



KEY FEATURES

- As PENTAX's 11th generation waterproof digital camera, this rugged, adventure-proof camera is ideal for any environment.
- Waterproof to 20 feet for reliable underwater photography by the pool or in the ocean.
- Shockproof to 4 feet to withstand the rigors of extreme use.
- Coldproof to sub-freezing temperatures for use in chilly wintry, snowy activities.
- Dustproof for use in dry, sandy climates from the beach to the desert.
- 12.1 megapixel sensor and wide angle 5X optical zoom (28-140mm equivalent) ensure detailed images of any subject near or far.
- Large 2.7 inch LCD, with 16:9 widescreen aspect ratio, is easy to view even in strong light or underwater.
- Digital Microscope mode with LED lens lighting perfectly captures even the smallest and closest macro subjects as near as 1cm from the camera.
- An HDMI port plays back beautiful high resolution images and video on HDTV's.
- Capture movies in widescreen 720p HD video at 30 frames per second.
- Advanced Pixel Track Shake Reduction captures blur-free images in any lighting.
- Take perfect portraits with fast Face Detection, Smile Capture, Blink Detection, and processing modes specifically designed for portraiture.
- Capture images remotely with infrared remote control capabilities.
- An autofocus assist lamp helps to quickly and accurately focus, even in challenging lighting.



DESCRIPTION	PRODUCT #	MAP
Optio W90 Black Kit	16411	\$329.95
Optio W90 Pistachio Green Kit	16426	\$329.95

PENTAX | Optio W90

CAMERA HARDWARE

MODEL: Optio W90
TYPE: Compact Digital Camera
PRODUCT CODE
Black: 16411, UPC: 027075163089
Green: 16426, UPC: 027075164239

SENSOR

Type: 1/2.3" interline transfer CCD w primary color filter
Effective pixels: 12.1
Total pixels: 12.39
Recorded resolutions
Still: 12M (4000x3000), 9M (16:9, 4000x2256), 7M (3072x2304), 5.3M (16:9, 3072x1728), 5M (2592x1944), 3.8M (16:9, 2592x1464), 3M (2048x1536), 2.1M (16:9, 1920x1080), 1024 (1024x768), VGA (640x480)
Movie: HD (1280x720p30/15), VGA (640x480p30/15), QVGA (320x240p30/15)
Quality levels: ★★★ (best), ★★ (better), ★ (good)

LENS

Type/construction: PENTAX zoom lens, 11 elements, 9 groups (5 aspheric elements)
Optical zoom: 5X
Focal length (equiv.): 5-25mm (28-140mm)
Digital zoom: 6.25X
Combined zoom: 31.3X
Intelligent zoom: Approx 6.5X at 7M to 31.3X at VGA
Aperture: F3.5-5.5

LCD/VIEWFINDER

LCD screen: 2.7" widescreen TFT color LCD w anti-reflective coating
LCD resolution: 230,000 dots
Wide angle viewable: Yes
Viewfinder: n/a

FOCUS SYSTEM

Type: TTL contrast detection autofocus, AF assist lamp, Macro Illuminating LEDs
Focus modes: 9 point AF, Spot AF, Auto Tracking AF, Macro, Super Macro, Infinity Landscape, Pan Focus, Manual Focus
Manual focus: Yes
Macro focus: Yes, Macro and Super Macro available
Focus lock: Yes, by pressing the shutter release button half way
Focus range
Normal: 1.64' to infinity
Macro: 0.33-1.97'
Super Macro: 0.03-0.98' (at mid-zoom, set automatically)

FLASH

Type: Built-in series control auto flash
Flash modes: Auto, Flash Off, Flash On, Auto + Redeye, On + Redeye, Soft
Effective range: 13' (wide, auto ISO), 8.2' (tele, auto ISO)

STORAGE MEDIA

Internal memory: 26.7MB
Removable memory: SD, SDHC

INTERFACES

Ports: USB 2.0 hi-speed, AV out, HDMI (type D)
Video out: NTSC, PAL (HDMI out supports Auto, 1080i, 720p, 480p)
Printer interfaces: n/a

POWER SUPPLY

Power source: Rechargeable Li-Ion battery D-Li88
Recordable images: Approx 205
Playback time: Approx 250 min
Movie recording time: Approx 85 min
Audio recording time: Approx 300 min
AC adapter available: Yes (optional)

PHYSICAL SPECIFICATIONS

Dimensions (W x H x D): 4.2 x 2.3 x 1.0"
Weight
Without battery or removable memory: 5.1 oz
Loaded and ready: 5.7 oz
Construction material(s): Reinforced polycarbonate plastic
Operating temperature: 14-104°F (coldproof)
Weather Resistant: Yes, JIS Class 8 waterproof submersible to 20', JIS Class 6 dustproof
Shock Resistant: Yes, shockproof to 4'

TIMING

Startup: Approx 1.3 sec
Release lag: Approx 0.03 sec

LANGUAGE SUPPORT

English, French, German, Spanish, Portuguese, Italian, Dutch, Japanese, Danish, Swedish, Finnish, Polish, Czech, Hungarian, Turkish, Greek, Russian, Thai, Korean, Traditional/Simplified Chinese

KIT COMPONENTS

Optio W90, USB Cable I-USB7, AV Cable I-AVC7, Rechargeable Li-Ion Battery D-Li88, Battery Charge Cradle D-BC88, AC Plug Cord, Strap O-ST20, Carabiner Strap O-ST103, Software CD-ROM S-SW102

OPTIONAL ACCESSORIES

AC Adapter Kit K-AC88U, Battery Charger Kit D-BC88U, [Case](#), [Slipper](#), [Skin](#), Optio Floating Strap (yellow, wrist strap), Remote Control WP, Optio Extended Warranty (+2 year)

IMAGE CAPTURE

IMAGE STABILIZATION

Still: Pixel Track SR, Digital SR (ISO 3200-6400 5M or 3.8M)
Movie: Movie SR

METERING SYSTEM

Type: TTL
Multi-segment: Yes
Center weighted: Yes
Spot: Yes
Exposure compensation: +/- 2 EV (1/3 steps)

ISO SENSITIVITY

Auto: 80-1600 auto range adjustable, Digital SR 80-6400 (ISO 3200-6400 5M or 3.8M)
Manual: 80-6400 (ISO 3200-6400 5M or 3.8M)

WHITE BALANCE

Auto preset modes: Auto, Daylight, Shade, Tungsten, Fluorescent
Manual mode(s): Yes

SHUTTER

Type: Programmed AE electronic lens shutter with CCD electronic shutter
Shutter speed: 1/1500 to 1/4 sec (up to 4 sec in Night Scene mode)

CAPTURE MODES

Mode selection: Auto Picture (*Standard, Landscape, Portrait, Night Scene Portrait, Night Scene, Sport, Flower, Candlelight*), Program, Night Scene, Movie, Underwater, Underwater Movie, Landscape, Flower, Portrait, Digital Microscope (2.1M), Digital Wide (5M), Surf & Snow, Digital SR (ISO 3200-6400 5M or 3.8M), Kids, Pet, Sport, Fireworks, Candlelight, Night Scene Portrait, Text, Food, Digital Panorama (2M per frame), Frame Composite (3M or 2.1M), Report, Green, Voice Recording (via reprogrammable Green button)
Green simplified mode available: Yes
Face detection available: Yes (up to 32 faces in 0.03 sec), Smile Capture, Blink Detection, Pet Recognition (3 faces)
P/A/S/M/B: P
Date stamp: Yes, date, date-time, time (not available in Green mode)
Digital filters (capture): Image Tone (Bright, Natural, Monochrome)
Dynamic Range Adjustment: Yes, highlight and shadow correction

DRIVE MODES

Mode selection: One Shot, Self Timer, Continuous, Burst (5M or 3.8M), Remote Control, Interval, Auto Bracket
Continuous FPS: Approx 1.03 FPS, Burst 2.7 FPS for 6 frames (5M or 3.8M), 5.0 FPS for 6 frames at ISO 3200-6400 (5M or 3.8M)
Self-timer: Yes (10 sec, 2 sec)
Remote control: Infrared (optional)

PLAYBACK MODES

Mode selection: One Shot, Index (6 or 12 thumbnails), Magnification, Movie Playback, Sound Playback, Histogram, Picture In Picture, Bright/Dark Indication, Folder Display, Select & Delete, Calendar
Mode pallet: Slideshow, Image Rotation, Small Face Filter, Ink Rubbing, Collage, Digital Filter, Original Frame (5M or 3.8M), Frame Composite (3M or 2.1M), Movie Edit, Redeye Edit, Picture In Picture, Resize, Cropping, Image & Sound Copy, Voice Memo, Protect, DPOF, Image Recovery, Startup Screen, Face Zooming
Magnification: Up to 10X, scrollable
Digital filters (playback): B&W, Sepia, Toy Camera, Retro, Color, Color Extract, Color Emphasis, High Contrast, Starburst, Soft, Fisheye, Brightness
Movie edit: Save as still image, movie divide, title picture

FILE FORMATS

Still: JPG (EXIF 2.2), DCF 2.0, DPOF, Print Image Matching III
Movie (compression): AVI (Motion JPG)
Sound: WAV (PCM), monaural

FILE STORAGE MATRIX (BASED ON 1GB MEMORY)

STILL	★★★	★★	★
12M	214	419	643
9M	254	508	737
7M	321	598	795
5.3M	385	737	1060
5M	385	737	1060
3.8M	479	959	1474
3M	598	1185	1727
2.1M	876	1727	2325
1024	2084	3556	4650
VGA	4318	6717	7557
MOVIE (H:M:S)	30 FPS	15 FPS	
HD 720p	0:05:00	0:09:46	
VGA	0:14:23	0:27:13	
QVGA	0:21:54	0:40:18	
SOUND (H:M:S)	4:17:56		

COMPUTER SYSTEM REQUIREMENTS*

*For device connectivity. Bundled software requirements may vary.
Windows: Windows XP/Vista/7, USB port
Mac: MacOS-X 10.3.9, 10.4, 10.5, 10.6, USB port