## HVC-P2 Human Vision Components

### **Main features**

- Camera module angle of view:
  2 models (50 deg. and 90 deg.) available
- Multiple Functions (10 functions): Body Detection, Face Detection, Hand Detection, Face Direction Estimation, Gaze Estimation, Blink Estimation, Age Estimation, Gender Estimation, Expression Estimation and Face Recognition
- User friendly: easy implementation
   through UART or microUSB

### Female - 27 years

MRON

### **Specifications**

Horizontal Detection Area (angle of view)	50 deg: 54°±3°; 90 deg: 94°±5°
Vertical Detection Area (angle of view)	50 deg: 41°±3°, 90 deg: 76°±5°
Detection Distance (differs per function)	3.2-16.7m (HVC-P2 50 deg), 1.6-8.6m (HVC-P2 90 deg)
Dimensions (WxLxH)	45 x 45 x 8.2mm (main board for both types), 25 x 25 x 8.7mm (camera board 50deg type), 25 x 25 x 15.7mm (camera board 90deg type)

Function	Results
Face Detection, Body Detection, Hand Detection	Result count (max:35), Center coordinates (X & Y), Detection size (pixel), Degree of confidence
Face Direction Estimation	Yaw degree, Pitch degree, Roll degree, Degree of confidence
Gaze Estimation	Yaw degree, Pitch degree
Blink Estimation	Blink degree (left-side eye/right-side eye)
Age Estimation	Age, Degree of confidence
Gender Estimation	Gender, Degree of confidence
Expression Estimation	5 expressions: "neutral", "happiness", "surprise", "anger", "sadness" and their respective score, Expression degree (positive/negative)
Face Recognition	Individual recognition result, Score
Image output	Choose one: none, 160×120pixels, 320×240pixels Image format: 8-bit Y data

# OMRON

## Applicable for:

### **ම (**

#### Indoor

- Estimate interest and purchase behavior of people to store goods of interest
- Vending machines recommending drinks to people



### Home

- Home appliances matching movement of people
- AC units targeting people
- Robots matching people
- Lights targetting only people



### Workplace

- AC units targeting people
- Lights targetting only people
- Hands free machine operation
- Doors opening to registered people





### Omron Electronic Components Europe B.V. Wegalaan 57 2132 JD, Hoofddorp The Netherlands Tel: +31 23 568 1200

For more information, please contact: info-components@eu.omron.com