Wireless Internet Module for the Oregon PIT Reader

VisAdvies

Ecologisch advies & onderzoek

Installation Guide
Wireless Internet Module for the Oregon PIT Reader
Version 1.0

1   Introduction

The Wireless Internet Module (WIM) for the Oregon (RFID) Reader facilitates data transfer from the study site to your office over the Internet in a fully automated way.
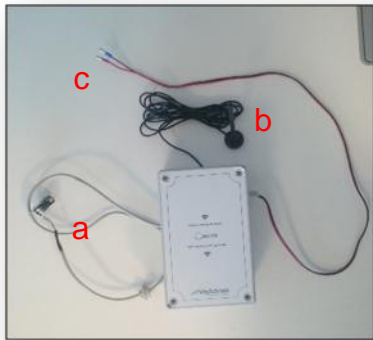
Reader data will be uploaded in any desired frequency (once a day by default). The data is transferred through a 3/4G Internet connection. An internet connection from a LAN network can also be used, if available at the study site. Data will be made available at a Cloud Server after the data is transferred from the study site.

The WIM serves two purposes:
- Data transfer from remote study sites and
- Monitoring of the progress of the PIT Reader system to make sure that everything is up and running. "Down-time" will be minimised this way. In case of a battery powered system (solar/wind energy), the status of the battery voltage can be consulted at any moment.

2   Package Contents

Wireless Internet Module with a) data cable, b) power cable and c) 3/4G antenna

Battery cables

Banana connectors

3   Plug and play

The WIM is designed to plug and play. When the system is powered-up, the latest data will be up-loaded and send over the Internet.

Note: Most essential is the availability of a 3 or 4G Internet provider at the study site. The WIM is supplied with an Internet subscription that can utilise any available provider in the neighbourhood. If you like to use the LAN (Ethernet cable), please contact VisAdvies for further detailed instructions.

Note: The following instructions assume that a RIFD PIT Reader is correctly installed. It is advised to download and install the latest software version of the PIT Reader system. if necessary, please consult your manufacturer's user manual for information on how to set up a PIT system with the Oregon PIT Reader (http://www.oregonrfid.com/software/datalogger506.zip).

3.1   Power supply

The WIM takes his power from the same 12 Volt source as the Reader, so no extra power supply is needed. Turn of the power switch on the left side of the WIM before connecting to your power supply. Depending on the power supply, the connection is as follows.

- 220v - 12 volt converter (Fig. 3.2.1)

  At locations with a regular 220 volt power supply, a 220v-12v (minimal 5 ampere) power converter will be used. In this case banana connecters (included) can be used.

- 12 Volt batteries (Fig. 3.2.2)

  In case 12 volt batteries are used, the supplied connectors with O-rings are used. First connect the red cable (+) to the plus pole (red) of the battery. Then, connect the black cable (-) to the negative pole (black) of the battery. Then connect the cables from the WIM and the batteries.

Fig. 3.2.1   Fig. 3.2.2

⚠️ **Note:** Using a power supply with a different voltage rating will damage and void the warranty of this product.

3.2   Location of the antenna

The antenna is wired with 3 meter cable. For the best coverage of the network it is necessary to place the antenna outside and as high as possible.

3.3   Data cable connection

The data cable is marked on the WIM with: "to Reader".
- To lead the cable into the reader, use one of the four holes on the left side and remove the grommet. If all holes are used, a fifth hole (16 mm) have to be drilled. The (male) serial connector must be temporarily detached (Fig. 3.1.1).
- Attach the cable to the serial connector again inside the Reader and take care to keep the red dot on the top (Fig. 3.1.2/3.1.3)
- Attach the male serial connector to the female serial connector on the Reader (Fig. 3.1.4).
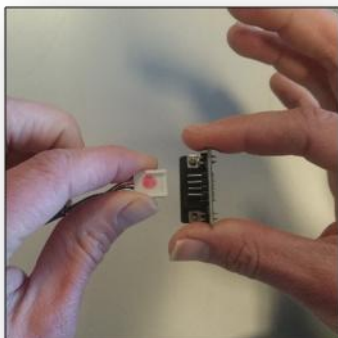- Place the new rubber grommet. (Fig 3.1.5/3.1.6)
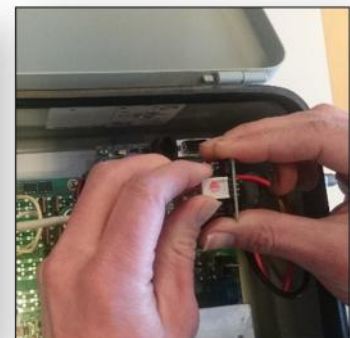

Fig. 3.1.1   Fig. 3.1.2   Fig. 3.1.3

Fig. 3.1.4	*Fig. 3.1.5*	*Fig. 3.1.6*

Now the installation in finished and the WIM can be turned on using the black switch on the left side.

3.4   Access to your data

The PIT data will be uploaded to the Synology^{tm} data server of VisAdvies on a daily basis at 06:00 AM. Clients can access this data from a Cloud-Service on the Synology^{tm}. Just like the Dropbox Cloud-Service, a piece of "*Client software*" must be installed on your local computer. The "*Client software*" takes care of a secure and private connection. After installation, the data at the local directory on your computer will be synchronized automatically with the PIT data at the VisAdvies data server.

Confidentiality agreement. The PIT data is only accessible for the client of the device. VisAdvies Ltd. will not distribute the data of clients in any way.

- Download the Synology Cloud Station Drive
  → https://www.synology.com/en-us/support/download/DS212+
  → choose Cloud station drive
  → Select your operating system (Windows, Mac)
- Start the Wizard (Fig. 3.4.1)

  After the download is completed, start the Wizard.
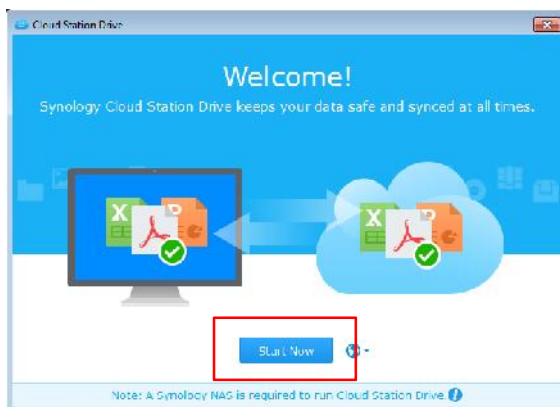- Set the settings for synchronisation (Fig. 3.4.3)
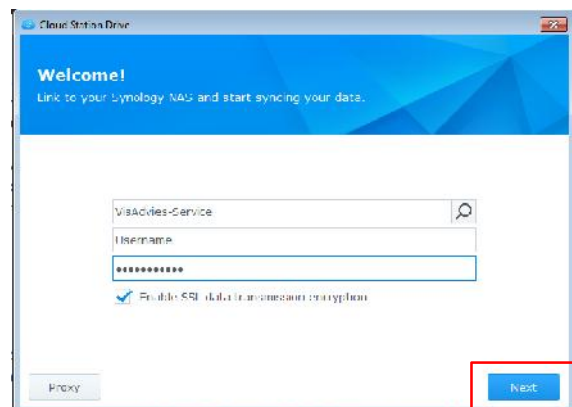

Fig. 3.4.1 Start the Wizard

Fig. 3.4.2 Set settings

In the first row the name of your local computer is visible. Put in the second row the name of the cloud service: **VisAdvies-Cloudservice.** Put in the third row your username and in the fourth row your password. **Username** and **password** are send by email.
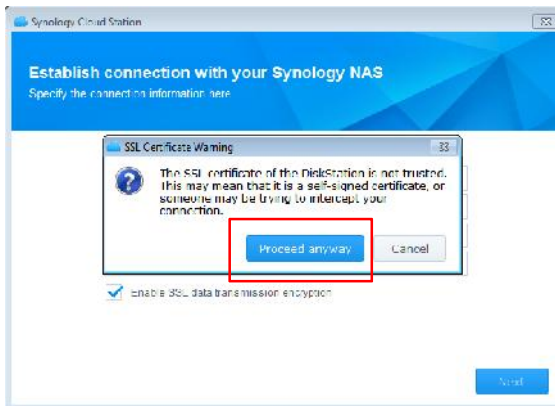
- Proceed the SSL-certificate anyway (Fig. 3.4.2)

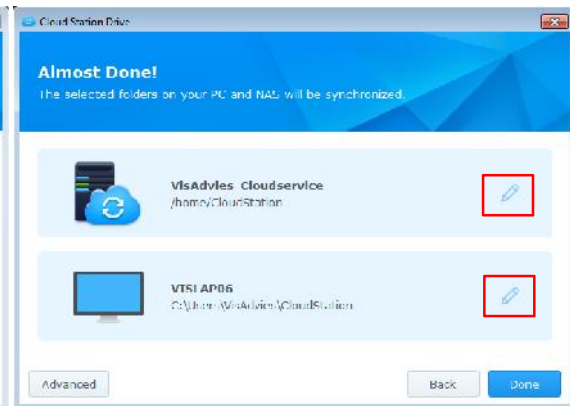*Fig. 3.4.3 Proceed anyway*

Fig. 3.4.4 Synchronize the Cloud to your pc/laptop

- Synchronisation rules/ parts (Fig. 3.4.4)

→ Click on the edit button next to VisAdvies-Cloudservice and select the your folder (PIT DATA)
→ Then, click on the edit button next to your pc/laptop name and select a map to your choice (for example C:/PIT DATA LOCATION).
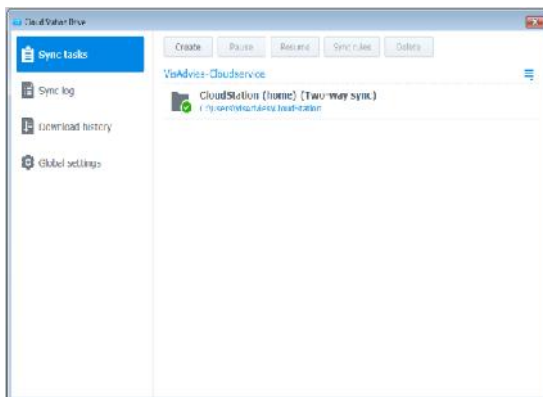

Fig. 3.4.5 Synology app

Fig. 3.4.6 New notification bar

- The Synology Cloud App is installed and a new icon appears in the notification bar (Fig. 3.4.5/3.4.6)
- Now the synchronisation will start directly!

Now your PIT Data is uploaded for the first time to your local map you have chosen on your computer. If no new detections were available on the reader, only a test-file was uploaded.

4   Technical support

VisAdvies BV
Telephone +31 (0) 285 10 66 (Monday – Friday from 9:00am-5:00pm)
Email: info@visadvies.nl
Website: www.VisAdvies.nl

5   Additional services

OPTIONAL

VisAdvies offers additional services for processing and analysing data. Such as:

- Processing raw data to an well-organized csv-file (without errors, double detections etc.).
- Online access to processed data on your website (graphs/ tables with downtime, detections etc.).
- PIT Telemetry Database (overview of the fish migration in your basin or at a single location)

VisAdvies
Ecological consultancy & research

Veluwehaven 43
PO Box 2744
3430 GC Nieuwegein
The Netherlands

Liability:
VisAdvies BV nor its shareholders, agents or employees be liable for any direct, indirect, incidental or consequential damages or fines or other forms of damages and costs arising from or arising from the use of the advice of VisAdvies BV by the principal or produced fluids and applications by customer or third parties of the results of operations or other data obtained from VisAdvies BV. Client indemnifies VisAdvies BV against all claims by third parties and by VisAdvies BV to do with costs (including legal assistance) if the claims in any way related to the client for the work done by VisAdvies BV.

Notwithstanding the foregoing, any liability of VisAdvies BV under the contract between VisAdvies BV and the client is limited to the amount in the particular case under the professional liability of VisAdvies BV is paid, plus the amount of the deductible, according to the insurance is borne by VisAdvies BV. Should no payment be take place the under mentioned insurance, for whatever reason, the liability of VisAdvies BV is limited to [twice] the amount by VisAdvies BV in connection with the contract concerned has been charged [and timely completion in the twelve months preceding the date on which the event causing the liability gave rise took place] with a maximum liability of € 50,000.