

Philips LCD widescreen monitor

56cm/22" wide WSXGA+

# 220TW9FB



# Digital HD-TV monitor in a stylish package

Combine work and entertainment with this widescreen multi-function monitor! With a large, wide viewing area, TV, video and HDMI input plus built-in speakers, the Philips 220TW9 boosts your productivity and brings you ultimate enjoyment.

#### Outstanding front of screen performance

- · Crystal Clear III for natural images with enhanced quality
- HD LCD display, with a 1680 x 1050p resolution
- Ready to display HD content
- 5ms fast response time

### **Great convenience**

- Built-in TV tuner for viewing TV programs on your PC monitor
- 2 HDMI inputs for full digital HD connection in one cable
- EasyLink: easy control of TV & connected device via HDMI CEC
- Smart mode selects a perfect mode for what you are watching
- Easy-to-use remote control included

# For advanced performance

• Incredible Surround for enhanced audio enjoyment

#### Ready for digital

• Integrated Digital Tuner for DVB-T reception



# Highlights

#### **Crystal Clear III**

Crystal Clear III combines a whole range of enhancements to provide a better picture. They include a 2D Comb filter, Dynamic contrast, Blue stretch and Green enhancement so that you always get the most natural looking colors.

#### **Built-in TV tuner**

A television tuner built into a monitor to display television signals as well as computer data.

#### 5ms on/off response time

On-Off response time is the period required for a liquid crystal cell to go from active (black) to inactive (white) and back to active (black) again. It is measured in milliseconds. Faster is better: Lower response time means faster transitions and, therefore, results in fewer visible image artifacts in the display of transition of texts and graphics. On-Off response time is a more important measure in the display of business content like documents, graphs and photos.

## 2 HDMI inputs

HDMI makes an uncompressed digital RGB connection from the source to the screen for the ultimate picture quality. HDMI intelligently communicates the highest output resolution with the source device. The HDMI input is fully backward compatible with DVI sources and includes digital audio. HDMI uses HDCP copy

protection. With one HDMI inputs on the back and one HDMI on the side of the TV you can connect multiple HD sources, for instance an HD settop box, a Blu-ray player, and game console or digital Camcorder. Your TV is fully prepared for the HD future.

#### **EasyLink**

EasyLink uses the HDMI CEC industry standard protocol to share functionality between connected devices and the TV. With EasyLink only one remote control is needed to operate main functionalities on your TV and connected devices. EasyLink uses the standard HDMI cable to transfer system commands. It works between all electronic devices equipped with HDMI CEC.

#### **Smart mode**

The optimum picture and sound depends on various aspects like the video source, content type, surroundings of the room, type of display device etc. Smart Mode has predefined picture and sound settings conveniently preset by the way you use your TV. The 'Personal' setting, allows you to define the picture settings according to your preference, store it and gain easy access for future selection. All these conveniently built into your TV for optimal settings.

# **Incredible Surround**

Incredible Surround is an audio technology from Philips that dramatically magnifies the

sound field to immerse you in the audio. Using state-of-the-art electronic phase shifting, Incredible Surround mixes sounds from left and right in such a way that it expands the virtual distance between the two speakers. This wider spread greatly enhances the stereo effect and creates a more natural sound dimension. Incredible Surround allows you to experience total surround with greater depth and width of sound, without the use of additional speakers.

#### **Integrated Digital DVB-T tuner**

The integrated Digital DVB-T tuner lets you receive digital terrestrial TV without an additional set top box. Enjoy quality TV clutter free.

# High definition monitor

A high definition monitor is a display device designed to deliver the exceptional picture quality of high definition pictures, one fully prepared for HD sources like HD set top boxes. A HD monitor offers picture quality beyond that of progressive scan, conforming to strict standards for HD screens that display high resolution, top picture quality signals through a universal connection for either analog VGA or uncompressed DVI digital connections and supports HDCP. It displays 720p (1280x720p @ 50 and 60 Hz progressive) and 1080i (1920x1080i @ 50 and 60 Hz interlaced) signals.

















# Specifications

#### Picture/Display

- Aspect ratio: Widescreen
- Brightness: 300 cd/m<sup>2</sup>
- Contrast ratio (typical): 1000:1
- Response time (typical): 5 ms
  Viewing angle: 170° (H) / 160° (V)
- Diagonal screen size: 22 inch / 56 cm
- Display screen type: LCD WSXGA Active Matrix
- Panel resolution: 1680 x 1050p
- Picture enhancement: Crystal Clear III, 2D Combfilter, 3/2 - 2/2 motion pull down, White stretch, Progressive scan, Smart Picture
- · Screen enhancement: Anti-Reflection coated

#### **Supported Display Resolution**

Computer formats

Resolution	Refresh rate
$640 \times 480$	60Hz
$800 \times 600$	60Hz
$1024 \times 768$	60Hz
$1280 \times 1024$	60Hz
$1440 \times 900$	50Hz, 75Hz
1680 x 1050	50Hz, 60Hz

Video formats

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Resolution	Refresh rat
480i	60Hz
480p	60Hz
576i	50Hz
576p	50Hz
720p	50, 60Hz
1080i	50, 60Hz

#### Sound

- Output power (RMS): 2 x 5W
- · Sound Enhancement: Auto Volume Leveler, Incredible Surround, Smart Sound
- Sound System: Mono, Stereo

# Convenience

- Clock: Sleep Timer, Start timer, Stop timer
- · Connection Enhancement: Easy link
- · Ease of Installation: Auto Program Naming, Automatic Channel Install(ACI), Automatic Tuning System (ATS), Fine Tuning, PLL Digital Tuning, Plug
- Ease of Use: Auto Volume Leveller (AVL), On Screen Display, Program List, Side Control
- Electronic Program Guide: Now + Next EPG, 8 day Electronic Program Guide
- · Picture in Picture: Text dual screen

- Remote Control: TV
- Remote control type: RCPF05E08B
- Screen Format Adjustments: 4:3, Movie expand 14:9, Movie expand 16:9, Subtitle Zoom, Super Zoom, Widescreen
- Teletext: 100 page Smart Text
- Smart mode: Movie, Personal, Power saver, Standard, Vivid

#### Tuner/Reception/Transmission

- Aerial Input: 75 ohm coaxial (IEC75)
- TV system: PAL I, PAL B/G, PAL D/K, SECAM B/G, SECAM D/K, SECAM L/L'
- · Video Playback: NTSC, SECAM, PAL
- Digital TV: DVB Terrestrial \*
- Tuner bands: Hyperband, S-Channel, UHF, VHF
- Tuner Display: PLL

#### **Connectivity**

- Ext 1 Scart: Audio L/R, CVBS in/out, RGB
- Ext 2: S-video in, CVBS in, Audio L/R in
- Ext 3: YPbPr, Audio L/R in
- HDMI 1: HDMI v1.3
- HDMI 2: HDMI v1.3
- EasyLink (HDMI-CEC): One touch play, System standby
- · Other connections: Headphone out, PC Audio in, PC-In VGA, S/PDIF out (coaxial), Common Interface

#### **Power**

- Ambient temperature: 5 °C to 35 °C
- Mains power: 100-240V, 50/60Hz
- Power consumption: 55 W
- Standby power consumption: <0.3 W

#### **Dimensions**

- Set dimensions (W  $\times$  H  $\times$  D): 534  $\times$  397  $\times$  71 mm
- Set dimensions with stand (W x H x D): 534 x 442 x 181 mm
- Weight incl. Packaging: 7.77 kg
- Product weight: 5.5 kg
- · Product weight (+stand): 6 kg
- Box dimensions (W x H x D):  $580 \times 510 \times 137 \text{ mm}$
- VESA wall mount compatible: 100 x 100 mm

#### **Accessories**

• Included accessories: Table top stand, Power cord, Quick start guide, User Manual, Warranty certificate, Remote Control, Batteries for remote



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