

# 4K CAMERA

## Model BCM-800C4K-003

### DATASHEET



This confidential document was prepared by the BMPTECH team, which also holds its copyright. All rights granted under copyright law and applicable international copyright conventions are reserved to the Company. Reproduction, copying, reprinting, or any form of material reproduction of this document, in whole or in part, is strictly prohibited. Additionally, the content of this document, including any methods or techniques described within, must not be disclosed to third parties without prior written authorization from the Company © 2025 BMPTech Engenharia LTDA.

#### **BMPTECH ENGENHARIA LTDA**

CNPJ: 35.401.189/0001-09  
Address: Estr. do Mato Alto, 3333 LT:04  
Guaratiba – Rio de Janeiro - RJ  
CEP: 23036-150

Phone n°: +55 021 2249-1510  
E-mail: [comercial@bmptech.com.br](mailto:comercial@bmptech.com.br)  
Website: <http://www.bmp.ltd>

# 4K CAMERA

MODEL BCM-800C4K-003



The 4K camera model BCM-800C4K-003, developed by BMPTECH, was designed to integrate into underwater inspection systems that require high-definition imaging and exceptional detail clarity. The camera features one of the best optical units available on the market and an **ultra-low latency** digital Ethernet transmission system. Digital video transmission opens up numerous possibilities and cost reductions at all stages of project integration.

The camera operates within a range of (13 to 60) VDC, offering operational flexibility and simplifying its integration into underwater inspection systems.

The external housing is made of 6Al4V GR5 titanium alloy, enabling pressure resistance at depths of up to 4,500 meters.

The equipment is available with a wide range of connectors and cables, with BMPTECH's Quick Connector Series being the recommended solution for greater efficiency and reliability.

## MAIN FEATURES:

- The BCM-800C4K-003 offers superior image quality with high resolutions of up to 2160p 4K (QFHD);
- The powerful optical zoom operates at 20X, with super zoom reaching up to 30X in QFHD (4K) and 40X in FHD. The zoom transitions quickly and smoothly from wide-angle to telephoto, making it ideal for area coverage and detailed close-ups, ensuring that critical details are not missed;
- It features an image stabilization function in its optical set that neutralizes the effects of shaky and blurred images caused by low-frequency vibrations;
- The camera includes a backlight function for the image sensor, enhancing image quality even in environments with low light levels;
- The 2D/3D noise reduction functions filter image noise for sharper results, especially in low-light conditions. Noise reduction can be selected from six levels to suit a wide range of operational environments.

# 4K CAMERA

MODEL BCM-800C4K-003



## TECHNICAL SPECIFICATIONS

|              |                          |                                                                                                                                                                                                                                                                 |
|--------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Video</b> | Sensor type              | 1/2.5" Exmor R CMOS sensor with Backlight function - 8.51 Mpixels                                                                                                                                                                                               |
|              | Auto ICR function        | Yes                                                                                                                                                                                                                                                             |
|              | Freeze                   | Yes                                                                                                                                                                                                                                                             |
|              | Auto Slow Shutter        | Yes                                                                                                                                                                                                                                                             |
|              | Slow Shutter function    | Yes                                                                                                                                                                                                                                                             |
|              | Signal system            | QFHD : 2160 p/29.97, 2160 p/25, 2160 p/23.98<br>FHD: 1080 p/59.94, 1080 p/50, 1080 P/29.97 (2-2), 1080 p/25 (2-2), 1080 i/59.94, 1080 i/50.<br>HD:720 p/59.94 , 720 p/50, 720 p/23.98                                                                           |
|              | Picture elements         | 8.51 Mpixels                                                                                                                                                                                                                                                    |
|              | Lens                     | X20 Zoom<br>f=4.4 mm (Wide), 88.4 mm (Tele)<br>F 2.0 to F 3.8                                                                                                                                                                                                   |
|              | Zoom movement speed      | Optical Wide- Optical Tele<br>3.0 sec (Focus Tracking On)<br>Optical Wide- Super Resolution<br>Zoom Tele: 3.4 sec<br>Digital Wide - Digital zoom Tele: 5.0 sec<br>Infinity to Near: 0.1 sec                                                                     |
|              | Digital zoom             | Super resolution zoom: 1.5x QFHD, 2.0X FHD Digital zoom: 12x                                                                                                                                                                                                    |
|              | Angle of view (H)        | Approx. 70.2 degrees (Wide end, Image stabilizer Off)<br>Approx. 4.1 degrees ( Tele end, Image stabilizer Off)                                                                                                                                                  |
|              | Min. working distance    | 80 mm (Wide end), 800 mm (Tele end)                                                                                                                                                                                                                             |
|              | Image stabilizer         | Yes                                                                                                                                                                                                                                                             |
|              | Minimum illumination     | 1.6 lux ( 1/30 sec, 50%, ICR Off, HighSensitivity mode Off)<br>0.4 lux (1/30 sec, 50%, ICR Off, HighSensitivity mode On)<br>0.21 lux (50%, ICR Off, Slow Shutter 1/4s, High sensitivity Off)<br>0.06 lux (50%, ICR Off, Slow shutter 1/4s, High sensitivity On) |
|              | Sync system              | No. (Need quote for this option)                                                                                                                                                                                                                                |
|              | Electronic shutter speed | 1/1 to 1/10000 sec. (22 steps)                                                                                                                                                                                                                                  |
|              | White balance            | Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp Fix /Auto / outdoor, Onepush, Manual                                                                                                                                                                |
|              | Gain                     | Auto/ manual/ Max gain limit/ High Sensitivity (0 to 48 dB, 16 steps)                                                                                                                                                                                           |
|              | AE control               | Full Auto, Shutter Priority, Iris Priority (26 steps), Manual, Bright, Exposure Compensation, Slow AE, Back Light Compensation, Slow Shutter- Auto/Manual, Max/Min shutter limit                                                                                |
|              | EV compensation          | -10.5 to + 10.5 dB (1.5 dB steps)                                                                                                                                                                                                                               |
|              | Noise reduction Spot AE  | YES                                                                                                                                                                                                                                                             |
|              | Focusing system          | Auto ( Sensitivity: normal, low) One-push AF, Manual, Infinity, Interval AF, Zoom Trigger AF, Spot AF, Near Limit, Focus Compensation with IR lighting                                                                                                          |
|              | Picture effects          | Defog ( Auto, 3 levels), Visibility enhancer, Black & White, E-Flip, Mirror, Colour enhancement, Black level, gamma, Sat/Hue Adjust, HLC, Colour Bar                                                                                                            |
|              | Aperture control         | 16 steps, Bandwidth, balance and limit adjustment.                                                                                                                                                                                                              |

|                       |                                |                                                                                                                         |
|-----------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Video Output</b>   | Video Compression              | H.265/HEVC, H.264 and MJPEG - (Progressive Scan)                                                                        |
|                       | Streams                        | 3 streams                                                                                                               |
|                       | Frame Rate                     | Main Stream: 2160 p (1~29,97 FPS)<br>Extra Stream 1 : 1080 p/1080 i (1~59,94 FPS)<br>Extra Stream 2: 720p (1~59,94 FPS) |
|                       | Bit Rate Control               | CBR / VBR                                                                                                               |
|                       | Bit Rate                       | H.264: 1Mb/s~100Mb/s<br>H.265: 1Mb/s~100Mb/s                                                                            |
| <b>Network</b>        | Interface                      | RJ45 (10/100/1000)<br>HTTP; HTTPS; TCP; ARP; RTSP; RTP; RTMP; UDP; DHCP                                                 |
|                       | Protocols                      | IPv4/v6; QoS; UPnP; NTP; 802.1x; Multicast; ICMP; IGMP; SNMP                                                            |
|                       | Internal Storage Compatibility | Onvif Protocol<br>SD Card. (Up to 2TB)                                                                                  |
| <b>Camera Control</b> | Ethernet                       | Onvif Protocol; HTTPS: Dedicated Software; Pass VISCA™ Camera Control Commands over IP.                                 |
|                       | RS 232 (Optional)              | Dedicated Software; Sony Visca Software.                                                                                |
| <b>Electrical</b>     | Voltage Supply                 | 13 to 60 VDC (Contact us for more information)                                                                          |
|                       | Power                          | ~ 10 W                                                                                                                  |
|                       | Connector                      | Contact us for more information                                                                                         |
| <b>Mechanical</b>     | Housing                        | 6Al4V GR5 titanium alloy                                                                                                |
|                       | Window                         | Optical grade acrylic                                                                                                   |
|                       | Dimensions                     | Ø 100mm (Lens) x Ø 82 mm (Housing) x 223.5 mm (Length / excluding the connector)                                        |
|                       | Weight in air / in water       | 2,0Kg / 1,0Kg                                                                                                           |
| <b>Environmental</b>  | Depth                          | 4.500m                                                                                                                  |
|                       | Storage temperature            | (-20 to 80)°C                                                                                                           |
|                       | Operating temperature          | (-5 to 70)°C                                                                                                            |

## DIMENSIONS

