TEST REPORT
ERP for electronic displays
COMMISSION REGULATION (EU) 2019/2021
COMMISSION DELEGATED REGULATION (EU) 2019/2013

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Manufacturer's name ..... :	Same as applicant
Address ..... :	Same as applicant
Factory's name ..... :	Same as applicant
Address ..... :	Same as applicant
Test specification:	
Standard ..... :	COMMISSION REGULATION (EU) 2019/2021, (EU) 2021/341; COMMISSION DELEGATED REGULATION (EU) 2019/2013, (EU) 2021/340
Test procedure ..... :	☒ EN 62087-1:2016 - Audio, video, and related equipment - Determination of power consumption - Part 1: General ☒ EN IEC 62087-7:2019 - Audio, video, and related equipment - Determination of power consumption - Part 7: Computer monitors ☒ EN 50564:2011 - Electrical and electronic household and office equipment - Measurement of low power consumption
Conclusion ..... :	Compliant with the above measured standards and Commission Regulation

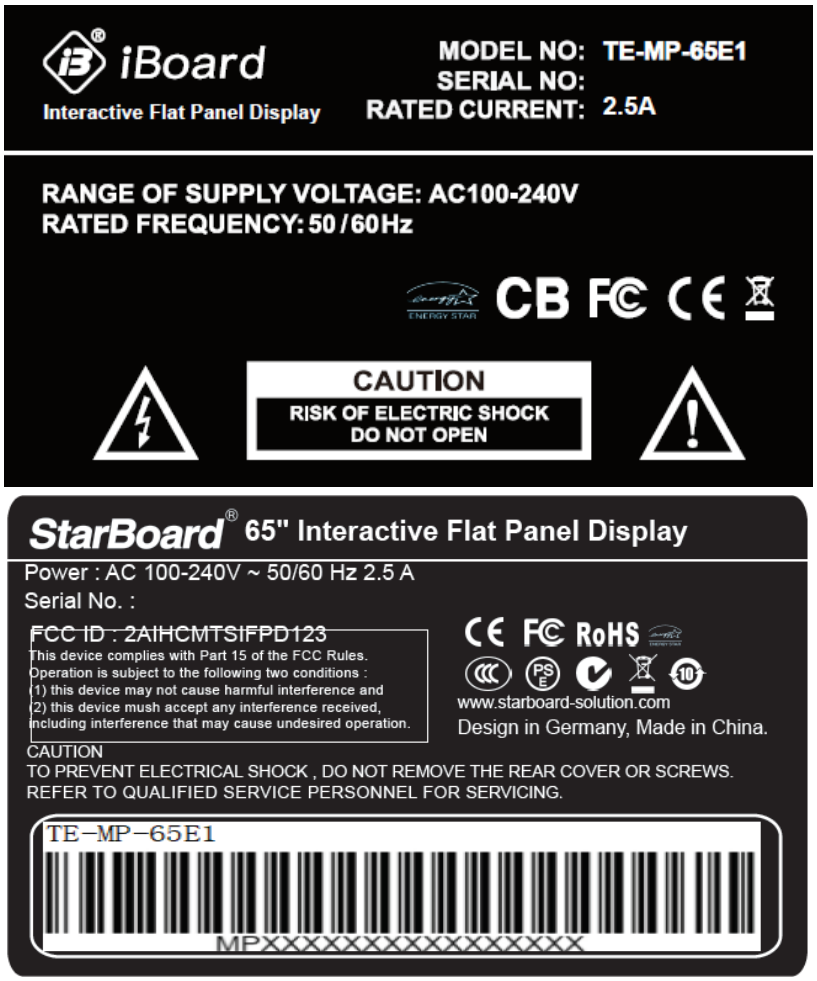
Note: The test data was only valid for the received sample(s). This test report is prepared for the customer shown above and for the specific product described herein. It must not be duplicated or used in part without prior written consent from Dongguan Yaxu (AiT) Technology Limited.

Test Object

Description	:	Interactive Flat Panel Display
Brand Name	:	Iboard/StarBoard
Model and/or type reference	:	TE-MP-65E1, TE-QS-65, TE-QS1H-65, TE-QS-65E1, TE-XP-65E1, TE-YL-65E1, TE-IT-65E1, TE-DP-65E1, TE-AP-65E1, TE-MP-65
Ratings	:	Input: 100-240V~, 50/60Hz, 2.5A

Copy of marking plate(Main unit):

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



1. The above marks are the minimum requirements required by the safety standard. For the final production, the additional marks which do not give rise to misunderstanding may be added.

2. Height of CE mark at least 5mm, height of WEEE mark at least 7mm, height of other marks at least 5mm, height of letters and numerals at least 2mm.

3. According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

Test case verdicts

Test case does not apply to the test object.....: N/A

Test item does meet the requirement…….....: P(ass)

Test item does meet the requirement .....: F(ail)

Testing

Date of receipt of test item .....: 2022-08-17

Date(s) of performance of test .....: 2022-08-17 to 2022-08-26

General remarks

This test report shall not be reproduced except in full without the written approval of the testing laboratory.
The test results presented in this report relate only to the item tested.
"(see remark #)" refers to a remark appended to the report.
"(see appended table)" refers to a table appended to the report.
Throughout this report a comma is used as the decimal separator.

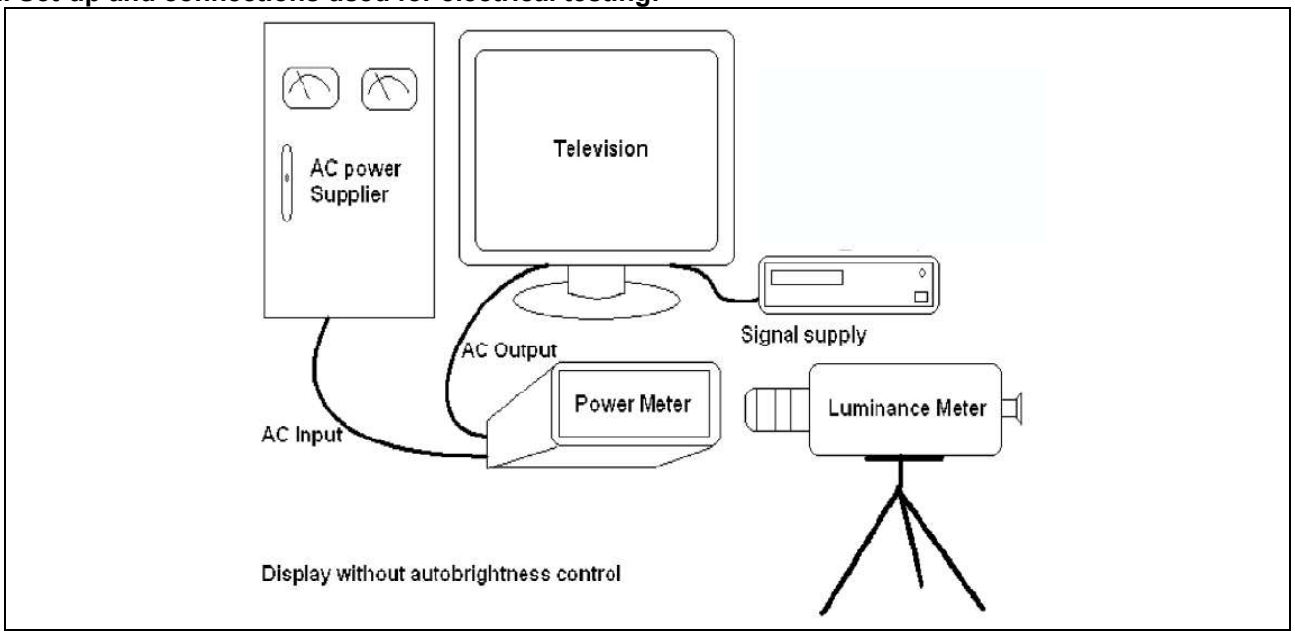
General product information:

1. The EUT is a Interactive Flat Panel Display designed as electronic displays equipment.
2. All models are exactly the same except the model names.
3. Instructions and equipment marking related to safety is applied in the language that is acceptable in the country in which the equipment is to be sold.

1. General Product Information

Product type	Interactive Flat Panel Display
Screen Technology	TFT-LCD
Backlight Technology	E-LED
Display resolution	3840*2160
Size ratio	16:9
Contrast Ratio	5000:1
Viewable screen (Vertical)	8.04 dm
Viewable screen (Horizontal)	14.28 dm
Viewable Screen Area	114.81 dm^2
Viewable Screen Diagonal Size	65 inch=165.1 cm
Image refresh frequency rate (Hz)	60Hz
Available Interfaces	HDMI, DP, Type C, USB
Voice recognition sensor available	NO
Room presence sensor available	NO
Minimum guaranteed availability of software and firmware updates (until):	2032-08-26
Minimum guaranteed availability of spare parts (until):	2032-08-26
Minimum guaranteed product support (until):	2032-08-26
Is there ABC function ?	With ☐ Without ☒
Is there force menu ?	With ☐ Without ☒
Brightness for default	50%
Contrast for default	50%
Interface Tested	DP
Power supply type:	Internal
Adapter	/
- Average active efficiency (%)	/
- Efficiency at low load (10%) (%)	/
- No-load power consumption (W)	/
Nameplate input current for main unit	2.5A
Automatic Brightness Control	No
Automatic Brightness Control enabled	No
Volume for test	0.7W
Display panel	Maker: Shenzhen iBoard Technology Co., Ltd. Type: UV650QUB-N90

2. Set-up and connections used for electrical testing:



3. Technical documentation

Annex II	**Ecodesign requirements ((EU) 2019/2021)**	-
A. ENERGY EFFICIENCY REQUIREMENTS		-
1. ENERGY EFFICIENCY INDEX LIMITS FOR ON-MODE		P
The energy efficiency index (EEI) of an electronic display shall be calculated using the following equation:		P
$EEI = \frac{(P_{measured} + 1)}{(3 \times [90 \times tanh(0,02 + 0,004 \times (A - 11)) + 4] + 3) + corr}$, Where: A represents the screen area in dm^2; Pmeasured is the measured power in Watts in on mode in the normal configuration, in standard dynamic range (SDR); corr is a correction factor of 10 for OLED electronic displays that do not apply the ABC allowance in point B (1). This shall apply until 28 February 2023. corr shall be zero in all other cases.	See appended table	P
The EEI of an electronic display shall not exceed the maximum EEI (EEImax) according to the limits in Table 1 from the dates indicated.		P

Table 1

EEI limits for on-mode

	EEI_{max} for electronic displays with resolution up to 2 138 400 pixels (HD)	EEI_{max} for electronic displays with resolution above 2 138 400 pixels (HD) and up to 8 294 400 pixels (UHD-4k)	EEI_{max} for electronic displays with resolution above 8 294 400 pixels (UHD-4k) and for MicroLED displays
1 March 2021	0,90	1,10	n.a.
1 March 2023	0,75	0,90	0,90

B. Allowances and adjustments for the purpose of the EEI calculation and functional requirements		-
From 1 March 2021, electronic displays shall meet the requirements listed below.		-
1. Electronic displays with automatic brightness control (ABC) shall qualify for a 10 % reduction in Pmeasured if they meet all of the following requirements:		N/A
(a) ABC is enabled in the normal configuration of the electronic display and persists in any other standard dynamic range configuration available to the end user;		N/A
(b) the value of Pmeasured, in the normal configuration, is measured, with ABC disabled or if ABC cannot be disabled, in an ambient light condition of 100 lux measured at the ABC sensor;		N/A
(c) if applicable, the value of Pmeasured with ABC disabled shall be equal to or greater than the on mode power measured with ABC enabled in an ambient light condition of 100 lux measured at the ABC sensor;		N/A
(d) with ABC enabled, the measured value of the on mode power must decrease by 20 % or more when the ambient light condition, measured at the ABC sensor, is reduced from 100 lux to 12 lux;		N/A
(e) the ABC control of the display screen luminance meets all of the following characteristics when the ambient light condition measured at the ABC sensor changes:		N/A
- the measured screen luminance at 60 lux is between 65 % and 95 % of the screen luminance measured at 100 lux;		N/A
- the measured screen luminance at 35 lux is between 50 % and 80 % of the screen luminance measured at 100 lux;		N/A
- the measured screen luminance at 12 lux is between 35 % and 70 % of the screen luminance measured at 100 lux.		N/A

2. Forced menu and set up menus		P
Electronic displays may be placed on the market with a forced menu on initial activation proposing alternative settings. Where a forced menu is provided, the normal configuration shall be set as default choice, otherwise the normal configuration shall be the out-of-the-box setting.		P
If the user selects a configuration other than the normal configuration and this configuration results in a higher power demand than the normal configuration, a warning message about the likely increase in energy use shall appear and confirmation of the action shall be explicitly requested.		P
If the user selects a setting other than those that are part of the normal configuration and this setting results in a higher energy consumption than the normal configuration, a warning message about the likely increase in energy consumption shall appear and confirmation of the action explicitly requested.		P
A change by the user in a single parameter in any setting shall not trigger any change in any other energy-relevant parameter, unless unavoidable. In such a case a warning message shall appear about the change of other parameters and the confirmation of the change shall be explicitly requested.		P
3. Peak white luminance ratio		P
In the normal configuration, the peak white luminance of the electronic display in a 100 lux ambient light viewing environment shall not be less than 220 cd/m2 or, if the electronic display is primarily intended for close viewing by a single user, not less than 150 cd/m2.	See appended table	P
If the electronic display's peak white luminance in the normal configuration is set to lower values, it shall not be less than 65 % of the peak white luminance of the display, in a 100 lux ambient light viewing environment in the brightest on mode configuration.	See appended table	P
C. OFF MODE, STANDBY AND NETWORKED STANDBY MODE REQUIREMENTS		-
From 1 March 2021, electronic displays shall meet the requirements listed below.		P
1. Power demand limits other than on-mode		-
Electronic displays shall not exceed power demand limits in the different modes and conditions listed in Table 2:		P

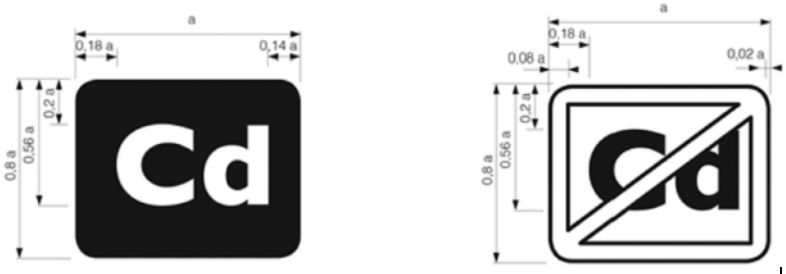
Table 2

power demand limits other than on-mode, in Watts

	Off mode	Standby mode	Networked standby mode
Maximum limits	0,30	0,50	2,00
Allowances for additional functions when present and enabled			
Status display	0,0	0,20	0,20
Deactivation using room presence detection	0,0	0,50	0,50
Touch functionality, if usable for activation	0,0	1,00	1,00
HiNA function	0,0	0,0	4,00
Total maximum power demand with all additional functions when present and enabled	*0,30*	*2,20*	*7,70*

	Operating mode	Measurement (W)	Limit (W)	-
	Off mode	See appended table		N/A
	Standby mode	See appended table		P
	Networked standby mode	See appended table		N/A
2. Availability of off, standby and networked standby modes				P
Electronic displays shall provide off mode or standby mode or a networked standby mode or other modes which do not exceed the applicable power demand requirements for standby mode.				P
The configuration menu, instruction manuals and other documentation, if any, shall refer to off mode, standby mode or networked standby mode using those terms.				P
Automatic switch to off mode and/or standby mode and/or another mode which does not exceed the applicable power demand requirements for standby mode shall be set as default, including for networked displays where the network interface is enabled when in on mode.				P
Networked standby mode shall be disabled in 'normal configuration' of a networked television. The end user shall be prompted to confirm the activation of networked standby, if it is needed for a chosen remotely activated function, and must be able to disable it.				N/A
Networked electronic displays shall comply with the requirements for standby mode when networked standby mode is disabled.				P
3. Automatic standby in televisions				N/A
(a) Televisions shall provide a power management function, enabled as delivered by the manufacturer that, within 4 hours following the last user interaction, shall switch the television from on mode into standby mode or networked standby mode or another mode which does not exceed the applicable power demand requirements respectively for standby or networked standby mode. Before such automatic switch, televisions shall show, for at least 20 seconds, an alert message warning the user of the impending switch, with possibility of delaying or temporarily cancelling it.				N/A
(b) If the television provides a function allowing the user to shorten, extend or disable the 4-hour period for automatic mode transitions detailed in (a), a warning message shall appear about a potential increase in energy use and a confirmation of the new setting must be requested when an extension beyond the 4-hour period or disabling is selected.				N/A
(c) If the television is equipped with a room presence sensor, the automatic transition from on mode into any mode as detailed in (a) applies if no presence is detected for no more than 1 hour.				N/A
4. Automatic standby in displays other than televisions				P

Electronic displays other than televisions, with various selectable input sources shall switch, as configured in the normal configuration, into standby mode, networked standby mode or another mode which does not exceed the applicable power demand requirements respectively for standby or networked standby mode when no input is detected by any input source for over 10 seconds and, for digital interactive whiteboards and for broadcast displays, for over 60 minutes.		P
Before triggering such a switch, a warning message shall be displayed and the switch completed within 10 minutes.		P
D. MATERIAL EFFICIENCY REQUIREMENTS		-
From 1 March 2021, electronic displays shall meet the requirements indicated below.		P
1. Design for dismantling, recycling and recovery		N/A
Manufacturers, importers or their authorised representatives shall ensure that joining, fastening or sealing techniques do not prevent the removal, using commonly available tools, of the components indicated in point 1 of Annex VII of Directive 2012/19/EU on WEEE or in Article 11 of Directive 2006/66/EC of the European Parliament and of the Council (1) on batteries and accumulators and waste batteries and accumulators, when present.		N/A
Manufacturers, importers or their authorised representatives shall, without prejudice to point 1 of Article 15 of Directive 2012/19/EU, make available, on a free-access website, the dismantling information needed to access any of the products components referred to in point 1 of Annex VII of Directive 2012/19/EU.		N/A
This dismantling information shall include the sequence of dismantling steps, tools or technologies needed to access the targeted components.		N/A
The end of life information shall be available until at least 15 years after the placing on the market of the last unit of a product model.		N/A
2. Marking of plastic components		P
Plastic components heavier than 50 g:		P
(a) Shall be marked by specifying the type of polymer with the appropriate standard symbols or abbreviated terms set between the punctuation marks ‘>’ and ‘<’ as specified in available standards. The marking shall be legible.		P
Plastic components are exempt from marking requirements in the following circumstances:		P
(i) the marking is not possible because of the shape or size;		P
(ii) the marking would impact on the performance or functionality of the plastic component; and		P
(iii) marking is technically not possible because of the molding method.		P
For the following plastic components no marking is required:		P
(i) packaging, tape, labels and stretch wraps;		P
(ii) wiring, cables and connectors, rubber parts and anywhere not enough appropriate surface area is available for the marking to be of a legible size;		P
(iii) PCB assemblies, PMMA boards, optical components, electrostatic discharge components, electromagnetic interference components, speakers;		P

(iv) transparent parts where the marking would obstruct the function of the part in question.		P
(b) Components containing flame retardants shall additionally be marked with the abbreviated term of the polymer followed by hyphen, then the symbol 'FR' followed by the code number of the flame retardant in parentheses. The marking on the enclosure and stand components shall be clearly visible and readable.		P
3. Cadmium logo		P
Electronic displays with a screen panel in which concentration values of Cadmium (Cd) by weight in homogeneous materials exceed 0,01 % as defined in Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment, shall be labelled with the 'Cadmium inside' logo. The logo shall be clearly visible durable, legible and indelible. The logo shall be in the form of the following graphic: Cadmium inside Cadmium free  The dimension of 'a' shall be greater than 9 mm and the typeface to be used is 'Gill Sans'. An additional 'Cadmium inside' logo shall be firmly attached internally on the display panel or molded in a position clearly visible to workers once the external back cover bearing the external logo is removed. A 'Cadmium free' logo shall be used if concentration values of Cadmium (Cd) by weight in any homogeneous material part of the display do not exceed 0,01 % as defined in Directive 2011/65/EU.	Cadmium free	P
4. Halogenated flame retardants		P
The use of halogenated flame retardants is not allowed in the enclosure and stand of electronic displays.		P
5. Design for repair and reuse		P
(a) Availability of spare parts:		P
(1) manufacturers, importers or authorised representatives of electronic displays shall make available to professional repairers at least the following spare parts: internal power supply, connectors to connect external equipment (cable, antenna, USB, DVD and Blue-Ray), capacitors, batteries and accumulators, DVD/Blue-Ray module if applicable and HD/SSD module if applicable for a minimum period of seven years after placing the last unit of the model on the market;		P
(2) manufacturers, importers or authorised representatives of electronic displays shall make available to professional repairers and end-users at least the following spare parts: external power supply and remote control for a minimum period of seven years after placing the last unit of the model on the market;		P
(3) manufacturers shall ensure that these spare parts can be replaced with the use of commonly available tools and without permanent damage to the appliance;		P

(4) the list of spare parts concerned by point 1 and the procedure for ordering them shall be publicly available on the free access website of the manufacturer, importer or authorised representative, at the latest two years after the placing on the market of the first unit of a model and until the end of the period of availability of these spare parts; and		P
(5) the list of spare parts concerned by point 2 and the procedure for ordering them and the repair instructions shall be publicly available on the manufacturer's, the importer's or authorised representative's free access website, at the moment of the placing on the market of the first unit of a model and until the end of the period of availability of these spare parts.		P
(b) Access to repair and maintenance information		P
After a period of two years after the placing on the market of the first unit of a model or of an equivalent model, and until the end of the period mentioned under (a), the manufacturer, importer or authorised representative shall provide access to the appliance repair and maintenance information to professional repairers in the following conditions:		P
(1) the manufacturer's, importer's or authorised representative's website shall indicate the process for professional repairers to register for access to information; to accept such a request, manufacturers, importers or authorised representative may require the professional repairer to demonstrate that:		P
(i) the professional repairer has the technical competence to repair electronic displays and complies with the applicable regulations for repairers of electrical equipment in the Member States where it operates. Reference to an official registration system as professional repairer, where such system exists in the Member States concerned, shall be accepted as proof of compliance with this point;		P
(ii) the professional repairer is covered by insurance covering liabilities resulting from its activity, regardless of whether this is required by the Member State;		P
(2) the manufacturers, importers or authorised representatives shall accept or refuse the registration within 5 working days from the date of request by the professional repairer;		P
(3) manufacturers, importers or authorised representatives may charge reasonable and proportionate fees for access to the repair and maintenance information or for receiving regular updates. A fee is reasonable if it does not discourage access by failing to take into account the extent to which the professional repairer uses the information.		P
Once registered, a professional repairer shall have access to the requested repair and maintenance information within one working day after requesting it. The available repair and maintenance information shall include:		P
- the unequivocal appliance identification;		P
- a disassembly map or exploded view;		P
- list of necessary repair and test equipment;		P
- component and diagnosis information (such as minimum and maximum theoretical values for measurements);		P
- wiring and connection diagrams;		P
- diagnostic fault and error codes (including manufacturer-specific codes, where applicable); and		P

- data records of reported failure incidents stored on the electronic display (where applicable).		P
(c) Maximum delivery time of spare parts		P
(1) during the period mentioned under point 5(a)(1) and point 5(a)(2), the manufacturer, importer or authorised representatives shall ensure the delivery of the spare parts for electronic displays within 15 working days after having received the order;		P
(2) in the case of spare parts available only to professional repairers, this availability may be limited to professional repairers registered in accordance with point (b).		P
E. INFORMATION AVAILABILITY REQUIREMENTS		P
From 1 March 2021, the product manufacturer, importer or authorised representative shall make available the information set out below when placing on the market the first unit of a model or of an equivalent model.		P
The information shall be provided free of charge to third parties dealing with professional repair and reuse of electronic displays (including third party maintenance actors, brokers and spare parts providers).		P
1. Availability of software and firmware updates		P
(a) The latest available version of the firmware shall be made available for a minimum period of eight years after the placing on the market of the last unit of a certain product model, free of charge or at a fair, transparent and non-discriminatory cost. The latest available security update to the firmware shall be made available until at least eight years after the placing on the market of the last product of a certain product model, free of charge.		P
(b) Information on the minimum guaranteed availability of software and firmware updates, availability of spare parts and product support shall be indicated in the product information sheet as from Annex V of Regulation (EU) 2019/2013.		P

Annex II **Energy efficiency classes ((EU) 2019/2013)**		-
B. Energy Efficiency Index (EEIlabel)		-
The Energy Efficiency Index (EEIlabel) of the electronic display shall be calculated using the following equation:	See appended table	-
$$EEI_{label} = \frac{(P_{measured} + 1)}{(3 \times [90 \times tanh(0,025 + 0,0035 \times (A - 11)) + 4] + 3) + corr_l}$$ where: A represents the viewing surface area in dm²; $P_{measured}$ is the measured power in on mode in Watts in the normal configuration and set as indicated in Table 2; $corr_l$ is a correction factor set as indicated in Table 3.		-

Table 2 **Measurement of $P_{measured}$** Dynamic Range level: Standard Dynamic Range (SDR): $Pmeasured_{SDR}$ — Power demand in Watts (W) in on mode, measured when displaying standardised test sequences of moving picture from dynamic broadcast content. Where allowances are applicable according to part C of this Annex, they should be deducted from $P_{measured}$. Dynamic Range level: High Dynamic Range (HDR) $Pmeasured_{HDR}$ — Power demand in Watts (W) in on mode, measured as for $Pmeasured_{SDR}$ but with the HDR functionality activated by metadata in the standardised HDR test sequences. Where allowances are applicable according to part C of this Annex, they should be deducted from $P_{measured}$.		-
Table 3 **$corr_i$ value** Electronic Display type: Television — $corr_i$ value: 0,0 Electronic Display type: Monitor — $corr_i$ value: 0,0 Electronic Display type: Digital signage — $corr_i$ value: 0,00062*(lum-500)*A *where 'lum' is the peak white luminance, in cd/m², of the brightest on mode configuration of the electronic display and A is the screen area in dm²*		-
C. Allowances and adjustments for the purpose of the EEIlabel calculation		-
Electronic displays with automatic brightness control (ABC) shall qualify for a 10 % reduction in Pmeasured if they meet all of the following requirements:		N/A
(a) ABC is enabled in the normal configuration of the electronic display and persists in any other standard dynamic range configuration available to the end user;		N/A
(b) the value of Pmeasured, in the normal configuration, is measured, with ABC disabled or if ABC cannot be disabled, in an ambient light condition of 100 lux measured at the ABC sensor;		N/A
(c) if applicable, the value of Pmeasured with ABC disabled shall be equal to or greater than the on mode power measured with ABC enabled in an ambient light condition of 100 lux measured at the ABC sensor;		N/A
(d) with ABC enabled, the measured value of the on mode power must decrease by 20 % or more when the ambient light condition, measured at the ABC sensor, is reduced from 100 lux to 12 lux;		N/A
(e) the ABC control of the display screen luminance meets all of the following characteristics when the ambient light condition measured at the ABC sensor changes:		N/A
- the measured screen luminance at 60 lux is between 65 % and 95 % of the screen luminance measured at 100 lux;		N/A
- the measured screen luminance at 35 lux is between 50 % and 80 % of the screen luminance measured at 100 lux;		N/A
- the measured screen luminance at 12 lux is between 35 % and 70 % of the screen luminance measured at 100 lux.		N/A

Annex IV	**Measurement methods and calculations ((EU) 2019/2013)**	-
1. MEASUREMENTS OF ON MODE POWER DEMAND	See appended table	P
Measurements of the on mode power demand shall fulfil all of the following general conditions:		-
(a) electronic displays shall be measured in the normal configuration;		P
(b) measurements shall be made at an ambient temperature of 23 °C +/- 5 °C;		P
(c) measurements shall be made using a dynamic broadcast video signal test loops representing typical broadcast content for electronic displays in standard dynamic range (SDR). For the HDR measurement the electronic display must automatically and correctly respond to the HDR metadata in the test loop. The measurement shall be the average power consumed over 10 consecutive minutes;		P
(d) measurements shall be made after the electronic display has been in the off-mode or, if an off-mode is not available, in standby mode for a minimum of 1 hour immediately followed by a minimum of 1 hour in the on mode and shall be completed before a maximum of 3 hours in on-mode. The relevant video signal shall be displayed during the entire on mode duration. For electronic displays that are known to stabilise within 1 hour, these durations may be reduced if the resulting measurement can be shown to be within 2 % of the results that would otherwise be achieved using the durations described here;		P
(e) where ABC is available, measurements shall be made with it switched off. If ABC cannot be switched off, then the measurements shall be performed in an ambient light condition of 100 lux measured at the ABC sensor.		N/A
2. MEASUREMENTS OF PEAK WHITE LUMINANCE		P
Measurements of the peak white luminance shall be made:		P
(a) with a luminance meter, detecting that portion of the screen exhibiting a full (100 %) white image, which is part of a ‘full screen test’ pattern not exceeding the average picture level (APL) point where any power limiting or other irregularity occurs;		P
(b) without disturbing the luminance meter’s detection point on the electronic display whilst switching between the normal configuration and the brightest on mode configuration.		P

Annex VI	**Technical documentation ((EU) 2019/2013)**	-
The technical documentation referred to in point 1(d) of Article 3 shall include:	See below	P
(1) identification data (general description of the model):		-
(a) trademark and model identifier;	See the label	P
(b) supplier’s name, address, registered trade name;	See the label	P
(2) references to the harmonised standards applied, other measurement standards and specifications used in measuring the technical parameters and calculations performed;	See page 1	P
(3) specific precautions to be taken when the model is assembled, installed and tested;		P
(4) a list of all equivalent models, including model identifiers;		P
(5) measured technical parameters of the model and calculations performed with the measured parameters as listed in Table 5;		P
General	See appended table	-
ambient temperature;		-
test voltage in V and frequency in Hz;		-
total harmonic distortion of the electricity supply system;		-

For on-mode:	See appended table	-
Peak white luminance of the brightest on mode configuration		P
Peak white luminance of the normal configuration		P
Peak white luminance ratio (calculated)		P
For APD		-
Duration of the on mode condition, before the electronic display reaches automatically standby, or off mode, or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode.	1 min	P
For televisions: the measured value of the time before the television automatically reaches standby, or off-mode, or another condition which does not exceed the applicable power consumption requirements for off-mode and/or standby-mode following the last user interaction;		N/A
For televisions equipped with room presence sensor: the measured value of the time before the television automatically reaches standby, or off-mode, or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when no presence is detected;		N/A
Other electronic displays than televisions and broadcast displays: The measured value of the time before the electronic display automatically reaches standby, or off-mode, or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when no input is detected;		N/A
For ABC		-
Average on mode power demand of the electronic display at an ambient light intensity, measured at the ABC sensor of the electronic display, of 100 lux and 12 lux.		N/A
Percentage of power reduction due to ABC action between the 100 lux and 12 lux ambient light conditions.		N/A
Display peak white luminance at each of the following ambient light intensities measured at the ABC sensor of the electronic display, 100 lux, 60 lux, 35 lux, 12 lux.		N/A
Measured on mode power at 100 lux ambient light at the ABC sensor		N/A
Measured on mode power at 12 lux ambient light at the ABC sensor		N/A
The measured screen luminance at 60 lux ambient light at the ABC sensor		N/A
The measured screen luminance at 35 lux ambient at the ABC sensor		N/A
The measured screen luminance at 12 lux ambient light at the ABC sensor		N/A
(6) Additional information requirements:		P
(a) input terminal for the audio and video test signals used for testing;	DP	P
(b) information and documentation on the instrumentation, set-up and circuits used for electrical testing;		P
(c) any other testing condition not described or determined in point (b);		N/A

(d) for on mode: (i) the characteristics of the dynamic broadcast-content video signal representing typical broadcast TV content; for the HDR dynamic broadcast content video signal the electronic display must be automatically switched to HDR mode by the HDR metadata of that signal; (ii) the sequence of steps for achieving a stable condition with respect to power demand level; and (iii) the picture settings used for the brightest peak white luminance measurement and the test pattern for the video signal used for the measurement.	☒ Sampling method ☒ Average reading method ☒ Direct meter reading method	P
(e) For standby and off mode: (i) the measurement method used; (ii) description of how the mode was selected or programmed including any enhanced reactivation functions; and (iii) sequence of events to reach the condition where the electronic display automatically changes mode.	The “monitors” was placed into “standby mode” by pressing the ”Standby button” on remote control of the monitors. In this state, the EUT only offers the reactivation function.	P
(f) For electronic displays with a designated computer signal interface: (i) confirmation that the electronic display prioritises the computer display power management protocols set out in point 6.2.3 of Annex II of Commission Regulation (EU) No 617/2013 (1). Any deviation from the protocols should be reported;		P
(g) For the networked electronic displays only: (i) number and type of network interfaces and, except for wireless network interfaces, their position in the electronic display; (ii) whether the electronic display qualifies as electronic display with HiNA functionality; if no information is provided the electronic display is considered not to be HiNA display or display with HiNA functionality; and (iii) information whether networked electronic display provides functionality allowing the power management function and/or the end-user to switch the electronic display being in a condition providing networked standby into standby mode, or off mode or another condition which does not exceed the applicable power demand requirements for off mode and/or standby mode including enhanced reactivation function power allowance where applicable.		N/A
(h) For each type of network port: (i) the default time (mm:ss) after which the power management function, switches the display into a condition providing networked standby; and (ii) the trigger to be used to reactivate the electronic display.		N/A
(7) where the information included in the technical documentation file for a particular electronic display model has been obtained:		P
(a) from a model that has the same technical characteristics relevant for the technical information to be provided but is produced by a different manufacturer or		P
(b) by calculation on the basis of design or by extrapolation from another model of the same or of a different supplier, or both;		P
the technical documentation shall include, as appropriate, the details of such calculation, the assessment undertaken by suppliers to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different suppliers; and		P

(8) the contact details of the person empowered to bind the supplier, if not included in the technical information uploaded into the database, shall be made available, on request, to market surveillance authorities or to the Commission for carrying out their tasks under this Regulation.		P

Appended table:

Sumary of test results:			
Test Item	**Input Voltage**	**Measured/calculated Value**	**Limit**
Off mode	230VAC, 50Hz	0W	≤0.3W
Standby mode	230VAC, 50Hz	0.22W	≤0.5W
Networked standby mode	230VAC, 50Hz	N/A	--
On mode (SDR)	230VAC, 50Hz	78.0W	--
On mode (HDR)	230VAC, 50Hz	N/A	--
EEI	--	0.82	≤0.9
Energy efficiency class, Energy Efficiency Index (EEI_{label})			
A	--	--	$EEI_{label} < 0.30$
B	--	--	$0.30 \leq EEI_{label} < 0.40$
C	--	--	$0.40 \leq EEI_{label} < 0.50$
D	--	--	$0.50 \leq EEI_{label} < 0.60$
E	--	--	$0.60 \leq EEI_{label} < 0.75$
F	--	0.897	$0.75 \leq EEI_{label} < 0.90$
G	--	--	$0.90 \leq EEI_{label}$
Energy efficiency class: F; Manufacturer declare: /			
Peak white luminance of the brightest on mode configuration	230VAC, 50Hz	196.4 cd/m^2	--
Peak white luminance of the normal configuration	230VAC, 50Hz	134.0 cd/m^2	--
Peak white luminance ratio	230VAC, 50Hz	68.2%	--
Peak white luminance of the brightest on measured	230VAC, 50Hz	508 cd/m^2	--
Ambient temperature: 23.5°C; Total harmonic distortion of the electricity supply system: 0.68%.			

4. Test equipment

Asset No.	Equipment Description	Manufacturer	Type	Scale & Unit	Calibration Last Date	Calibration Due Date
AiT-F01316	Power meter	YOKOGAWA	WT310E	600V, 20A	2021-09-14	2022-09-13
AiT-F01179	Tape Measure	Deli	DL9005	5.0M	2020-09-03	2025-09-02
AiT-F01178	Humidity & Temp. Recorder	KTJ	TA218B	0-50°C, 0%-75%RH	2021-08-31	2022-08-30
AiT-F01010	AC Power Soure	APE	AFR-220	0-300Vac 50/60Hz 20KVA	-	-
AiT-F01207	Stopwatch	CHAOSUDA	PC2001	Full	2021-09-01	2022-08-31
AiT-F01213	Lumen meter	Xuan Bao	LX1010B	0~20000 Lux	2021-08-31	2022-08-30
AiT-F01315	Digital anemometer	Shenzhen Jumaoyuan Science And Technology Co., Ltd.	GM8901	0-45m/s 0-45°C	2021-09-14	2022-09-13
AiT-F01288	Luminance meter	Konica Minolta	CA-210	0.10-1000cd/m^2	2021-08-31	2022-08-30

5. Photos

Photo 1 overall view

Photo 2 back view

Photo 3 terminals view

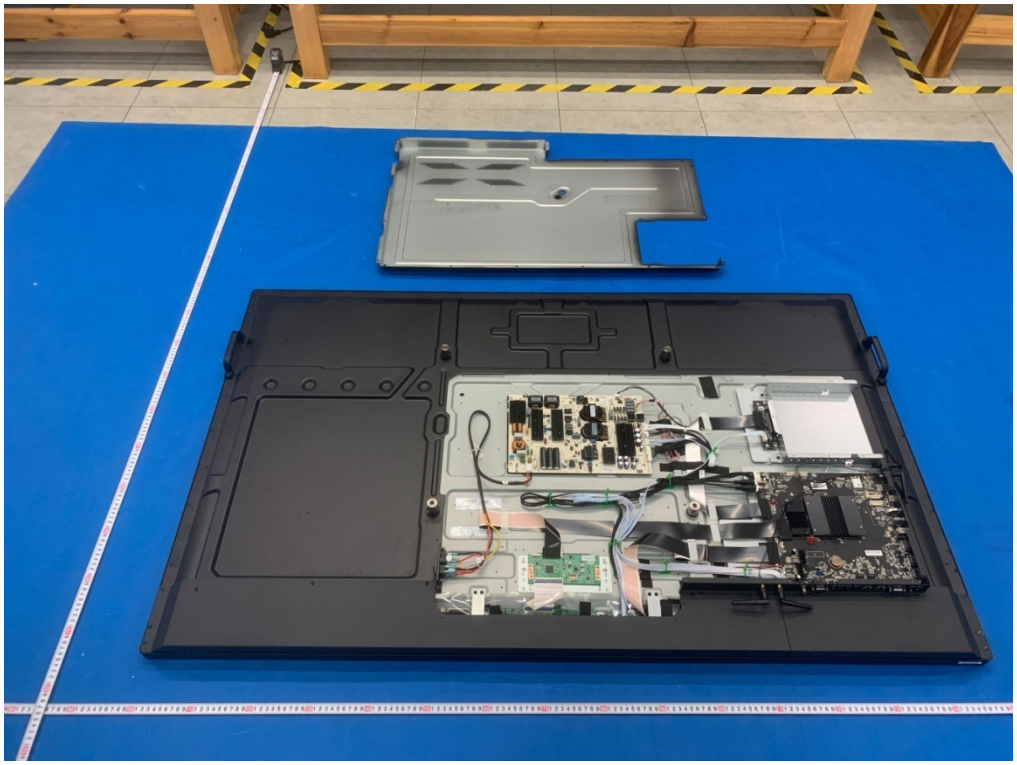


Photo 4 internal view

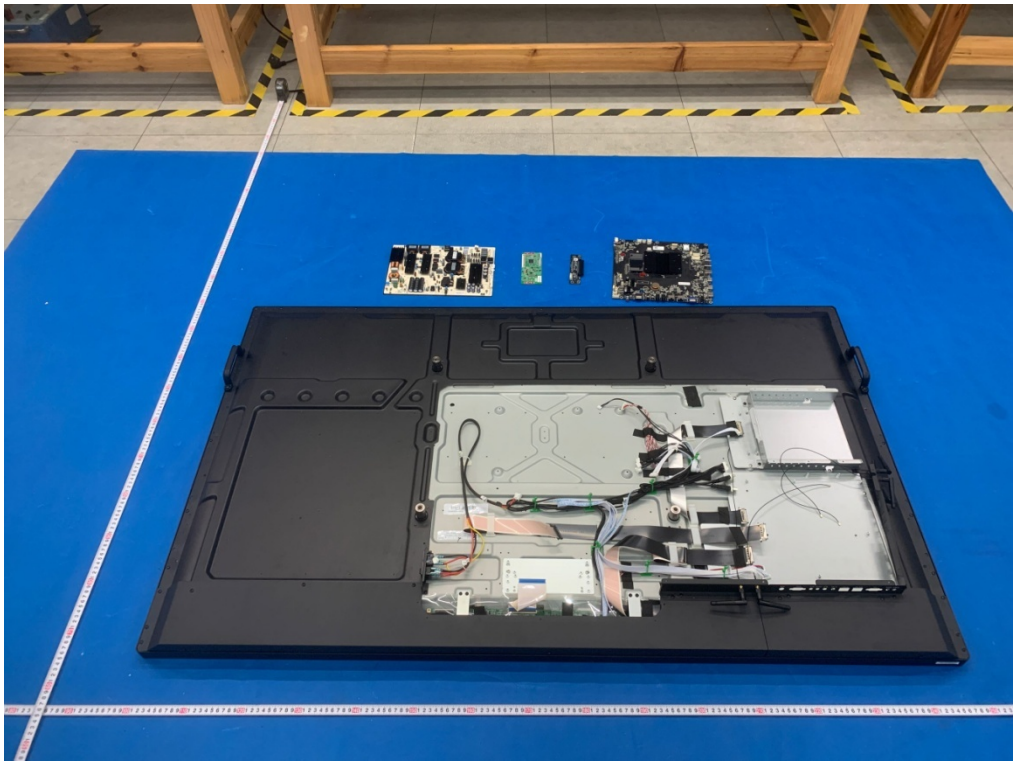


Photo 5 internal view

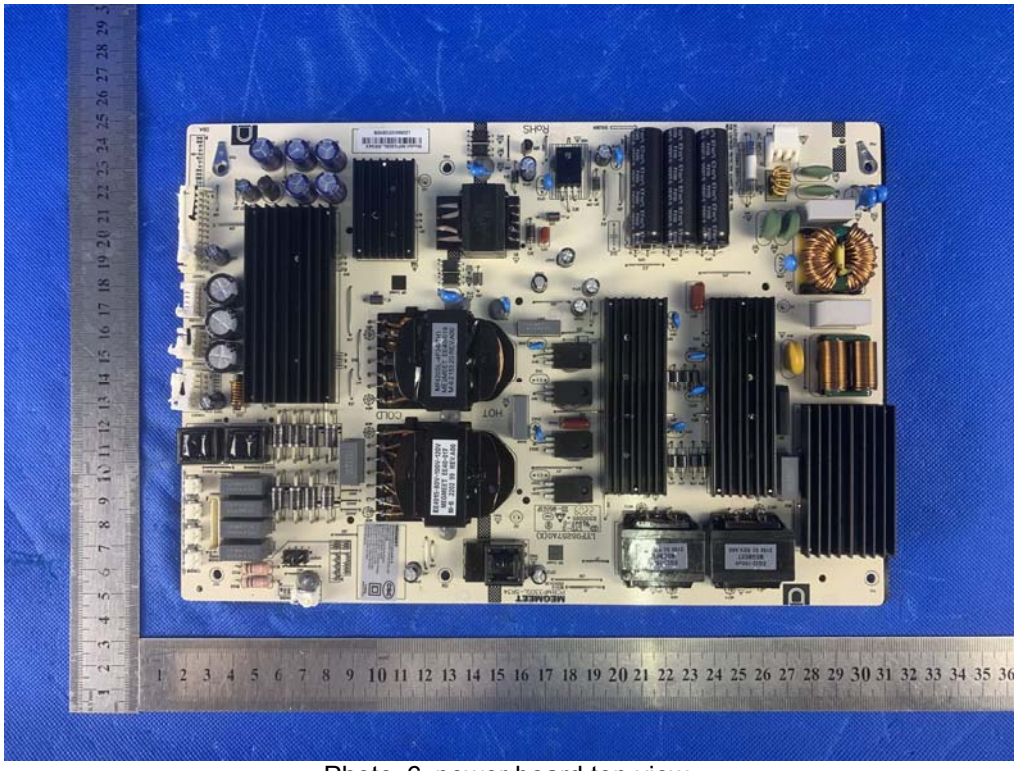


Photo 6 power board top view

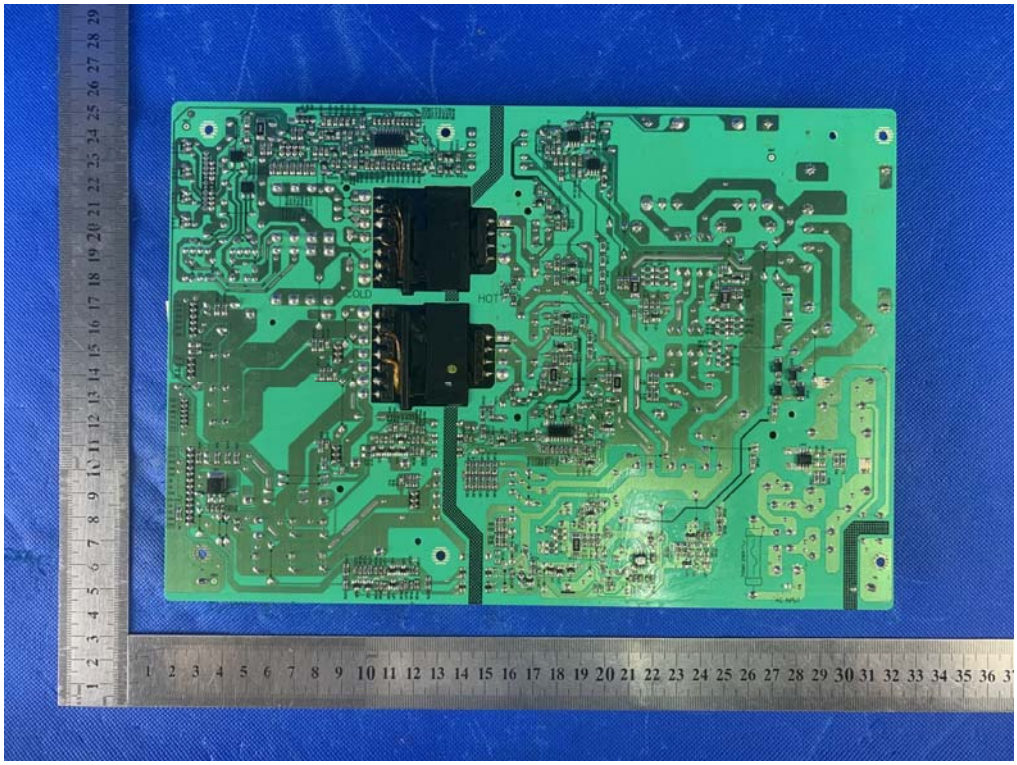


Photo 7 power board bottom view

Photo 8 main board top view

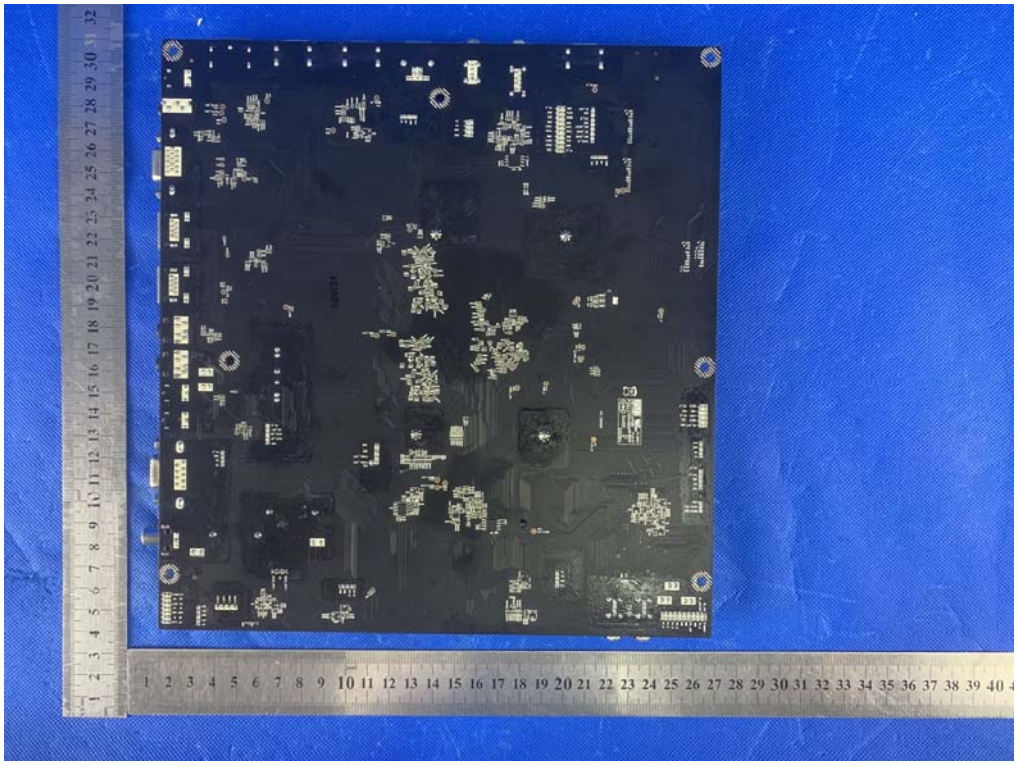


Photo 9 main board bottom view

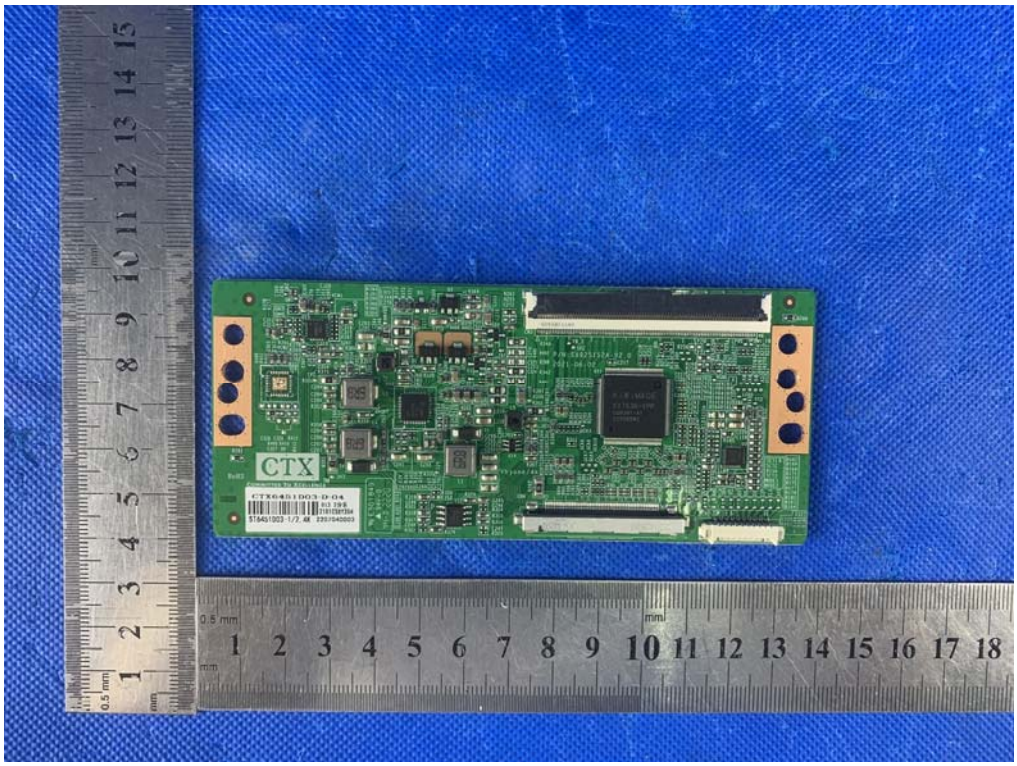


Photo 10 signal board top view

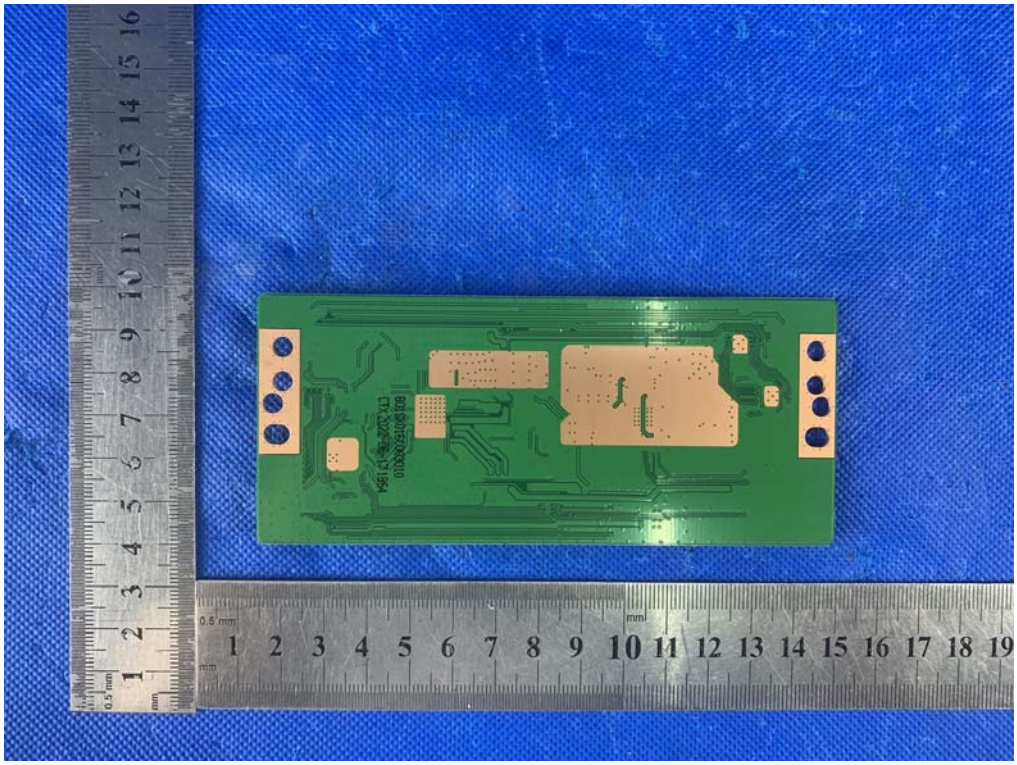


Photo 11 signal board bottom view

*****End of Report*****