EXTREME ENVIRONMENT EQUIPMENT TECHNOLOGY

DATA SHEET
DIGITAL STILLS SUBSEA CAMERA
RAYSTILLS - 003PWRSHT

Mechanical Specifications

Outside Dimensions:	200mmØ
Length:	150mm excluding underwater connectors
Depth Rating:	1500msw
Veiwing port:	Water corrected CR30
Material:	6061-T6 Black Anodised Marine Grade Aluminium
Access:	Two stainless steel spring clips.
Test port:	7/16 UNF GAJON hex plug

Electronic Interface Specifications
The interface electronics allows for the folllowing:
- Power supply for the camera set at 8.6Vdc.
- Composite video line driver relay video up 1500m COAX max. (Remote View Finder)
- Second video interface for twisted pair cable.
- Control of camera shooting "Half Press" and "Full Press".
- Time interval shooting. From 0.5 TO 60 Seconds.
- Programmable power and sequence shooting for stand alone applications.
- 4 x usable programmable dry relay outputs.
- Interface between hot shoe and strobe.
- LANC or RS232 output interfaces.
- RS485 Communication up to 1500m twisted pair.
- Overvoltage protection and reset-able fuses on video and Communication lines.
- Firm and software can be configured for specialised or customer requirement.
- Networking of multiple units on single communication line up to 24 units.

Electrical Specifications

Underwater Connector:

Main:	MCBH-8-F/SS
SD Camera:	MCBH-8-M/SS
Strobe:	MCBH-5-F/SS

HDD Camera Pin Outs

1	-	Screen
2	-	Video
3	-	+ RS485
4	-	- RS485
5	-	0Vdc Supply
6	-	24Vdc Supply
7	-	Video +
8	-	Video –

Strobe Camera Pin Outs

1	-	Trigger
2	-	Detect
3	-	Ready
4	-	Quench
5	-	0Vdc

SDD Camera Pin Outs

1	-	Screen
2	-	Video
3	-	+RS485
4	-	-RS485
5	-	0Vdc Supply
6	-	24Vdc Supply
7.	-	Spare
8.	-	Spare

Technical Specifications Power Shot G1X

Effective Number of Pixels :	Approx. 14.3 MP High Sensitivity CMOS
Size / Filter Array:	1.5-inch / Primary colour filter (Bayer)
Image Processor:	DiG!C 5
Lens Focal Length (optical) :	15.1 (W) - 60.4 (T) mm
35mm film equivalent:	28 (W) - 112 (T) mm
f/number:	f/2.8 - 16.0 (W) / f/5.8 - 16 (T)
Shutter Speed:	1 - 1/4000 sec. 60 sec. to 1/4000 sec. for Manual and Tv modes.
Zoom:	Optical approx 4x; Digital approx 4x
Image Stabilizer;	Optical (Lens Shift Type), approx 4 steps
Shooting Functions AF System:	TTL Autofocus (Single / Continuous), Servo AF (with Servo AE), Manual
Focusing Frame:	Face AiAF, Tracking AF, Center, FlexiZone
Face Detection:	Auto Focus, Auto Exposure, White Balance, Flash Exposure, Auto Red-Eye correction, Auto Focus Point Zoom, Face Self Timer4
Other Shooting Functions:	Servo AF, i-Contrast, Auto Focus Assist Beam, Auto Focus Lock
Range:	Auto: 40cm - infinity (W), 1.3m - infinity (T), Macro: 20 - 70cm (W), 85 - 1.6m (T), Auto: 20cm-infinity (W), 85cm-infinity (T)
Continuous Shooting (Large/Fine):	Approx 1.9 shots/sec; High-speed HQ: 4.5 shots/sec (max. 6 shots per burst); AF Approx 0.7 shots/sec; LV Approx 0.7 shots/sec
Self-timer:	Approx. 10 sec or 2 sec delay, custom
Control/Balance Light Metering:	Evaluative, Center-weighted average, Spot
Exposure Control Method:	Program AE, AE Lock available, Manual, Intelligent Contrast Correction, Program Shift, Safety Shift
Exposure Compensation:	± 3 stops in 1/3-stop increments (±2 for exposure shift)
Sensitivity (EquivFilm Speed):	Auto, ISO 100/125/160/200/250/320/400/500/640/800/1000/1250/1600/2000/2500 /3200/4000/5000/6400/8000/10000/12800
White Balance Modes:	Auto, Daylight, Cloudy, Tungsten, Fluorescent, Fluorescent H, Flash, Underwater, Custom 1, Custom 2
Viewfinder / LCD Screen;:	Real-image optical zoom viewfinder with dioptric adjustment (-3.0 - + 1.0m-1 dpt)
LCD Screen:	3.0 inch LCD monitor Vari-Angle type (Movement approx. 175° horizontal, approx. 270° rotational), wide viewing angle (approx 922k dots) and 100% viewing coverage. Aspect ratio: 4:3. Brightness adjustment: 5 levels.
Flash Flash Modes:	Auto, on, off, Red Eye Correction, Red Eye Reduction, Slow Synchro, Second Curtain Synchro, FE Lock, Safety FE, Manual Flash Output
Flash Range:	Normal: 50 cm - 7.0 m (W) 1 m - 3.1 m (T)
Flash Exposure Compensation:	±2 stops in 1/3-stop increments
External Flash Support:	Canon EX series Speedlites via Hot Shoe

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Selectable Shooting Modes: Intelligent Auto (with Scene Detection), P (Program), Tv (Shutter Priority), Av (Aperture Priority), M (Manual), C1, C2, Discreet, Movie, Special Scene (Movie Digest, Portrait, Landscape, Kids & Pets, Sports, Smart Shutter (Smile, Wink Self-timer, Face Self-timer), High-speed Burst HQ, Handheld Night Scene, Beach, Underwater, Foliage, Snow, Firework, Stitch Assist), Creative Filters (High-dynamic Range, Nostalgic, Fisheye Effect, Miniature Effect, Toy Camera Effect,

Monochrome, Super Vivid, Poster Effect, Colour Accent, Colour Swap)

My Colours: Vivid, Neutral, Sepia, Black & White, Positive Film, Lighter Skin Tone, Darker Skin Tone, Vivid Blue, Vivid Green, Vivid Red (Not available for RAW images)

Image Recording Format Stills: EXIF 2.3 (JPEG), RAW (14 bit, CR2 (Canon Original)) **Colour Space and Compression:**   sRGB; Fine, Normal

Movies: MOV (Image Data: H.264; Audio Data: Linear PCM (2 channel stereo))

Recording capacity/ 4GB card: Still Images and Capacity (at Fine Image Setting, 4:3) Large: 4352 x 3264 (1040), Medium 1: 3072 x 2304 (1978), Medium 2: 1600 x 1200 (6352), Small: 640 x 480 (20116), RAW: 4352 x 3264 (190)

Movie Frame Rate: FULL HD 1920x1080: 24fps (14min 34sec), HD 1280x720: 30fps (20min 43sec), SD 640x480: 30fps (43min 43sec)

Playback Operations: Blink Detection, Scroll Playback, Index Playback, Folder Creation, Hints and Tips display, Red-eye Correction, Slideshow, My Category, Index, Resize, Magnified, Focus Check, Advancing and Reversing through magnified images, Jump, Auto Rotate, Histogram, Overexposure Warning, Auto Play

File Operations /, PictBridge: DPOF - Print Order/Image transfer / Yes10

Operating Systems: PC: Windows 7 (including SP1), Windows Vista SP1/SP2, Windows XP SP3; Mac: OS X v10.5 - v10.6

Computer I/F: USB 2.0 Hi-Speed (mini-B compatible)

Video / Audio Output: PAL or NTSC selectable / Stereo

Memory Storage: SD / SDHC / SDXC Memory Card

General Features Battery: Rechargeable Lithium-ion Battery NB-10L