USER'S MANUAL

Omi

FLUIGENT
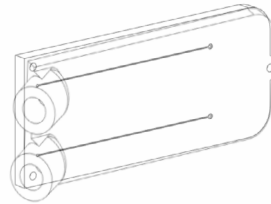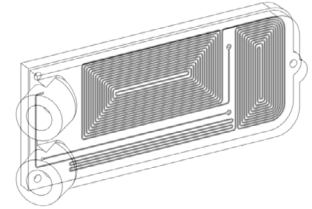
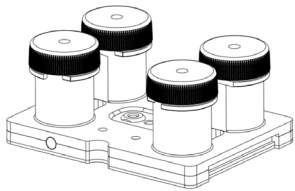# WHAT IS INCLUDED

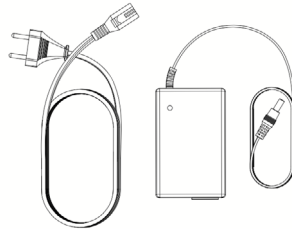**(1) OMI device**
O-OMI-DEV ●
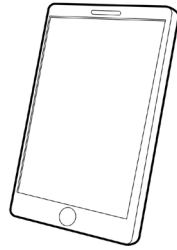
(1) Tablet
O-OMI-TAB

(4) Low resistance chip fitting
O-OMI-LRCC

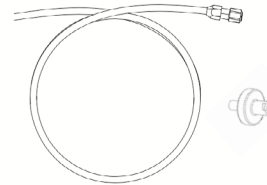**(4) High resistance chip fitting**
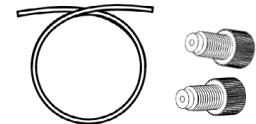O-OMI-HRCC

(4) Cartridge
O-OMI-CART

(1) Power supply kit*
O-OMI-SK ●

Socket depending on the region

(1) Air filter & pneumatic kit
O-OMIAF-CTK ●

(1) OMI connector & tubing kit
O-OMI-CTK ●

PRECAUTIONS

> ▬ Do not open or dismantle the Omi device.
>
> Please refer all servicing to after-sales service department (support@fluigent.com)
>
> Prevent any objects or liquid from entering the Omi device, this may cause a short-circuit failure or other malfunction. Failing to respect this advice would:
>
> • Expose you to direct current/voltage in case the device is under voltage which may lead to severe damages
>
> • Void device's warranty
>
> • Discharge our company from any liability regarding physical or device damages.

Do not place the product in an unstable location with a level surface and a strong and stable support

Do not use other power supply than the one provided, it has been carefully selected to meet the power requirements of Omi in all configurations and to comply with all safety standards.

TABLE OF CONTENT

INTRODUCING OMI

Omi is the first automated microphysiological platform, of the peristaltic pump or syringe pump type, on the market dedicated to to sustain cell culture or organ on chip model. Flexible, it has been designed to interface with any type of chip. Compact, transportable (software on tablet), autonomous (operates on battery), proof incubator, it is perfectly suited to working conditions in a cell biology laboratory.

Omi can be used in single or dual mode to perform either single channel perfusion for blood vessel reproduction for example or to perform co culture to perform air/liquid interface with mechanical stretch or blood brain barrier reproduction by synchronizing two Omi with one Organ-on-chip chip.

Single perfusion mode
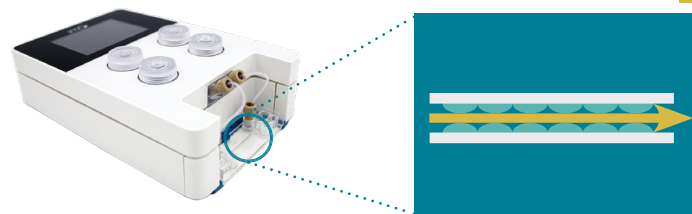
Cells
Channel
Flow

Omi can be used in single mode to perform for example single channel perfusion for blood vessel reproduction

Dual perfusion mode

Omi can be used in dual mode to perform for example co culture to perform air/liquid interface with mechanical stretch

Cells (type 1)
Channel 1
Flow 1
Cells (type 2)
Channel 2
Flow 2

SETTING UP

Prestep

Communication between an Omi device and the mobile application on your tablet can be done in two ways:

Bluetooth: A direct connection between the device and the tablet is made. The tablet <u>must have</u> its Bluetooth activated <u>and</u> its geolocation activated as well (this is a current requirement from Android OS).

Wifi: The device sends its state via a remote server that is forwarding the information to both the web server and the tablet. Omi devices <u>must be</u> connected to a Wifi network to make it work.

When Bluetooth is set as the favorite communication method the Omi devices can still send information via Wifi in parallel. So one method does not prevent the other. For your information, Bluetooth information is updated every second for a set of maximum 6 devices in parallel. When there are more than 6 devices, only the first 6 devices can be updated on such frequency, the others will be updated every 30 seconds.

Note: Omi devices <u>cannot</u> connect to a Wifi network protected by a login/password access (e.g. eduroam). Some places also ask for a MAC-based recognition of the devices connected to a Wifi network to allow their access to the internet. Check with your IT department whether this is applicable to your Omi devices.

Hardware preparation

Power ON

Plug the power source to one of the two power ports. The battery will then start charging.
(Note that the battery will then be able to run)

Power in
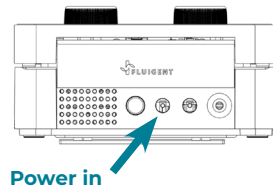
You can then use the other power port in combination with the Power Link cable to power up to 2 other Omis in a daisy-chain configuration.

Power source   **Power link cable**
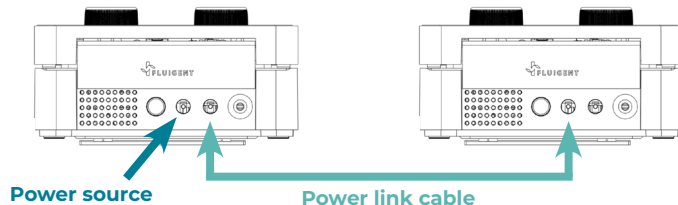
Finally, press the back button for at least 2 seconds. The screen should then turn on.

"click"
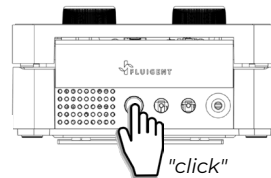
Power OFF

To power Omi OFF, press the button for a few seconds. The screen will turn OFF. If the power source is plugged, the battery will then still be charging.

Placing/Removing the cartridge and adaptor

To place a cartridge, slide the two level sensing rods in the cartridge holes, and gently push it until you hear a double "click", meaning that the side bolts locked it.
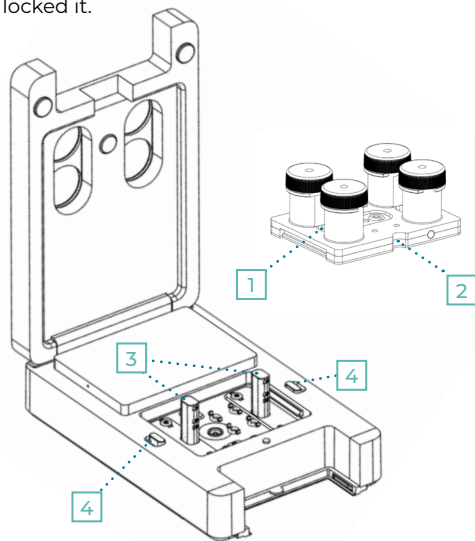
1 Cartridge holes

2 Round alignment notch

3 Level sensor rods

4 Lock buttons (inward to engage bolt)

Pay attention to the cartridge orientation: the rounded notch should align with the machine.

Check that it is correctly locked by gently trying to pull it out. It should stay in place horizontally and the two buttons aside should be oriented inwards.

To unlock the cartridge, push the two aside buttons outwards and simultaneously. The cartridge should automatically be ejected. You can then gently slide it out.
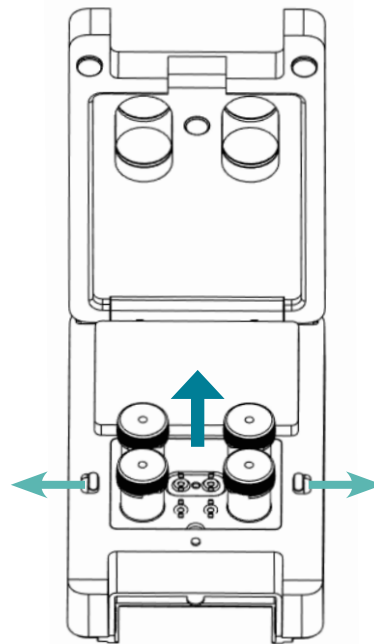
When the cartridge is in place, the adaptor can now be positioned. The adaptor allows the Omi to be compatible with both low and high resistance Organ-on-chip chips for better versatility.
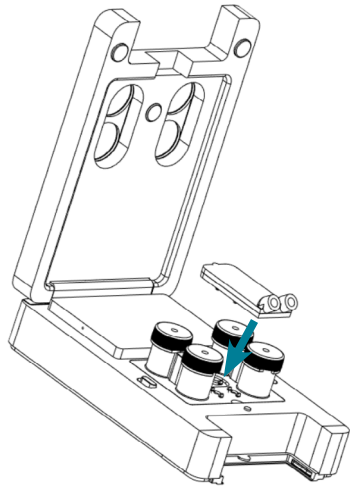
Low resistance chip fitting
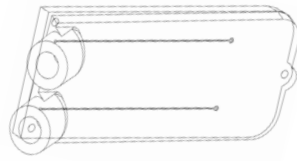
High resistance chip fitting
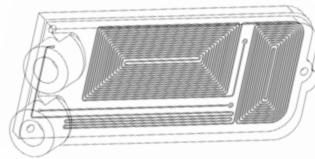
Once the adaptor is in place, connect the chip using the provided adaptors.
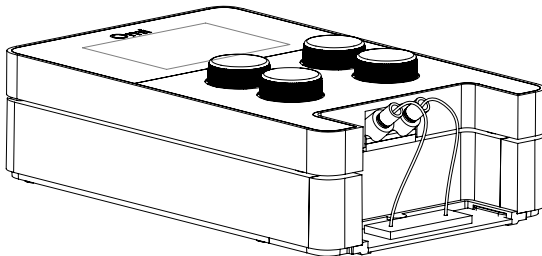
Pipetting solutions in your cartridge

To fill the reservoir with a solution once the cartridge is inserted, remove the cap and use a pipette to transfer the solution.
The volume of liquid in the reservoir should be between 500µl and 4ml. Above or below that, the reservoir will be considered empty or overfilled, which can be a problem

After pipetting, the caps should be closed tightly to ensure there is no leakage in the system (be sure the cap is equipped with its silicone gasket).

### Pneumatic filter and external gas source

We strongly advise placing the external filter in order to enhance the internal pump lifetime.

Filter / External gas source inlet
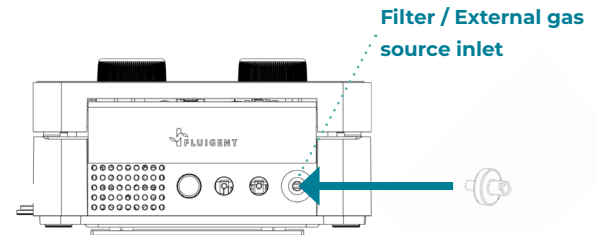
To use an external gas source (like CO2, N2, or air from outside the incubator), plug tubing on the luer port on the filter using an appropriate luer connector. Please note that the gas source should be at atmospheric pressure. The internal pump consumes up to 150ml/min of gas.

Application configuration

Installation

The Omi mobile application is available via the Google Play Store of any Android-based tablet. To find it, simply search for "Omi", access the application page, check that the publisher is "Fluigent SAS" and press "Install".
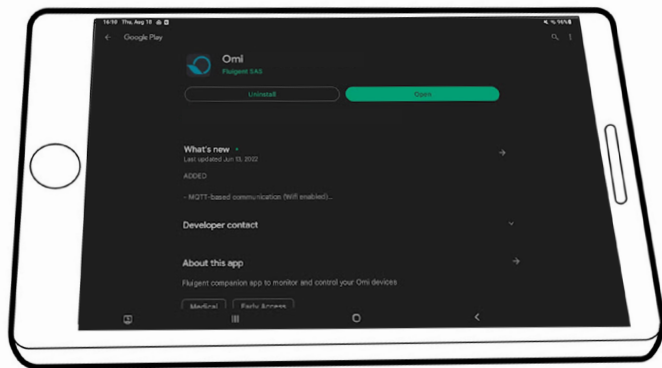
Key concepts

All Omi users are part of a **team**. Within this team, devices, layouts and protocols will be shared to allow different members of the team to work synchronously when necessary.
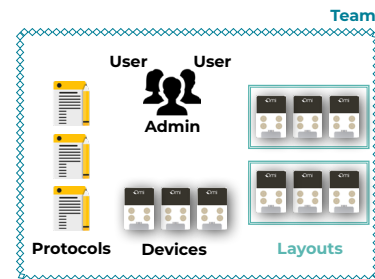
Devices designate all Omi apparatus that a user manipulates.
This is basically the hardware that will run your protocols. The list of your team devices can be seen in "Menu" > "Devices".

A **layout** is a virtual group of devices that can be monitored by the mobile application at a rather high frequency.
While all devices that are part of a layout can be seen and controlled, a device that would not be part of the current layout will be hidden. This can be useful to sort your workspace based on the type of experiments your devices are running or based on their location in your incubator for instance.
Note that a unique layout can be used for up to 12 devices. Only 6 devices maximum can be monitored simultaneously at high frequency. The remaining devices will be easily accessible but will be monitored at a lower frequency (about every 30 seconds in Bluetooth mode). You can check what is the current layout used by the application, load another one or create a new one by going to "Menu" > "Layouts".

A **protocol** is a sequence of steps that you want to perform in an automated way.
When sent to a device, a protocol is automatically started and will read and execute the protocol sequence, step-by-step. A protocol can be created or edited via "Menu" > "Protocols".

Registration

To use the mobile application, you must create an account. It requires access to the internet and can be done either via the mobile application itself or via the Omi website (https://omi.fluigent.com).

To register you will need one of two pieces of information:

● The serial number of one of your Omi device, can be found on the tag below the device:
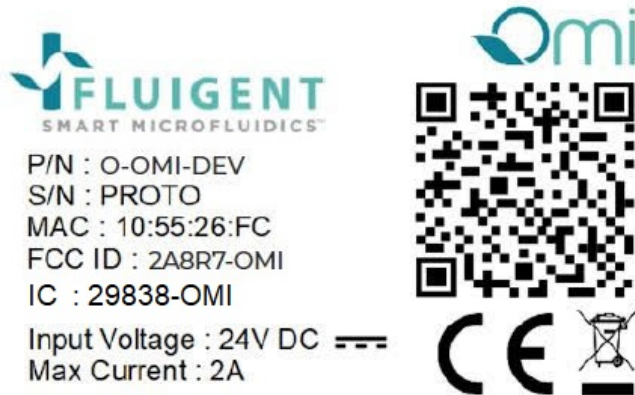
● or a team invitation that someone sent to you to integrate his or her team.

Launch Omi mobile application

Open Omi mobile application. On the first page, click on register.
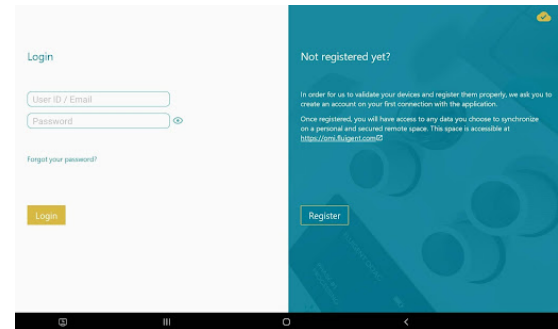
On the registration page, fill in the required information.
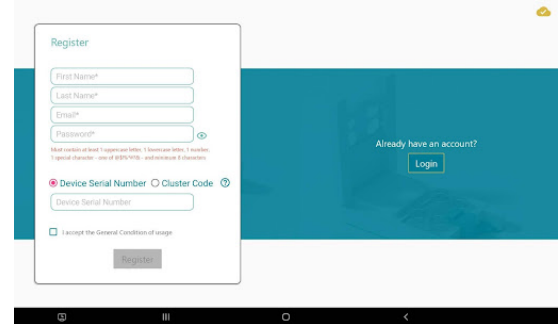
If all the information is filled in correctly, a message will pop up to confirm the Omi's registration and a confirmation link with the account's information summary will be sent via email. Click the confirmation link (or copy-paste the URL in a browser) to verify the email used. Once done, different features of the mobile application are now accessible.

Launch Omi service web

Open in a browser https://omi.fluigent.com. On the login page (see below), click on "Register".

On the registration page, fill in the required information.

Users can login via the web interface before verifying the email used but will only have access to a very limited set of options that include:

- Editing information
- Deleting the account
- Requesting to resend the confirmation link

First login - tutorial

When first logging in to the Omi mobile application, users will be guided through a 4-step tutorial in order to run your first protocols.

As a first step, a successful login will display the settings page.

Settings

Choose your preferred communication method between the mobile application and the devices.

Two methods are offered, either a Bluetooth-based communication, where a direct connection is made via Bluetooth between the device and the tablet, or a Wifi-based communication, where the device sends its data to a remote server that forwards it to the tablet. To use this second method, users must provide the Wifi settings in the next section ("Omi devices network"). This consists of an SSID and the Wifi password. Click the button next to the Wifi SSID field to scan nearby networks and select yours. Finally, the Wifi password will always have to be filled in manually.

Note that this page also allows users to receive information like your current team ID, user ID, application version and a direct link to the web server. It is also possible to change your current team by entering another team code.

Press "Save" or "Skip" after filling in the settings to view the second step of the tutorial.

Hardware useful information

This page illustrates how to prepare your devices for the next step. As explained in Power ON, the page displays some explanations on how to turn ON your Omi devices. It also illustrates how to get the Bluetooth address of all your devices via the embedded screen. Press "Next" to access device pairing.

Device pairing

When the page loads, a background process analyses all surrounding Bluetooth devices to look for Omi devices. Once done, if new devices have been detected, a message will appear and allow users to pair all devices at once. If so, a list with nearby devices and their Bluetooth addresses will show.

Users have the possibility to change each device name (by default "Fluigent Omi") and to provide the Wifi information that the devices will use to connect to the internet. Press "Pair X device(s)" to pair the selected devices. Once done, your devices should appear in the list and have "Paired" as the status. If you joined a team that already registered devices previously, all team devices will appear here.

Press "Next" to reach the last step of the process.

Layout creation

A layout is a group of devices that are monitored simultaneously. Any device that does not belong to the active layout (only one layout can be active at a time) will not be visible in the homepage and won't be monitored. This allows users to create a group of devices based on different criteria like experiment types, spatial localisation, users, etc. It is also possible to create a unique layout that contains all devices a team possesses.
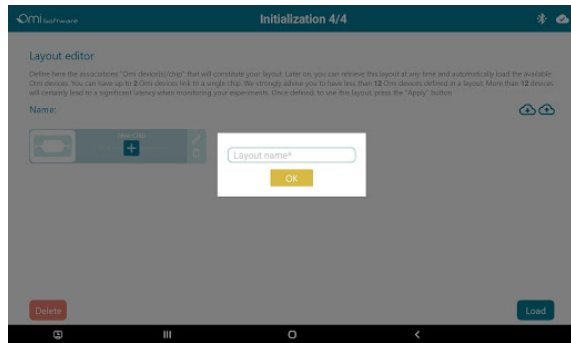
After entering your layout name, users have the option to add a new chip. A chip can possess 1 or 2 channels and will therefore be associated by either a single Omi device or two. Associating 2 devices to a single chip allows the use of dual perfusion mode where each device addresses a different channel of the chip (see ...). Note that you can add up to 12 devices on a single layout, therefore it may include a maximum of 6 to 12 chips.

Each new chip added must be associated with at least one device. To do so, press the chip area, and the association page will be displayed.

If you have successfully paired new devices in the previous step, (see Device pairing) they will be available in the drop down list after a short loading time.

To add and pair new devices, press "Add a new device".. This will activate the "Associate" button and display the editor page, where the device should now appear in the chip section.

After adding all devices needed for your layout, press "Load" to make use of this layout. A popup will notify you that going forward will close the tutorial.

Press "Finalize" to finish the process.

Note that after finalizing the tutorial, it will not be accessible anymore upon restarting the application. To follow this tutorial again, you can go to "Menu" > "Settings" and press "Run tutorial".

Start protocol

Visualization of layout - Home page

Upon starting the application, or after finalizing the tutorial, you will be brought to the home page. On this page, all devices of the current layout are visible.
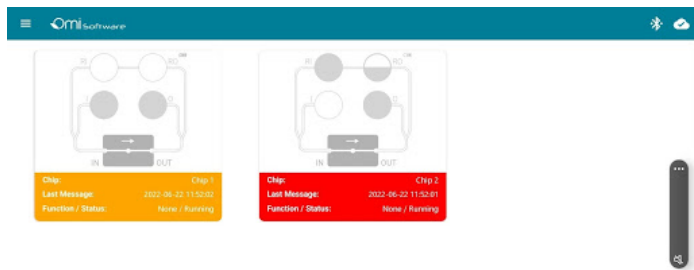

A maximum of 6 devices can be seen at the same time. If your layout contains more than 6 devices, the remaining devices can be accessed by swiping from right to left. Some basic information about each device's current state is displayed if the mobile application can communicate with it. Among the available information from the homepage:

- Name of the chip
- Date and time of the last message received for this device
- Current step executed by the device (if any) and current state of the device
- Warning or error notification via the device illustration background (red for errors, orange for warnings)

Every device on-screen is monitored live, meaning that its status is updated every second with a Bluetooth connection, and every 3 seconds when communicating via Wifi. To access more information about a device and run a protocol, you can press its illustration.

Device information page

This page will display more details about the selected device (or devices in case of a dual perfusion system).

Among the new information displayed, added to the ones mentioned in the previous section, you will find:

- The warning and/or error messages (if any - see Error and Warning list for more details)
- The device name
- The device wifi connection status
- The device firmware version and a notification about available updates
- A list of all protocols available and the option to create a new one, and to edit/run the selected protocol
- A brief overview of the selected protocol steps and parameters

When using the application for the first time, no protocol will be available, one must create a new one to be able to run it on a device. To do so, press "New".

Protocol editor

When accessing the protocol editor, a configuration window asks whether to load an existing protocol or create a new one.
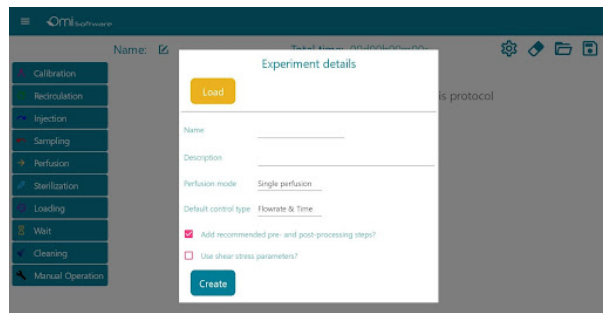
To create a new protocol, some information must be provided:

- (opt.) Name of the protocol
- (opt.) Description of the protocol
- Perfusion mode (Single perfusion, Dual perfusion) - if Dual perfusion is selected:
    - Dual mode (Sequential, Synchronized)
- Default control type (Flowrate & Time, Volume & Flowrate, Volume & Time) - can be changed for each step individually
- Automatically insert pre- and post-processing steps to the protocol
- Use of shear parameters instead of flow rate - if selected, a new set of parameters will appear:
    - Dynamic viscosity of the liquid (in mPa.s)
    - Channel geometry (Circular or Rectangular)
        - Diameter (in µm) OR Height/Width (in µm)

Once you've filled in all required parameters, press "Create" to start editing your protocol.

> TIP: For your first protocol, we strongly advise inserting the pre- and post-processing steps.l. If this is problematic, at least add the Calibration step to properly calibrate the liquid level sensors. Without a proper calibration, you may encounter errors that will block your protocol.

Single perfusion mode

If you've selected to add pre- and post-processing steps in the configuration window, they will appear. To add a new step, select one on the left side.

Pressing it will add the steps to the list and, if this step is editable, a parameter window will be opened.
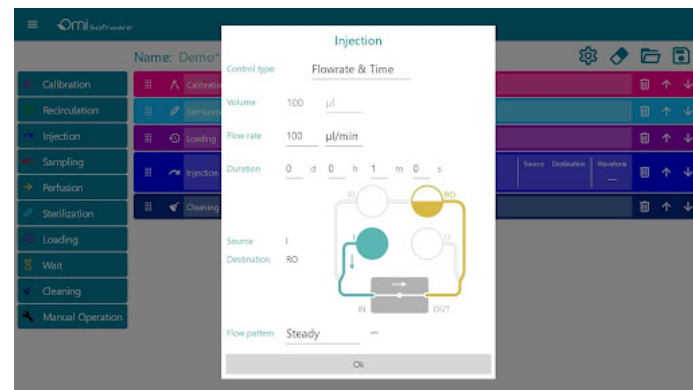
This window allows you to tune the step parameters:

- **Control type** (Flowrate & Time, Volume & Flowrate, Volume & Time) - by default the control type selected in the protocol configuration window

- **Volume** (in µl or ml)

- **Flow rate** (in µl/min or ml/min)

- **Duration**

- **Source & Destination** - cannot be changed, illustrate the input and output reservoir(s) for this particular function

- **Flow pattern** (Steady, Sinusoidal, Slope or Step) - if different from "Steady", a new set of parameters will appear:

  - Period (in s) - number of seconds between two patterns
  - Min flowrate (in µl/min or ml/min) - lowest value targeted by the flow pattern
  - Max flowrate (in µl/min or ml/min) - highest value reached by the flow pattern

Once you've filled in all required parameters, press "Ok".

To change a **step position**, you can either drag and drop it to its new position, or press one of the up/down arrows to move it upward/downward.
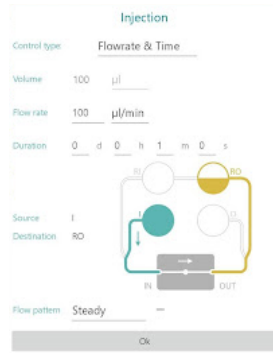
The top bar provides some information about the current protocol and some basic controls/ From left to right:
- **Name** - can be changed via the editing icon at the right of the field.
- **Total time** - Cumulated time of the protocol based on all the steps present in the step list.
- **Settings** - Open the configuration window (as presented previously - see Figure X).
- **Reset** - Delete all steps of the current protocol and reset it, automatically open the configuration window afterwards.
- **Open** - Open a window that presents all protocols saved previously either remotely (team protocols) or locally.
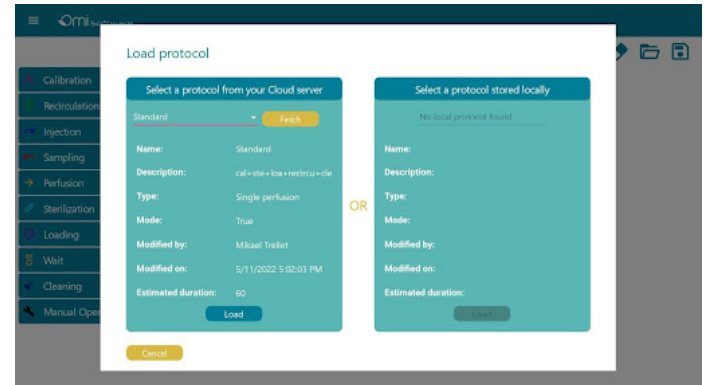
When selecting a protocol, some basic information are displayed:
  - Name
  - Description
  - Mode (single or dual)
  - Modified by
  - Modified on
  - Estimated duration

- **Save** - Save the current protocol locally, a popup will ask to upload the protocol to the cloud.

Dual perfusion mode

In Dual perfusion mode, the step list will look slightly different.

Here, every step is automatically duplicated to be run on two devices (X and Y) in parallel. Depending on the mode you have chosen ("Sequential" or "Synchronized") users have the option to synchronize each step, one by one. Press the "Sync" checkbox to activate or not the synchronization of a step between the two devices. When synchronized, a step won't start on a device (X) if the same step has not been reached yet by the second device (Y). This ensures that a particular step is started at the exact same time on two devices used in dual perfusion mode. Any change you make in the step parameters of one device will be automatically reflected in the step parameters of the other device.

> TIP: To use different parameters for the same step, duplicate the step and delete it for one device in the first location, then delete it for the other device in the second location. Note that in this case, it's not possible to synchronize the step between two devices.

Once finished, save your protocol and press the back button on the top left to go back to the "Device page".

Run a protocol - Device page

The newly created protocol should now appear in the list. Select it, and details will appear in the "Experiment info" section. When ready, run the protocol by pressing "Run". It may take up to 3 minutes (depending on your protocol length) to send the protocol information to the device(s). Once done, you will be notified and the page should change and switch to the protocol first step page.

There are two types of pages depending on the type of step the device is currently running:

1. Blocking step page
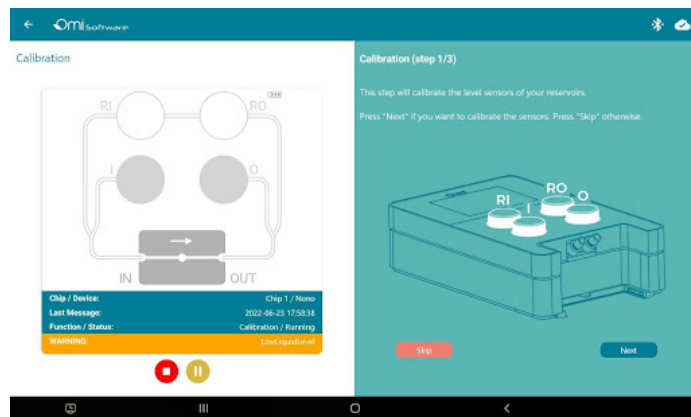
In those steps, a manual operation is necessary to go through the step. They are usually divided in several sub-steps that require either a confirmation from the user, or an action with the Omi device. The blocking steps are: **Calibration**, **Sterilization**, **Loading** and **Cleaning**.

2. Automatic step page

Those steps begin automatically and do not require, if no error occurs, manual intervention from the user. The automatic steps are: **Injection**, **Sampling**, **Perfusion**, **Recirculation**, **Wait** and **Manual operation**.
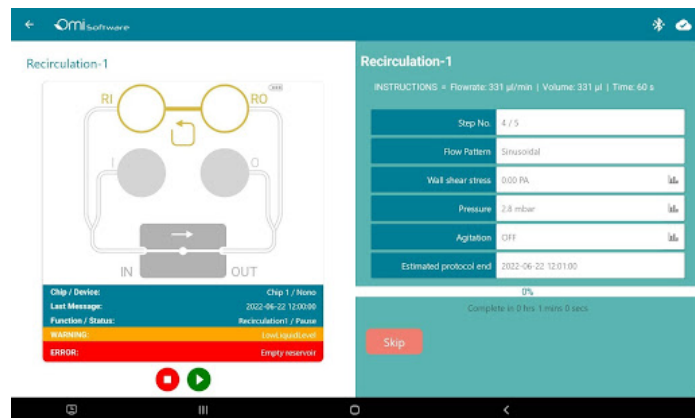
NOTE: A page is only updated when the information the tablet gets from the device has changed. Do not expect a page to change right after "Next", "Stop", "Pause", etc. Users must account for the time a command is sent to the device, processed, sent back by the device to the tablet. Depending on the communication protocol, Wifi or BLE, it can take between 1 and 5 seconds before the effect of a command is reflected in the mobile application.

Run a protocol - Experimental summary
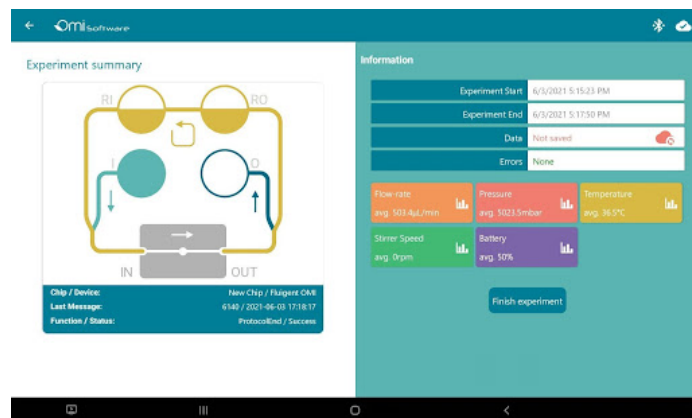
When a protocol is finished, a summary page is shown, containing:

● **Start time**

● **End time**

● **Data sync status** - A verification is made to ensure that all protocol data frames have been saved to the cloud (if the tablet is connected). This verification is made 1) between the Omi internal memory and the tablet database and 2) between the tablet database and the remote server database. If all records have been found on the remote server, then the status is "Saved" in green. If the remote server lacks records, then the status "Not saved" appears in red and a cloud icon is displayed. Pressing this icon will trigger a synchronization of the data from the Omi device and the tablet to the remote server. Depending where the missing data lie (Omi or tablet) the synchronization process can take some time.

- **Errors** - If any error occurred during the protocol, a sorted list of error(s) is created and can be accessed through an icon displayed

- **Statistics** - To see how a property fluctuated along the protocol, press the graph icon for the property being . A popup window will appear with a plot of the selected property values during the experiment. Note that those values are only shown for the automatic steps and are restricted, for performance sake, to 600 points over the whole experiment. If more points have been recorded, the 600 points are selected every X frames to report the overall trend.

> To quit the experiment summary page, simply press "Finish experiment". A popup message will appear warning that finishing an experiment deletes all related data from the tablet and device storage space. If data frames have been saved on the remote server, they can be accessed at any time by logging in via the web interface.

Data storage
Omi automatically stores data every 30 secondes during an experiment. The storage capacity is up to 10 days of data.

ERROR & WARNING LIST

Warning list

Name	Description	Possible solution
Low battery level	The battery level is under 20%	Plug-in your Omi device
Low wireless signal	The device has difficulties accessing the internet network. Bandwidth and latency can be degraded	Move the Omi closer to a Wifi router
Air leak in the system	The device cannot pressurize correctly the reservoirs leading to reduced pressure and flow-rate	Check that all components are properly sealed and that no space exist between the different components
Low liquid level	The liquid level of one or more reservoir(s) is low (under bottom level sensor)	Fill in the reservoir(s) reported as too low
High liquid level	When a fluidic step is in progress, one or more output reservoir(s) have a high liquid level that could prevent the correct execution of the step when they are full	Empty the reservoir(s) reported as too high
Error during firmware update	An error occurred during the last firmware update	Try to update the firmware again (device page). If the error persists, contact the support team
Wrong command received	The last command received could not be processed	Try to send the last action command again. If the error persists, contact the support team
Time out	The processing of the last command timed out	Try to send the last action command again. If the error persists, contact the support team

Error list

Name	Description	Possible solution
Critical battery level	The battery level is under 5%	Plug-in the Omi
Missing fluidic component	One of the following component is not detected: Lid, cartridge, adaptor	Check that the Omi has its cartridge and adaptor correctly positioned and that it is properly closed.
Unreachable pressure	The requested pressure cannot be reached by the device	Check that all components are correctly closed and that no space exist between them
Unreachable flow-rate	The requested flow-rate cannot be reached by the device	Check that the pressure value is consistent with the requested flow-rate
Empty reservoir	One or more input reservoir(s) is/are empty	Fill in the reservoir(s) reported as empty
Full reservoir	One or more output reservoir(s) is/are full	Empty the reservoir(s) reported as full
Pump stopped	The pressure pump has stopped working	Try restarting the device. If the error persists, contact the support team

EMBEDDED DISPLAY

While Omi key functions (such as protocol editor) are only available via the mobile app or the web service, main information and access to basic controls are found in the embedded screen.
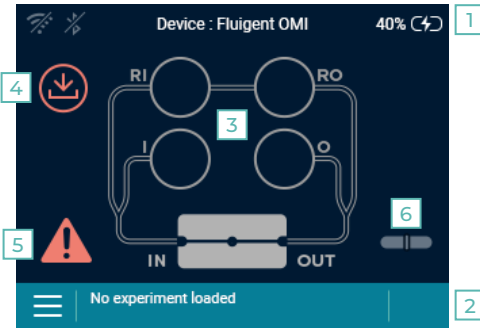
Splash screen

At startup, a splash screen with the Omi logo is displayed for about 5 seconds.

Main screen

The first page to be displayed is the main screen which indicates the state of the device.

This screen contains the following elements :

1. The **top navigation bar** can be found on every screen and always indicates from left to right :
   - The state of the wifi : connected or disconnected
   - The state of the bluetooth : paired or unpaired
   - The name of the device
   - The percentage of the battery charge left
   - A pictogram that indicates if the battery is charging or gives a visual representation of the remaining charge

2. The **bottom navigation** bar can also be found on every screen but its content will depend on the displayed screen. When no experiment is loaded, userswill only be able to press the menu button that links to the *Menu screen*.

3. The **fluidic system illustration** indicates the level of the 4 reservoirs and the input and output reservoirs with corresponding flowpath.

4. At startup, an **update button** will be blinking for [xx] seconds if a new hardware update is available. Pressing this button will *the update screen*. Newly available updates can be found at any time on the *Information screen*.

5. A **warning and error pictogram** will be displayed if an error or a warning is occuring. This pictogram will be yellow if only warnings are occurring and red if there is at least one error. Pressing this button will display the *Warning / Error screen* to show error and warning messages.

6. The **stirrer pictogram** gives the state of the stirrer (on or off). Press it to go to the *Stirrer options screen* that allows you to change its state and speed.

When and experiment is running, the bottom navigation bar indicates :

- The measured flowrate value
- The computed shear stress value
- The name of the running step and its position in the experiment
- The step percentage of completion
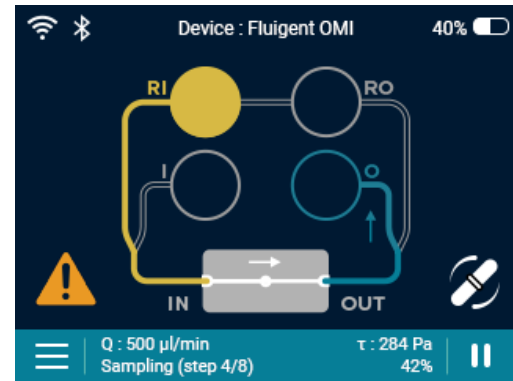
Press any of these values to open the *Experiment summary screen*. If the experiment is running, press the pause button to display the *Pause / stop screen*. If the experiment is paused, a play button can be found in place and will drive you to *Resume / stop screen*.

Warning / Error screen

This screen is made of two tabs, one for the warnings and one for the errors.

> A **warning** is a non critical issue that does not prevent the system normal operation.
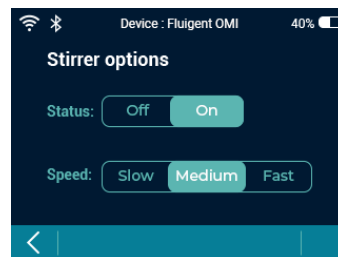
> An **error** is a critical issue that will stop the system operation.
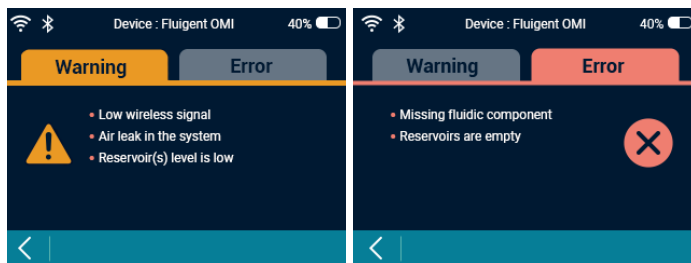
All possible warning and error messages and their reasons are detailed in chapter **Warning and Error list**.

Press the back arrow button to go back to the previous screen: *Main screen* or *Manual mode screen*.

Stirrer option screen

The stirrer options screen allows you to activate and deactivate all four stirrers at once as well as setting their speed : slow, medium or fast.

Stirrers can not be controlled independently.

Press the back arrow button to validate your choice and go back to the previous screen : *Main screen* or *Manual mode screen*.

Pause / Stop screen
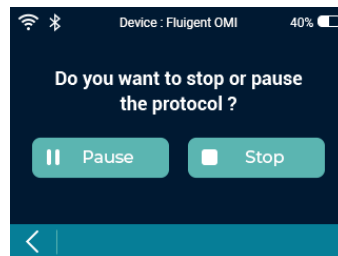
This pause / stop screen will be displayed if an experiment is running and the pause button is pressed from the 2) Main screen. Press the pause button to pause the experiment and the stop button to stop the experiment.

Pressing the stop button will open the experiment summary page of the mobile app that allows you to get an overview of the finished experiment and store the results locally and in the cloud.

Press the back arrow button to cancel.

Resume / Stop screen

This pause / stop screen will be displayed if an experiment is paused and the play button is pressed from the *Main screen*.
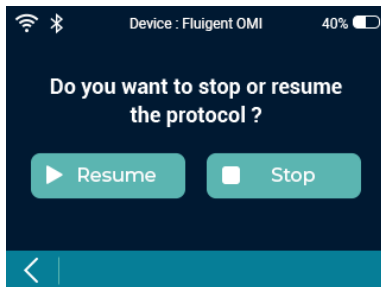
Press the resume button to resume the experiment and the stop button to stop the experiment.

Pressing the stop button will open the experiment summary page of the mobile app that allows you to get an overview of the finished experiment and store the results locally and in the cloud.

Press the back arrow button to cancel.

Experiment summary screen

The experiment summary screen lists all the steps of the running experiment.
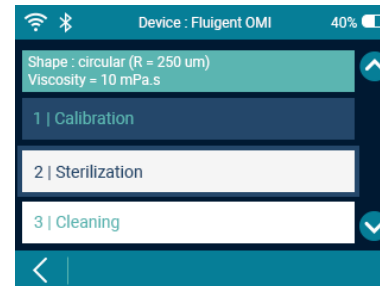
The light blue rectangle at the top of the screen displays the shear parameters of the chip, that are :

● Shape of the chip channel: square or circular

● Radius of the channel for circular section or height and width of the channel for square section

● Viscosity of the medium used in the circuit

The other rectangles displays the steps of the experiment with the following color code :

- Dark blue for the past steps
- White with dark blue border for the current step
- White for the next step

Two arrow buttons at the right side of the screen allows you to navigate through the experiment steps. Press the back arrow button to go back to the previous screen *Main screen*.

Update screen

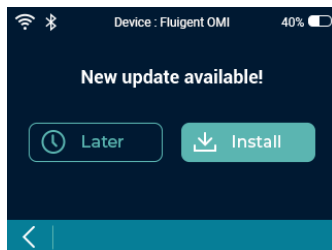If a new update is available, this screen allows you to start the installation process.

Make sure the device is plugged to its power supply and press the install button to start the installation. If the device is not plugged, the install button will be grayed and an error message will be displayed. Press later or the back arrow button to cancel the installation and go back to the previous screen.

While the installation is running, a spinning wheel will be displayed for around 2 minutes until the installation is complete. The device will reboot once during the installation process.
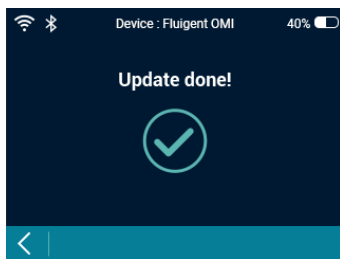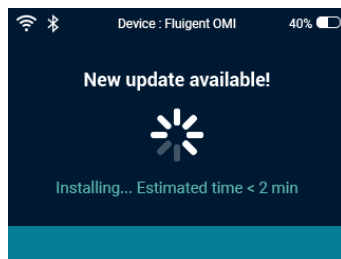
When the installation process is completed, press the back arrow button to go back to the *Main screen* or *Information screen*.

Menu screen

The menu screen allows for navigation through the embedded screen interface.
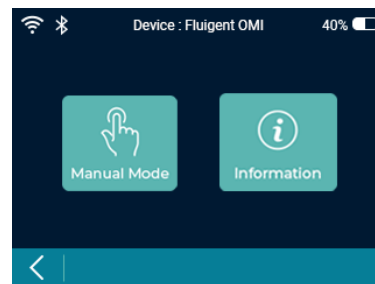
- Press the **manual mode button** to go to *Manual mode screen* and start functions such as injection, sampling or recirculation without using the mobile app. If an experiment is running, this button will be grayed and an error message will be displayed.

- Press the **information button** to go to *Information screen*.

- Press the **back arrow** on the bottom navigation bar to go back to *Main screen*

Information screen

The information screen lists the main information of your device.
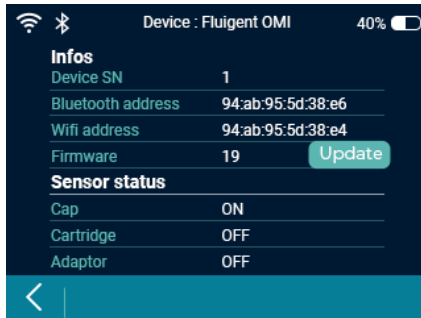
This screen contains the following elements, from top to bottom :

● The device serial number

● The device Bluetooth address : this address will be used by the mobile application to set up a device and pair it.

● The Wifi address : used when connecting to a private network that gives specific permission to individual devices.

● The current firmware version, an update button will be displayed if the firmware is not up-to-date. Pressing this button will display *Update screen*.

● The status of the cap, cartridge and adaptor sensors : ON means that the component is detected and OFF means that the component is missing.

Manual mode screen

The manual mode screen allows users to start manually and without using the mobile app the following functions :
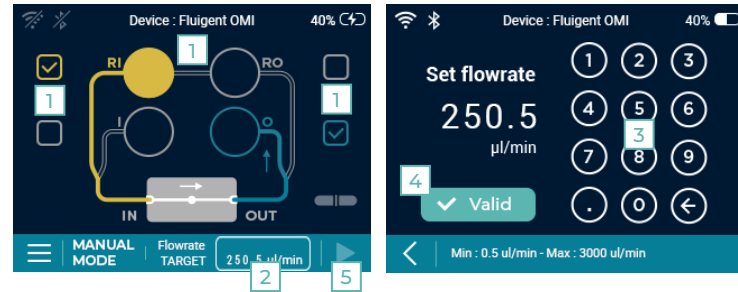
● Injection (from I to RO)
● Sampling (from RI to O)
● Perfusion (from RI to RO)
● Recirculation (from RO to RI)

To set up the manual mode, please use the following steps :

1 Select the input and output reservoirs that correspond to the function listed above. Press the checkbox located between RI and RO reservoirs for the recirculation function.

2 Press the bottom navigation bar to go to the flowrate selection screen

3 Use the numeric keypad to enter the desired flowrate value

4 If the value is a number in the range 0.5 through 3000, a valid button will appear. Press this button to validate the selection and go back to the previous screen.

5 Press the play button to start the manual function. If the previous steps were not done properly, the play button will be grayed and impossible to press.

When the manual mode is running, a stop button is displayed in place of the play button. Users must first stop the process in order to change the flowrate value or the selected reservoirs.

HARDWARE SPECIFICATIONS
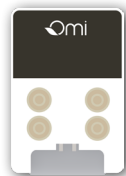
Characteristics	Value	Unit
Dimensions	190 x 120 x 50	mm x mm x mm
Input voltage	24	V DC
Maximum input current	0,5	A
Maximum pumping flow rate	150	mL/min

TECHNICAL SUPPORT

Still have a question?

Email us at : contact@fluigent.com

Or call our technical support team directly

Fluigent S.A.S +33 1 77 01 82 65

Fluigent Inc. +1 (978) 934 5283

Fluigent GmbH +49 3641 277 652

WARRANTY TERMS

What this warranty covers

This warranty is granted by Fluigent and applies in all countries. The Fluigent product is guaranteed for one year from the date of delivery at the laboratory against defects in materials and workmanship. If found to be defective within the warranty period, the Fluigent product will be repaired or replaced free of charge.

What this warranty does not cover

This warranty does not cover routine maintenance, or damage resulting from the failure to maintain the product in accordance with instructions provided by Fluigent. This warranty also does not cover damage that arises from accidental or intentional misuse or abuse, alteration or customization, or repairs by unauthorized persons.

How to get service

If there is a problem, please contact the Fluigent sales office from where one purchased the product(s). Arrange a mutually convenient time for Fluigent service representative to discuss and find a solution to fix the issue. Repairs will be made remotely whenever possible. If more action is needed, the system will need to be sent back to Fluigent offices (for no additional cost, only if it is under warranty).

Warranty conditions

Do not open Omi device (opened devices will not be charged by the customer support)

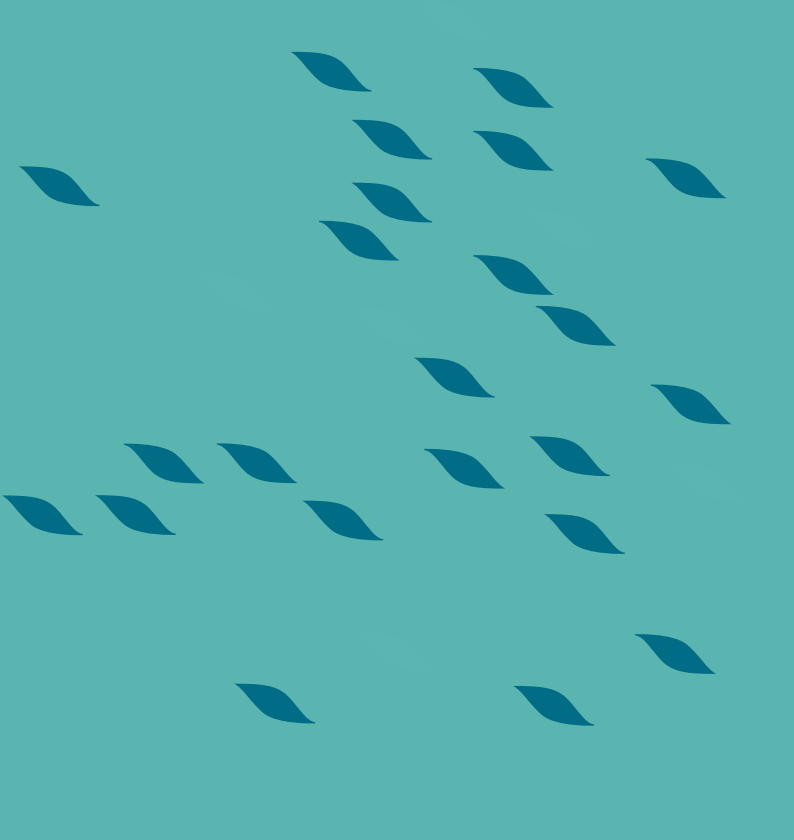Do not use cables and power supplies other than the one provided by Fluigent

Prevent foreign objects or liquids from entering the device

Do not place the product in an unstable location

Prevent heavy objects from falling on the device

Prevent any corrosive liquid from coming in contact with the device

NOTES

VERSION
OCT. 2022

FLUIGENT

RF exposure statement

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

This equipment meets the exemption from the routine evaluation limits in section 2.5 of RSS-102. It should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

Cet équipement est conforme à l'exemption des limites d'évaluation habituelle de la section 2.5 de la norme RSS-102. Il doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et toute partie de votre corps.

FCC Warning

This device complies with Part 15 of the FCC Rules. 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.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, 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 frequency 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 cause harmful interference to radio or television reception, which can be determined 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IC WARNING

This device contains licence-exempt transmitter(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CE WARNING

Caution:

Use the Product in the environment with the temperature Between 0°C and 40°C; Otherwise, it may damage your product. Products can only be used below 2000m altitude

For the following equipment:

Product Name: OMI

Brand Name: --

Model No.: OMI

Fluigent

E-mail: contact@fluigent.com

hereby declares that this [Name: OMI, Model: OMI] is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

CE

The full text of the EU declaration of conformity is available at the internet address: https://omi.fluigent.com/conformity_certificate

CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED
BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING
TO THE INSTRUCTIONS

Adapter shall be installed near the equipment and shall be easily accessible.

Only can use adapter as below:

Power supply Type: 3721-24

Input: 100-240Vac 50-60Hz max 1.0A;

Output: 24Vdc 1.75A 42W

Mascot Electronics AS

The plug considered as disconnect device of adapter.

  This product is intended for sale and application in a business environment.

RED Article 10 2

-This product can be used across EU member states

RED Article 10 10

-The product is class 1 product, No restrictions

The RF distance between body and product is 0mm.

Bluetooth V4.2

Frequency Range: 2402-2480MHz

Max.RF Output Power: 5.97dBm (EIRP)

Wi-Fi(2.4GHz)

Frequency Range: 2412-2472MHz for 802.11b/g/n(HT20); 2422-2462MHz for 802.11n(HT40)

Max.RF Output Power: 12.02dBm (EIRP)