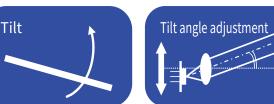
Smart LAC

A contactless angle measurement device by laser



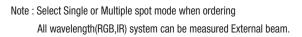
Laser Autocollimator

General <u>Purp</u>ose

- Instant non-contact angle measurement
 Wide working distance
- (Angle Range ±0.5deg at W.D.300mm)
- High precision and resolution
- Single and multiple sport measurement mode available

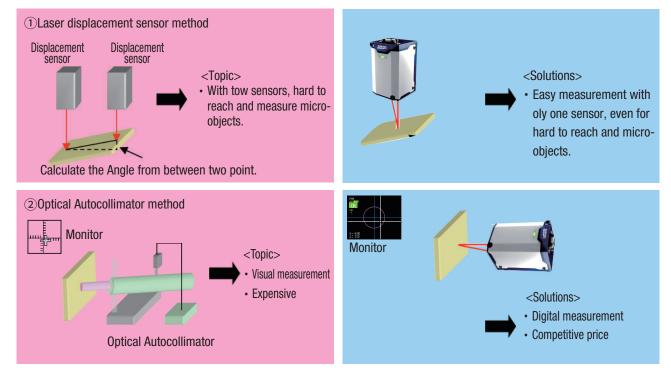
Laser Autocollimator method

- Red, Green, Blue and Infrared laser available
- External beam measurement available



<Measurement comparison>

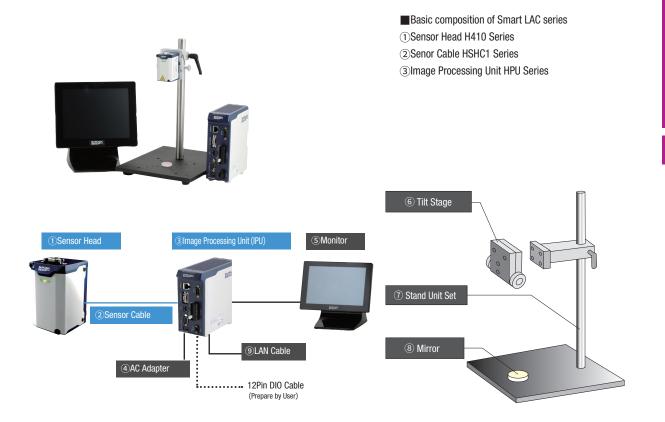
Conventional way



Easy tilting angle measurement for various DUT(Device Under Test)

Leaser beam needed for measurement





Basic Set

Standard Configuration

For Single Spot Measurement Note 1				
Sensor Head Model [①Sensor Head+③IPU]		②Sensor Cable		
Model	Wavelength	Model		
HPU-500SET-175R	655nm±10nm	HSHC1-1.5 (1.5m)		
HPU-500SET-175S1	852nm±10nm	HSHC1-4 (4m)		
HPU-500SET-175G1	520nm±10nm	HSHC1-10 (10m)		
HPU-500SET-175B1	450nm±10nm			

Note1:For Single spot measurement, Sensor Head and IPU are sold as a set.

①Sensor Head ②Sensor Cable Model Wave Length Model Model H410-175R 655nm±10nm HSHC1-1.5 (1.5m) HPU-1000 H410-175S1 852nm±10nm HSHC1-4 (4m) H410-175G1 520nm±10nm HSHC1-10 (10m) H410-175B1 450nm±10nm

gh Speed and

Option

Standard Configuration

0					
(4) AC Adapter	(5)Monitor	©Tilt Stage	⑦Stand Unit Set	8 Mirror	IAN Cable
Model	Model	Model	Model	Model	Model
HDC24V-2710MA	HMNT1	HB10	HA14	Parallel Mirror: HS-0(0deg)	RS232C Cable: HRSCC1-2
				Wedge Mirror: HS-025AL(0.25deg)	LAN Cable: HLANC1-2
				Wedge Mirror: HS-050AL(0.5deg)	
				Wedge Mirror: HS-100AL(1.0deg)	

Smart LAC Series Sensor Head : H410



New

Tilt

Measurement

Laser Autocollimator SERVERA SERVERA

Applications



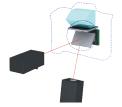
Feature

Laser Class 1

Can be used at any working environment (former Laser Class is Class2)

High Anti-vibration performance Max.2G(X/Y/Z Axial direction)

High performance with Light and Small size



Measure Glass Parallelism

Mirror Angle measurement for Camera device

		SPEC			
Model	H410-175R H410-175S1 H410-175G1 H410-175B1				
Wavelength	655nm±10nm 852nm±10nm 520nm±10nm 450nm±10n				
Laser Power	0.39mW	0.78mW	0.39mW	0.39mW	
Laser Fower	Class 1	Class 1	Class 1	Class 1	
Measurement are by Working Distance	±0.5deg:0~300mm ±1.0deg:0~200mm ±1.75deg:0~120mm				
Laser Spot Size	Appr. φ1.0mm				
Repeatability(Ave.)	1sec				
Linearity(Ave.)	±0.2% of Full Scale ±0.4% of Full Scale(W.D.=200, Full Scale=±1deg) (W.D.=200, Full Scale=±1deg) ±0.4% of Full Scale(W.D.=200, Full Scale=±1deg)			±1deg)	
Sampling Speed	25msec				
Calibration data	Stored in each sensor head				
Weight	160g				
Anti-vibration	Max 2G (X/Y/Z axial direction at 10~500Hz)				

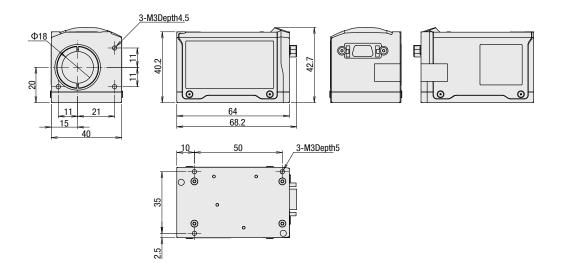
*The sensor head cannot be used alone. A combination with an image processing unit is required.

 \star This product does not require initial calibration.

There are no restrictions on the combination of the sensor head and image processing unit.

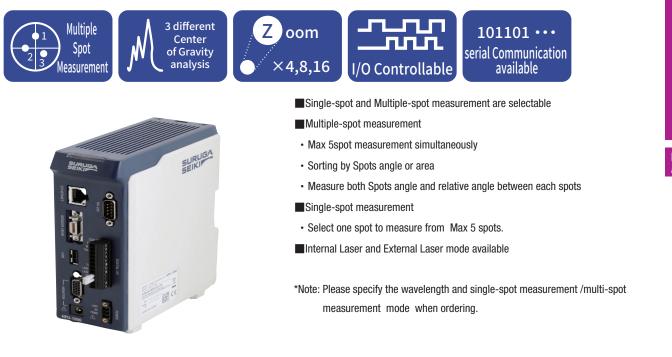
Dimensions

2.5<u>58</u> 87 87 2-Φ3.5



High Speed and High Resolution General Purpose

Smart LAC Image Processing Unit :HPU

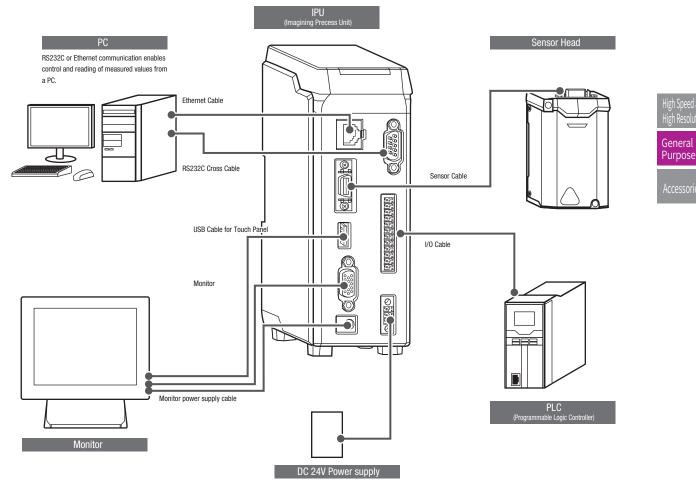


Various communication capability can allow to operate Laser Autocollimator through Touch panel, PC or PLC.

For standalone usage, connect to either Touch panel or PC to control Laser Autocollimator.

For Embedded system, Connect to either PLC or PC to control Laser Autocollimator.

*:For PLC and PC usage, a Control software is needed to prepare by end user side.



New

5 008

Smart LAC Image Processing Unit :HPU

New

Tilt Measurement

Function		HPU-1000	HPU-500
	Single-spot measurement	0	0
Angle Measurement	Multiple-spot measurement	Max 5 Spots	_
	Center of Area	0	0
Angle Analysis	Luminance centroid	0	0
	Luminance peak	0	0
	Luminance value	0	0
Convenient Functions	Zoom	0	0
	Image rotation and reverse	0	0
Pass/Fail Judgment	Circle	0	0
Judgement Area	Rectangle	0	0
	Offset judgement	0	0
Pass/Fail Judgment Judgement Conditions	Specified spot	0	0
	All spots	0	_
	Input/Output	0	0
	Input1 Hold results	0	0
	Input2 Zero reset	0	0
	Input3 Start trigger (24V)	0	0
Digital I/O	Input4 Laser power ON	0	0
	Input5 Start trigger (5V)	0	0
	Output1 Judgement strobe signal	0	0
	Output2 Results	0	0
	Output3 Busy for trigger	0	0

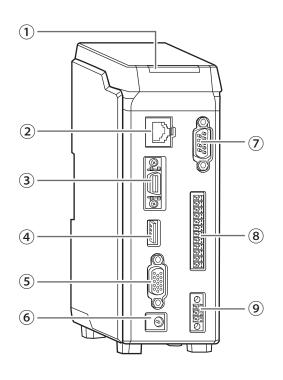
General Purpose

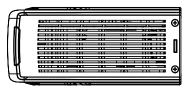
High Speed and High Resolution

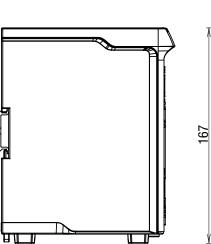
Accessor

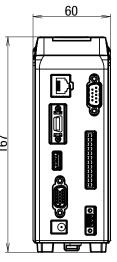
Dimensions

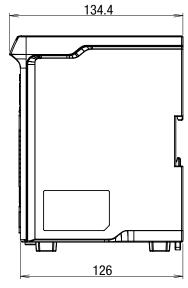
No.	Function	
1	Power Lamp	
2	Ethernet connecter	
3	Sensor cable connecter	
4	USB connecter for Touch Panel	
5	Monitor connecter	
6	Power supply for monitor	
7	RS232C connecter	
8	12-pole terminal block	
9	DC24V terminal block	

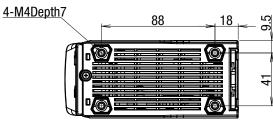












New Mea

Laser Autocollimator

> igh Speed and igh Resolution

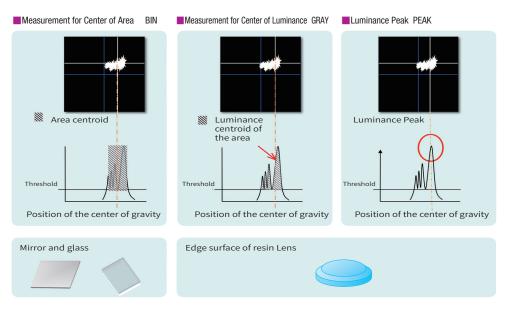
General Purpose

Smart LAC Series Software : HPU

Various center of gravity analysis

Three types of spot center-of-gravity analysis modes are available for more accurate measurements.

The center of area is suitable for specular reflectors with high flatness precision such as mirrors and glass, and the center of luminance is suitable for cases where reflection is distorted, such as the edge of a lens.



Single-spot measurement

Single-spot measurement is a method of measuring the reflected light from a specified point out of multiple reflected lights.

•

Single-spot measurement SINGLE

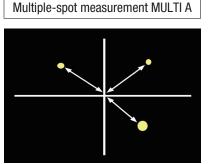
Angle measurement by specifying any one point from a maximum of 5 light points

Multiple-spot measurement

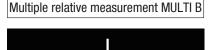
Multiple-spot measurement can be selected from two types of measurement according to the purpose.

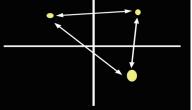
Multiple A: Measure each spot angle simultaneously

 $\label{eq:multiple} \mbox{Multiple B: Measure relative angle between each spot simultaneously}$



Each spot angle measurement simultaneously





Relative angle measurement between each spot simultaneously

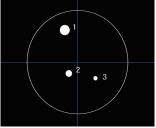
Autocollimator

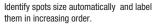
New

Labeling Function

Each spot can be labeled when measuring multiple reflectors. Select a mode for labeling by size order or labeling by angle order.

Size order





Angle order



Identify spots angle automatically and label them in increasing order.

Center of gravity analysis	Sorting	Single Spot Measurement	Multiple Spot Measurement
Center of Area	Angle Ascending order	0	0
(BIN)	Size Descending order	0	0
Center of Luminance	Angle Ascending order	0	0
(GRAY)	Size Descending order	0	0
Peak Top (PEAK)	Max. Luminance point	0	Not available

Without changing sensor

by the function.

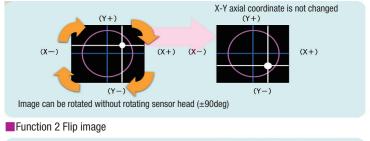
mounting position or angle, the

viewing image can be changed

New

Convenient functions

Function 1 Image rotate



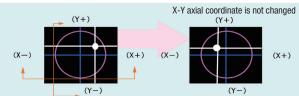
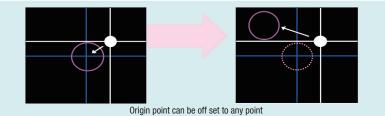
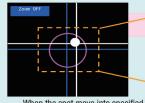


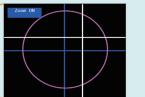
Image can be inverted without mounting sensor position

Function 3 Off set origin point



Z00M (x2,X4,X8)





When the spot move into specified magnified area, viewing image is enlarged automatically.

External communication port



ligh Speed an

General Purpose

cessorie

012

Sensor Head

NOTE

mance.



Smart LAC Series Specification

Tilt Measurement

Laser Autocollimator

	Item	SPEC			
Model		H410-175R	H410-175S1	H410-175G1	H410-175B1
Specifications		±0.50deg at W.D. 0~300mm ±1.00deg at W.D. 0~200mm ±1.75deg at W.D. 0~120mm			
	Wavelength	655nm±10nm	852nm±10nm	520nm±10nm	450nm±10nm
Laser	Power	0.39mW Class 1	0.78mW Class 1	0.39mW Class 1	0.39mW Class 1
Lasei	Output position	20±0.5mm at Reference surface 1 15±0.5mm at Reference surface 2			
	Out going angle	±0.05deg			
	Power		Max 5mV	V : Note1	
External Laser	Incident position	Within Radius 7.5mm from center of lens			
	Incident angle	Within ± 3.5 deg from center axial of lens.			
Laser Spot size		Appr. φ1mm			
Indicated resolu	ution	1 sec			
Repeatability(Av	ve.)	1 sec			
Linearity(Ave.)		±0.2% of Full Scale±0.4% of Full Scale(W.D.=200mm,(W.D.=200mm, Full Scale ±1.0deg)			
Sampling speed			25mS	ec \sim	
Operation displa	ay	LED(Green/Red)			
	Ambient temp. for use	0~40deg			
Environment	Ambient humid. for use	35~85% RH			
	Performance guarantee temperature	23±5deg			
	storage Temp.	-10~+60deg			
	Anti-vibration	Max 2G (X/Y/Z axial direction) at 10~500Hz			
Weight		Appr. 160g			

Please note that part of the specifications of this product may be changed without prior notice in order to improve its perfor-

Note 1: Depending on Wavelength, beam size and power, ND filter may be needed for use.

General Purpose

Image Processing Unit

Model HPU-500 (Note 1),HPU-1000 Adaptable number of sensor head 1 unit Applicable Sensor Model H410-17561, H410-17561, H410-17561 Rating Power Current 1.8.0 rlss Current 1.8.0 rlss Duput Sensor Head 120, 0.5.4 Output Output Output Sensor Head 120, 0.5.4 Output Output Duput Sensor Head 120, 0.5.4 Output Output Corouth Input Input Sensor Head 120, 0.5.4 Output circuit for 2.3.4 Residual Voltage Max 0.5.4 Residual Voltage Max 0.5.4 Residual Voltage Max 0.5.4 Ison of F(-) and 6(-) Input circuit for 3.6 and trigger constituon of Max 0.5.4 Ison of Concent 5 and 6 for In-Non-voltage contact) Input circuit for 3.6 and 500 Input circuit for 3.6 and 6(-)		Item	SPEC
Applicable Sensor Model H410-175R, H410-175S1, H410-175B1 Voltage DC24V ±10% ±10% ±1 include voltage ripple Rating Power Output Sensor Media 12V, 0.5A DC24V ±10% ±10% Sensor Media 12V, 0.5A Rating Power Output Sensor Media 12V, 0.5A Output Output Common ground Inuput: Final Sensor Media 12V, 0.5A Output: Stroke output fin judgment Minut: Stroke output fin judgment Output: Stroke output fin judgment Output: Stroke output fin judgment Minut: Stroke output fin judgment Minut: Stroke output fin judgment Output: Stroke output fin judgment Minut: Stroke output fin judgment Minut: Stroke output fin judgment Minut: Stroke output fin judgme	Model		HPU-500 (Note 1),HPU-1000
Voltage DC24V ±10% *: Include voltage ripple Rating Power Current 1.8.4 or less Output Sensor Head 12V, 0.5A Touch Pamel montur: 12V, 0.5A Output: Common ground Output: Sensor Head 12V, 0.5A Output: Output: Common ground Input: Finger busy Upput: Since output for judgment Output: Sensor Head 12V, 0.5A Output: Common ground Input: Environment Output: Sensor Integer (4N) Input: Environment Output: Sensor Input for infogment Output: Sensor Input for infogment Input: Input: Output: Sensor Input for infogment Input: Sensor Input for Output Input: Sensor Input for Output Input circuit MPVPMP input voltage: Max 20 Input circuit Mexinger Singer Singer Singer Input circuit Input circuit infor OFP(Deen: 'Over 10KOhm of Min 4V Input circuit Input circuit infor OFP(Deen: 'Over 10KOhm of Min 4V Input circuit <td< td=""><td>Adaptable numb</td><td>er of sensor head</td><td>1 unit</td></td<>	Adaptable numb	er of sensor head	1 unit
Rating Power Current 1.8A or less Output Sensor Head 12V, 0.5A Output Output Sensor Head 12V, 0.5A Output Output Output 1: Common ground Output 1: Common ground Units Output 1: Common ground Output 1: Output 3: Output 1: forger housy Input 1: Common ground Input 3: Output 1: Ground ground Output 3: Output 1: Ground ground Input 2: Start trigger (LSV) Start trigger (LSV) Start trigger (LSV) Output circuit MPV/PM Open drain output With Start trigger (LSV) Output circuit MPV/PM Popen drain output With Start trigger (LSV) Input circuit MPV/PM popen drain output With Start trigger (LSV) Input circuit Maximum drive current : Max SOMA Residual Vitage : Max 30V Maximum drive current : Max SOMA Residual Vitage : Max 30V Maximum drive current : Max SOMA Input circuit Input circuit Max input Vitage: SOV Max input Vitage: SOV Input circuit Input circuit Sont-Circuit current : ZmA Max input vitage: SOV Input circuit Input circuit Input circuit in for 0 (SOP (Circuit) SOR 0:	Applicable Sens	or Model	H410-175R, H410-175S1, H410-175G1, H410-175B1
Instruct Notes Output Sensor Head 12V, 0.5A Output Output: Control: 12V, 0.5A Output: Control: Common ground Output: Control: Common ground Output: Control: Common ground Input: Control: Common ground Input: Start trigger (24V) Input: NPV/PNP cinput output Withstand Voltage: Mass Start Mass Start Input circuit Mass Input voltage: Input circuit Mass Input voltage: Input circuit Input voltage: Input circuit Mass Input voltage: Input circuit Mass XV Input circuit Voltage:		Voltage	DC24V ±10% *: Include voltage ripple
Output Sensor Head 120, 0.5A Touch Panel monitor: 120, 0.5A Velocity Output 1: Common ground Output 2: Strobe output for judgment Output 3: Dutput for ground Imput 3: Start trigger (-SV) Pin assign Pin 2: Start Start for exet Imput 3: Start trigger (-SV) Output circuit for 2.3,4 Pin Passign Velocity 2: Start Start for exet Imput 3: Start trigger (-SV) Output circuit for 2.3,4 PV/PAP open drain output Velocity 2: Start Start for exet Imput 3: Start trigger (-SV) Input circuit for 2.3,4 PV/PAP open drain output Velocity 2: Start Start for exet Imput velocity 1: Start trigger (-SV) Input circuit for 5(+) and 6(-) PV/PAP open drain output Velocity 2: Start S	Rating Power	Current	1.8A or less
I2-pole Output: Common ground Pin assign Input: Common ground Input: Common ground Input: Common ground Input: Common ground Input: Common ground Input: Start tingger (240) Input: Common ground Input: Start tingger (240) Input: Start tingger (240) Input: Start tingger (240) Input: Start tingger (240) Input: Start tingger (250) Input: Common ground Input: Start tingger (250) Input: Start tingger (250) Input circuit NPN/PNP open drain output for 2,3,4 Withstand Voltage: Max 30V Withstand Voltage: Max 30V Max 30V Withstand Voltage: Max 30V Max 30V Input circuit Max 15V Input circuit Tor 5(-) Input circuit Start tingger condition (Rising adge detection for 5V system) Input circuit Start trigger condition (Rising adge detection for 5V system) Input circuit Start trigger condition (Rising adge detection for 5V system) Input circuit Analog R6B Nomitor output Index 3V Start tinger (Cross cate) Bart triger condition Rising adge detection for 5V system)	3	Output	
Dutput circuit for 2.3,4Withstand Voltage : Max 30V Maximum drive current : Max 50mA Residual Voltage Max 0.5V: Leak current : Max 0.1mA12-pole connecterInput circuit for 2.3,4NPNPPN Input voltage Max input voltage : S0V Input circuit for 2.3,4Input circuit for 2.3,4NPNPPN Input voltage Max input voltage : S0V Input current : 2mA ON Voltage : Max 2VInput circuit for 5(+) and 6(-)Start trigger condition for 0F(Open) : Over 10k0hm of Min 4V Input cordition for ON(Short) : Max 0.5k0hm or Max 1VInput circuit for 7(+) and 8(-)Start trigger condition (Rising edge detection for 5V system) Input condition for ON(Short) : Max 0.5k0hm or Max 1V Input condition for ON(Short) : Max 0.5k0hm or Max 1V Input condition for ON(Short) : Max 0.5k0hm or Max 1V Input condition for ON(Short) : Max 0.5k0hm or Max 1V Input condition for ON(Short) : Max 0.5k0hm or Max 1V Input condition for ON(Short) : Max 0.5k0hm or Max 1V Input current : 2mA Input condition for ON(Short) : Max 0.5k0hm or Max 1V Input current : 4mA at 5Votage On voltage : Max 1VMonitor outputAnalog RGBMonitor outputIdeo 0utputAnalog RGBMumber of Pixel1024x768 pixelConnectorD-sub 15pinStart 1: 9600, 19200, 38400, 57800, 115200External conditionRJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX CommunicationIndicatorLED(Green/Red)Led(cen/Red)0ereating Temperature at 0.456 pixelConditionOperating Temperature at 0.4545 pixelConditionOperating Temperature at 0.456 pixelConditionOperating Temperature		Pin assign	Output1: Common ground Output2: Strobe output for judgment Output3: Output for judgment Output4: Trigger busy Input1: Common ground Input2: Hold signal input for the result Input3: Zero re-set Input4: Start trigger (24V) Input5: Laser on (+) Input6: Laser on (-) Input7: Start trigger (+5V)
Input circuit for 2,3,4NPV/PNP input voltage imput current : 2.3mA ON Voltage : Min 15V OFF Voltage : Min 15V DFF Voltage : Min 15V DFF Voltage : Min 15V DFF Voltage : Min 15V DFF Voltage : Min 15V Der 10kOhm of Min 4V input circuit for 5(+) and 6(-)Laser On (connect 5 and 6 pin: Non-voltage contact) Internal voltage : SV Short-circuit current : 2mA input condition for OFF(Open) : Over 10kOhm of Min 4V input condition for OFF(Open) : Over 10kOhm of Min 14V input condition for OV(Short) : Max 0.5kOhm or Max 1VMonitor outputVideo OutputStart trigger condition (Rising edge detection for 5V system) Input voltage : Min 3.5V Off voltage : Max 1VMonitor outputVideo OutputAnalog RGBMonitor outputNumber of Pixel1024x768 pixelSerial inputUSBUSB 2.0 Type A for Touch panel or MouseExternal communicationRJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX Communication Method: 100Pase-TX Communication			NPN/PNP open drain output Withstand Voltage : Max 30V Maximum drive current : Max 50mA Residual Voltage Max 0.5V:
Input circuit for 5(+) and 6(-)Internal voltage : SV Short-circuit current : 2mA Input condition for OFF(Open) : Over 10kOhm of Min 4V Input condition for OFF(Open) : Over 10kOhm of Max 1VInput circuit for 7(+) and 8(-)Start trigger condition (Rising edge detection for 5V system) Input voltage : nage : 0~5V Input current : 4mA at 5Voltage On voltage : Min 3.5V Off voltage : Max 1VMonitor outputAnalog RGBMonitor outputNumber of PixelVideo OutputAnalog RGBMumber of Pixel1024x768 pixelConnectorD-sub 15pinSerial inputUSBUSBUSB 2.0 Type A for Touch panel or MouseFermal 	Connecter		NPN/PNP input voltage Max input voltage: 30V Input current : 2.3mA ON Voltage : Min 15V
Input circuit for 7(+) and 8(-)Input voltage range : 0~5V Input current : 4mA at 5Voltage On voltage : Max 1VMonitor outputVideo OutputAnalog RGBMonitor outputNumber of Pixel1024x768 pixelConnectorD-sub 15pinSerial inputUSBUSB 2.0 Type A for Touch panel or MouseExternal communicationsRS-232CD-sub 15pinExternal communicationRJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX Communication Method: TCP/IP, Socket Data output, Control command input/outputIndicatorLED(Green/Red)Environment conditionOperating Temperature 			Internal voltage : 5V Short-circuit current : 2mA Input condition for OFF(Open) : Over 10k0hm of Min 4V
Monitor outputNumber of Pixel1024x768 pixelConnectorD-sub 15pinSerial inputUSBUSB 2.0 Type A for Touch panel or MouseExternal communicationsRS-232CD-sub 9 pin (Cross cable) Baud rate : 9600,19200,38400,57800, 115200External communicationsRJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX Communication Method: 1CP/IP, Socket Data output, Control command input/outputIndicatorLED(Green/Red)Environment 			Input voltage range : 0~5V Input current : 4mA at 5Voltage On voltage : Min 3.5V
ConnectorD-sub 15pinSerial inputUSBUSB 2.0 Type A for Touch panel or MouseExternal communicationsRS-232CD-sub 9 pin (Cross cable) Baud rate : 9600,19200,38400,57800, 115200External communicationsRJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX Communication Method: TCP/IP, Socket Data output, Control command input/outputIndicatorLED(Green/Red)Environment 		Video Output	Analog RGB
Serial inputUSBUSB 2.0 Type A for Touch panel or MouseExternal communicationsRS-232CD-sub 9 pin (Cross cable) Baud rate : 9600,19200,38400,57800, 115200External communicationsRJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX Communication Method: TCP/IP, Socket Data output, Control command input/outputIndicatorLED(Green/Red)Environment conditionOperating Temperature range0~40degOperation humidity range35~85% RHStorage Temperature Anti-vibration-10~60degMax. 2G X/Y/Z axial direction at 10-500Hz	Monitor output	Number of Pixel	1024x768 pixel
External communicationsRS-232CD-sub 9 pin (Cross cable) Baud rate : 9600,19200,38400,57800, 115200External communicationsRJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX Communication Method: TCP/IP, Socket Data output, Control command input/outputIndicatorLED(Green/Red)Indicator0perating Temperature range0~40degOperation humidity range35~85% RHStorage Temperature Anti-vibration-10~60degAnti-vibrationMax. 2G X/Y/Z axial direction at 10-500Hz		Connector	D-sub 15pin
External communicationsRS-232CBaud rate : 9600,19200,38400,57800, 115200External communicationsRJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX Communication Method: TCP/IP, Socket Data output, Control command input/outputIndicatorLED(Green/Red)Indicator0Perating Temperature range0~40degOperation humidity range35~85% RHStorage Temperature-10~60degAnti-vibrationMax. 2G X/Y/Z axial direction at 10-500Hz	Serial input	USB	USB 2.0 Type A for Touch panel or Mouse
External communicationsEthernetRJ-45 connecter Transmission Method: 100Base-T, 100Base-TX Communication Method: TCP/IP, Socket Data output, Control command input/outputIndicatorLED(Green/Red)Indicator0perating Temperature range0~40degOperation humidity range35~85% RHStorage Temperature Anti-vibration-10~60degMax. 2G X/Y/Z axial direction at 10-500Hz		RS-232C	
Operating Temperature range 0~40deg Operation humidity range 35~85% RH Storage Temperature -10~60deg Anti-vibration Max. 2G X/Y/Z axial direction at 10-500Hz		Ethernet	RJ-45 connecter Transmission Method: 1000Base-T, 100Base-TX Communication Method: TCP/IP, Socket
Environment condition Operation humidity range 0~40deg Operation humidity range 35~85% RH Storage Temperature -10~60deg Anti-vibration Max. 2G X/Y/Z axial direction at 10-500Hz	Indicator		LED(Green/Red)
Environment condition Deration humidity range 35~85% RH Storage Temperature -10~60deg Anti-vibration Max. 2G X/Y/Z axial direction at 10-500Hz			0~40deg
condition Storage Temperature -10~60deg Anti-vibration Max. 2G X/Y/Z axial direction at 10-500Hz	Environment		35~85% RH
Anti-vibration Max. 2G X/Y/Z axial direction at 10-500Hz			
Weight Appr. 900g			
	Weight	1	Appr. 900g

Tilt Measurement

> Laser Autocollimator

High Speed ar

General Purpose

Accessories

Note: HPU-500 is not sold standalone, Please order HPU-500 with sensor head.