$ CIF MVD	OBSERVATIONS
	Up to 5.000		
	between 5.001 and 10.000		
	between 10.001 and 15.000		
	above 15.000		

SPARE PARTS - MANDATORY QUOTATION		
SPARE PART	UNIT PRICE, US \$ FOB MVD	MINIMUM LOT
Screen		
Battery		
Motherboard. All motherboards shipped as spare parts must be delivered with the firmware version specified by Ceibal and the MAC addresses loaded at source.		
Touchscreen		
Charger		
...		
...		
...		

The prices quoted for the spare parts will be valid for 12 months from the date of award.





SPARE PARTS - OPTIONAL QUOTATION

This type of spare parts quote is optional. It brings value to Ceibal's repair service by adapting to the evolution of the demand for spare parts. If awarded, the operation will have the following characteristics:

1. Centro Ceibal will acquire the estimated quantity of spare parts to cover the first 6 months of operation.
2. According to the evolution of the demand, which will be informed monthly, Centro Ceibal will buy an estimated quantity of spare parts sufficient to cover the next 3 months of operation. This lot must be delivered to the port or free zone in Montevideo within a maximum period of 45 days.
3. Step 2 will be repeated according to the evolution of the demand. With the operation in regime, a frequency of request of parts of approximately 3 months is expected.

SPARE PART	UNIT PRICE, US \$ FOB MVD	MINIMUM LOT
Screen		
Battery		
Motherboard. All motherboards shipped as spare parts must be delivered with the firmware version specified by Ceibal and the MAC addresses loaded at source.		
Touchscreen		
Charger		
...		
...		
...		

The prices quoted for the spare parts will be valid for 12 months from the date of award.



10. ANNEX III: 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. The Confidential Information includes, among others and by way of example, the following information: any strategy, business plan and procedure, proprietary information, software, tool, process, images, personal data, methodology, information and trade secret, and other information and material of Ceibal, as well as of the students, beneficiaries, teachers, study centers, that could be obtained by the Company from any source or could be developed as a consequence of this contract.

The Company undertakes to process the personal data to which it has access under this contract, in accordance with Law No. 18.331, of August 11, 2008 and Decree No. 414/2009, of August 31, 2009, solely for the benefit and in the framework of the contracted service, not being able to use them for another purpose, neither for their own benefit, free or expensive, nor to assign them, communicate them or transfer them to third parties, except with previous authorization from Centro Ceibal.

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

The Company is obliged to adopt the necessary security measures to guarantee the security and confidentiality of personal data and to prevent its adulteration, loss, consultation or unauthorized treatment, as well as to detect deviations of information.

In the event that the personal data is hosted, even temporarily, outside the national territory, the Company is obliged that the importer is in countries considered to have levels adequate to European data protection standards, in accordance with the General Protection Regulation of Data 2016/679, of the European Parliament and of the Council, amending, concordant and complementary. Otherwise, the Company undertakes to have the data holder's consent for the transfer to an unsuitable territory, or for the importer to adhere to the Privacy Shield framework, to subscribe standard contractual clauses with the exporter or to have a Code of registered Conduct, with the consequent authorization of international transfer of data processed before the Regulatory Unit and Control of Personal Data, in the last two cases.

Upon termination of this agreement, the Company undertakes to return or delete from all its physical and logical systems and files, whether owned or contracted to third parties, the personal data

accessed, obtained or processed under this contract, as well as the associated metadata. , in case of correspondence and without prejudice to the particularities of each service, which will be considered by Centro Ceibal in the specific case to consider this obligation fulfilled.

For the purposes of this agreement, personal information is considered information of any type referring to individuals or legal entities determined or determinable, by way of example, any numerical, alphabetical, graphic, photographic, acoustic or any other information that refers to them directly or indirectly, in accordance with the provisions of article 4 of Law No. 18,331 and articles 1 and 4 of Decree No. 414/009. 4.3.