HVC-P2
Human Vision Components

MAIN FEATURES

- Camera module angle of view: two models (50 deg. and 90 deg.) available
- Multiple functions (10):
  - Body detection
  - Face detection
  - Hand detection
  - Face direction estimation
  - Gaze estimation
  - Blink estimation
  - Age estimation
  - Gender estimation
  - Expression estimation
  - Face recognition
- User friendly: easy implementation through UART or USB

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), centre 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	Five 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

Applicable for:

OUTDOORS

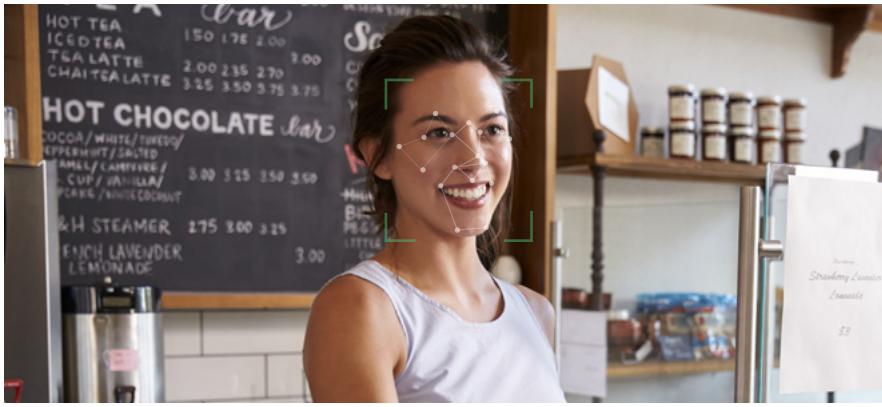
- Estimate interest and purchase behaviour of people to store goods of interest
- Vending machines recommending drinks to people

HOME

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

WORKPLACE

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



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