



Ministério do Meio Ambiente  
Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis  
CADASTRO TÉCNICO FEDERAL  
CONSULTA PÚBLICA A CERTIFICADO DE REGULARIDADE - CR

Registro n.º: 9750 Data da consulta: 13/06/2022 CR emitido em: 01/06/2022 CR válido até: 01/09/2022

Dados básicos

CNPJ: 72.381.189/0001-10

Razão social:

DELL COMPUTADORES DO BRASIL LTDA.

Nome fantasia:

DELL COMPUTADORES

Data de abertura:

14/06/1993

Endereço

Logradouro: AV. INDUSTRIAL BELGRAF

Complemento:

N.º:

400

Bairro:

CENTRO

Município:

ELDORADO DO SUL

UF:

RS

CEP:

92990-000

Cadastro Técnico Federal de Atividades Potencialmente Poluidoras e Utilizadoras de Recursos Ambientais - CTF/APP

Categoria

21 - Atividades não relacionadas no Anexo VIII da Lei nº 6.938/1981

Detalhe

3 - Utilização de substâncias controladas - Protocolo de Montreal

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## OptiPlex 3090 SFF

### Product Summary:

Product Type: Desktop

Registered In: Brazil

Manufacturer: DELL

EPEAT Tier: Gold

Registration Date: 2021-09-27

Product Status: Active

Exceptions: ENERGY STAR compliant power management features and power supply. Computers without such features may not conform to 4.5.1.1 ENERGY STAR and would not be in conformance with EPEAT.

All unique product identifiers existing for this product may not be listed here. If the unique product identifier you are looking for is not listed, please contact EPEAT at [EPEAT@GEC.org](mailto:EPEAT@GEC.org).

### EPEAT Tier Score Detail

For a product to be listed on the EPEAT Registry, it must, at a minimum, meet the applicable "required" criteria. [Click here](#) to see a list of the required criteria for this product category.

This product has met the necessary required criteria.

Along with required criteria, products can also meet optional criteria and score optional points. It is not required for a product to achieve any optional points.

Products that meet all required criteria and achieve less than 50% of the optional points are rated at EPEAT Bronze

Products that meet all required criteria and achieve 50 - 74% of the optional points are rated at EPEAT Silver

Products that meet all required criteria and achieve 75 - 100% of the optional points are rated at EPEAT Gold

The optional criteria for this product category and optional points achieved by this product are listed below.

Optional Criteria	Scores
4.1 Substance Management	10 / 16
4.2 Materials Selection	3 / 2
4.4 Product longevity/life-cycle extension	2 / 2
4.5 Energy Conservation	2 / 4
4.7 Packaging	1 / 2
4.8 Life cycle assessment and carbon footprint	6 / 6
4.9 Corporate Environmental Performance	6 / 9
4.10 Corporate social responsibility	6 / 6
TOTAL OPTIONAL CRITERIA SCORE:	36 / 48

Please note that it is not required for a product to achieve any optional points.

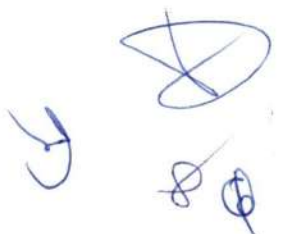
Some optional criteria may not be applicable to a product. Optional criteria that are not applicable (N/A) to the product are not included in the Total Optional Criteria Score, and are not reflected above.

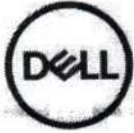
For any questions, comments, or feedback regarding the EPEAT Registry, please contact us.

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## EU DECLARATION OF CONFORMITY

Name and Address of the manufacturer:

Dell Inc.  
One Dell Way  
MS: PS4-30  
Round Rock, Texas USA 78682

Name and address of the authorised representative:

Dell Products Europe BV  
Raheen Business Park  
Limerick, Ireland  
Contact: <https://support.dellproductcompliance.com>

This declaration of conformity is issued under the sole responsibility of Dell, Inc.

### OBJECT OF THE DECLARATION

Type of Object.....: Desktop Computer  
Regulatory Model.....: D15S  
Regulatory Type<sup>1</sup>.....: D15S001,D15S002,D15S003  
Trade/Manufacturer name.: Dell

The object of the declaration described above is in conformity with the following Directives:

- DIRECTIVE 2014/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC
- DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
- DIRECTIVE 2009/125/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 October 2009 establishing a framework for the setting of eco design requirements for energy related products.

The object of the declaration is in compliance with the following European standards, regulations, and technical references:

**SAFETY** EN IEC 62368-1:2020 +A11:2020  
EN IEC 62311:2020

**EMC** EN 55032:2015 +A11:2020  
EN 55035:2017 +A11:2020  
EN 61000-3-2:2014 (Class D)  
EN 61000-3-3:2013  
EN 301 489-1 V2.2.3  
EN 301 489-17 V3.2.4

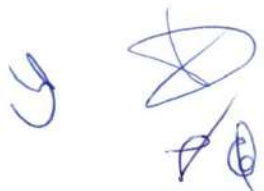
**RoHS** EN IEC 63000:2018

**ENERGY** EN 50563:2011  
EN 62623:2013  
Commission Regulation (EU) No. 2019/1782

**RADIO** EN 300 328 V2.2.2  
EN 301 893 V2.1.1  
EN 300 440 V2.1.1  
EN 300 330 V2.1.1

**SUPPLEMENTARY INFORMATION:** The object of this declaration has been tested and found to comply with the electromagnetic compatibility (EMC) limits for a Class B digital device pursuant to the listed directives, regulations

<sup>1</sup> Regulatory Type uniquely identifies the product Tracking Number, radio, apparatus and EEE which is the object of this DoC.





and standards. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential or business environment. Optional devices, such as radios, conform to the noted standard when the Dell Inc. provided devices are installed in the product. The equipment was tested in a typical configuration.

Round Rock, Texas, USA

Place of Issue

05/23/2022

Date Issue

CDD15S001-2

Dell Document Control

Wu, Maurice

Full Printed Name

Senior Manager, Regulatory Engineering

Position/Title



Signed for and on behalf of Dell Inc.

346J

# Service Manual-E2222Ht/E2222Hf

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Version: 02  
Date:2022/03/16

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## 1. Important Safety Notice

### Product Announcement:

This product is certificated to meet RoHS Directive and Lead-Free produced definition. Using approved critical components only is recommended when the situation to replace defective parts. Vendor assumes no liability express or implied, arising out of any unauthorized modification of design or replacing non-RoHS parts. Service providers assume all liability.

**Qualified Repairability:** Proper service and repair is important to the safe, reliable operation of all series products. The service providers recommended by vender should be aware of notices listed in this service manual in order to minimize the risk of personal injury when perform service procedures. Furthermore, the possible existed improper repairing method may damage equipment or products. It is recommended that service engineers should have repairing knowledge, experience, as well as appropriate product training per new model before performing the service procedures.

### NOTICE:

- ! To avoid electrical shocks, the products should be connected to an authorized power cord, and turn off the master power switch each time before removing the AC power cord.
- ! To prevent the product away from water or expose in extremely high humidity environment.
- ! To ensure the continued reliability of this product, use only original manufacturer's specified parts.
- ! To ensure following safety repairing behavior, put the replaced part on the components side of PWBA, not solder side.

- ! To ensure using a proper screwdriver, follow the torque and force listed in assembly and disassembly procedures to unscrew screws.
- ! Using Lead-Free solder to well mounted the parts.
- ! The fusion point of Lead-Free solder requested in the degree of 220°C.

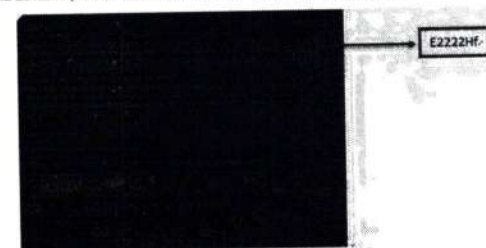
## 2. Check Label behind monitor:



### 2.1 E2422Ht (Please follow instruction for E2222Ht)



### 2.2 E2422Hf (Please follow instruction for E2222Hf, start from section 6):

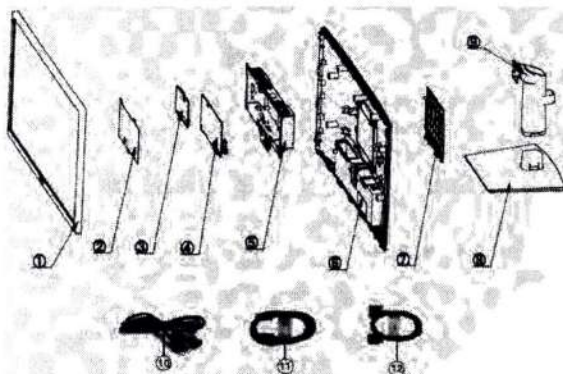


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- 4 -

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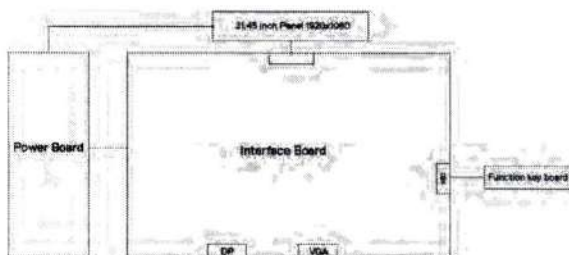
### 3. Exploded view diagram with list of items (E2222Ht)



Item	Description	Qty	Remark
1	LCD ASSEMBLY	1	
2	Safety Mylar	1	
3	Interface Board	1	
4	Power board	1	
5	Main chassis	1	
6	Rear Cover ASSEMBLY	1	For EMEA Only, not for other regions
7	VESA Cover	1	
8	Base	2	
9	Stand	1	
10	Power cable	1	See "NOTE"
11	DisplayPort cable	1	See "NOTE"
12	VGA cable	1	See "NOTE"

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### 4. Wiring connectivity diagram (E2222Ht)



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### NOTE:

For replacement of power cord, connectivity cable and external power supply (if applicable), contact Dell:

1. Go to <https://www.dell.com/support>.
2. Verify your country or region in the Choose A Country/Region drop-down menu at the bottom-right corner of the page.
3. Click Contact Us next to the country dropdown.
4. Select the appropriate service or support link based on your need.
5. Choose the method of contacting Dell that is convenient for you

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### 5. Disassembly and Assembly Procedures (E2222Ht)

#### NOTE:

This "Disassembly and Assembly Procedures" is for EMEA only, not for other regions. Please note that Dell will deem warranty void if any disassembly is done on the monitors.

#### Tool Required:

Let the type and size of the tools that would typically be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

#### Tool Description:

- Screwdriver (Phillips head) #1
- Screwdriver (Phillips head) #2
- Plastic Spudger
- Soldering Iron and Solder

#### 5.1 Disassembly SOP (E2222Ht)

##### Remove the monitor stand base:

1. Place the monitor on a soft cloth or cushion.
2. Remove VESA cover to access the release button.
3. Use a long and thin screwdriver to push the release latch located in a hole just above the stand.
4. Once the latch is released, remove the base away from the monitor.



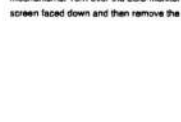
S1

1. Use a Philips-head screwdriver to remove 6pcs screws for unlocking mechanisms.
- (No. 1-4 screw size=M4x11; Torque=11x1kgfcm; No. 5-6 screw size=M4x6; Torque=11x1kgfcm)



S2

1. Turn over the LCD monitor to let the screen faced up, place a cloth on the panel where you are working on to protect the panel. Continuously wedge your fingers between the front bezel and the panel in order of screw preference for unlocking mechanisms. Turn over the LCD monitor to let the screen faced down and then remove the rear cover.



S3



S4

1. Disconnect the function key cable away from the connector of the board, then tear off 3pcs adhesive tape for releasing the function key board.



S5

1. Tear off 1pcs aluminum foil on the back of the panel lamp cable for unlocking panel lamp cable, and then disconnect the panel lamp cable away from the connector of panel module.



S6

1. Use a Philips-head screwdriver to remove 2pcs screws for unlocking the bracket with panel module. Use a Hex-head screwdriver to remove 3pcs screws for unlocking the VGA connector.
- (No. 1-2 screw size=M3x2.5; Torque=4x0.5kgfcm; No. 3-4 screw size=M2x6; Torque=4x0.5kgfcm)



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## 5.2 Assembly SOP (E2222Ht)

- S7 Unplug the LVDS cable from the connector of the panel module by pushing the earring-locks.



- S8 Lift up the bracket chassis and put it on a protective cushion.



- S9 Release the panel module away from the hooks of the front bezel, then lift up the panel module and take away the front bezel with key board.



- S10 Tear off the mylar tape, then put the front bezel into a fixture, then use a Philips-head screwdriver to remove 3pcs screws for unlocking the function key board with the front bezel.



- S11 Remove the Mylar from the hooks of the bracket chassis module.
- S12 Use a Philips-head screwdriver to remove 4pcs screws for unlocking the circuit board, release all the cables from the hooks.
- (No.1 screw size=M4x8, Torque=6.0 N·m; No.2-4 screw size=M3x7.5, Torque=6.0 N·m)



- S13 Remove the interface board and power board from the bracket chassis module carefully, and disconnect all the cables.



- S1 Place a bracket chassis base on a protective cushion.



- S2 Turn over a power board and put the power board into the bracket chassis, locate the panel power cable into the hook of the bracket chassis.



- S3 Take an interface board, connect a LVDS cable to the connector of the interface board, then connect the cable of the power board to the connector of the interface board. Turn over the interface board and locate it into the bracket. Use a Philips-head screwdriver to tighten 4pcs screws for locking the power board and interface board.
- (No.1 screw size=M4x8, Torque=6.0 N·m; No.2-4 screw size=M3x7.5, Torque=6.0 N·m)



- S4 Take a mylar to insert the hooks of the bracket to cover the power board.



The following two steps (S6 and S7) is processed in LCM assemble line. Take 1pcs function key board and 1pcs front bezel from the carton, then put the middle bezel into a fixture, and locate the function keyboard into the hooks of the front bezel. Use a Philips-head screwdriver to tighten 3pcs screws for locking the function key board with the front bezel, then paste 1pcs black mylar tape to cover the function key board.

(No.1-3 screw size=M2x2.4, Torque=0.8 N·m)



- S6 Take 1pcs panel module, then put the panel into the front bezel and locate the panel into the hooks of the front bezel for the two parts firmly attached.



- S7 Take out 1pcs panel assembled module with front bezel and function key board from the carton, and then examine the panel surface according to inspection criteria. Turn over the panel, and then place screen faced down for later assembling.



- S8 Move the bracket close to the panel, then use a proper tool to connect LVDS cable to the connector of the panel.



- S9 Adjust the bracket chassis to the correct position, then use a Philips-head screwdriver to tighten 2pcs screws for locking the bracket with panel module. Use a Hex-head screwdriver to lock 2pcs screws for locking the VGA connector.
- (No.1-2 screw size=M3x4, Torque=5.0 N·m; No.3-4 screw size=M2x6, Torque=6.0 N·m)



- S10 Connect the panel lamp cable to the connector of the panel module, then fix the panel lamp cable with 1pcs aluminum foil as the picture below shown.



- S11 Connect the function key cable to the connector of board, then tear off the 3pcs double-faced tape on the back of the board and fix the cable on the bracket as the picture below shown.



- S12 Take 1pcs rear cover, put down the rear cover and push the rear cover on the positions marked as the picture below shown for mechanisms engagement.



- S13 Use a Philips-head screwdriver to tighten 4pcs screws for locking rear cover with the assembled unit, to tighten 2pcs screws for locking the rear cover with bracket chassis module.
- (No.1-4 screw size=M4x11, Torque=10 N·m; No.5-6 screw size=M4x6, Torque=10 N·m)



- S14 Stick 3pcs labels on the specific positions as the picture below shown. Take 1pcs stand riser and 1pcs stand base, assemble the stand base with stand riser, insert the stand-riser into monitor groove until it snaps into its place.

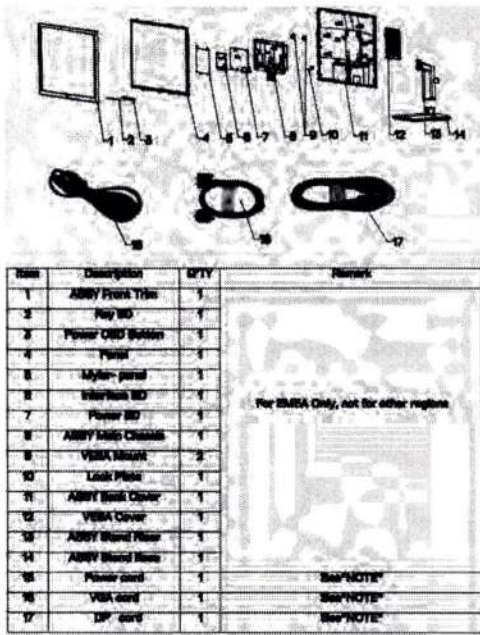


- S15 Lift up the monitor to checking the gap between the front bezel with panel module, then provide power supply and a video signal to the monitor, then turn on the monitor for functionality check.



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## 6. Exploded view diagram with list of items (E2222Hf)

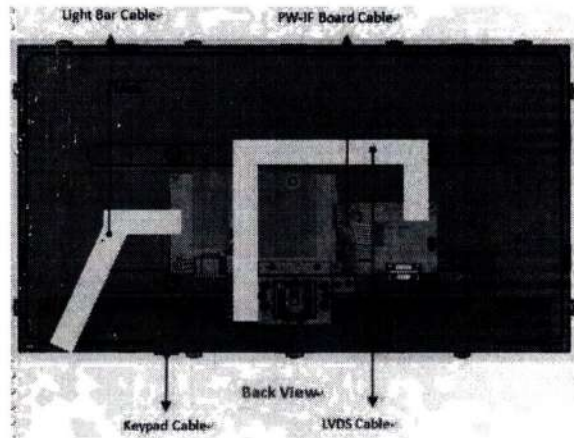


### NOTE:

For replacement of power cord, connectivity cable and external power supply (if applicable), contact Dell:  
 1. Go to <https://www.dell.com/support>.  
 2. Verify your country or region in the Choose A Country/Region drop-down menu at the bottom-right corner of the page.  
 3. Click Contact Us next to the country dropdown.  
 4. Select the appropriate service or support link based on your need.  
 5. Choose the method of contacting Dell that is convenient for you.

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## 7. Wiring connectivity diagram (E2222Hf)



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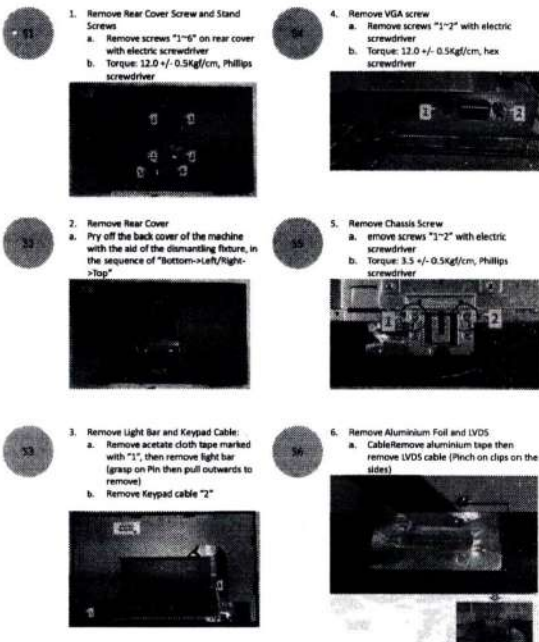
## 8. Disassembly Procedures (E2222Hf)

### NOTE:

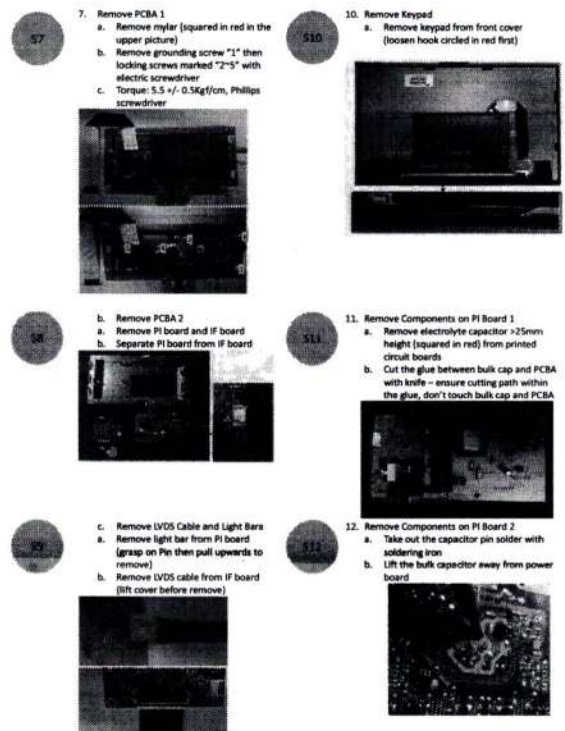
This "Disassembly and Assembly Procedures" is for EMEA only, not for other regions. Please note that Dell will deem warranty void if any disassembly is done on the monitors.

### List of tools/equipment:

1. Philips-head screwdriver
2. Electric screwdriver
3. Hex-head screwdriver



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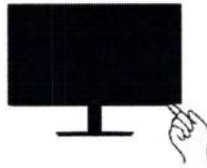


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## 9. How to connect and disconnect power cable/ connectivity cable

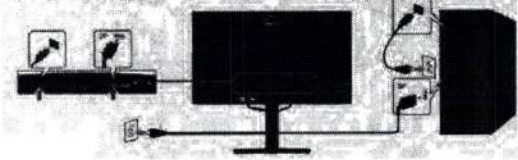
**WARNING:** To change power cable/ connectivity cable, switch off power before unplugging the cable and replugging in required cable.



Connecting VGA cable



Connecting DP cable



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## 10. Trouble shooting instructions

### Self-test

Your monitor provides a self-test feature that allows you to check if your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

1. Turn off both your computer and the monitor.
2. Disconnect all video cables from the monitor. This way, the computer does not have to be involved.
3. Turn on the monitor.

If the monitor is working correctly, it detects that there is no signal and one of the following message appears. While in self-test mode, the power LED remains white.

E2222H



**NOTE:** This message also appears during normal operation, when the video cable is disconnected or damaged.

4. Turn off your monitor and reconnect the video cable; then turn on your computer and the monitor.

If your monitor remains dark after you reconnect the cables, check your video controller and computer.

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### Built-in diagnostics

Your monitor has a built-in diagnostic tool that helps you determine if any screen abnormality you experience is an inherent problem with your monitor, or with your computer and video card.



Label	Description
1	Button 1
2	Button 2
3	Button 3
4	Button 4

#### To run the built-in diagnostics:

1. Ensure that the screen is clean (no dust particles on the surface of the screen).
2. Press and hold Button 4 for about 4 seconds and wait for a pop up menu.
3. Use Button 1 or 2 to select the and press to confirm.
4. A gray test pattern appears at the beginning of the diagnostic program.
5. Carefully inspect the screen for abnormalities.
6. Press Button 1 to change the test patterns.
7. Repeat steps 4 and 5 to inspect the display in red, green, blue, black, white and text screens.
8. When in White color test screen, check for white color uniformity and if there white color appears greenish/reddish, etc.
9. Press Button 1 to end the diagnostic program.

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### Common problems

The following table provides general information about common monitor problems you might encounter and the possible solutions:

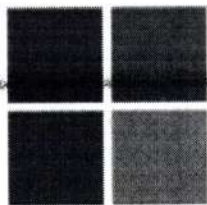
Common symptoms	Possible solutions
No video/Power LED off	<ul style="list-style-type: none"> <li>• Ensure that the video cable connecting the monitor and the computer is properly connected and secure.</li> <li>• Verify that the power outlet is functioning properly using any other electrical equipment.</li> <li>• Ensure that the power button is pressed.</li> <li>• Ensure that the correct input source is selected via the Input Source menu.</li> </ul>
No video/Power LED on	<ul style="list-style-type: none"> <li>• Increase brightness and contrast controls using the OSD.</li> <li>• Perform monitor self-test feature check.</li> <li>• Check for bent or broken pins in the video cable connector.</li> <li>• Run the built-in diagnostics.</li> <li>• Ensure that the correct input source is selected via the Input Source menu.</li> </ul>
Poor focus	<ul style="list-style-type: none"> <li>• Eliminate video extension cables.</li> <li>• Reset the monitor to Factory Settings (<b>Factory Reset</b>).</li> <li>• Change the video resolution to the correct aspect ratio.</li> </ul>
Shaky/Jittery video	<ul style="list-style-type: none"> <li>• Reset the monitor to Factory Settings (<b>Factory Reset</b>).</li> <li>• Check environmental factors.</li> <li>• Relocate the monitor and test in another room.</li> </ul>
Missing pixels	<ul style="list-style-type: none"> <li>• Cycle power On-off.</li> <li>• Pixel that is permanently off is a natural defect that can occur in LCD technology.</li> <li>• For more information about Dell Monitor Quality and Pixel Policy, see Dell Support site at: <a href="https://www.dell.com/support/monitors">https://www.dell.com/support/monitors</a>.</li> </ul>
Stuck on pixels	<ul style="list-style-type: none"> <li>• Cycle power On-off.</li> <li>• Pixel that is permanently off is a natural defect that can occur in LCD technology.</li> <li>• For more information about Dell Monitor Quality and Pixel Policy, see Dell Support site at: <a href="https://www.dell.com/support/monitors">https://www.dell.com/support/monitors</a>.</li> </ul>
Brightness problems	<ul style="list-style-type: none"> <li>• Reset the monitor to Factory Settings (<b>Factory Reset</b>).</li> <li>• Adjust brightness and contrast controls using OSD.</li> </ul>
Geometric distortion	<ul style="list-style-type: none"> <li>• Reset the monitor to Factory Settings (<b>Factory Reset</b>).</li> <li>• Adjust horizontal and vertical using OSD.</li> </ul>
Horizontal/Vertical lines	<ul style="list-style-type: none"> <li>• Reset the monitor to Factory Settings (<b>Factory Reset</b>).</li> <li>• Perform monitor self-test feature check and determine if these lines are also in self-test mode.</li> <li>• Check for bent or broken pins in the video cable connector.</li> <li>• Run the built-in diagnostics.</li> </ul>

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Common symptoms	Possible solutions
Synchronization problems	<ul style="list-style-type: none"> <li>Reset the monitor to Factory Settings (<b>Factory Reset</b>).</li> <li>Perform monitor self-test feature check to determine if the scrambled screen appears in self-test mode.</li> <li>Check for bent or broken pins in the video cable connector.</li> <li>Restart the computer in safe mode.</li> </ul>
Safety related issues	<ul style="list-style-type: none"> <li>Do not perform any troubleshooting step.</li> <li>Contact Dell immediately.</li> </ul>
Intermittent problems	<ul style="list-style-type: none"> <li>Try different <b>Preset Modes</b> in <b>Color</b> settings OSD. Adjust <b>R/G/B</b> value in <b>Custom Color</b> in <b>Color</b> settings OSD.</li> <li>Change the <b>Input Color Format</b> to <b>RGB</b> or <b>YPbPr</b> in the <b>Color</b> settings OSD.</li> <li>Run the built-in diagnostics.</li> </ul>
Missing color	<ul style="list-style-type: none"> <li>Perform monitor self-test feature check.</li> <li>Ensure that the video cable connecting the monitor to the computer is connected properly and is secure.</li> <li>Check for bent or broken pins in the video cable connector.</li> </ul>
Wrong color	<ul style="list-style-type: none"> <li>Try different <b>Preset Modes</b> in <b>Color</b> settings OSD. Adjust <b>R/G/B</b> value in <b>Custom Color</b> in <b>Color</b> settings OSD.</li> <li>Change the <b>Input Color Format</b> to <b>RGB</b> or <b>YCbCr/YPbPr</b> in the <b>Color</b> settings OSD.</li> <li>Run the built-in diagnostics.</li> </ul>
Image retention from a static image left on the monitor for a long period of time	<ul style="list-style-type: none"> <li>Set the screen to turn off after a few minutes of screen idle time. These can be adjusted in Windows Power Options or Mac Energy Saver setting.</li> <li>Alternatively, use a dynamically changing screensaver.</li> </ul>
Video ghosting or overshooting	<ul style="list-style-type: none"> <li>Change the <b>Response Time</b> in the <b>Display</b> OSD to <b>Fast</b> or <b>Normal</b> depending on your application and usage.</li> </ul>

## Product-specific problems

Specific symptoms	Possible solutions
Screen image is too small	<ul style="list-style-type: none"> <li>Check the <b>Aspect Ratio</b> setting in the <b>Display</b> settings OSD.</li> <li>Reset the monitor to Factory Settings (<b>Factory Reset</b>).</li> </ul>
Cannot adjust the monitor with the buttons on the bottom of the panel	<ul style="list-style-type: none"> <li>Turn off the monitor, unplug the power cord, plug it back, and then turn on the monitor.</li> </ul>
No input signal when user controls are pressed	<ul style="list-style-type: none"> <li>Check the signal source. Ensure that the computer is not in standby or sleep mode by moving the mouse or pressing any key on the keyboard.</li> <li>Check if the video cable is plugged in properly. Disconnect and reconnect the video cable if necessary.</li> <li>Reset the computer or video player.</li> </ul>
The picture does not fill the entire screen	<ul style="list-style-type: none"> <li>Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen.</li> <li>Run the built-in diagnostics.</li> </ul>



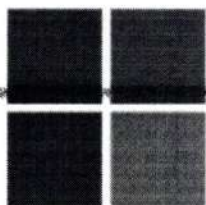
# Microsoft

Hardware certification report **Approved**

Private product ID: **14140172077886672**  
Shared product ID: **400934721**  
Submission ID: **1152921505694780866**  
Submission date: **4/27/2022**  
Completion date: **4/27/2022**  
Company: **Dell Inc**  
Product name: **OptiPlex 3090 SFF -Realtek LOM**  
Category: **System**  
Product type: **Desktop**  
Qualification level: **Certified for Microsoft Windows 10 Client family version 2004, x64**  
Marketing name: **OptiPlex 3090**

Microsoft  
Certified





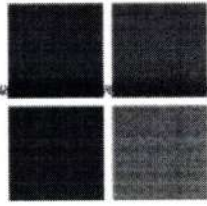
# Microsoft

Hardware certification report **Approved**

Private product ID: **14547460420706405**  
Shared product ID: **400456138**  
Submission ID: **1152921505692591207**  
Submission date: **11/30/2020**  
Completion date: **11/30/2020**  
Company: **Dell Inc**  
Product name: **OptiPlex 3090 UFF Vpro**  
Category: **System**  
Product type: **Desktop**  
Qualification level: **Certified for Microsoft Windows 10 Client family version 2004, x64**  
Marketing name: **OptiPlex 3090 UFF**

Microsoft  
Certified

Handwritten signatures and initials in blue ink.

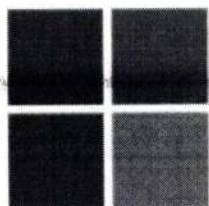


# Microsoft

Hardware certification report **Approved**

Private product ID: **14134238463839148**  
Shared product ID: **400456243**  
Submission ID: **1152921505692591090**  
Submission date: **11/30/2020**  
Completion date: **11/30/2020**  
Company: **Dell Inc**  
Product name: **OptiPlex 3090 UFF Non Vpro**  
Category: **System**  
Product type: **Desktop**  
Qualification level: **Certified for Microsoft Windows 10 Client family version 2004, x64**  
Marketing name: **OptiPlex 3090 UFF**

Microsoft  
Certified



# Microsoft

Hardware certification report **Approved**

Private product ID: **13511093478558075**  
Shared product ID: **400934767**  
Submission ID: **1152921505694781949**  
Submission date: **4/27/2022**  
Completion date: **4/27/2022**  
Company: **Dell Inc**  
Product name: **OptiPlex 3090 SFF -Intel LOM**  
Category: **System**  
Product type: **Desktop**  
Qualification level: **Certified for Microsoft Windows 10 Client family version 2004, x64**  
Marketing name: **OptiPlex 3090**

Microsoft  
Certified





# ITEM 02

## MATERIAL TÉCNICO

Handwritten marks and signatures in the bottom right corner, including a large stylized 'A' and several smaller marks.

# SMS

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# NEW STATION

## UPS LINE INTERACTIVE 700 VA



**A AUTONOMIA IDEAL COM O DESIGN MAIS INOVADOR**

- › Modelo monovolt e bivolt automático
- › Estabilizador interno com 4 estágios de regulação
- › Filtro de linha interno
- › Forma de onda senoidal por aproximação
- › Botão liga/desliga temporizado com função Mute
- › Battery Saver: preserva a vida útil da bateria
- › Porta fusível externo com unidade reserva
- › LED bicolor no painel frontal



COMPUTADOR



PONTO DE VENDA



IMPRESSORA  
JATO DE TINTA OU  
MULTIFUNCIONAL  
JATO DE TINTA



TELEFONE/FAX



CÂMERA  
CENTRAL, CFTV



GAMES



INSTRUMENTOS  
MUSICAIS

Handwritten signatures and marks at the bottom right of the page.

# NEW STATION

Proteção e autonomia para os equipamentos de informática, áudio e vídeo

## 6 Níveis de Proteção

O UPS New Station alia as últimas tendências do design, tecnologia e proteção em um só equipamento.

Através do recarregador Strong Charger, é possível recarregar a bateria mesmo com níveis muito baixos de carga. Além disso, o seu exclusivo botão iluminado indica com praticidade as condições de funcionamento do UPS.

- Sobreaquecimento no transformador.
- Potência excedida.
- Descarga total da bateria.
- Curto-circuito no inversor.
- Surtos de tensão entre fase e neutro.
- Sub/sobretensão da rede elétrica. Na ocorrência destas, o UPS passa a operar em modo bateria.

## EQUIPAMENTOS QUE TAMBÉM PODEM SER LIGADOS:



MONITOR



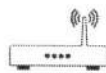
SCANNER



CENTRAL DE INTERFONIA



SERVIDOR



ROTEADOR



VOIP



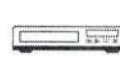
RECARREGADORES



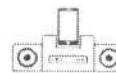
HOME THEATER



TV



DVD PLAYER/  
BLU-RAY PLAYER



DOCK STATION

## PROTEÇÕES PARA CARGA CONTRA PROBLEMAS DA REDE ELÉTRICA

### Queda de rede (Blackout)

Mantém o fornecimento de energia nas saídas durante a ausência total da rede elétrica.

### Ruído de rede elétrica

Possui filtro de linha interno que atenua ruídos provenientes da rede elétrica, fornecendo energia limpa para os equipamentos.

### Sobretensão de rede elétrica

Durante a ocorrência deste evento, o UPS utiliza energia das baterias, mantendo a saída em um valor adequado.

### Subtensão de rede elétrica

Durante a ocorrência deste evento, o UPS utiliza energia das baterias, mantendo a saída em um valor adequado.

### Surtos de tensão na rede

A rede elétrica pode apresentar picos de tensão provenientes, principalmente por descargas elétricas. A proteção é de modo comum e diferencial (entre fase-neutro ou fase-fase).

### Correção de variação da rede elétrica por degrau

A correção da tensão de saída é realizada através do estabilizador interno e é feita por taps de regulação.

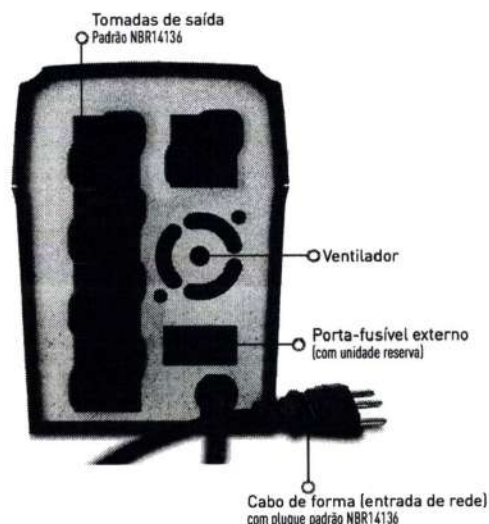




# CARACTERÍSTICAS GERAIS



- › **Microprocessado:** Microprocessador RISC de alta velocidade com memória Flash, integrando diversas funções periféricas, aumentando a confiabilidade e o desempenho do circuito eletrônico.
- › **Função TRUE RMS:** Analisa corretamente os distúrbios da rede elétrica permitindo a atuação precisa do equipamento.
- › **Autoteste:** Ao ser ligado, o UPS testa todos os circuitos internos, inclusive as baterias.
- › **Autodiagnóstico de bateria:** Informa quando a bateria precisa ser substituída.
- › **Recarregador Strong Charger:** Permite a recarga das baterias mesmo com níveis muito baixos de carga.
- › **Recarga automática da bateria em 4 estágios** com compensação de temperatura mesmo com o UPS desligado, mantendo-a sempre em condições ideais de operação, contribuindo para melhor preservação de sua vida útil.
- › Permite ser ligado na ausência de rede elétrica (DC Start).
- › **Circuito desmagnetizador:** Garante o valor de tensão adequado na saída do UPS para equipamentos de informática e similares (cargas não lineares).
- › Gabinete plástico anti-chama.
- › **Alarme audiovisual** para queda de rede, subtensão, fim do tempo de autonomia, final de vida útil da bateria, sobretensão, potência excedida e sobretemperatura.
- › **Garantia de 1 ano + 6 meses** mediante cadastro no site: [www.sms.com.br/garantia](http://www.sms.com.br/garantia).



Configuração típica (Equipamentos de informática)		Consumo Máximo VA <sup>(1)</sup>
A	Impressora jato de tinta	50
B	PC (on-board) + monitor LCD 15"	200
C	PC (on-board) + monitor LCD 17"	230
D	PC (on-board) + monitor CRT 17" ou 19"	300
E	PC (off-board) + monitor LCD 17"	350

TEMPO DE AUTONOMIA <sup>(2)</sup>	
Configuração típica	μST 700 (1 bateria 12Vdc x 7Ah)
B + A	30 minutos
C + A	25 minutos
D + A	15 minutos
E + A	08 minutos

<sup>(1)</sup> Consumo máximo é a potência que os equipamentos ligados ao UPS podem atingir, considerando-se regime não contínuo de operação.

<sup>(2)</sup> O tempo de autonomia varia significativamente de acordo com as condições de uso da bateria, do número de ciclos de carga e descarga, da temperatura ambiente, bem como da potência média dos equipamentos ligados ao UPS.

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# NEW STATION

## UPS

Características Técnicas			
Código		0027916	0027915
Características de Entrada		μST 700S 115V	μST 700 BI
Tensão nominal	[V~]	115/127	115/127/220 (automático)
Variação máxima	[V~]	89 a 140	89 a 140 (rede 115V~) 175 a 265 (rede 220V~)
Frequência de rede <sup>[1]</sup>	[Hz]	60 ± 4	
Plugue do cabo de força		Padrão NBR 14136	
Características de Saída			
Potência máxima	[VA]	700	
Fator de potência		0,5	
Tensão nominal	[V~]	115	
Regulação		± 5% (para operação bateria) <sup>[2]</sup> + 6% - 10% (para operação rede)	
Frequência		60Hz ± 1% (para operação bateria)	
Forma de onda do inversor		Senoidal por aproximação (retangular PWM – controle de largura e amplitude)	
Número de tomadas (Padrão NBR14136)		5 tomadas Padrão NBR14136	
Características Gerais			
Rendimento (Modo Rede)		95% (para operação rede)	
Acionamento do inversor		1 bateria 12V <sub>DC</sub> /7Ah	
Bateria interna		< 0,8 ms	
Peso líquido	[kg]	5,4	
Peso bruto		5,7	
Dimensões A x L x P	[mm]	158 x 115 x 324	
Comprimento do cabo de força do UPS	[mm]	1400 ± 50	
Protetor entre fase e neutro:			
Máxima energia de surto <sup>[3]</sup>	[J]	276	
Máxima corrente de pico 8/20μS	[A]	4500	
Tensão de operação	[V~]	175	

<sup>[1]</sup> Modelos 50Hz somente sob consulta. • <sup>[2]</sup> Utilize um multímetro TRUE RMS para medir a tensão de saída. • <sup>[3]</sup> De acordo com a ANSI C62.41 categoria A.



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WWW.SMS.COM.BR



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# SMS®



## NEW STATION

Nobreak Interativo  
700 VA



MANUAL DO USUÁRIO

### CARO USUÁRIO,

Obrigado por escolher um produto com a marca SMS!

Nossos nobreaks são produzidos de acordo com o padrão internacional de qualidade ISO 9001:2008, o que garante total confiabilidade e segurança aos equipamentos.

Para manter o perfeito funcionamento do nobreak são necessários alguns cuidados básicos. Leia atentamente este manual e não deixe de seguir nossas orientações de instalação e utilização.

Por favor, guarde este manual e o mantenha sempre à mão, caso tenha dúvidas sobre o funcionamento do nobreak e suas funções.

A SMS oferece 6 (seis) meses de garantia adicional para o nobreak, desde que solicitada em até 90 dias a partir da data de aquisição do produto. Para solicitar basta acessar o site [www.sms.com.br/garantia](http://www.sms.com.br/garantia) e preencher o formulário. O comprovante será enviado para o e-mail cadastrado.

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# SMS

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### 1. APLICAÇÕES

A linha de nobreaks New Station foi desenvolvida para uso em equipamentos de informática e eletro-eletrônicos, como: Notebook, CPU, monitor, impressora jato de tinta, modem, scanner, hub, roteador, switch, multimídia, câmera, televisão LCD, home theater, dvd player, conversor de TV, equipamento de som, instrumentos musicais, games, recarregadores, VoIP, telefone, aparelho de fax, PABX, PDV, entre outros, desde que estejam dentro da potência máxima do nobreak.



#### ATENÇÃO:

Assim como as TVs CRT (tubo) e projetores, alguns aparelhos podem apresentar incompatibilidade com nobreaks de onda retangular PWM (senoidal por aproximação). Para estes equipamentos indicamos um nobreak senoidal SMS. Em caso de dúvida e/ou informações, consulte o fabricante do aparelho que você deseja conectar ao nobreak. Ele indicará o tipo de nobreak adequado ao seu aparelho. A SMS coloca-se também à sua disposição para mais informações. Consulte também o site: [www.sms.com.br](http://www.sms.com.br)

Obs.: Não utilize o nobreak para alimentar motores AC (refrigeradores, freezers, ventiladores, liquidificadores, aspiradores de pó, entre outros), eletrodomésticos (microondas, forno elétrico, entre outros), reatores eletromagnéticos, computadores que possuam fontes com PFC ativo, impressoras laser, copiadoras e equipamentos de sustentação à vida.

### 2. SEGURANÇA E CUIDADOS BÁSICOS

Não retire a tampa do nobreak, nem introduza objetos pela ventilação, evitando assim o risco de choque elétrico. O aparelho somente pode ser aberto por técnicos credenciados.

Uma rede elétrica dimensionada corretamente assegura o perfeito funcionamento de todos os circuitos internos do nobreak. A não instalação do fio terra coloca em risco o bom funcionamento do filtro de linha, bem como diminui a segurança contra choque elétrico no nobreak e nos equipamentos a ele conectados.



#### ATENÇÃO:

Lembre-se de que um aterramento adequado não é obtido ligando-se o fio terra ao neutro da rede elétrica, nem utilizando partes metálicas não apropriadas para este fim. Portanto, para um perfeito aterramento e dimensionamento da rede elétrica siga a norma da ABNT sobre Instalações Elétricas de Baixa Tensão NBR 5410.

#### 2.1. PADRÃO BRASILEIRO DE PLUGUES E TOMADAS

A polarização dos plugues e tomadas (fase, neutro/fase e terra) deve estar de acordo com a figura a seguir:

