uPASS TARGET ✳

quick reference guide

1 INSTALLATION[1]

1.1 SAFETY INSTRUCTIONS

The following safety precautions shall be observed during normal use, service and repair.

- The uPASS Target shall only be installed and serviced by qualified service personnel.
- Disconnect the power supply before (dis)connecting any wires, uPASS Target is NOT hot-swappable, so when making or changing connections, power must be switched OFF.
- To be sure of safety, do not modify or add anything to the uPASS Target other than mentioned in this installation guide or indicated by Nedap N.V.

1.2 MOUNTING INSTRUCTIONS

The uPASS Target can be mounted to any surface with the wall mounting bracket and Pole Mounting Set. The uPASS Target can be "aimed" at the desired detection area with the mounting brackets.
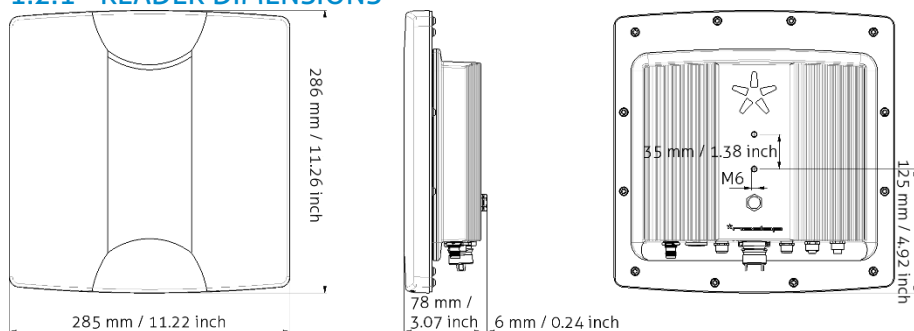
1.2.1 READER DIMENSIONS

Figure 1: uPASS Target dimensions
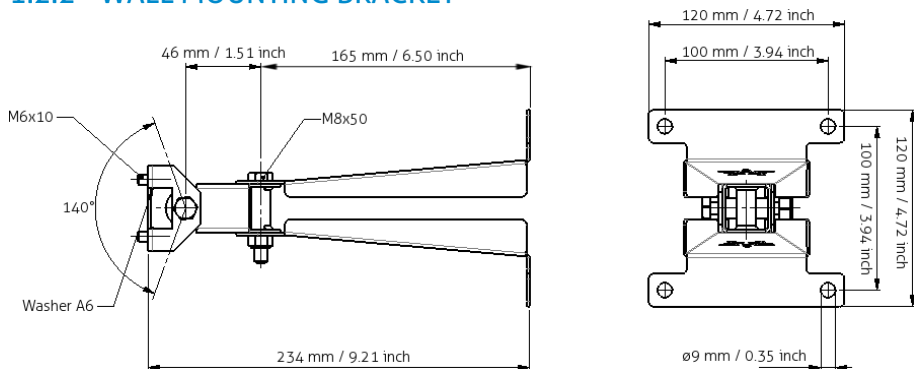
1.2.2 WALL MOUNTING BRACKET

Figure 2: Wall Mounting Bracket

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[1] For the complete documentation see the uPASS Target Installation guide

1.2.3 POLE MOUNTING SET

172 mm / 6.77 inch

100 mm / 3.94 inch

140 mm / 5.51 inch

100 mm / 3.94 inch

43 mm / 1.69 inch

Round: 190 mm / 7.48 inch
Square: 150 mm / 5.90 inch
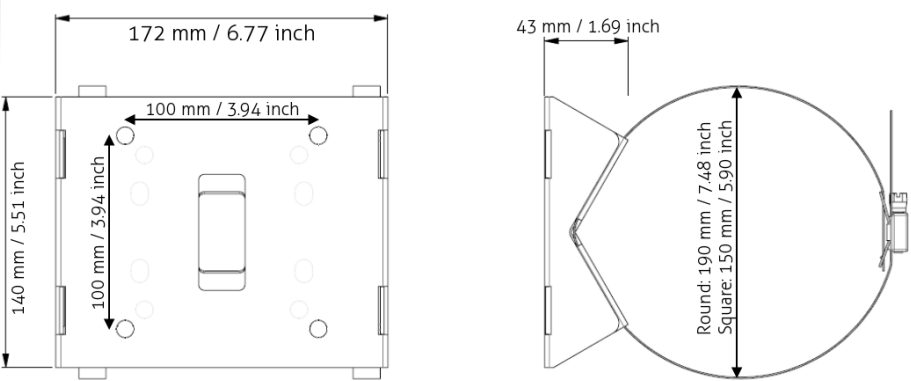
Figure 3: Pole Mounting Set

1.2.4 WEATHER PROTECTION HOOD MOUNTING

M5x10

27 mm / 1.06 inch

85 mm / 3.35 inch

302 mm / 11.89 inch
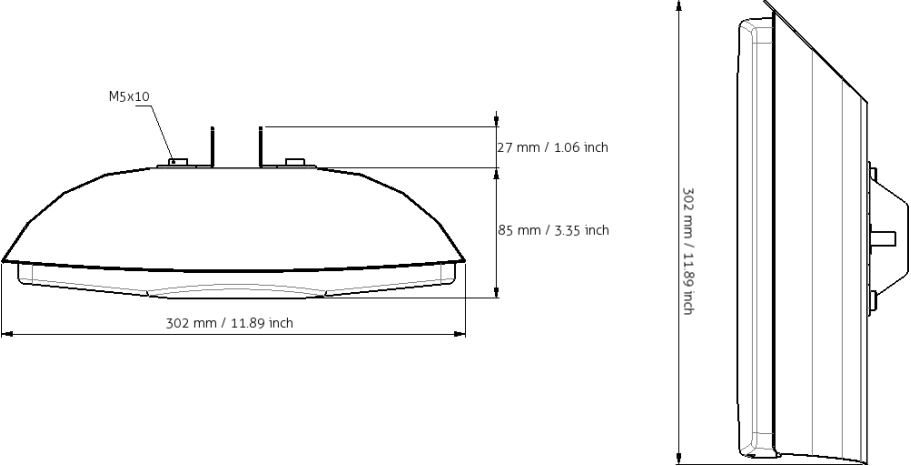
302 mm / 11.89 inch

Figure 4: Weather Protection Hood

2   CONNECTIONS[2]

All connectors shown in this chapter are seen from the outside of the reader.

Figure 5: uPASS Target connectors

CONN. 1

Pin	Function
1	RS-422 TX-
2	RS-422 TX+
3	RS-422 RX- / RS-485 B
4	RS-422 RX+ / RS-485 A
5	Ground

CONN.2

Pin	Function
1	Input 1 / UL
2	Wiegand Data 0 / Magstripe Clock
3	Magstripe Card loaded
4	Wiegand Data 1 / Magstripe Data
5	RDIS
6	Ground
7	Ground
8	Input 2 / NA

CONN. 3

Pin	Function
1	Relay NO
2	HF Data
3	Relay NC
4	Relay COM
5	Ground

CONN. 4

CONN.5

Pin	Function	SW	Function
1	-	1	Enable TRANSIT mode
2	Ground	2	Enable RS-422
3	DC+		
4	-		

USB

[2] For the complete documentation see the uPASS Target Installation guide

USB Driver installation

Make sure your computer is connected to the internet. The driver should install automatically via Windows update when the uPASS Target reader is connected to your PC via the USB cable. Follow the driver installation wizard. If you do not see the Windows update pop-up, you can manually install the driver. To manually install, you need to go to FTDI's website at www.ftdichip.com/Drivers/VCP.htm and download the VCP (Virtual Com Port) drivers for your operating system.

DC power supply

A DC power supply can be connected to the uPASS Target via CONN. 5. This DC power supply must be able to deliver 12Vdc/1.5A or 24Vdc/0.75A.

Power over Ethernet

Power over Ethernet operates over Ethernet cables. CONN. 4 is a RJ45 Ethernet connection and can be used for Power over Ethernet. The uPASS Target requires IEEE802.3at (Power over Ethernet Plus).

Serial

The RS-422 or RS-485 communication can be used for communication with the Access Control System, configuration settings and firmware update. Only the RS-422 or the RS-485 interface can be active (not both), this is determined by SW1-2 (located near the USB port).
The maximum cable length for both interfaces is 65 meters / 213 feet. This distance can be increased by adding termination resistors, using twisted cables and/or configuring a lower baud rate.
It isn't possible to use the communication protocol in a bus, only point-to-point communication is possible. The default communication settings are 115200 Baud, 8 data bits, 1 stop bit and no parity.

Wiegand / Magstripe

The Wiegand and Magstripe communication can be used for communication with to Access Control System only. The Wiegand and Magstripe can operate with a cable length of 150 meters / 490 feet.

3   TRANSIT COMPATIBLE MODE

The uPASS Target has a TRANSIT compatible processor. This processor is capable of running the TRANSIT software (e.g. P61, P81 and Q70). To select this mode the dipswitch SW1-1 (located near the USB port) must be switched ON.
The tooling of the TRANSIT can be used to communicate with TRANSIT compatible processor. The TRANSIT tooling can be downloaded from the portal https://portal.nedapidentification.com.

4   READER CONFIGURATION[3]

The uPASS Target reader settings can be configured easily using the UHFTOOL software. The UHFTOOL requires a Microsoft Windows installation to run. The UHFtool can be downloaded from https://portal.nedapidentification.com.

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[3] For the complete documentation see the uPASS Target Installation guide

A   TECHNICAL SPECIFICATIONS

Item	Specification	Remark
Dimensions	286mm x 285mm x 78mm 11.26in x 11.22in x 3.01in	Length x width x height
Weight	3.5 kg (7.72 lbs.)	
Cover material	UL94 ABS cover (RAL7016)	
Chassis material	Aluminum (RAL9006)	
Protection class	EN IEC 60529 + A1 (IP66)	
Operational temperature	-30 °C ... +60 °C -22 °F ... +140 °F	
Relative humidity	10 .. 93 % non-condensing	
Identification range	Up to 10 meters (33 feet) (line-of-sight)	With passive Nedap UHF tags
Power supply	12 ... 24VDC ±10% power supply Power over Ethernet plus (IEEE 802.3at)	
Current consumption	1.50A @ 12VDC 0.75A @ 24VDC	
Inputs	2 digital input for LED control 1 digital input for reader disable1 TNC Nedap UHF antenna	Active low inputs (0V – 5V) Active low input (0V – 5V)
Output	Wiegand, Magstripe (clock & data), Nedap EM4102, Nedap CR/LF	Other possible in TRANSIT compatible mode, see TRANSIT firmware guides
Relay	1 relay (NO, common, NC) 24VDC 2A	
Interfaces	RS-422, RS-485, Ethernet and USB	
Air interface	ISO18000-6C	
Polarization	Circular	

Operating frequency	Country	Frequency	Technique		Power
	Europe	865.7 - 867.5 MHz	FHSS	4ch	2W ERP
	Americas	902.7 - 927.2 MHz	FHSS	50ch	1W cond, ≤6dBi gain
	Brazil	915.5 - 927.5 MHz	FHSS	41ch	1W cond, ≤6dBi gain
	China	920.6 - 924.4 MHz	FHSS	20ch	2W ERP
	Australia	920.7 - 925.2 MHz	FHSS	10ch	4W EIRP
	Israel	915.1 - 916.9 MHz	DRM	4ch	2W EIRP
	South-Korea	917.7 - 920.1 MHz	FHSS	5ch	4W EIRP
	New Zealand	922.5 - 926.0 MHz	FHSS	8ch	4W EIRP
	Japan	916.8 - 920.4 MHz	DRM	4ch	1W cond, ≤6dBi gain
	Malaysia	919.8 - 922.2 MHz	DRM	5ch	2W ERP
	Taiwan	922.6 - 927.4 MHz	FHSS	9ch	1W cond, ≤6dBi gain
	Vietnam	920.7 - 924.3 MHz	DRM	7ch	2W ERP
	Philippines	918.5 - 919.5 MHz	DRM	3ch	0.5W ERP
	Russian	866.3 - 867.6 MHz	DRM	3ch	2W ERP

Immunity	EN 50364 EN62369-1 EN301 489-1 V1.9.2 EN 301 489-3 V1.6.1 EN 55022 EN 61000-6-2 EN 61000-6-3 +A1	
Safety	EN 60950-1	
Emission	EN 302 208-1 v1.4.1 EN 302 208-2 v1.4.1 ERC REC 70-03 FCC 47 CFR part 15 subpart C Section 15.247 Industry Canada RSS210	
Shock	IEC 68-2-27 Ea	50 G, 6 ms, 10x3 dir
Bump	IEC 68-2-29 Eb	25 G, 6ms, 1000x3 dir
Random vibration	EN 50155	5 – 150Hz, 5 G, 20 sweeps x 3 dir

B   DISCLAIMER

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C   DOCUMENT REVISION

Version	Date	Comment
1.01	2016-02-29	• Increased version for release
0.01	2016-02-24	• Initial version

D FCC / IC STATEMENT

FCC ID: CGDUPASSTAR
IC: 1444A-UPASSTAR

Compliance statements (part15.19)
This device complies with part 15 of the FCC Rules and to RSS210 of Industry
Canada. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that
    may cause undesired operation.

Cet appareil se conforme aux normes CNR210 exemptés de licence du Industriel
Canada. L'opération est soumise aux deux conditions suivantes:
(1) cet appareil ne doit causer aucune interférence, et
(2) cet appareil doit accepter n'importe quelle interférence, y inclus interférence qui
    peut causer une opération non pas voulu de cet appareil.

Warning (part15.21)
Changes or modifications not expressly approved by party responsible for
compliance could void the user's authority to operate the equipment.

RF Exposure (OET Bulletin 65)
To comply with FCC RF exposure requirements for mobile transmitting devices, this
transmitter should only be used or installed at locations where there is at least 20cm
separation distance between the antenna and all persons.

Information to the User (Part 15.106(b))
Note: This equipment has been tested and found to comply with the limits for a class
B digital devices, 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 generates, uses and can radiate radio frequent energy
and, if not installed and used in accordance with the instructions, may cause harmful
interference to radio communications. However, there is no guarantee that
interference will not occur in a particular installation. If this equipment does not
cause harmful interference to radio or television reception, which can be determine
by turning the equipment off and on, the user is encouraged to try to correct the
interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to
  which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

UL
This equipment is intended to be powered from a limited power supply that is listed as ALVY
(UL294) or APHV (UL603).

UL294 Classifications:	Destructive Attack:	Level 1
	Line Security:	Level 1
	Endurance:	Level 4
	Standby Power:	Level 1