

Data Sheet

CHRONOS Q12 HIGH-SPEED CAMERA

Built for high-frame-rate performance at standard resolutions.

The Chronos Q12 is a compact, high-speed camera designed to capture fast-moving events in exceptional detail. Recording up to 2,313 frames per second at 2560 × 2016 resolution, the Chronos Q12 combines high frame rates with high-resolution imaging in a portable, user-friendly design. Its built-in touchscreen and flexible connectivity make it well suited for research, engineering, industrial, and field applications.

AVAILABLE IN COLOR

MAIN FEATURES

ULTRA HIGH-RESOLUTION

Up to 2,313 FPS @ 2560 x 2016

FLEXIBLE WINDOWING

Adjustable up to 29,515 FPS @ 128 x 32

STANDALONE OPERATION

A built-in 5" touchscreen allow for easy recording and review. Additional external battery required for field work (not included).



Lens not included

RAW OR COMPRESSED

Save files as CinemaDNG (Raw), MPEG-4 (Compressed) and TIFF (Uncompressed) formats.

INTERCHANGEABLE LENS MOUNTS

C, E, EF, F, MFT and PL lens mount plates available. All lens mounts are passive.

REST API for automation. Network connection via USB-C to Ethernet or WiFi adapter.

INDUSTRIES

Academic Research

Media Production

Industrial / Manufacturing

Sports / Biomechanics

Engineering / R&D

Wildlife

RESOLUTION & FRAME RATES

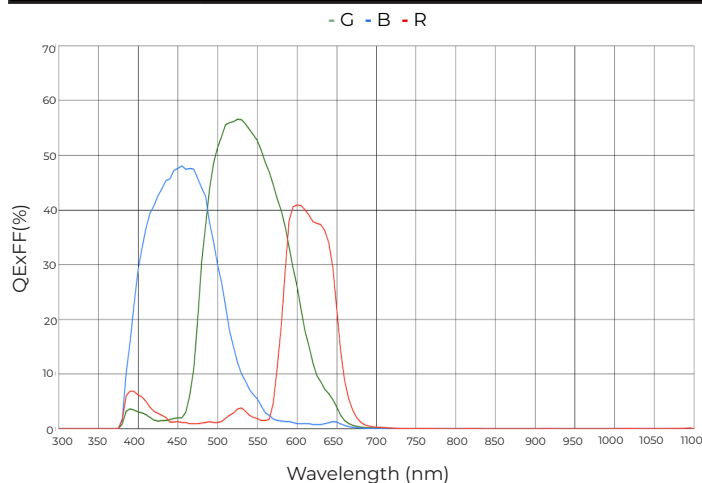
CAPTURE RESOLUTION	8-BIT 16.7 Million Colors	10-BIT 1.07 Billion Colors	12-BIT 68.7 Billion Colors
2560 x 2016	2,313 FPS	1,900 FPS	975 FPS
2048 x 2016	2,782 FPS	1,933 FPS	975 FPS
2048 x 1080 (2K Cinema)	4,740 FPS	3,368 FPS	1,731 FPS
1920 x 1080 (Full HD)	5,148 FPS	3,368 FPS	1,731 FPS
1536 x 1536	4,662 FPS	2,479 FPS	1,260 FPS
1536 x 1152	5,938 FPS	3,204 FPS	1,643 FPS
1536 X 864	7,471 FPS	4,103 FPS	2,130 FPS
1280 x 1024 (Machine Vision)	6,620 FPS	3,549 FPS	1,829 FPS
1280 x 720 (HD 720p)	8,548 FPS	4,688 FPS	2,453 FPS
768 x 576	10,199 FPS	5,704 FPS	3,026 FPS

CAMERA OVERVIEW

CAMERA	
Model	Color
Imaging	2560 x 2016 @ 2,313 FPS
Memory	64GB, 128GB
Record Time	5.7 (64 GB), 11.5 seconds (128GB) at max resolution
Lens Mount	C, E, F, EF, MFT and PL Mounts (Passive mounts)
Backfocus	Field adjustable via included shim kit
IR Filter	650nm, user removable
Display	5" 800x480 touchscreen, 1000 nit daylight visible
Enclosure	Anodized CNC machined aluminum
Cooling	Active cooling, variable-speed fans
Dimensions	188mm x 111mm x 53mm (7.40" x 4.37" x 2.08") w/o lens
Weight	1.32 kg (2.91 lbs) without lens

CAMERA SPECIFICATIONS - CHRONOS Q12 HIGH-SPEED CAMERA

INPUTS/OUTPUTS	
Power Input	12-24V 60W (5.5/2.5mm barrel jack, positive tip)
Network	Gigabit Ethernet via USB-C Adapter
Trigger	2 trigger inputs/frame strobe outputs (4-pin 3.5mm TRRS Connector) Adjustable input threshold 0 to 6.6V
Video Out	4096 x 2160 at 30 FPS 3840 x 2160 at 30 FPS 1920 x 1080 at 60FPS
USB	USB-C Port 1: 3.2 Gen 1, 5 Gbps (Peripheral) USB-C Port 2: 3.2 Gen 2x2, 20 Gbps (Peripheral, SSDs)
VIDEO FORMATS	
Compressed	Standardized H.264 AVC, or H.265 HEVC MPEG-4 Video Files
RAW	Standard Adobe CinemaDNG raw files
TIFF	Standard TIFF files with timestamps
STORAGE	
Internal	Internal 1 TB NVMe SSD, SD Card
External	USB-C SSD
Network	SMB/NFS network drives
IMAGE SENSOR	
Sensor Type	CMOS APS-C
Resolution	2560 x 2016 @ 2,313 FPS Maximum 128 x 32 @ 29,515 FPS Minimum
Speed	11.9 Gigapixels per second
Dimensions	23.04mm (H) x 18.14mm (V); 29.3mm Diagonal
Crop Factor	1.5X
Pixel Pitch	9 µm
Sensitivity (ISO)	Color - ISO 80 to 640
Shutter	Electronic global shutter, 1/fps to 4µs (1/250,000 s)
Dynamic Range	11.26 stops (67.6 dB) in 12-bit mode 8.35 stops (50.1 dB) in 8-bit mode
Bit Depth	8-bit, 10-bit, 12-bit User Selectable
IMAGE SENSOR - QUANTUM EFFICIENCY	



TRIGGER MODES	
End Trigger	Records until a defined delay after trigger
Toggle	Starts and stops with button press
Exposure Trigger	External signal sets synchronization frame-rate
Shutter Gating	External signal sets the exposure synchronization and frame-rate
Frame Sync Output	Outputs a signal indicating its frame-rate and exposure
SOFTWARE	
API	HTTP REST Interface, Open-source codebase
NETWORK CONTROL	
Network Control	REST API via optional Ethernet adapters
RECORDING MODES	
Normal	Records into the ring buffer. Once a trigger occurs, video can be reviewed and saved.
ASSISTIVE	
Focus Aid	Highlights sharp edges to aid focusing
Zebras	Rolling diagonal lines indicate clipped (overexposed) areas
Histogram	Graphically represent brightness and distribution of light in the image
Overlay	Displays frame and time information on top of footage
ENVIRONMENTAL	
Operating Temperature	0 °C to +40 °C (32 °F to +104 °F)
REGULATORY COMPLIANCE	
USA	FCC - 47 CFR Part 15
Canada	ISED ICES-Gen Iss.1 & ICES-003 Iss.7
EU / UK / AUS / NZ	CE EN IEC 61000-6-3:-2021, 61000-6-2:2019
Korea	KS C 9610-6-3:2017, 9610-6-2:2019
Japan	VCCI-CISPR32:2016
SERVICE & SUPPORT	
Standard 1 year warranty. Optional 1 and 2 year extensions available. Chronos high-speed cameras benefit from free software updates, which offer continuous additions and improvements to in-camera features. Support, tutorials, and software updates are available online at support.krontech.ca	

