Operator Manual

CIND Dimensioner Static

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1 Background and purpose

This document contains instructions on how to use the Cind product Dimensioner Static. The intent of this document is to be used by a notified body to review how the product is constructed and how to operate it, in order to evaluate Dimensioner Static for legal for trade certification, for example the MID 2014/32/EU directive.

2 User interface

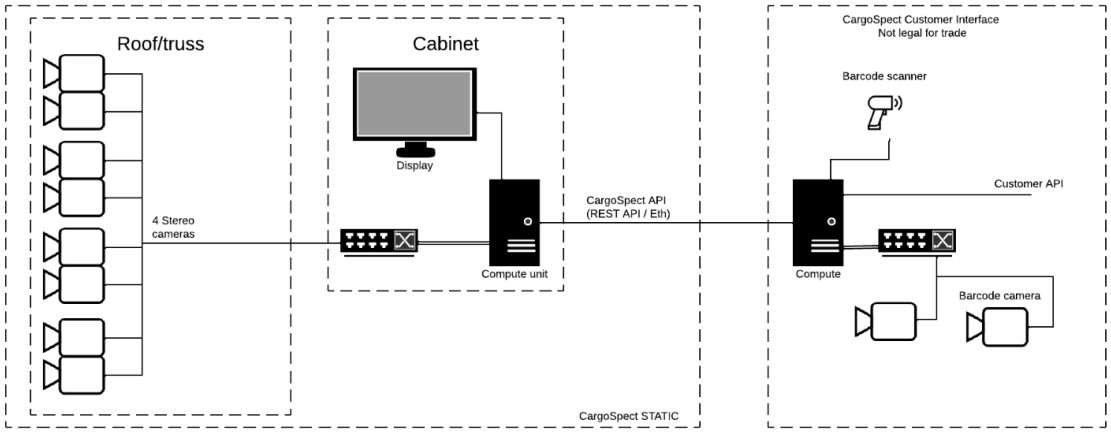
2.1 Overview

The user interface consists of two parts. An external system that will trigger measurement through scanning of barcodes and a display with five output fields.

2.2 External system

Normally, the product is installed with the acompaning CargoSpect CUSTOMER system, that connects through API (see separate documentation) to initiate a measurement. Normally, this is done when an operator scans the barcode of the pallet that should be measured. This is called **measurement trigger** in the rest of the document.

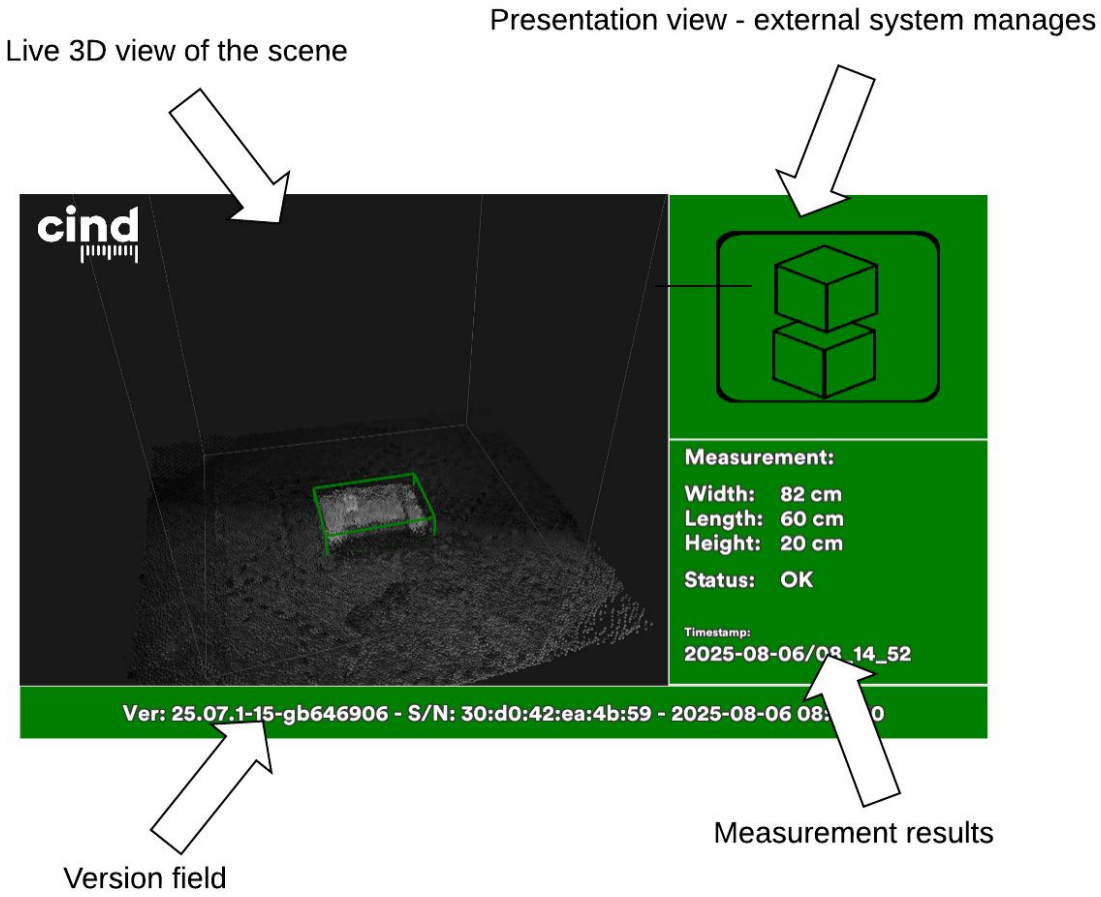
The overview of this system can be seen in the following overview image:



Note that the external system also has its own cameras/lenses (totally separated from the legally relevant sensors) that can be used to detect things like text, labels and/or images. This is used to collect further, non-legally relevant data together with measurements.

2.3 Display

The display is split into four parts that shows different information as described below:



The version field shows software identifiers (version, serial number and installation date). This field allows for verification that the system is running certified software and that it is locked down after installation test. In case the system is not locked down, the version together with the “Not legal for trade!” text is presented. The background is also yellow to indicate a problem. If the system has detected a tampering (modified configuration params for example), this will display “TAMPERING DETECTED – Not legal for trade!” and have a yellow background. In this mode, the system will also refuse to accept new measurements.

The measurement results field shows the results of the latest measurment. The results contain length, width, height, status and a timestamp. When the results appears here it is an indication it has also been saved in the measurement database. There is a timeout so that when this has expired, the result data will be replaced with “---” for length, width and height. The status will show “Idle”. In case any error has happened during measurement, the results will be set to “---” and the status will show an error message/code.

This field will also indicate ongoing measurement with setting the background to yellow and presenting a “Calculating” text onto it. In case any error with the measurement zone is detected, these will be presented here as well.

The presentation view field shows text and/images received from an external system that is

legally non-relevant. For example a list of the latest measurements or error messages explaining why a measurement failed. It might also be additional information calculated by a non-legally relevant system, such as the image in the sample above. Indicating that this pallet is determined stackable.

The live 3d view filed shows a live view of the measurement zone. This is rotating around a center coordinate of the system to give the operator a view of the pallet from all angles. This view also contains information about how the pallet is placed into the zone. If the zone is empty, there is a small yellow cube in the center of the zone.

In order to do a measurement, the pallet must be placed so that it covers the cube (and it disappear). This is to force the operator to place the pallet as much as center in the zone as Possible.

In case the pallet is outside the measurement zone, i.e. breaks the borders, a red box will appear at the side where the pallet is not correctly placed. This will force correct placement as well as not trying to measure larger pallets than the system is approved for.

There is also detection of multiple pallets. In case there are several pallets (or perhaps something else like a person) the system will indicate this with red boxes.

The object also has to be in a steady state (non moving) and the system detects this with a red box around the pallet.

If everything is good, like in the sample above, the box will turn green and the system will accept the measurement.

2.4 Requirements

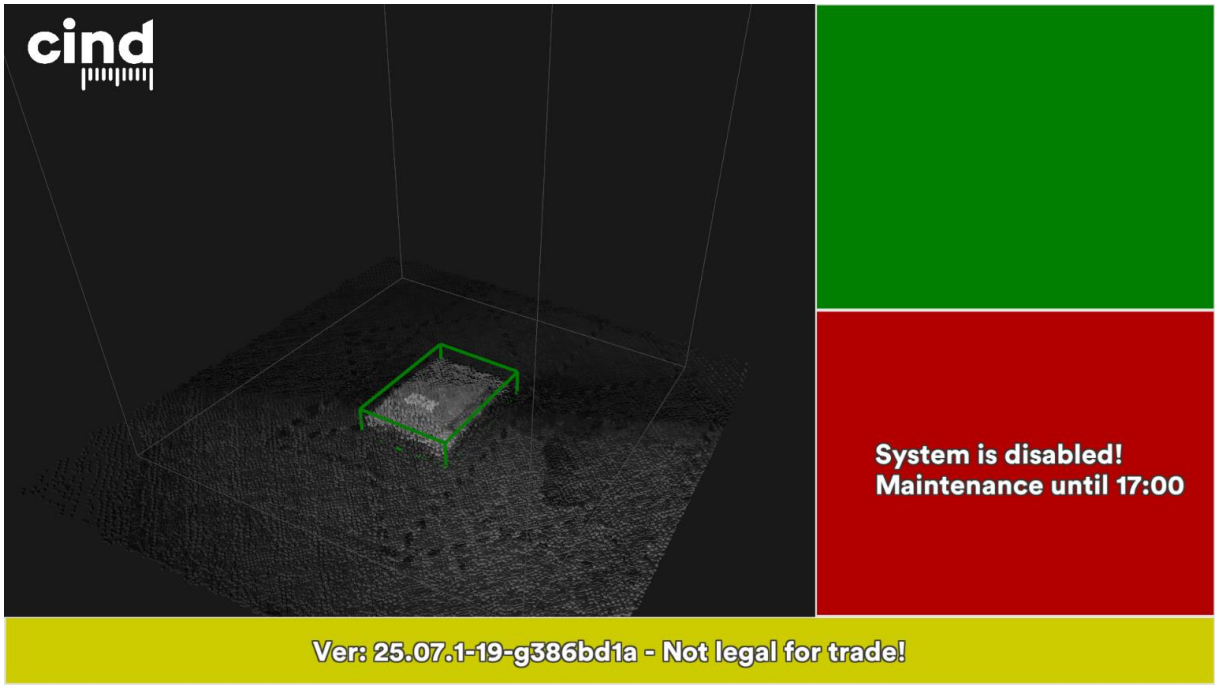
All cargo needs to be loaded on a pallet and placed into the measurement area for the sytem to deliver a valid measurement. Measuring cargo not loaded on a pallet or using other means of moving through the system (ex. conveyor belts, package carts, unregistered pallet movers, objects being carried etc) is not supported.

General requirements

- No internal errors detected / system online
- Cargo loaded on pallet
- Pallet with cargo placed correctly into the zone (cancel the yellow cube, not breaking borders)
- Pallet with cargo is non-moving
- Pallet and cargo is within max/min measurment of the system (length, width and height)

2.5 System disabled

The system can be disabled, based on operation hours or maintenance for example. In this case this is show in the measurements results field like:



Also note that in this example, the system is not locked after installation, hence the “Not legal for trade” text and the yellow background. This has nothing to do with system disabled.

3 Measuring

Before you measure your cargo it must be loaded on a pallet. Pick up the pallet loaded cargo on the forks of the pallet mover. Position the pallet in the zone so that it cancels the yellow box and do not break any other zone borders.

In case you have to enter the zone to scan the barcode of the pallet/shipment, do this promptly, scan the code and exit the zone. The system will detect movement insize the zone when the barcode is scanned and therefore display this on the UI. However, if the zone becomes free of multiple objects and the one and only object left is stable, the measurement will start as soon as that happens (normally 1-2 seconds after zone has been cleared).

Once the results are shown on the UI, the pallet can be removed and the next measurement can be started.