Christie
Pandoras Box

AirScan Hardware User Manual

Hazard Warning

This warning note is part of the Pandoras Box product that you have purchased.

Hazard information:
This device is to be operated indoors only and to be kept away from the influences of humidity,dust and sunshine or other radiating heat sources. Do not open the device. It does not contain any parts to be maintained by the user.

Caution!
Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Used batteries are not to be disposed of with the house-hold waste! Please dispose them at your local battery collection point!

Instructions for disposal:
Do not dispose off the device as part of household garbage! Electronic devices are to be disposed of in accordance with the guidelines concerning electrical and electronic devices via the local collecting point for old electronic devices.

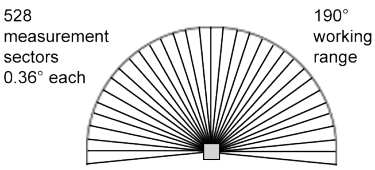
This device may only be used lower than 2000m altitude.

This device may only be used in non-tropical regions.

AirScan Hardware

The AirScan is a laser scanner device that measures distances in two dimensions. Thus, it allows for optical and contactless detection of objects or persons or just their hands. It can be used for any touch-less interaction with a display or a projected touch surface.
In Widget Designer, our interactivity software, the AirScan is available as an optional input device and can be setup using the AirScan Tool. It is possible to read up to 24 input points and use them for various applications within Widget Designer or Pandoras Box.

Measurement Principle and Restrictions



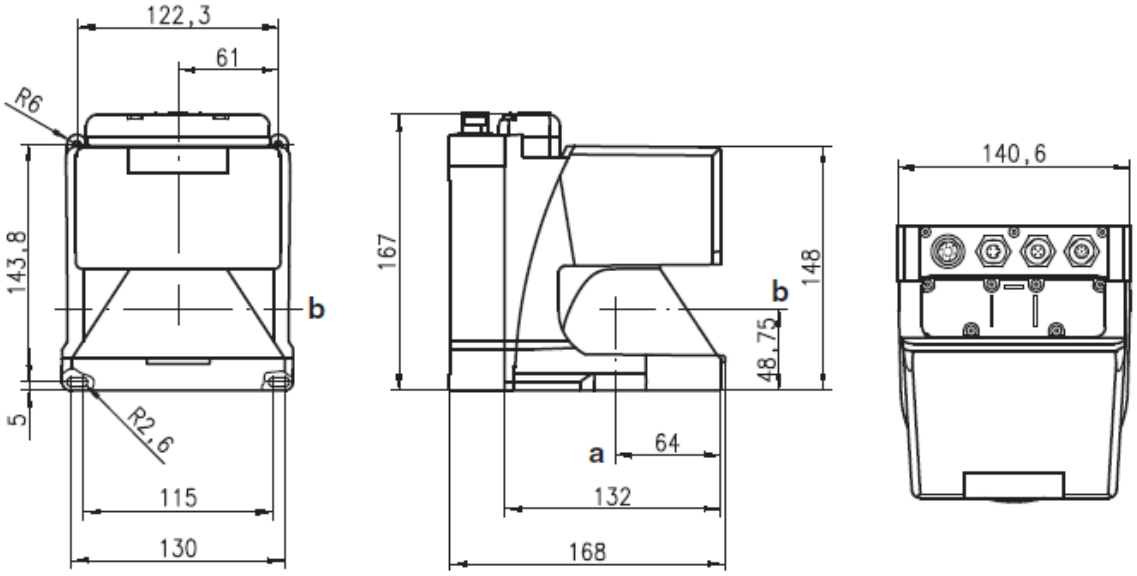
The AirScan unit can be mounted above, below or on the side of a screen and its recommended distance to the input screen area should not be further away then 10m or 30ft. Longer distances (up to 65m or 200ft) can be set up, but will lead to a less accurate readout. The AirScan measures every 0.36 degrees if anything has crossed the scan area and transmits its data via TCP over network to Widget Designer for further data processing.

Please note the following restrictions to ensure correct usage and measurement readout:

- Due to its IR laser technology, the AirScan device itself should not be exposed to direct sunlight or direct tungsten lighting as this would distort the correct readout of the sensed data.
- Physical contact with the front cover of the sensor is to be avoided. Note that even a slight movement of the sensor affects the measurement values.
- If the AirScan is (partly) mounted into a wall or exhibition stand, make sure that the sensor (to be exact, the glass window) is not covered and the entire interactivity area is free.
- If a protective housing is provided for the sensor, the detection must not occur through additional window material (plastic, glass, etc.).
- Vapors, smoke, dust and all particles visible in the air could affect the measurement values.
- Glass and highly reflective materials such as mirrors could falsify the measurement value.
- Avoid large temperature fluctuations.

Drivers

It is not necessary to install a driver. The communication between the AirScan and Widget Designer works over Ethernet and all necessary components come with the installation of Widget Designer.



Product Specifications

Ambient temp. (operation/storage): -0°C … +50°C/-20°C … +50°C
Weight: 2.3kg
Product Size (WxHxD): 141mm x 167mm x 168mm Measurement data transmission: 100MBit/s

Optical data
Measurement range: 0-65m (recommended distance: 0-10m) Angular range: max. 190°
Angular resolution: 0.36°
Scanning rate: 50 scans/s or 20ms/scan Wavelength: 905nm
Pulse Duration: 3ns

Electrical data
Voltage supply: +24VDC Overcurrent protection: fuse 2.5A Current consumption: approx. 1A
Power consumption: < 75W

Rear View with scanning direction going up: connections and LED indicators from left to right

AirScan Connectors and LEDs

Connectors	
M12 plug / Connector1	For special applications and not to be used.
M12 socket / Connector2	For special applications and not to be used.
M12 socket / Connector3	This is the 100MBit/s Ethernet socket to connect a network switch or a computer. Use the supplied Ethernet cable with the 4-pin D-coded connector for the AirScan and the RJ-45 connector for the switch or computer. The interface is configured with the IP address labeled on your device and the subnet mask is 255.255.255.0. Both can be changed with the “AirScan IP Configurator” which is available in the Download-Center on our web site.

Connectors	
M16 plug / Connector4	This is the power plug. Connect the supplied power cable with the 14-pin M16 connector to the AirScan and the XLR male connector to the XLR female connector of the low voltage power supply. Then connect its power cord. Note that the device powers on automatically and that there is no dedicated power switch.

Ethernet status indicator (above connectors)	
Left, red LED 1	Ethernet system ready
Middle, red LED 2	Ethernet connection present
Right, red LED 3	Ethernet data transmission active

General device status indicator (on top of device)	
Leftmost, yellow LED 1	- slowly (1Hz) flashing: internal warning message (e.g. due to soiled sensor cover) - faster (4Hz) flashing: internal error message - continuous light: for internal use
Green LED 2	Detection field up to 30m is free
Red LED 3	Detection field up to 30m is occupied
Yellow LED 4	Detection field over 30m is occupied
Rightmost, green LED 5	Sensor functions active