

LIPSMetric™ ST130e Pallet Dimensioner Datasheet

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Revision History

Ver.	Release Date	Description	Author
1.0	2022/12/20	1. PM's first version released	Ethan
1.1	2022/12/22	2. Update 4.3 Measuring Limitation	Ethan
1.2	2023/11/21	Update Measurement Spec	Hank

1. Overview

1.1. Features

The LIPSMetric™ ST130e Pallet Dimensioner Camera Kit is a solution that features an industry-leading multiple-dimension measurement algorithm for pallet measurement purposes. The solution comes with a LIPSedge™ AE450 Ruggedized 3D camera and LIPSMetric™ ST130e Pallet Dimensioner application with API access which allows the instant dimensioning of the underlying pallet. The LIPSMetric™ ST130e Pallet Dimensioner also comes with an automated calibration function that can adapt to indoor environments easily. The built-in, adjustable LIPS 3D Camera has a maximum Z-accuracy of 98%.

1.2. Applications

This LIPSMetric™ ST130e Pallet Dimensioner could be adopted in the parcels measuring in the logistic center, retails industry, Manufacturing factories, and air lines warehouse etc. In these industries, the applications include the complete or incomplete pallet and large size parcels dimensioning. They could be both cubic and non-cubic cargo on the pallet. Customers can use LIPSMetric™ ST130e Pallet Dimensioner for the parcels dimensioning automatically and arrange the air flight. Thus, it can save much time, human resource, and cost in an economic operation.

2. Specifications

2.1. LIPSedge™ AE450 Technical Information

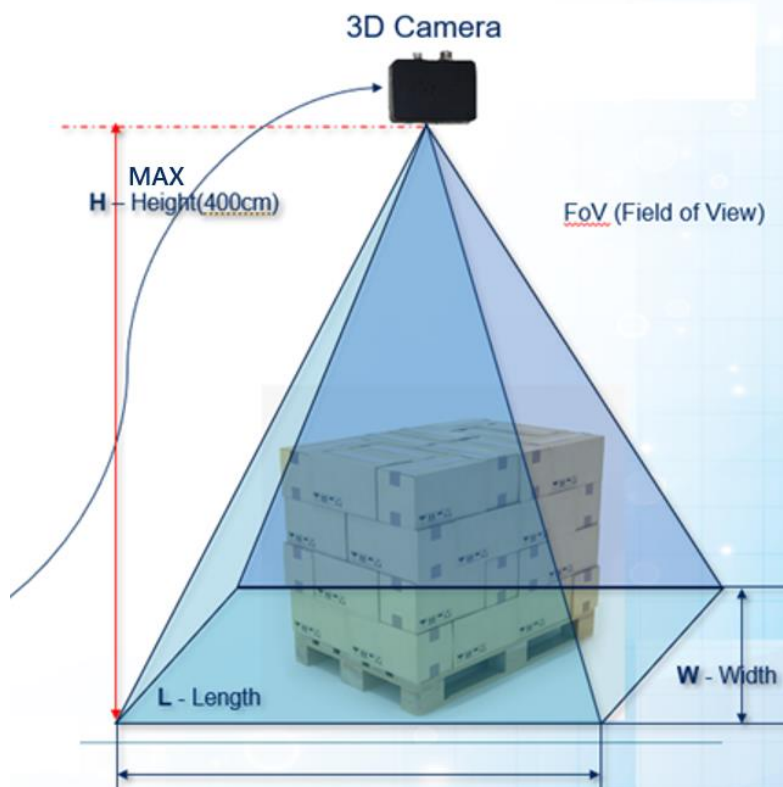
Model	LIPSedge™ AE450 Ruggedized 3D Camera
Environment	Indoor & Outdoor
Safety	CE / FCC
Technology	Active Stereo
RGB Resolution	1280 x 720 @ 30fps, 640 x 480 @ 60fps
RGB FoV (H × V × D)	87° × 58° × 95° (+/- 3°)
Dimension (mm)	145 x 102 x 43 mm
Dust / Waterproof	IP67
Interface	PoE (IEEE 802.3 af/at); Power wire (12V, 1A)



LIPSedge™ AE450 Ruggedized 3D camera

2.2. Camera Position

Install the camera to keep an optimal viewing angle of 90° downwards the object measured.



2.3. Camera Height

There is a range for the camera elevation height

Situation	Camera Simulation Height	Max Pallet Height
Case 1	260cm	110cm
Case 2	210cm	60cm
Case 3	190cm	40cm

3. System Architecture

This LIPSMetric™ ST130e Pallet Dimensioner main application runs on a computer which operates in a **Windows 10 system**. And the computer runs in a temp range below.

Operation Temperature	
Operating Temperature	-10°C ~ 40°C
System Requirement	
OS	Windows 10

4. Measuring Spec and Accuracy

4.1. Specifications

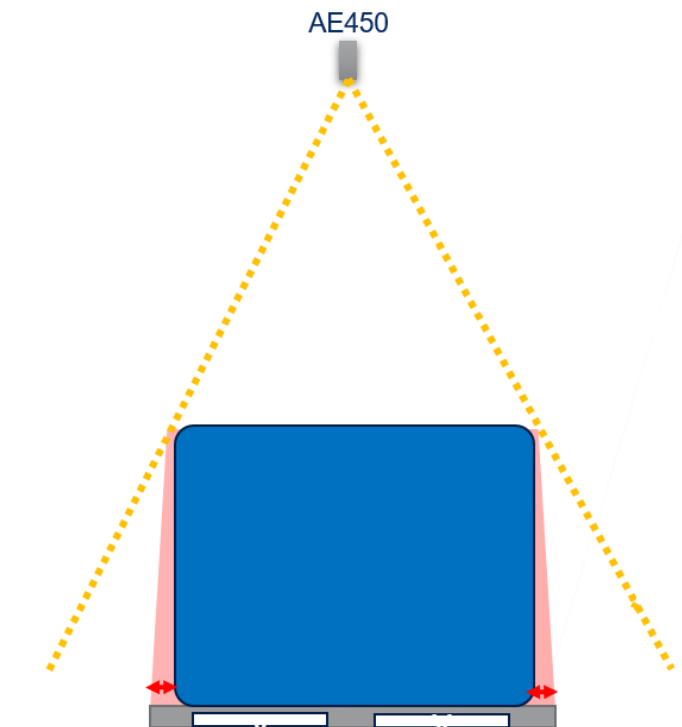
Measurement Specification	
Measurable Objects	Cubic / Non-Cubic
Minimum Object Dimensions	45 cm * 45 cm * 45 cm (L x W x H)
Maximum Object Dimensions	120 cm * 120 cm * 110 cm (L x W x H)

4.2. Accuracy

Accuracy	≤ 5% margin error on each side
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4.3. Measuring Limitation

LIPSMetric™ ST130e Pallet Dimensioner measure the pallet size only based on the AE450 sight. Therefore, the measuring result is only for the cargo on the pallet platform. Sometimes there is a blind spot between the cargo and pallet and it can't be measured and shown on the result.



5. Regulatory Compliance

5.1. CE and FCC

- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
- This equipment is a CE compliance product. It is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures

5.2. ROHS and REACH

- All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.







6. Others

6.1. Data record Format

- This LIPSMetrics™ ST130e Pallet Dimensioner records the measurement results as a log file.

The file is accessible at: `D:\ > LIPS_LDS4_Pallet\datarecord`

- The log file contains the following fields:
 - ◆ **Date / Time:** Time stamp in the format of yyyy-mm-dd hh:mm:ss.
 - ◆ **Measurement:** Measurement result including length, width and height. If an electronic scale is connected, the object’s weight is also included. The sum of the parcel dimension follows.
 - ◆ **Image:** The color image (.jpg) of the measured object.

Date & Time		Measurement				Image
Time : 2021/10/01 09:43:29	Weight : 0.45kg	Length:25cm	Width:15cm	Height:10cm	LWH Sum:50cm	
Time : 2021/10/01 09:43:29	Weight : 0.45kg	Length:25.19cm	Width:15.45cm	Height:10.36cm	LWH Sum:51.00cm	
Time : 2021/10/01 09:43:45	Weight : 0.45kg	Length:25cm	Width:10cm	Height:15cm	LWH Sum:50cm	
Time : 2021/10/01 09:43:45	Weight : 0.45kg	Length:25.62cm	Width:10.57cm	Height:15.15cm	LWH Sum:51.34cm	
Time : 2021/10/01 09:45:25	Weight : 0.45kg	Length:35cm	Width:25cm	Height:8cm	LWH Sum:68cm	
Time : 2021/10/01 09:45:25	Weight : 0.45kg	Length:35.58cm	Width:25.90cm	Height:8.68cm	LWH Sum:70.16cm	
Time : 2021/10/01 09:45:38	Weight : 0.45kg	Length:35cm	Width:25cm	Height:8cm	LWH Sum:68cm	
Time : 2021/10/01 09:45:38	Weight : 0.45kg	Length:35.58cm	Width:25.90cm	Height:8.68cm	LWH Sum:70.16cm	