# XA20
## HD Camcorder

**The XA20 is a compact, "run-and-gun" HD camcorder with an impressive optical performance from a powerful new Genuine Canon 20x HD Video Lens with a new 8-Blade Circular Aperture, capable of focusing down to just 60cm (23.6 inches).**

Other features include a 3.5-inch OLED Touch Panel Display with the equivalent of 1.23 million dots of resolution, tiltable electronic viewfinder, multiple HD/SD recording rates - including 24p for a "cinematic" look - together with a choice of industry-standard MP4 (up to 35 Mbps) and AVCHD (up to 28 Mbps) codecs. The high image quality and recording versatility make the XA20 ideal for independent and documentary filmmaking, as well as event videography and educational institutions.

In addition to reducing horizontal and vertical shaking, five-axis SuperRange Optical Image Stabilization eliminates rolling and other artefacts, for sharper images no matter how the camcorder is moved. A new automatic correction circuit can substantially reduce image distortion, thereby producing better-looking videos.

A detachable handle offers increased control functionality, with a built-in microphone holder and XLR-format audio inputs. Infrared shooting with little to zero ambient light offers additional flexibility during, for example, surveillance and wildlife projects; the detachable handle also includes an IR light.

Dual-band, built-in Wi-Fi® technology allows easy FTP file transfer and upload to the internet. And intelligent lithium batteries report remaining power and battery-wear levels in one-minute increments to the camcorder, thereby taking the guesswork out of battery management.

## Key Features

### Professional level optical performance and high definition

- Three newly-developed key components
  - Newly-developed wide angle lens with 20x optical zoom
  - New HD CMOS PRO Image Sensor
  - New DIGIC DV 4 image processing platform

### Professional level operability

- Enhanced "seesaw" style zoom lever operation
- Zoom function added to the focus ring
- Custom dial provides control over exposure, AGC limit, etc.
- 3.5-inch, 1.23 million-dot equivalent OLED electrostatic touch screen
- 1.56 million-dot high-resolution angle-adjustable CVF

### Professional level Shooting Assist Functions

- Professional level MP4 recording
  - Supports high definition MP4 50P (35Mbps) recording
- Supports MP4 (3Mbps) movie recording used for breaking news broadcasts
  - Supports simultaneous recording (AVCHD+MP4, MP4+MP4)
  - Supports slow/fast motion recording (MP4 format)
- Supports AVCHD 50P (28Mbps) recording

### Professional level expandability

- Attachable handle featuring 2 XLR terminals
- Supports use of GPS accessory
- Equipped with headphone and remote terminal
- Equipped with Wi-Fi module for wireless connectivity

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## XA20 Technical Specifications

| CAMERA | |
|---|---|
| **Image Sensor** | |
| Sensor | 1/2.84 type HD CMOS Pro |
| System | Bayer pattern filter |
| Total pixels per sensor | Approx. 3.09 megapixels |
| Effective pixels per sensor | Approx. 2.91 megapixels (2136 x 1362) |
| Minimum illumination | Slow Shutter: 0.1 lux |
| Horizontal Resolution | 1000 TV lines or more (Full HD recording) |
| **Lens** | |
| Zoom ratio | 20x |
| Focal length | 26.8 - 576mm (35mm equivalent / 28.8-576mm with Dynamic IS on) |
| Minimum focus distance | 60cm (throughout zoom range);<br>20mm (wide angle) |
| ND filter | Built-in gradation filter (Auto or Off) |
| Zoom control | Zoom rockers on body and handle; Selectable manual zoom/focus ring on lens; Selectable High Speed and Soft Zoom modes available. |
| Zoom speed | Variable (body rocker only) or Constant speed (body and handle rocker; Fast/Normal/Slow, 16 speed level settings in each) |
| Focus control | MANUAL: Lens ring, Touchscreen OLED (touch Focus, Touch and Track), Focus Preset<br>AUTO: Face Priority AF / Face Only AF / Instant AF / Medium AF / TV AF" |
| Iris control | Custom dial; Touchscreen; Auto |
| Aperture range | f1.8 - f8 |
| Filter diameter | 58mm |
| Lens elements/groups | 12/10 |
| Aperture blades | 8 Blade Circular Aperture |
| Image stabilization system | Optical lens shift system (angle & vector movement detection) + electronic stabilisation; 4 modes: Intelligent (Auto), Dynamic, Standard, Powered |
| Digital zoom | Up to 400x; Built-in 2x Digital Teleconverter (cannot be used with Digital Zoom) |
| **Image Processor** | |
| Type | DIGIC DV 4 |

| RECORDING | |
|---|---|
| Video storage media | SDXC/SDHC/SD memory card (2 card slots);<br>Dual Format recording, Double slot (simultaneous) recording and Relay (continuous) recording possible.[1] |
| Type | Class 6 (or higher) cards recommended for 1080/50P recording; Class 4 (or higher) cards recommended for other Full HD recording |
| Recording time | 128GB SDXC card:<br>10hrs 10mins (AVCHD max. quality)[1]<br>8hrs 00mins (MP4 max. quality)[1]<br>91hrs 55mins (MP4 lowest quality)[1] |
| Recording file format | AVCHD Progressive (v2.0, high profile); MP4 |
| Recording format | AVCHD (all modes variable bit rate, 4:2:0 colour sampling): 1920x1080: 50p (28Mbps, linear PCM audio available); 1920x1080: 50i/PF25 (24Mbps, 17Mbps); 144x1080: 50i/PF25 (5Mbps)<br>MP4 (all modes variable bit rate, 4:2:0 colour sampling):<br>1920x1080: 50p (35Mbps);<br>1920x1080: 25P (24Mbps, 17Mbps);<br>1280x720: 25P (4Mbps);<br>640x360: 25P (3Mbps) |
| Slow/Fast motion | YES (MP4 HD mode only, 2x fast motion, 0.5x slow motion) |
| Interval Record | NO |
| Frame Record | NO |
| Pre Record (cache record) | YES (3 seconds) |
| Scan Reverse | NO |
| HD->SD conversion | YES (AVCHD to MP4) |
| Internal Data Transfer | MOVIE & STILLS: Yes (internal memory to card, card to card) |
| Photo storage media | SDXC/SDHC/SD memory card |
| Still quality | During video recording or playback: 1920 x 1080/1280 x 720/640 x 360 |

| SYSTEM | |
|---|---|
| **Monitoring Panel** | |
| Type | Capacitive Organic LED |
| Size | 8.8cm (3.5"), 100% view |
| Dots | 1.23 million-dot equivalent |
| Image quality adjustments | Brightness, backlight, OLED colour balance |
| Adjustable | YES (270 degree rotation about horizontal axis) |
| Waveform Monitor | NO |
| Focus Assist | Peaking; Magnifying |
| Peaking | YES |
| Zebra | YES (70% or 100% reference level) |
| Markers | ON/OFF (Level, Grid) |
| **EVF** | |
| Size | 0.61cm (0.24"), 100% view |
| Dots | 1.56 million dots equivalent |
| Adjustable | YES (tiltable to 45 degrees) |
| Correction lens | + 2.0 to -5.5 diopter |
| **Inputs/Outputs** | |
| Audio in | XLR inputs with 48V phantom power (x2), 3.5mm microphone input jack |
| Headphone output | 3.5mm stereo jack |
| Video monitor output | NO |
| HDMI | YES (HDMI™ mini connector, output only, 1080/50p output possible) |
| IEEE 1394 (Firewire) | NO |
| USB | YES (Mini-B, USB 2.0 Hi-Speed, output only) |
| HD/SD-SDI output | NO |
| Time code | YES (Superimposed on HDMI Output signal) |
| Genlock | NO |
| Component out | NO |
| AV terminal | 3.5mm mini jack (output only for video and audio) |
| DC input | YES |
| Remote Control Terminal | 2.5mm mini jack |
| Colour Bars | YES (SMPTE or EBU), with 1KHz Tone |
| **Misc** | |
| Tally lamp | YES, in detachable handle |
| Accessory shoe | YES (cold shoe) |
| Custom key | YES (5 assignable buttons; select from 22 functions) |
| Custom Dial | YES (Shutter Priority (Tv), Aperture Priority (Av), Manual Exposure, exposure compensation, AGC limit) |

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## XA20 Technical Specifications

### SHOOTING FUNCTIONS

| | |
|---|---|
| **Exposure** | |
| Exposure metering | Centre-weighted average or segment evaluative (determined by shooting mode); No metering: Fireworks mode, Fixed exposure (1/50 sec.) |
| Exposure compensation | -3 to +3 EV (12 steps); Backlight Correction available (Auto or always on) |
| Auto Exposure mode | Smart Auto, Face Detection AE; Manual control via Touch Exposure and Exposure Compensation functions. |
| Push Auto Iris | YES (via touchscreen) |
| Exposure Lock | YES |
| Auto Gain Control setting | Auto / Manual |
| Auto Gain Control limit | 0 to 24dB, 1dB increments (0 to 18dB in Cinema Mode) |
| Gain setting | 0 to 24dB, 1dB increments (0 to 18dB in Cinema Mode) |
| **Shutter speed** | |
| Control Modes | Full Auto / Manual control (touchscreen LCD or control dial) |
| Shutter speed | 1/6 to 1/2000 (depending on Scene Mode and frame rate) |
| Clear Scan | NO |
| **Infrared** | |
| Infrared shooting mode | YES (green or white) |
| Built-in IR lamp | YES, in detachable handle |
| **3D Shooting Assist** | |
| OIS Axis Shift | NO |
| Focal Length Guide | NO |
| **Shooting Modes** | |
| Smart AUTO | YES |
| Program AE | AUTO; M mode: P, Tv, Av, M (manual exposure), SCN (Portrait, Sports, Snow, Beach, Sunset, Night, Low Light, Spotlight, Fireworks); Cinema mode: P, Tv, Av, M |
| Cinema Features | Cinema-Look Filter (9 options, including customisable 'Cinema Standard') |
| Image Effects | Brightness, Contrast, Sharpness, Colour Depth |
| **Wi-Fi & GPS Specifications** | |
| Wireless LAN standards | IEEE 802.11b/g/n (2.4GHz band) / IEEE 802.11a/n (5GHz band)[2] |
| Supported Wi-Fi Functions | Remote Operation; Movie Uploader (YouTube and Facebook)[3]; Playback (in browser); Media Server; FTP File Transfer |
| Supported Browser for Remote Operation | Internet Explorer 8 or later, Safari (iOS), Safari (MacOS), Android standard browser |
| Remote Operation Control Features | Aperture, Focus, WB, shutter Speed, Gain, Exposure Compensation, Shooting Mode, Slot select, Start/Stop Recording |
| Live view image Resolution | Camera setting mode: 680 x 383; Simplified setting: 284 x 160 |
| Authentication Systems | Open/WPA-PSK/WPA2-PSK |
| Encryption | WEP64, WEP128, TKIP, AES |
| GPS Information (Optional Accessory) | Latitude/Longitude/Elevation, Coordinated Universal Time (UTC) |
| **White balance** | |
| Auto | YES |
| Preset | 6: Daylight, Shade, Cloudy, Tungsten (incandescent lamps or halogen bulbs), Fluorescent H (3-wavelength type fluorescent), Fluorescent (white fluorescent) |
| Manual setting | Set 1, Set 2, Colour Temperature (2,000–15,000K, 100K steps) |
| **Time code** | |
| Countup system | Regen/Rec Run/Free Run/Preset (Non-Drop Frame) |
| Start value setting | "00:00:00:00", Set/Reset selectable |
| **Audio** | |
| Recording | AVCHD: Linear PCM[4] (2ch, 16 bit, 48 kHz) or Dolby Digital (AC-3 2ch, 48kHz)<br>MP4: MPEG-2 AAC LC (2 ch) |
| Control | Audio controls include:<br>- Independent 2ch Line/Mic/Mic+48V input;<br>- Independent level control per channel (-∞ to +18 dB);<br>- Independent audio limiters (2 ch);<br>- Input mic trimming |
| Microphone attenuation | Auto/On/Off (20dB) |
| Microphone level meter | YES |
| Zoom Microphone | YES (customisable frequency response and directivity) |

### ACCESSORIES

| | |
|---|---|
| Supplied | Lens hood with barrier, Mic holder unit, Handle unit (HDU-1), Wireless Controller (WL-D89), Battery Pack BP-820, High Speed HDMI Cable (HTC100/S), Compact Power unit CA-570, AC Cable, Interface Cable (IFC-300PCU/S), Stereo Video Cable (STV-250N), Data Import Utility Ver2.0 |
| Optional | Canon Battery Pack BP-820/BP-828,<br>Canon Compact Power Adapter CA-570,<br>Canon Battery Charger CG-800E/CG-800B,<br>Canon HDMI cable HTC-100,<br>Canon Stereo Video Cable STV-250N,<br>Canon Tele Converter TL-H58,<br>Canon Wide Attachment WA-H58,<br>Canon Wireless Microphone WM-V1,<br>Canon Soft Carrying Case SC-2000,<br>Canon PROTECT Filter 58 mm, Canon ND4-L Filter 58 mm,<br>Canon ND8-L Filter 58 mm,<br>Canon GPS Receiver GP-E2,<br>Canon Battery Video Light VL-10Li/VL-10LiII *(Model A/B only)*,<br>Canon Battery Pack BP-900 series *(for VL-10Li/VL-10LiII)*,<br>Canon Compact Power Adapter CA-910/920/930 *(for charging BP-900 series)* |
| **Battery** | |
| Backup power supply | Lithium coin battery (built-in) |

### MISCELLANEOUS

| | |
|---|---|
| Dimensions | Approx. 109 x 84 x 182 mm (main body only)<br>Approx. 131 x 180 x 231 mm (fully equipped) |
| Detachable handle | YES |
| Weight (camera only) | Approx. 765 g |
| Weight (fully equipped) | Approx. 1155 g |
| Operating Temperature range | -5°C to +45°C, 60% relative humidity |

**Disclaimer**

1. After 12 hours of continuous recording, camcorder will stop recording and re-start automatically. Simultaneous/Dual Format recording not available in 1080/50P modes.
2. 5Ghz not available in Qatar
3. iOS devices only, excludes MP4 1080/50P mode
4. AVCHD 1080/50P mode only

All specifications are subject to change without notice

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## Supporting features of the Canon XA20 HD Camcorder

FULL HD 1920×1080
HD Video Lens
DiG!C DV 4
WiFi CERTIFIED
MP4 35Mbps
Mac Works with iMovie
Audio Scene SELECT
SETUP
High quality Microphone
POWERED IS
SuperRange OPTICAL IMAGE STABILIZER DYNAMIC
24p Native Progressive
SD XC
Cinema-Look Filter
HD CMOS FULL HD 1920×1080
Instant AF
INTELLIGENT IS
OPTICAL WIDE-ANGLE LENS
Pre REC
OLED
AVCHD Progressive
Face Detection Technology
Video Snapshot
8-Bladed Circular Aperture
Smart AUTO
Double Slot
Touch Panel

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