Automatic doors UHF cabinet
S-UHF-CAB-201

USER MANUAL

Version 2.0

textile ID™ DATAMARS

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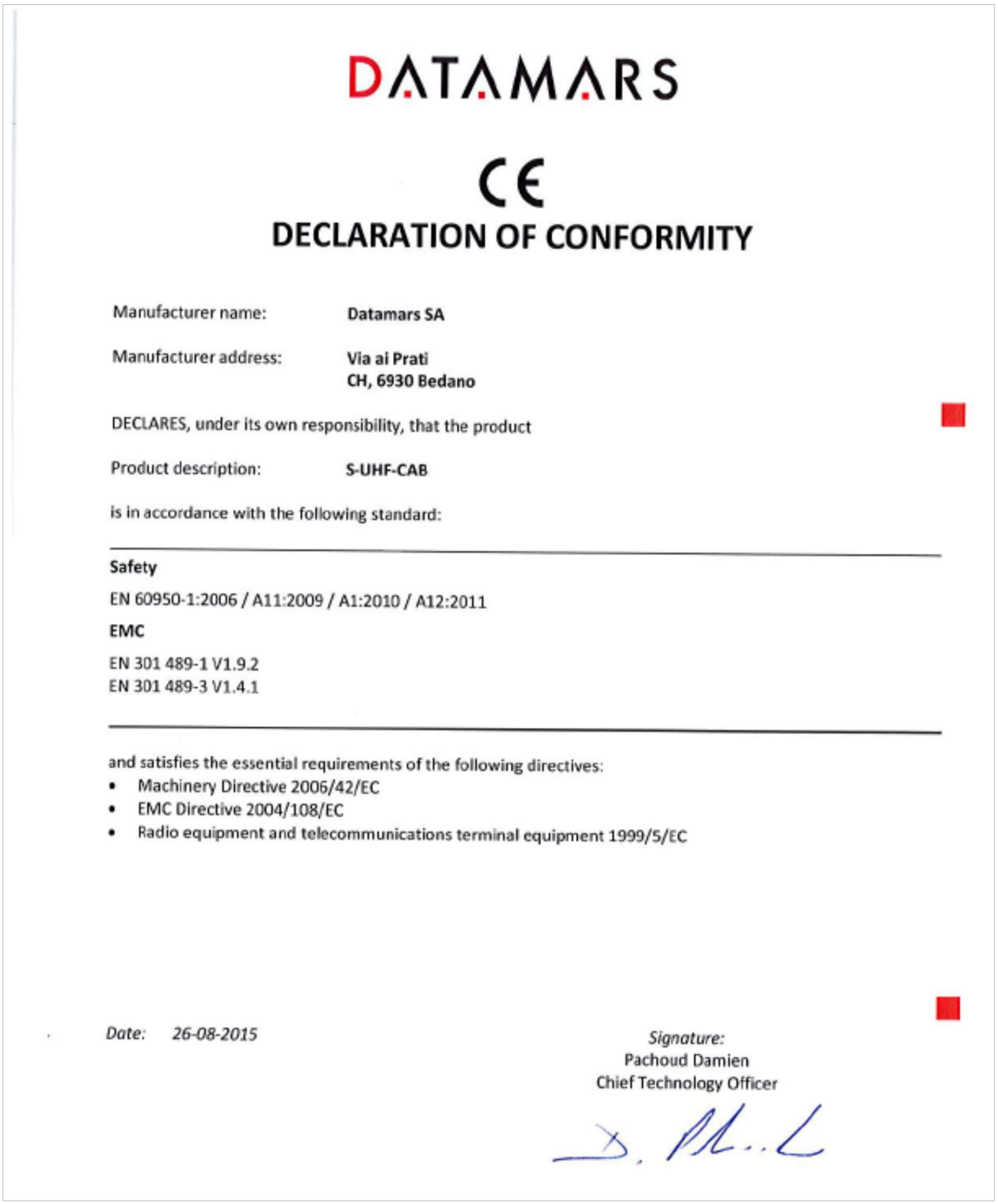
1 Declaration of conformity

The customer's electrical system, where the Cabin is connected to, must be properly earth-grounded in order to guarantee the fully compliance with the regulations stated in the declaration of conformity.



DATAMARS

CE

DECLARATION OF CONFORMITY

Manufacturer name: **Datamars SA**

Manufacturer address: **Via ai Prati**
CH, 6930 Bedano

DECLARES, under its own responsibility, that the product

Product description: **S-UHF-CAB**

is in accordance with the following standard:

Safety

EN 60950-1:2006 / A11:2009 / A1:2010 / A12:2011

EMC

EN 301 489-1 V1.9.2
EN 301 489-3 V1.4.1

and satisfies the essential requirements of the following directives:

- Machinery Directive 2006/42/EC
- EMC Directive 2004/108/EC
- Radio equipment and telecommunications terminal equipment 1999/5/EC

Date: *26-08-2015*

Signature:
Pachoud Damien
Chief Technology Officer

2 Installation

2.1 Physical installation

The Cabin shall be installed on an even floor, with no irregularities, to guarantee that Cabin is installed in a perfectly straight and stable position. In case of a not perfectly even floor, doors may require some adjustments to avoid them rubbing on the floor. This operation must be carried out by authorized Datamars personnel only.

The designated installation area shall guarantee a clear area to allow doors to operate.

Installation and handling of the Cabin requires a large area. Make sure, prior the installation, to prepare a clear area so that the authorized personnel can easily install the Cabin. For more information about installation requirements please contact Datamars support.

The Cabin is delivered into a wooden cage on a custom wooden pallet which measures about 1600 x 1700 mm. While still on the pallet, it shall be precisely located on the designated installation area. It can be unloaded with the included legs system which allow to lift it, remove the pallet, and lower it on the floor. Alternatively, four steel hooks are provided to lift the Cabin from the top with a big forklift or a roof pulley by means of robust straps (straps and forklift or roof pulley shall be available at destination location, they are not provided by Datamars).

The Cabin has one push button on the front and one the back. Before placing the Cabin in the designated installation area, it is important to understand where the push buttons to operate the Cabin shall be. Outside the wooden cage it is indicated on which side the push buttons are.

Four doors protection bumpers are provided. They require to be bolted down on the floor. It is important that no technical installations (pipes, heating system, etc.) exist underneath the floor.

2.2 Power supply and Ethernet connection

A five meters long power cord (coming out from top of the Cabin) is provided. A power socket shall be available nearby the designated installation area.

An ethernet RJ-45 socket is located on top of the Cabin.

2.3 Guide rails

Inside the Cabin there are two guide rails to protect the inside walls from accidental collisions with the trolleys. Those guide rails can be removed in case a pallet or a wide trolley shall be loaded into the cabin. Additional care must be taken while operating the Cabin without guide rails.

2.4 Clearance

The sides of the Cabin are fully shielded, and clearance is not required around it. However, no tagged items should be placed in front of the doors while reading is in progress. Even though the slots around the door are narrow, they could potentially lead to some unwanted readings.

3 Operating instructions

Before connecting the main power manually close the doors of the Cabin. When powered up the Cabin performs a calibration open and close cycle at reduced speed. It is very important that no obstacles interfere with the doors during this phase.

The software system which manages the Cabin takes about one minute to boot up. When the system is ready the doors automatically open and the illuminated push buttons light up in green.

A laundry cart can be put inside the Cabin, pressing one of the push buttons, the doors close. When doors are completely closed the reading, cycle starts and transponders EPCs are sent over the TCP/IP socket. When the reading ends the push buttons backlit turns green and the doors open. The laundry cart can be pushed out of the Cabin.

By default, the reading time is automatically adapted to the amount of tags which are inside the Cabin and it lasts at least one second. A fixed reading time can be set if required.

The Cabin is equipped with light barriers on both sides to prevent operation while an obstacle is in the immediate proximity of the doors. When the light beam is interrupted, the push buttons are disabled, and the Cabin cannot be operated. If an obstacle is detected while doors are closing they are immediately stopped and opened.

3.1 Reading accuracy

The reading accuracy achieved by the Datamars Cabin is also dependent on the quality of the transponders used. The best results may be achieved using the Datamars UHF transponders. Poor tags usually lead to lower performances.

In laundry environment, several kinds of cages, trolleys and carts are available. According to Datamars' tests, the metallic mesh width is not considerably affecting the reading accuracy. In case of cages with fully metal bottom plate instead, Datamars recommends placing a thick layer of non-conductive material (e.g. plastic foams, polystyrene, plastic, wood) over the bottom plate. This avoid transponders being shielded or strongly detuned by the metallic plate.

4 Default EPC data format and Ethernet socket

The default data format is a 96 bits EPC followed by a CR (Carriage Return) character. The EPCs are sent over a RAW Ethernet socket on port 14150.

It is possible to customize the EPC data format and the Ethernet socket port number through the web based graphical user interface.

4.1 Ethernet configuration

The Cabin's Ethernet interface is configured in DHCP mode by default. In addition to the IP address, a hostname is preconfigured. The default hostname is: speedwayr-xx-xx-xx.local where xx-xx-xx are the last six digits of the MAC address. The MAC address is printed on a label attached inside the Cabin.

The network interface of the Cabin can be configured directly through the web-based GUI. For more info see paragraph 5.1.

5 Software configurations

The Cabin is powered by Datamars' Cloudburst software. It comes with a standard software setup which allows to operate it without requiring any special configuration after the installation.

The default software configuration should provide a very high reading accuracy in most of the use cases. However, the RFID parameters and EPC data format can be customized through a web graphical user interface.

5.1 Graphical User Interface

To access the Cabin Cloudburst graphical user interface, make sure it is powered on, ready and connected through the Ethernet port to the same network of the PC used for the configuration.

Type the IP address of the reader if manually set or assigned by the DHCP server, or the reader host name (e.g. https://169.254.1.1 or https://speedwayr-11-4b-73.local) in your favorite web browser (e.g. Mozilla Firefox, Google Chrome) address bar and press enter.

You will be prompted for a login operation.
Default password is: password

For additional information about Cloudburst and the description of the parameters, please refer to the user manual available at the following link: https://textile-id.com/products-to-identify-and-track-every-kind-of-textile/#1572537140830-a664a90e-d859

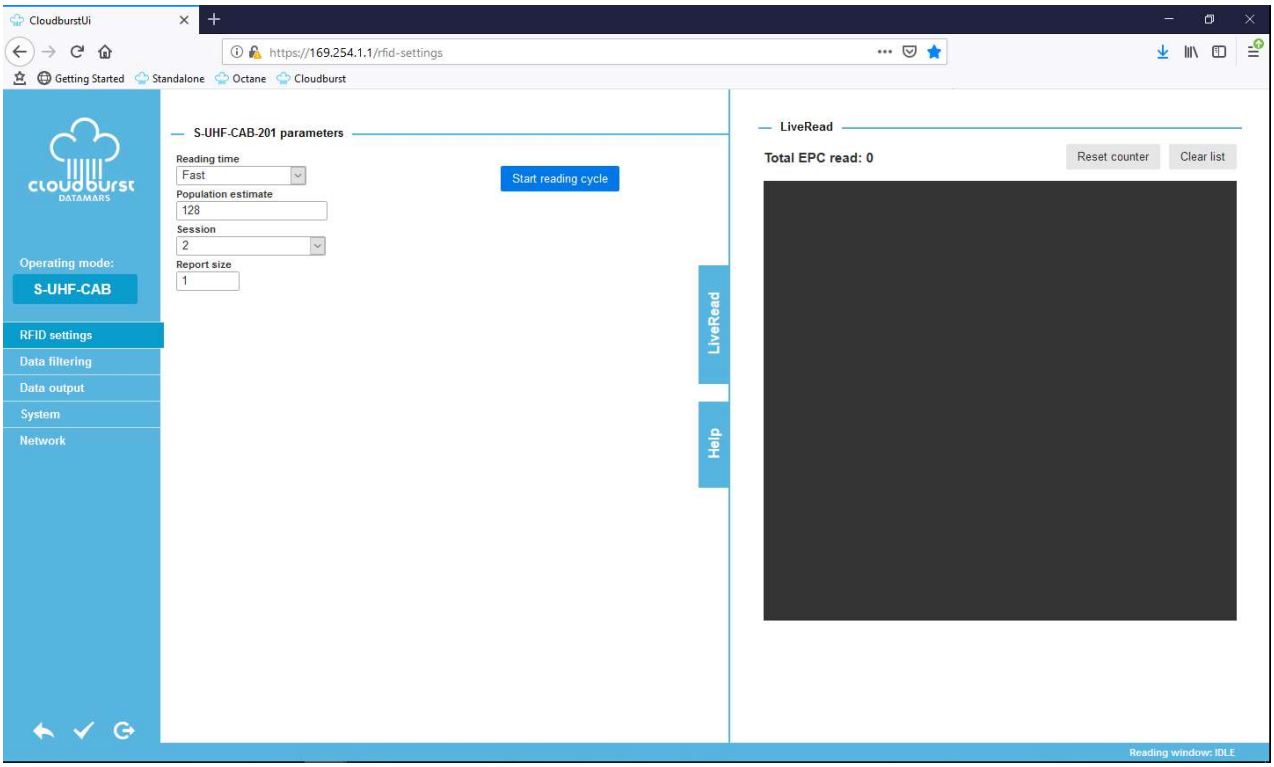


Figure 1 – Cloudburst Graphical User Interface

6 Safety and maintenance

Please read this paragraph carefully in order to ensure that a correct care and maintenance plan is followed to guarantee optimal operation of the Cabin.

- Storage
  - Do not expose the Cabin to water or moisture.
- Cleaning
  - Gently wipe outer and inner parts with a soft damp cloth and dry them immediately.
  - Do not use high pressure water jet to clean the Cabin; the product is not waterproof.
- Handling and operation
  - Handle and operate the Cabin with care; significant shocks may damage it.
  - The Cabin is heavy, unloading operation must be carried out by professional personnel to avoid any accident.
  - Be sure not to hit the doors switches when loading the cabin and do not apply excessive force. Damage may occur resulting in incorrect operation and failure detecting the doors position.
  - It is suggested not to operate the Cabin while people are inside it.
  - In the unlikely event of a person inside the Cabin while the reading is ongoing doors automatically open when the reading ends. In case of main power failure doors can be manually opened.
  - Do not wait in the immediate proximity of doors operation area while they are closed.
  - Do not place any object in the door's operation area.
  - Be careful before operating the Cabin, people or objects may be within the door's operation area on the opposite side.
  - Mind fingers and hands when automatic doors are operating.
  - The Cabin is equipped with safety anti crushing features. In case of an object or a person block the doors they immediately stopped, and the doors motion is inverted.
- Maintenance
  - Keep the doors switches clean.
  - Keep light barriers reflectors clean.
  - Periodically check that the hinges are properly working, and the screws are tightened.
  - Regular service of the Cabin is carried out by Datamars technicians and covered under support agreement if it has been included in the contract.
  - Do not attempt any modification to mechanical and/or electrical parts of the Cabin. If extraordinary maintenance is required, please contact Datamars support. Unauthorized service will void the warranty. Datamars disclaims any liability in case the Cabin has been modified.

7 Troubleshooting

If any problem arises while using the Cabin, the following table should help to find out a solution.

If the problem persists or is not listed, please contact Datamars support at support-tid@datamars.com or call landline support at: +41 (0)91 935 73 80.

Symptom	Cause and solution
The push buttons illumination is off	- An obstacle obstructs the beam of the light barriers or reflectors need to be cleaned. - The Cabin is not powered up. Check the power cable. - The software is not properly configured, or a general failure occurred. Turn off the Cabin, wait 10 seconds and turn it on again. If the problem persists, please contact Datamars support.
Doors close but don't open anymore	- The doors switches need to be adjusted, please contact Datamars support. - The software is not properly configured, or a general failure occurred. Turn off the Cabin, wait 10 seconds and turn it on again. If the problem persists, please contact Datamars support.
No EPC codes are sent over the Ethernet interface	- Check the Ethernet connection. - Run subsequent reading cycles of the same items is not possible. Once an RFID tag is identified by the Cabin a persistence time must be observed before reading it again. The persistence time is not a Cabin parameter, it is RFID tag dependent and it could last more than 60 seconds. However, it is usually not required to identify the RFID tags twice. - The software is not properly configured, or a general failure occurred. Turn off the Cabin, wait 10 seconds and turn it on again. If the problem persists, please contact Datamars support.
The graphical user interface is not reachable	- Check the Ethernet connection. - Check that the Cabin address typed in the web browser' address bar is correct. - The software is not properly configured, or a general failure occurred. Turn off the Cabin, wait 10 seconds and turn it on again. If the problem persists, please contact Datamars support.

8 Technical specifications

External dimensions (L x W x H)	1360 x 1636 x 2180 mm (54” x 65” x 86”) with doors closed 1360 x 2516 x 2180 mm (54” x 99” x 86”) with doors opened
Maximum internal dimensions (L x W x H)	920 x 1400 x 1990 mm (36” x 55” x 78“)
Weight	Approx. 750 kg (1654 lb)
RFID compliances	ISO/IEC 18000-6C EPC Class 1 Gen 2 ETSI EN 302 208 (865 – 868 MHz)
Interface	RJ-45 connector, 10/100 Mbps Ethernet interface
Operating voltage range	Single phase 240 V AC, 50 Hz
Maximum operating current	5 A
Operating temperature	0°C to +50°C (32°F to +122°F)

9 Warranty

Datamars S-UHF-CAB-201 follows standard warranty rules for Datamars reading systems and it is guaranteed for one year from the delivery date.