

# 구매규격서

## COMMODITY DESCRIPTION

품목번호 Item No.	관세분류번호 HSK No.	정부물품분류번호 Korean Government Commodity Classification Code	품명 Description	단위 Unit	수량 Q'ty
1	8525.80.1090	45121511	고속 CMOS 카메라 (High Speed CMOS Camera)	system	1

### I. 용도 (End-user's Use)

- High speed CMOS camera system for high resolution and highest color fidelity.
- Synchronize up to 5 cameras and 50 meters by daisy chain with delay less than 1 us.

### II. 장비의 구성 (Configuration of goods)

#### 1. 주장비

- |                          |       |
|--------------------------|-------|
| 1) Camera System         | 1 set |
| 2) F-mount Lens          | 2 ea  |
| 3) Geared Tripod         | 1 ea  |
| 4) Geared Head           | 1 ea  |
| 5) Controller for camera | 1 set |
| 6) Contact Trigger Cable | 1 ea  |

### III. 성능 및 규격 (Performance and specification)

#### 1. camera system

- 1) CMOS sensor resolution: 1920 x 1080 Pixels, Color, or more
- 2) sensor format / diagonal: 21.1 mm x 11.9 mm / 24.2 mm or more
- 3) fullwell capacity: 36,000e- or more
- 4) readout noise: 23e-rms (typ.), 18e-rms (CDI, typ.) or less
- 5) quantum efficiency: 50%@peak or more
- 6) Photon Response Non Uniformity: < 1 % @ 80 % signal or less
- 7) max. frame rate (full frame): 2,128 fps at 1920 x 1080 or more
- 8) max. speed: 130,000 fps, or more
- 9) dynamic range A/D: 12 bit or more
- 10) region of interest: steps of 48 x 4 pixel (centered) or less
- 11) primary image memory: 9GB - Memory segmentation or more
- 12) light sensitivity: ISO 6,400 Color, or more
- 13) CDI (Correlated Double Image): to record images with increased dynamic range and a 30% better performance on the weak signal side of the images.
- 14) free of session referencing: possible to change frame rates "on the fly"(during recording).
- 15) color image quality: According to ISO Standard 17321 the camera reaches quality grades of 83 SMI (matching high end digital cameras with typical 75 to 90 SMI) or more
- 16) operational shock: 30g@11ms, half sine wave, all axes or more
- 17) operational vibration: 25g@1-150Hz, all axes or more
- 18) CE / FCC certified or equivalent
- 19) carrying case - hard plastic cart or equivalent

- 20) operating software for Windows XP, 7 and 8 or equivalent
  - 21) SDK (Software development kit) including a 32/64 bit dynamic link library for user customization and integration on PC platforms is available for free or equivalent
  - 22) USB-Stick for software and electronic manual, printed manual
  - 23) synchronize up to 5 cameras and 50 meters (camera to camera) by daisy chain with delay less than 1 us and jitter less than 50 ns (any camera in the chain). The maximum achievable frame rate in camera sync mode is only about 0.5% less than when operating the camera individually.
2. F-mount Lens set
    - 1) FX format 50mm F-mount Lens – MOD 0.45m, F/1.4, max magnification 1/6.8x
    - 2) FX format Micro 105mm F-mount Lens – MOD 0.37m, F/2.8, max magnification 1/0.88x
  3. Geared Tripod
    - 1) Max. Height:188cm or more
    - 2) Min. Height: 43cm or less
    - 3) Max. Load Capacity: 12 kg or more
  4. Geared Head
    - 1) Max. Load Capacity: 7.5 kg or more
    - 2) Pan Movement: 360 deg or more
    - 3) Frontal Tilt Movement: -30 deg to +90 deg or more
    - 4) Lateral Tilt Movement: -90 deg to +30 deg or more
    - 5) Leveling bubble
    - 6) Micro Adjustment
    - 7) Relief and control system
    - 8) Quick release system
  5. Controller for high speed camera, Laptop PC or better  
 Ultrabook, Core i5-4260U, 15.6" 1920x1080 Full-HD LED display, 8GB DDR3, 128GB SSD, HDMI/WiDi, Battery 4 cell, Windows 8.1 64 bit, USB3.0 2ea, weight <2kg.
  6. Contact Trigger Cable

**IV. 기타조건(REMARKS):**

1. Warranty: 1 year after delivery
2. One day training service at customer's site for user education