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1 Introduction

This User Manual is designed to provide users with a comprehensive understanding of the functionalities and features of the EOSC Digital Innovation Hub Web Application which can be accessed at the following URL: https://ai4pheno.seth.software. The document aims to guide users step-by-step through the application, ensuring they can efficiently utilize its features and address any challenges encountered. Additionally, this manual serves as a go-to reference for troubleshooting, best practices, and frequently asked questions about the platform.

1.1 Web Application Access

The web application is available and can be accessed at the following URL: https://ai4pheno.seth.software.

1.2 Problem Definition

The heart of the problem lies in the domain of Phenology - a discipline studying vegetation’s temporal changes. Traditionally, it targets seasonal events such as budding, fruiting, flowering, and ageing. Due to the influence of both environmental factors and human activities on plant developmental stages, this science yields invaluable insights into the state of our landscape’s vegetation cover. Such data proves pivotal especially in the context of climate change, where progressive shifts challenge the health and occurrence of plant species.

While various methods exist to detect phenological stages, there remains a void in the market for open tools aiding in the collection and analysis of digital phenological imagery using machine learning (ML) techniques. The proposed tool intends to fill this gap by offering an automated, efficient means to apply ML in time series image analyses of vegetation impacted by climate changes.

1.3 User Benefits

Upon the provision of this service, users will be endowed with a comprehensive IT solution. This integrated platform will not only streamline the processes of image acquisition, storage, and analysis but also offer scalability to accommodate further research areas like landscape analysis or crop yield forecasting.
1.4 Objectives

The overarching aim is to co-develop this solution with the EOSC DIH and the Research Community, ensuring its accessibility via the EOSC Marketplace. By procuring these solutions from the private sector, EOSC DIH aims to meet the research community’s needs while also enriching the EOSC with novel offerings.

Specific objectives encompass:

1. Acquisition of a digital platform for phenological imagery.
3. Introduction of digital tools to utilize hand crafted AI models for phenological imagery analysis.
5. Facilitation of management tools for the platform concerning data and users.

2 User Roles and Types

In the AI4Pheno system, roles are predefined sets of permissions that determine what actions users can and cannot perform. On the basis of these roles, three primary user types are defined:

2.1 Administrators

Administrators have the highest level of control in the AI4Pheno system. They can manage other user accounts, oversee system settings, and perform any function that other user types can.

2.2 Power Users - Users of Cameras and Analysis Tools

Power users have permissions that allow them to access and use cameras and analysis tools provided by AI4Pheno. This role is ideal for those who need to capture and analyze data directly within the application.
2.3 Regular Users - Analytical Tools User

Users with this role have access to the analysis tools in AI4Pheno. They may not have permissions to access cameras or certain data but can utilize tools to analyze existing datasets.

2.4 Default login and password

AI4Pheno has three primary user roles: admin, power user, and regular user.

2.5 Regular User Access

These default credentials are provided for demonstration purposes and initial system exploration. It’s advised to change the default password upon the first login to ensure the security of your account.

2.6 Admin and Power User Access

The roles of admin and power user are reserved for system management and administrative tasks. As such, their default login credentials are not publicly disclosed to maintain system security. Only the system administrators or those responsible for system management have access to these credentials.

If you believe you require admin or power user access, please contact the system management team for further assistance.

2.7 Sign In

Logging in is possible after providing an email and password following prior account registration.
2.8 Sign Up

Account registration is possible by initially providing an email address and accepting the Terms of Use and Privacy Policy. After clicking, check your email and click the activation link. Next, you should set a password according to the presented password complexity policy.
Figure 2: Sign up screen

Figure 3: Activation link screen
Next, you need to fill out the profile form, providing more information about the account.
After completing the profile and saving, the account will be manually reviewed. After manual review, the account will be activated and an activation notification will be sent via email.
2.9 Dashboard

After logging into the system, the user is redirected to the dashboard.

Figure 7: Dashboard screen
3 Data acquisition and storage (DAS)

3.1 Camera Type 1

5MP IPC-HFW2531S-S-S2

IPC-HFW2531S-S-S2 (dahuasecurity.com)
Dahua-Network-Camera-Web-3.0_OperationManual_V2.1.5.pdf (dahuasecurity.com)

3.1.1 Basic Configuration

The chapter introduces the basic configuration, camera configuration, storage configuration and system configuration.

Login  This subsection introduces how to log in to and log out of the web interface.

• You need to initialize the camera before logging in to the web interface.

• When initializing the camera, keep the PC IP and device IP in the same network.

• Follow the instruction to download and install the plug-in for the first login.

Procedure
Step 1: Open IE browser, enter the IP address of the camera (192.168.1.108 by default) in the address bar and press Enter.
Step 2: Enter the username and password.
Step 3: Click Login.

**General**
You can configure device name, language and video standard.

**Procedure**
Step 1 Select Setting > System > General > General.
### Step 2: Configure general parameters

#### Description of general parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the device.</td>
<td>Each device has its own name. Set own name e.g. SLOWIN_1</td>
</tr>
<tr>
<td>Language</td>
<td>Select system language.</td>
<td>Select system language from list. Set e.g. English</td>
</tr>
<tr>
<td>Video Standard</td>
<td>Select video standard from PAL and NTSC</td>
<td>Set PAL</td>
</tr>
</tbody>
</table>

### Step 3: Click Save.

#### Date & Time

You can configure date and time format, time zone, current time, DST (Daylight Saving Time) or NTP server.

**Procedure**

Step 1: Select Setting > System > General > Date & Time.
Step 2: Configure date and time parameters

Description of date and time parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Format</td>
<td>Configure the date format</td>
<td>YYYY-MM-DD</td>
</tr>
<tr>
<td>Time Format</td>
<td>Configure the time format. You can select from 12-Hour or 24-Hour.</td>
<td>24-Hour</td>
</tr>
<tr>
<td>Time Zone</td>
<td>Configure the time zone that the camera is at.</td>
<td>(UTC) Coordinated Universal Time</td>
</tr>
<tr>
<td>Current Time</td>
<td>Configure system time. Click Sync PC, and the system time changes to the PC time.</td>
<td></td>
</tr>
<tr>
<td>DST</td>
<td>Enable DST as needed.</td>
<td>Not enable</td>
</tr>
</tbody>
</table>
### Parameter | Description | Preferences
--- | --- | ---
NTP | Select the check box, and then NTP (network time protocol) is enabled, the system then syncs time with the internet server in real time. You can also enter the IP address, time zone, port, and interval of a PC which installed NTP server to use NTP. | Serwer: clock.isc.org Port: 123 Interval: 30 Min. 

Step 3: Click Save.

**Snapshot (Quality & Interval)** You can configure snapshot parameters, including snapshot type, image size, quality and interval.

**Procedure**

**Step 1:** Select Setting > Camera > Video > Snapshot.

![Snapshot Configuration](image.png)

Step 2: Configure snapshot parameters.

Description of snapshot parameter
### Snapshot Type
- **General**: The system takes snapshot as scheduled.
- **Event**: The system takes snapshot when the video detection, audio detection, event, or alarm is triggered. This function requires the corresponding snapshot being enabled.

### Image Size
The same resolution with main stream.

### Quality
Configures the snapshot quality. There are six levels of Image quality, and the sixth is the best.

### Interval
Configures the snapshot frequency. Select Customized, and then you can configure snapshot frequency manually.

---

**Step 3:** Click Save.

### Setting Schedule Snapshot Plan
You can configure record schedule, snapshot schedule and holiday schedule. Set certain days as holiday, and when the Record or Snapshot is selected in the holiday schedule, the system takes snapshot or records video as holiday schedule defined.

**Procedure**
- Step 1 Select Setting > Storage > Schedule > Snapshot
Step 2: Select Snapshot.
Step 3: Select snapshot type and set time period.

- green represents normal snapshot plan (such as timing snapshot);
- yellow represents motion snapshot plan (such as snapshot triggered by)
- red represents alarm snapshot plan (such as snapshot triggered by alarm-in) intelligent events);

Step 4: Select Setting.

Step 5: Select Period and type (General, Event, Alarm) -> preferences General. You can set 6 time periods per day.
Step 6. Select Save.

**Setting Destination FTP**  This subsection introduces the configuration of the storage method for the recorded videos and snapshots.

**Path**  You can select different storage paths for the recorded videos and snapshots according to event type. You can select from SD card, FTP and NAS.

- Local is displayed only on models that support SD card.

**Procedure**

**Step 1** Select Setting > Storage > Destination > Path

![Image of configuration interface](image)

**Step 2:** Select the storage method that you need for the snapshots of different types.

**Description of path parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Type</td>
<td>Select from <strong>Scheduled</strong>, <strong>Motion Detection</strong> and <strong>Alarm</strong></td>
<td>Snapshot &gt; Scheduled</td>
</tr>
<tr>
<td>Local</td>
<td>Save in the internal SD card.</td>
<td></td>
</tr>
<tr>
<td>FTP</td>
<td>Save in the FTP server.</td>
<td>Enable</td>
</tr>
<tr>
<td>NAS</td>
<td>Save in the NAS (network attached storage).</td>
<td></td>
</tr>
</tbody>
</table>

**Step 3:** Click Save.

**Step 4:** Configure other path parameters on FTP interface.

**FTP**  FTP can be enabled only when it was selected as a destination path. When the network does not work, you can save all the files to the internal SD card for emergency.
Step 1: Select Setting > Storage > Destination > FTP.
Step 2: Select the Enable check box, and select the FTP type.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server Address</td>
<td>The IP address of the FTP server.</td>
<td>Set FTP IP address</td>
</tr>
<tr>
<td>Port</td>
<td>The port number of the FTP server.</td>
<td>Set FTP port number</td>
</tr>
<tr>
<td>Username</td>
<td>The user name to log in to the FTP server.</td>
<td>Set user name</td>
</tr>
<tr>
<td>Password</td>
<td>The password to log in to the FTP server.</td>
<td>Set password</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td>Preferences</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Remote Directory</td>
<td>The destination path in the FTP server, and it is shared by default.</td>
<td>The default directory structure in destination path:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Remote Directory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Date</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• “001” – channel no.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• “jpg”– file ext.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• e.g. “01” – hourly period with image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• image file name</td>
</tr>
</tbody>
</table>

Step 4: Click Save.  
Step 5: Click test to test whether FTP function works normally.

**Local**  Display the information of the local SD card. You can set it as read only or read & write; you can also hot swap and format SD card

**Setting Alarm**  Preferences to set: Disk Full, Disk Error
About Alarm Types
Description of alarm types

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disk Full</td>
<td>The alarm is triggered when the free space of SD card is less than the configured value.</td>
<td>The SD card no space function is enabled.</td>
</tr>
<tr>
<td>Disk Error</td>
<td>The alarm is triggered when there is failure or malfunction in the SD card.</td>
<td>SD card failure detection is enabled.</td>
</tr>
</tbody>
</table>

Setting SD Card

In case of SD card abnormality, the system performs alarm linkage. The event types include No SD Card, Capacity Warning, and SD Card Error. The introduction is for reference only, and may differ from the actual interface.

Step 1 Select Setting > Event > Abnormality > SD Card
Step 2: Select the event type from the Event Type drop-down list, and then select the Enable check box to enable the SD card detection function.

When setting Capacity Warning as Event Type, set Capacity Limit. When the remaining space of SD card is less than this value, the alarm is triggered.

Step 3: Set alarm linkage actions.

Step 4: Click Save

3.2 Camera Type 2

12MP IPC-HFW71242H-Z

IPC-HFW71242H-Z (dahuasecurity.com)
Dahua-Network-Camera-Web-5.0_Operation-Manual_V1.0.6.pdf (dahuasecurity.com)
3.2.1 Basic Configuration

The chapter introduces the basic configuration, including login, camera configuration, storage configuration and system configuration.

**Login**  This subsection introduces how to log in to and log out of the web interface.

- You need to initialize the camera before logging in to the web interface.
- When initializing the camera, keep the PC IP and device IP in the same network.
- Follow the instruction to download and install the plug-in for the first login.
- Follow the instruction to download and install the plug-in for the first login.

**Procedure**

Step 1: Open IE browser, enter the IP address of the camera (192.168.1.108 by default) in the address bar and press Enter.
Step 2: Enter the username and password.  
Step 3: Click Login.

**General**  
You can configure device name, language and video standard.  
**Procedure**
Step 1 Select Setting > Camera > System > General > Basic.

![Camera Settings Menu](image)

Step 2: Configure general parameters
Description of general parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device Name</td>
<td>The name of the device.</td>
<td>Each device has its own name. Set own name e.g. 8H0BFDA2170</td>
</tr>
<tr>
<td>Video Standard</td>
<td>Select video standard from PAL and NTSC</td>
<td>Set PAL</td>
</tr>
</tbody>
</table>

Step 3: Click Save.

**Date & Time** You can configure date and time format, time zone, current time, DST (Daylight Saving Time) or NTP server.

Procedure
Step 1: Select Setting > System > General > Date & Time.
Step 2: Configure date and time parameters

Description of date and time parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Format</td>
<td>Configure the date format</td>
<td>YYYY-MM-DD</td>
</tr>
<tr>
<td>Time Format</td>
<td>Manually Setting: Configure the parameters manually. NTP: When selecting NTP, the system then syncs time with the internet server in real time. You can also enter the IP address, time zone, port, and interval of a PC which installed NTP server to use NTP.</td>
<td>24-Hour</td>
</tr>
<tr>
<td>Time Zone</td>
<td>Configure the time zone that the camera is at.</td>
<td>(UTC) Coordinated Universal Time</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td>Preferences</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Current Time</td>
<td>Configure system time. Click Sync PC, and the system time changes to the PC time.</td>
<td></td>
</tr>
<tr>
<td>DST</td>
<td>Enable DST as needed.</td>
<td>Not enable</td>
</tr>
</tbody>
</table>

**Snapshot (Quality & Interval)** You can configure snapshot parameters, including snapshot type, image size, quality and interval.

**Procedure**

Step 1: Select Picture > Snapshot.

Step 2: Configure snapshot parameters.

Description of snapshot parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snapshot Type</td>
<td>You can select from Scheduled and Event. Scheduled: Capture images in configured period. Event: Capture images when configured event is triggered, such as Motion Detection, Video Tamper and Scene Changing.</td>
<td>General</td>
</tr>
<tr>
<td>Size</td>
<td>It is same with the resolution of the main stream.</td>
<td></td>
</tr>
</tbody>
</table>
### Parameter Description Preferences

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>Set the quality of the snapshot. The higher the value, the better the quality.</td>
<td></td>
</tr>
<tr>
<td>Interval</td>
<td>Set the frequency of snapshot. You can select Custom to set the frequency as needed.</td>
<td></td>
</tr>
</tbody>
</table>

Step 3: Click Apply.

**Setting Schedule Snapshot Plan**  You can configure record schedule, snapshot schedule and holiday schedule. Set certain days as holiday, and when the Record or Snapshot is selected in the holiday schedule. The system takes snapshot or records video as holiday schedule defined.

Procedure

Step 1 Select Picture > Time Plan

Step 2: Set record plan.

- Green represents normal record plan (such as timing recording);
- yellow represents motion record plan (such as recording triggered by intelligent events);
• red represents alarm record plan (such as recording triggered by alarm-in).

Select a record type, such as Normal, and directly press and drag the left mouse button to set the period for normal record on the timeline.

Step 3: Click Apply.

Setting Destination FTP  This subsection introduces the configuration of the storage method for the snapshots.

Procedure

Step 1 Select Picture > Storage

![Screenshot of the interface]

Step 2: Select the storage method that you need for the snapshots of different types.

Description of path parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Type</td>
<td>Select from Scheduled, Motion Detection and Alarm</td>
<td>Scheduled</td>
</tr>
</tbody>
</table>
### Parameter Description Preferences

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
</table>
| Disk Full       | Recording strategy when the disk is full.  
|                 | Overwrite: Cyclically overwrite the earliest video when the disk is full.  
|                 | Stop: Stop recording when the disk is full                                 | Overwrite            |
| Storage Method  | Select from Local storage and Network storage  
|                 | Local storage: Save the recorded videos in the internal SD card.  
|                 | Network storage: Save the recorded videos in the FTP server or NAS.       | Network storage > FTP |

Step 3: Click Apply.  
Step 4: Configure FTP parameters.  
Description of path parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server IP</td>
<td>The IP address of the FTP server.</td>
<td>Set FTP IP address</td>
</tr>
<tr>
<td>Port</td>
<td>The port number of the FTP server.</td>
<td>Set FTP port number</td>
</tr>
<tr>
<td>Username</td>
<td>The user name to log in to the FTP server.</td>
<td>Set user name</td>
</tr>
<tr>
<td>Password</td>
<td>The password to log in to the FTP server.</td>
<td>Set password</td>
</tr>
<tr>
<td>Storage Path</td>
<td>The destination path in the FTP server.</td>
<td></td>
</tr>
<tr>
<td>Directory Structure</td>
<td>Set the directory structure, and you can select Use Level 1 Directory, Use Level 2 Directory, and Use Level 3 Directory</td>
<td></td>
</tr>
</tbody>
</table>
### Parameter Description Preferences

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 Directory</td>
<td>Set the Level 1 directory name, and you can select from <strong>Device name</strong>, <strong>Device IP</strong>, and <strong>Custom</strong>. When you select <strong>Custom</strong>, please enter the custom directory.</td>
<td></td>
</tr>
<tr>
<td>Level 2 Directory</td>
<td>Set the Level 2 directory name, and you can select from <strong>File Type</strong>, <strong>Date</strong>, <strong>File Type_Channel Number</strong>, and <strong>Custom</strong>.</td>
<td></td>
</tr>
<tr>
<td>Level 3 Directory</td>
<td>Set the Level 3 directory name.</td>
<td></td>
</tr>
<tr>
<td>Urgently store to local</td>
<td>Click , and when the FTP server does not work, all the files are saved to the internal SD card.</td>
<td></td>
</tr>
</tbody>
</table>

---

**Step 4:** Click Apply.  
**Step 5:** Click test to test whether FTP function works normally.

**Local**  
Display the information of the local SD card. You can set it as read only or read & write; you can also hot swap and format SD card.

![Local SD Card Information](image)

**Setting Exception**  
In case of SD card exception, the system performs alarm linkage. The event types include No SD Card, Low SD Card Space, and SD Card Error. Functions might vary with different models.  
Preferences set: Low SD card space, SD card error  
**Procedure**  
**Step 1:** Select > Event > Exception > SD Card Exception.
Step 2: Click to enable the SD card detection functions. When enabling Low SD Card Space, set Capacity Limit. When the remaining space of SD card is less than this value, the alarm is triggered. Step 3: Set alarm linkage actions.
Step 4: Click Apply
About Alarm Types
Description of alarm types

Parameter | Description | Preparation
---|---|---
Low SD card space | The alarm is triggered when the free space of SD card is less than the configured value. |
SD card Error

The alarm is triggered when there is failure or malfunction in the SD card.

3.3 API definition – Swagger

3.3.1 Connect Controller

3.3.2 Alarm Controller
### 3.3.3 Snapshot Controller

<table>
<thead>
<tr>
<th>Method</th>
<th>Endpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>/api/dahua/snapshot/snap</td>
<td>Get (SNAP) config</td>
</tr>
<tr>
<td>PUT</td>
<td>/api/dahua/snapshot/snap</td>
<td>Set (SNAP) config</td>
</tr>
<tr>
<td>GET</td>
<td>/api/dahua/snapshot/snap/get</td>
<td>Get Current snapshot</td>
</tr>
</tbody>
</table>

### 3.3.4 File Controller

<table>
<thead>
<tr>
<th>Method</th>
<th>Endpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST</td>
<td>/api/dahua/files/download</td>
<td>Download file from Dahua</td>
</tr>
<tr>
<td>GET</td>
<td>/api/dahua/files</td>
<td>Get list of files from Dahua</td>
</tr>
</tbody>
</table>

### 3.3.5 Time Controller

<table>
<thead>
<tr>
<th>Method</th>
<th>Endpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>/api/dahua/timezone</td>
<td>Get current timezone</td>
</tr>
<tr>
<td>POST</td>
<td>/api/dahua/timezone</td>
<td>Set timezone to Dahua</td>
</tr>
<tr>
<td>GET</td>
<td>/api/dahua/timezone/get</td>
<td>Get current Dahua timezone</td>
</tr>
</tbody>
</table>

### 3.3.6 Device Controller

<table>
<thead>
<tr>
<th>Method</th>
<th>Endpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>/api/dahua/device/info</td>
<td>Get device info about device</td>
</tr>
</tbody>
</table>

### 3.3.7 Media Controller

<table>
<thead>
<tr>
<th>Method</th>
<th>Endpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>/api/dahua/media/ftp</td>
<td>Get FTP data</td>
</tr>
<tr>
<td>PUT</td>
<td>/api/dahua/media/ftp</td>
<td>Set FTP new</td>
</tr>
<tr>
<td>GET</td>
<td>/api/dahua/media/media-encode</td>
<td>Get media config</td>
</tr>
<tr>
<td>PUT</td>
<td>/api/dahua/media/media-encode</td>
<td>Set media config</td>
</tr>
</tbody>
</table>
3.3.8 Time Controller

Dahua Time Controller - Endpoint to set the time

GET /api/dahua/time/GetCurrent
- Get current time and date

POST /api/dahua/time/set
- Set time and date in Dahua

GET /api/dahua/time/get
- Get current date and time from Dahua

Date as a string, in format yyyy-mm-dd hh:mm

Parameters:
No parameters

Execute Clear

Responses:

Code: 200
Response Body:

OK

Code Description Links
200 OK

Response Headers:
- Content-Type: text/plain
- Server: Apache/2.4.18 (Ubuntu) Ubuntu
- Date: Fri, 02 Mar 2018 16:36:34 GMT
- User-Agent: libcurl/7.52.0
- Expect-ETag: none
3.3.9 Device controller

3.4 FTP Storage Data

3.4.1 Camera Type 1

Interval = 600s (10 min)
3.4.2 Camera Type 2

Interval = 600s (10 min)
4 Image data sources

After logging in, the user can navigate to image sources, where they will see image sources defined by the logged-in user. By clicking on "Show all image sources," one can view public image sources.
Figure 8: Image sources screen

Figure 9: Image sources (all) screen
4.1 Defining a new image data source

After filling out the fields in the form regarding the new data source, click "Save."

Figure 10: New image sources screen

Figure 11: New image sources created screen
After defining the source, you can connect to the camera by providing the necessary connection parameters.

### 4.2 Upload new images from Google drive

After creating a new source, you can upload new photos from e.g. Google drive

![Figure 12: Import from Google drive screen](image)

Figure 12: Import from Google drive screen
After importing data from Google Drive, thumbnail images appear.
5 Analysis

5.1 Define analysis

With the added photo of Linden or Apples, we can perform an analysis.
Figure 15: Go to analysis screen

After defining the analysis parameters, click the Save button.
After defining the source, you can initiate the analysis by clicking the "Order AI analysis" button.
5.2 Order AI analysis

Figure 18: Order AI analysis screen

Figure 19: Ordered AI analysis screen
5.3 Preview of the completed AI analysis
6 ROI

For a given analysis, one can define their own ROI or approach those already defined.
Figure 23: Preview ROI screen

Figure 24: Create new ROI screen
7 Data visualization

After conducting the AI analysis, you can visualize the data by clicking the "Visualize data" button.

Figure 25: Visualization data screen

One can perform the following analyses in the form of graphs:

- RGB indices averaged for ROI
- Daily RGB chromatic coordinates (median)
- Green chromatic coordinate
- Meteorological data
8 Contact

If you need to get in touch with our team, please use the appropriate email address below based on the nature of your inquiry:

- **Administrative Inquiries**: For questions related to licensing, partnerships, and other administrative matters, please contact ai4pheno-admin@seth.software.

- **General Information**: For general questions or information about our software and its features, reach out to ai4pheno-info@seth.software.

- **Security Issues**: If you have identified a security vulnerability or have concerns about the security of our software, please alert our security team immediately at ai4pheno-security@seth.software.

- **Support**: For technical support, troubleshooting, or reporting bugs, get in touch with our support team at ai4pheno-support@seth.software.

We aim to respond to all inquiries in a timely manner. Thank you for your interest in AI4Pheno.