

Product Information

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Product Features

BRILLIANCE 200P3M/200P3G

- 20-inch color LCD monitor with excellent display performance
- Multiple video input allowing displaying of DVI-I digital/ analog, VGA analog, S-Video & CVBS Video inputs.
- Picture-in-Picture (PIP) function for displaying both PC and video simultaneous on the screen
- Embedded AC power supply
- Front firing speakers with 48W PMPO stereo sound output
- Advanced AUTO adjustment optimizes picture quality
- Adjustable tilt and swivel function

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Technical Specifications*

LCD PANEL	
• Type	TFT LCD
• Screen size	20.1" / 51cm
• Pixel Pitch	0.255 x 0.255mm
• LCD Panel type	1600 x 1200 pixels R.G.B. vertical stripe Anti-glare polarizer, hard coated
• Effective viewing area	408 x 306mm
• Display Colors	8 bits interface (16M colors)
SCANNING	
Vertical refresh rate	56Hz-85Hz
Horizontal Frequency	30KHz-94KHz (Analog input), 30KHz--90KHz (Digital input)
VIDEO	
• Video dot rate	202MHz
• Input impedance	

• Input impedance	
- Video	75 Ohm
- Sync	2K Ohm
• Input signal levels	0.7 Vpp
• Sync input signal	Separate sync Composite sync Sync on green
• Sync polarities	Positive and negative
• S-Video	Y input 1.0Vpp, C input 0.3Vpp, 75ohm input impedance
• CVBS	Composite, 1.0Vpp, 75ohm input impedance
• Video interface	Triple input(two connectors): D-Sub(analog) and DVI-I(accepts both digital and analog) are available and user selectable S-Video & CVBS
AUDIO-In	
• Input signal level	0.7 Vpp
• Headphone out signal level	32 Ω 20+20mW
• Input signal connector	3.5mm mini jack
• Loudspeaker	2+2W RMS stereo front firing (PMPO: 48W)
MICROPHONE	
• Sensitivity	-55dB re 1V/ubar at 1KHz
• Output impedance	2.2K Ω max.
• Directivity	-5dB at 180°
• Frequency range	300Hz-3KHz
Optical characteristics	
• Contrast ratio:	300 (typ.)
• Brightness:	250 cd/m ² (typ.)
• Peak contrast angle	6 o'clock
• White Chromaticity:	x: 0.281 y: 0.311 (at 9300°K) x: 0.312 y: 0.338 (at 6500°K)
• Viewing Angle: (C/R>10)	Upper $\geq 85^\circ$ (typ.) Lower $\geq 85^\circ$ (typ.) Left $\geq 85^\circ$ (typ.) Right $\geq 85^\circ$ (typ.)
• Response time	≤ 30 ms (typ.)

* These information are subject to change without notice.

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Resolution & Preset Modes

- Maximum 1600 x 1200 at 75Hz(analog input)
1600x 1200 at 60Hz(digital input)

- Recommended 1600 x 1200 at 60Hz

50 user definable modes

18 factory preset modes:

H. freq (KHz)	Resolution	V. freq (Hz)
31.5	640*350	70 (IBM VGA 10h)
31.5	720*400	70
31.5	640*480	60
35.0	640*480	67
37.5	640*480	75
35.2	800*600	56
37.9	800*600	60
46.9	800*600	75
49.7	832*624	75
48.4	1024*768	60
60.0	1024*768	75
69.0	1152*870	75
71.8	1152*900	76 (SUN Mode II)
63.9	1280*1024	60
80	1280*1024	75
91.1	1280*1024	85
75.0	1600*1200	60
93.8	1600*1200	75

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Automatic Power Saving

If you have VESA's DPMS compliance display card or software installed in your PC, the monitor can automatically reduce its power consumption when not in use. And if an input from a keyboard, mouse or other input device is detected, the monitor will automatically "wake up". The following table shows the power consumption and signaling of this automatic power saving features:

Power Management Definition					
VESA Mode	Video	H-sync	V-sync	Power Used	LED color
ON	Active	Yes	Yes	< 60W	Green
Stand-by	Blanked	No	Yes	< 3W	Amber
Suspend	Blanked	Yes	No	< 3W	Amber
OFF	Blanked	No	No	< 3W	Amber

This monitor is ENERGY STAR[®] compliant. As an ENERGY STAR[®] Partner, PHILIPS has determined that this product meets the ENERGY STAR[®] guidelines for energy efficiency.

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Physical Specifications

• Dimension (WxHxD)	488 x 459 x220 mm (incl. Pedestal)
• Weight	10.0 Kg
• Tilt / Swivel	-5° ~ 25° / + - 175°
• Height adjustment rang	50mm
• Power supply	100 — 240 VAC, 50/60 Hz
• Power consumption	52 W (typ.)
• Temperature	5° C to 35° C (operating) -20° C to 60° C (storage)
• Relative humidity	20% to 80%
• System MTBF	50K hrs (including CCFL 40K hrs)
• Cabinet color	200P3M: Light Gray 200P3G: Black

* These information are subject to change without notice.

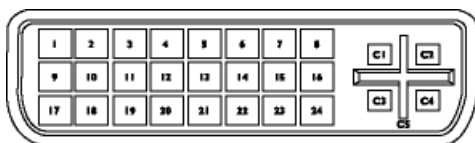
* Resolution 1600x1200, standard size, contrast max., brightness 50%, 9300° K, full white pattern, without audio/USB.

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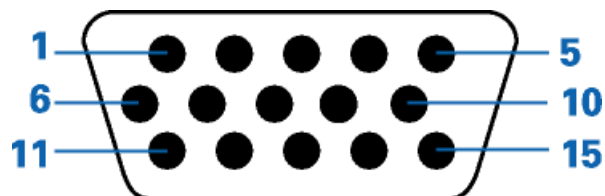
Pin Assignment

1. The digital/analog DVI-I onnector contains 29 signal contacts organized in three rows of eight contacts. Signal pin assignments are listed in the following table:

Pin No.	Signal Assignment	Pin No.	Signal Assignment	Pin No.	Signal Assignment	Pin No.	Signal Assignment
1	TMDS Data 2-	9	TMDS Data 1-	17	TMDS Data 0-	C1	Analog Red Video Out
2	TMDS Data 2+	10	TMDS Data 1+	18	TMDS Data 0+	C2	Analog Green Video Out
3	TMDS Data 2/4 Shield	11	TMDS Data 1/3 Shield	19	TMDS Data 0/5 Shield	C3	Analog Blue Video Out
4	TMDS Data 4-	12	TMDS Data 3-	20	TMDS Data 5-	C4	Analog Horizontal Sync
5	TMDS Data 4+	13	TMDS Data 3+	21	TMDS Data 5+	C5	Analog Common Ground Return (Red, Green, Blue Video Out)
6	DDC Clock	14	+5V Power	22	TMDS Clock Shield		
7	DDC Data	15	Ground (+5V, Analog H/V Sync)	23	TMDS Clock+		
8	Analog Vertical Sync	16	Hot Plug Detect	24	TMDS Clock-		



2. The 15-pin D-sub connector (male) of the signal cable:



Pin No.	Assignment	Pin No.	Assignment
1	Red video input	9	+5V
2	Green video input/SOG	10	Logic ground
3	Blue video input	11	Identical output - connected to pin 10
4	Sense (GND)	12	Serial data line (SDA)
5	Not connected	13	H. Sync / H+V
6	Red video ground	14	V. Sync (VCLK for DDC)
7	Green video ground	15	Data clock line (SCL)

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Product Views

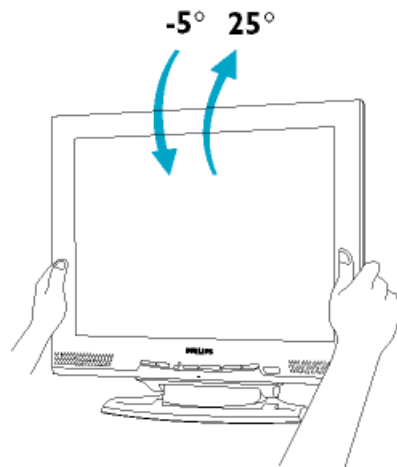
Follow the links to see various views of the monitor and its components.

[Front View Product Description](#)

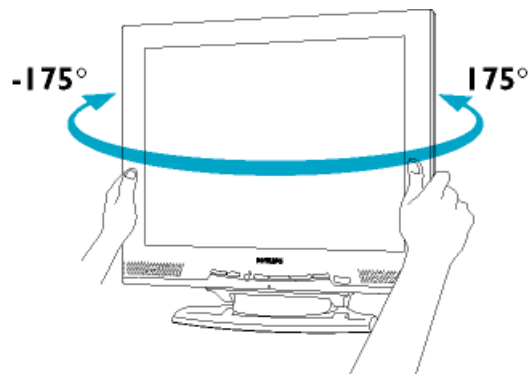
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Physical Function

1) Tilt



2) Swivel

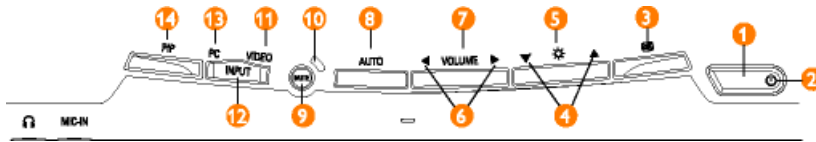


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Installing your LCD Monitor

Your LCD Monitor : [Front View Product Description](#) • [Connecting to Your PC](#) • [Remove and re-install the base](#) • [Getting Started](#) • [Optimizing Performance](#) • [Accessories \(optional\)](#)

Front View Product Description



UP and DOWN buttons are used when adjusting the OSD of your monitor



LEFT and RIGHT buttons, like the UP and DOWN buttons, are also used in adjusting the OSD of your monitor.



BRIGHTNESS hotkey. When the UP and DOWN arrow buttons are pressed, the adjustment controls for the BRIGHTNESS will show up.



OK button which when pressed will take you to the OSD controls



POWER button switches your monitor on

AUTO

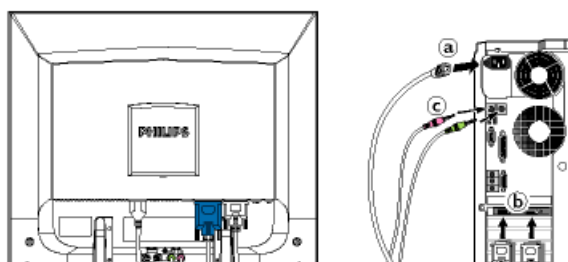
Automatically adjust the horizontal position, vertical position, phase and clock setting.

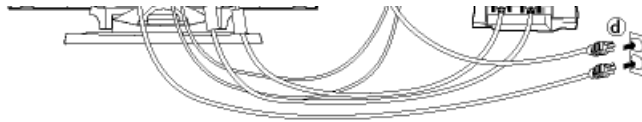
INPUT

Signal inputs selective hotkeys. Allows user to switch between two video connectors (D-Sub & DVI-I), e.g. D-Sub <-> DVI-D digital inputs or D-Sub <-> DVI-A analog inputs.

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Rear View





• **Connect the cables to the back of your computer by following steps**

- (a) Turn off your computer and unplug its power cord.
- (b) Connect the VGA or DVI cable to video connector.
- (c) Connect the microphone & audio cables.
- (d) Plug the power cord of computer and monitor into a near by outlet.
- (e) Turn on your computer and monitor. If the monitor displays an image, installation is complete.

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Optimizing Performance

- For best performance, ensure that your display settings are set at 1600x1200@60Hz



Note: You can check the current display settings by pressing the "OK" button once. Go into the Product Information. The current display mode is shown on the item called RESOLUTION.

- You can also install the [Flat Panel Adjust \(FP Adjust\) program](#), a program for getting the best performance out of your monitor, included in this CD. A step-by-step instructions is provided to guide you through the installtion process. Click on the link to know more about this program.

More about  [FP_setup02.exe](#)

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Regulatory Information

[TCO '99 Information](#) • [TCO Environmental Requirements](#) • [Energy Star Declaration](#) • [Federal Communications Commission \(FCC\) Notice \(U.S. Only\)](#) • [Commission Federale de la Communication \(FCC Declaration\)](#) • [EN 55022 Compliance \(Czech Republic Only\)](#) • [VCCI Class 2 Notice \(Japan Only\)](#) • [MIC Notice \(South Korea Only\)](#) • [Polish Center for Testing and Certification Notice](#) • [North Europe Information](#) • [BSMI Notice \(Taiwan Only\)](#) • [Ergonomie Hinweis \(nur Deutschland\)](#) • [Philips End-of-Life Disposal](#) • [Information for UK only](#)

[Safety and Troubleshooting](#) • [Troubleshooting](#) • [Other Related Information](#) • [Frequently Asked Questions \(FAQs\)](#)

TCO '99 Information



Congratulations! You have just purchased a TCO '99 approved and labeled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

Why do we have environmentally labeled computers?

In many countries, environmental labeling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during their manufacture. Since it is not so far possible to satisfactorily recycle the majority of electronics equipment, most of these potentially damaging substances sooner or later enter nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of electricity generation have a negative effect on the environment (e.g. acidic and climate-influencing emissions, radioactive waste), it is vital to save energy. Electronics equipment in offices is often left running continuously and thereby consumes a lot of energy.

What does labeling involve?

This product meets the requirements for the TCO'99 scheme which provides for international and environmental labeling of personal computers. The labeling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

Position A1	Suspend	Amber	< 3 W
Power Saving Position A2	OFF	Amber	< 3 W



As an ENERGY STAR® Partner, PHILIPS has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.



We recommend you switch off the monitor when it is not in use for quite a long time.

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Federal Communications Commission (FCC) Notice (U.S. Only)



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Use only RF shielded cable that was supplied with the monitor when connecting this monitor to a computer device.

To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or excessive moisture.

THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

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Commission Federale de la Communication (FCC Declaration)



Cet équipement a été testé et déclaré conforme aux limites des appareils numériques de class B, aux termes de l'article 15 Des règles de la FCC. Ces limites sont conçues de façon à fournir une protection raisonnable contre les interférences nuisibles dans le cadre d'une installation résidentielle. CET appareil produit, utilise et peut émettre des hyperfréquences qui, si l'appareil n'est pas installé et utilisé selon les consignes données, peuvent causer des interférences nuisibles aux communications radio. Cependant, rien ne peut garantir l'absence d'interférences dans le cadre d'une installation particulière. Si cet appareil est la cause d'interférences nuisibles pour la réception des signaux de radio ou de télévision, ce qui peut être décelé en fermant l'équipement, puis en le remettant en fonction, l'utilisateur pourrait essayer de corriger la situation en prenant les mesures suivantes:

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'équipement sur un autre circuit que celui utilisé par le récepteur.
- Demander l'aide du marchand ou d'un technicien chevronné en radio/télévision.



Toutes modifications n'ayant pas reçu l'approbation des services compétents en matière de conformité est susceptible d'interdire à l'utilisateur l'usage du présent équipement.

N'utiliser que des câbles RF armés pour les connections avec des ordinateurs ou périphériques.

CET APPAREIL NUMERIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU REGLEMENT SUR LE MATERIEL BROUILLEUR DU CANADA.

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EN 55022 Compliance (Czech Republic Only)

This device belongs to category B devices as described in EN 55022, unless it is specifically stated that it is a Class A device on the specification label. The following applies to devices in Class A of EN 55022 (radius of protection up to 30 meters). The user of the device is obliged to take all steps necessary to remove sources of interference to telecommunication or other devices.

Pokud není na typovém štítku počítače uvedeno, že spadá do třídy A podle EN 55022, spadá automaticky do třídy B podle EN 55022. Pro zařízení zařazená do třídy A (chranné pásmo 30m) podle EN 55022 platí následující. Dojde-li k rušení telekomunikačních nebo jiných zařízení je uživatel povinen provést taková opatření, aby rušení odstranil.

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Brief Description of Circuit Functions

Function Description for Hudson2-200P

1. General

The 20.1" UXGA TFT LCD monitor is specified as a display peripheral with analog,digital(DVI),CVBS,S-video and audio function. Horizontal scan range is 30KHz-94KHz(for analog),30KHz-91KHz(for digital) and the refresh range is 56Hz-85Hz in normal mode.This scan range allows it to display resolution up to 1600x1200@75Hz(for analog),1600*1200@60Hz(for digital) non-interlace input.

The image can be adjusted by OSD control.These adjustments can be stored in an onboard memory.

2. Power supply

Main voltage : AC 90-264V rms,50-60Hz

Power consumption : 65W Max.

Power indicator : LED(on:green,standby:amber)

Auto power saving : VESA DPMS

3. Input signal

Horizontal scan : 30-94KHz(for analog),30-91KHz(for digital)

Vertical scan : 56-85Hz(from VGA to SXGA for analog/digital),
60-75Hz(for UXGA analog),
60Hz(for UXGA digital)

Input signals :

A. D-sub /DVI-analog signal input level

Video : 0.7Vp-p linear/75 ohms

Sync : H/H+V,V TTL level,composite sync,
sync on green

B. Analog signal impedance

Video : Terminated with 75 ohms

Sync : Terminated with 2K2 ohms

C. Intel DVI- digital Single channel TMDS signal

D. CVBS

Video : 1Vp-p linear/75 ohms

Sync : composite sync 0.3Vp-p combined with video

E. S-video

Separated Luminance(Y) and Chrominance(C) signals

Y input : 1.0Vp-p/75 ohms

C input : 0.3Vp-p/75 ohms

4. OSD(On Screen Display) function

Software control function via OSD

-Main controls:

Language----- 6 Languages

Adjust position-----Horizontal,Vertical

Adjust Size----- Full screen,Native mode,Fill with aspect

Brightness & Contrast-- Brightness, Contrast

Video Noise----- Phase, Clock

Adjust color----- Original panel color,9300K,6500K,User preset

OSD Settings----- Horizontal,Vertical

Product information----- Serial No,Resolution,Signal input

Input selection-----Analog(D-SUB),Analog(DVI),
Digital(DVI), CVBS,S-Video

Reset to factory setting-- No/Yes

Exit Main controls

5. LCD Panel

Type : 20.1” LCD flat panel

Dimensions : 20.1”(467.8x361x24.1mm)

Pitch : 0.255mmx0.255mm

Color pixel arrangement : RGB vertical stripes

Number of color : 256 gray level (8 bits)

Backlight : 6 CCFL's

Active area (W*H) : 408x306mm

6. Function block

ADC

- Included video switch,support 2-channel RGB input.
- Sample the input video signal according to its pixel rate to form a digital data for format converter IC.

TMDSRx

- Convert serial digital signal to parallel digital RGB signal ,it can reduce EMI.

Video Decoder

- Convert composite video(CVBS) & S-video signal to digital YUV signal.

Scaler

- Built in microprocessor, frame buffer, GPIO, mode detect.
- Convert the image data from ADC, TMDSRx or Video Decoder to LCD panel data format.
- Zoom the input video to full screen display.

TMDSTx

- Convert digital image signal to serial TMDS signal.

Audio/Control Board

- Provide audio in/out, mute, volume control, microphone in/out, earphone
- Provide DCSW, OSD, UP/Brightness+, Down/Brightness-, Right/Volume+, Left/Volume-, Auto, Mute, Source, PIP key.

Inverter

- Accept +18VDC voltage.
- Provide 750Vrms voltage for CCFL.

Power supply

- AC adapter : AC power input from 90VAC to 264VAC
can generate +18VDC power
- DC to DC converter : Convert +18V to +5V and +3.3V