UPower Pro-22
User Guide

Copyright Notice

In the Beginning

After unpacking, check that all the following items are included:

- UPower x1
- 120W or 150W power adapter x1
- Mounting bracket x1
- Power cord x 1 (optional)

If any of these items are missing or damaged, you should contact your distributor or sales representative immediately.

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Safety & Warranty

1. **WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.**
2. **WARNING: Do not modify this equipment without authorization of the manufacturer.**
3. Read these safety instructions carefully.
4. Keep this user's manual for later reference.
5. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
6. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
7. Keep this equipment away from humidity.
8. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
9. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
10. **Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.**
11. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
12. All cautions and warnings on the equipment should be noted.
13. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
14. Never pour any liquid into an opening. This could cause fire or electrical shock.
15. Never open the equipment. For safety reasons, only qualified Service personnel should open the equipment.
16. If any of the following situations arises, get the equipment checked by service personnel:
a. The power cord or plug is damaged.
b. Liquid has penetrated into the equipment.
c. The equipment has been exposed to moisture.
d. The equipment does not work well, or you cannot get it to work according to the user manual.
e. The equipment has been dropped and damaged.
f. The equipment has obvious signs of breakage.

17. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

18. External equipment intended for connection to signal input/output or other connectors, shall comply with relevant UL / IEC standard (e.g. UL 1950 for IT equipment and ANSI/AAMI ES 60601-1: 2005 AND CAN/CSA-C22.2 No. 60601-1:08 / IEC 60601 series for systems – shall comply with the standard IEC 60601-1-1, Safety requirements for medical electrical systems. Equipment not complying with UL 60601-1 shall be kept outside the patient environment, as defined in the standard. **Any person who connects external equipment to signal input, signal output, or other connectors has formed a system and is therefore responsible for the system to comply with the standard IEC 60601-1, safety requirements for medical electrical systems.**

Caution:

It may cause the danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer.

Intended use

UPower series was applied to mobile power for AIO and laptop

FCC

	This device complies with Part 18 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.
Warning!	

UL Module Description

	UPower Pro-22 modules are developed to suitable for the Classification Mark requirement

Safety Symbol Description

The following safety symbols are the further explanations for your reference.

CLASSIFIED c (UL) US	Medical equipment with respect to electric shock, fire and mechanical hazards only in accordance with ANSI/AAMI ES 60950-1: 2005 AND CAN/CSA-C22.2 No. 60950-1:08
	Attention, consult ACCOMPANYING DOCUMENTS.
	Stand-by
	Ground wire Protective Ground wire.
	Equipotentiality
	Symbol of refer to instruction manual

INSTRUCTIONS FOR USING THE BATTERIES IN UPOWER

The UPower batteries are based on LI-ION Technology. A feature of this technology is that if the batteries are discharged until a certain point, they cannot be recharged again and internally the battery is destroyed. This is inherent of the LI-ION technology.

In order to avoid that UPower batteries are not chargeable anymore we advise to use the UPower batteries as follows. If customers don't follow these instructions than the warranty on batteries is void.

1. If you have a failing battery, send the battery immediately to the nearest service partner. If you fail to do this the warranty is void.
2. If a battery is empty, charge the battery immediately.
3. If batteries are not charged immediately the following discharge table will apply. If batteries reach this point they are destroyed and cannot be charged again. The following table shows in 2 different situations the number of days before the battery is destroyed.

Battery remaining capacity percentage	Approximately days to over-discharge (not install in UPower)	Approximately days to over-discharge (install in close down UPower) (no any device/cable connect to UPower)
100%	1000 days	40 days
75%	750 days	37 days
50%	500 days	35 days
25%	250 days	32 days
10%	100 days	31 days
5%	50 days	30 days
0%	30 days	30 days

Contents

Component Identification
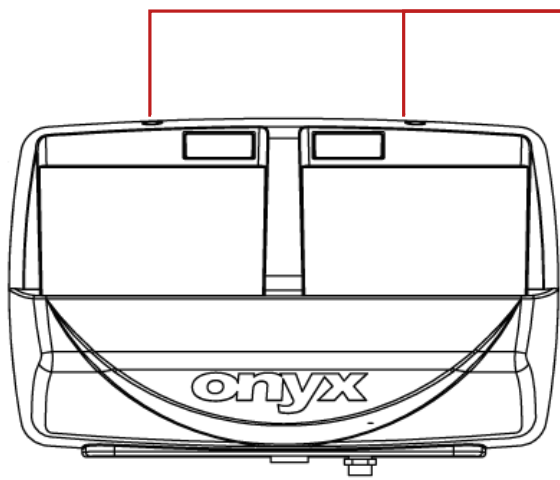
Battery LED indicator

LED status	What does it means
Blue Lighting	Adaptor output @AC mode
Blue Flashing	Charging (@AC mode)
Green Lighting	Capacity 16%~100% @Battery mode
Orange Lighting	Capacity 8%~15% @Battery mode
Purple Lighting	Capacity 0%~7% @Battery mode
Green-Purple Flashing	Error
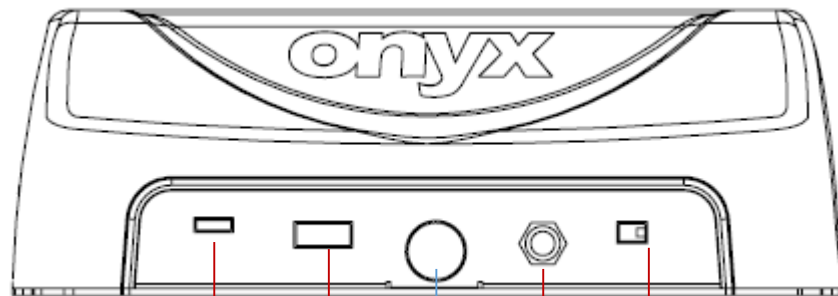
Micro USB

USB (Power only)

DC-in

Voltage switch

GND

GND

Detection pin

4   3

2   1

Vcc

Vcc

Specification

Main Specification

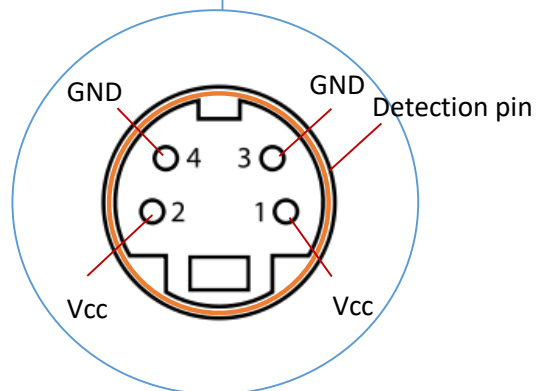|	
Output Voltage	12/19/24V (can be selected only one voltage)

Output Capacity	mini-din 4pin : MAX 100W @24V with XL Battery*
	                              MAX 90W @12V/19V with XL Battery**
	                              MAX 50W @12V/19V/24V with standard battery***
	USB Type A : MAX 10W ** (power output only)
	* total power output (mini-din+USB) MUST lower than 100W@24V with XL battery
	** total power output (mini-din+USB) MUST lower than 90W@12V/19V with XL battery
	*** total power output (mini-din+USB) MUST lower than 50W with standard battery

Charge Time	3hrs for standard battery; 3.5hrs for XL battery # the charging current will be auto-regulated (0A~4A) by UP-P22 depending on the battery temperature or remaining adaptor power
Safety	Supports protection from over-voltage (input), over-current (input and output), short circuit, over-charge.
Certification	CE, FCC, UL 60950, IEC 60950
IO interface	Mini-din 4pin x1; USB Type A x1 (Power output only); USB micro-B x1 (Data transport only); DC-in x1; voltage switch x1 (12/19/24V)

Mechanical and Environmental

Architecture	ABS + PC
Color	White
Dimension	191(L) x 64(W) x 117(H) mm
Net Weight	0.67kg (1.47 lbs)
Packing Size	350(L) x 130(W) x 290(H) mm
Cross Weight	2kg (4.41 lbs)
Operating Temperature	0°C ~ 35°C(32°F ~ 95°F)
Storage Temperature	-20°C ~ 60°C(-4°F ~ 140°F)
Storage Humidity	10%~95%@35°C, non-condensing

Battery LED Indicator

Blue Lighting	Full Charge (AC mode)
Blue Flashing	Charging (AC mode)
Green Lighting	Capacity 16%~100% (Battery mode)
Orange Lighting	Capacity 8%~15% (Battery mode)
Purple Lighting	Capacity 0%~7% (Battery mode)
Green-Purple Flashing	Charging error

Power Supply Specification

Model	EDAC EM11701F	EDAC EM11011M
Input Voltage	100-240V AC @50-60 Hz	100-240V AC @50-60 Hz
Output Power	24V / 6.25A, 150W max	24V / 5A, 120W max

Installation and Operation

⚠ **WARNING:** A risk of personal injury from electric shock and hazardous energy levels exists. The installation and service of this product must be performed by individuals who are knowledgeable about the procedures and precautions.

⚠ **WARNING:** The charger is restricted to charging ONYX batteries only. Never use this charger for other batteries.

⚠ **WARNING:** The charging unit should only be used at normal indoor room conditions.

⚠ **WARNING:** Always follow the charging instructions for the rechargeable battery.

⚠ **WARNING:** Never use any power cable and transformer other than those originally supplied with the charging unit.

⚠ **WARNING:** The rechargeable batteries may become hot during charging (especially when a high charging current is chosen). User should take extra care when taking out the batteries after charging.
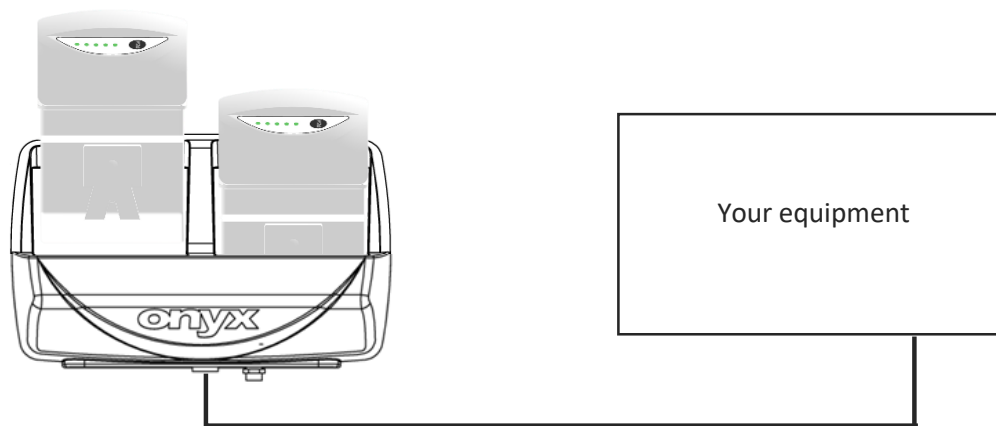
⚠ **WARNING:** Unplug the charging unit from the power source when not in use.

⚠ **WARNING:** The rear cover is hot during UPower working

How to Power the Equipment:

Your equipment

1. Removed all the batteries, USB cable and adaptor from the UPower.
2. Install the UPower on the right place with mounting bracket
3. Select the RIGHT voltage by the switcher. (12V/19V/24V)
4. Connect your computer to the UPower via USB cable for reading battery information.
5. Connect your equipment (laptop, vital sign, printer, scanner, etc) to the "DC-OUT".
6. Insert the full charge batteries. (UPower would directly provide the power when inserting the battery)
7. Turn on your equipment.
8. If the battery power is low, replace to the full charge battery. (UPower would lose the power when user remove both batteries at the same time)

total power output (mini-din+USB) MUST lower than 100W@24V with XL battery;
    Ex1 : mini-din 90W + USB 10W@24V with XL battery
    Ex2 : mini-din 100W + USB 0W@24V with XL battery

total power output (mini-din+USB) MUST lower than 90W@12V/19V with XL battery;
    Ex1 : mini-din 80W + USB 10W@12V/19V with XL battery
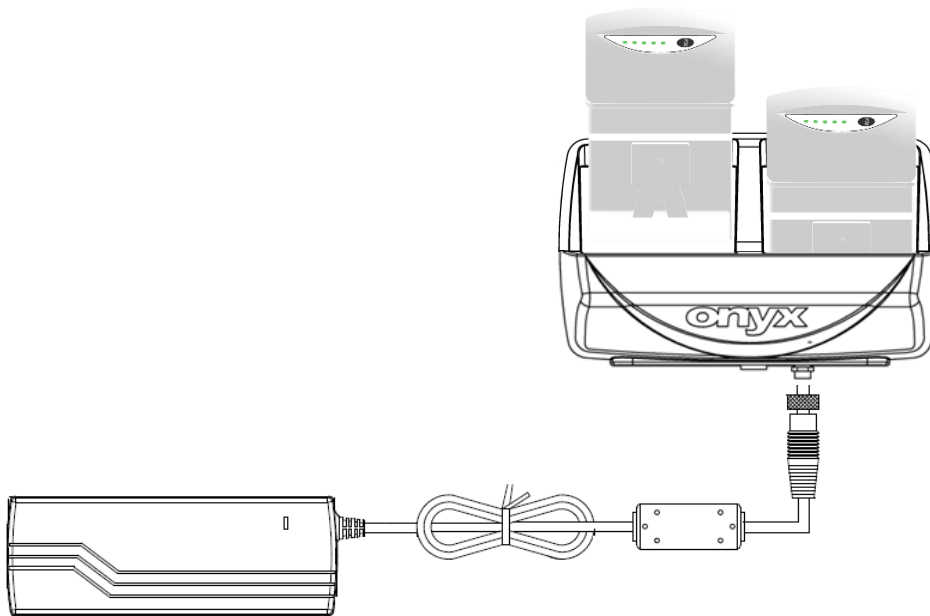   Ex2 : mini-din 90W + USB 0W@12V/19V with XL battery

total power output (mini-din+USB) MUST lower than 50W@12V/19V/24V with standard battery
    Ex1 : mini-din 40W + USB 10W@12V/19V/24V with standard battery
    Ex2 : mini-din 50W + USB 0W@12V/19V/24V with standard battery

How to charge battery:

1. Connect the adaptor to UPower
2. The LED indicator will show flashing blue light when charging.
3. The LED indicator will show blue light when full charging

the charging current will be auto-regulated (0A~4A) by the UP-P22 depending on the battery temperature or remaining adaptor power

How to switch the voltage:

1. Turn off and removed the equipment from UPower
2. Remove the battery
3. Remove the DC out cable
4. Select the right voltage
5. Connect the equipment to the UPower

Cleaning

General Cleaning Tips

You may need the following precautions before you begin to clean the computer. When you clean any single part or component for the computer, please read and understand the details below fully.

1. Never spray or squirt the liquids directly onto any computer component. If you need to clean the device, please rub it with a piece of dry cloth.
2. Be cautious of the tiny removable components when you use a vacuum cleaner to absorb the dirt on the floor.
3. Turn the system off before you start to clean up the component or computer.
4. Never drop the components inside the computer or get circuit board damp or wet.
5. Be cautious of all kinds of cleaning solvents or chemicals when you use it for the sake of cleaning. Some individuals may be allergic to the ingredients.
6. Try not to put any food, drink or cigarette around the computer.

Cleaning tools

Although many companies have created products to help improve the process of cleaning your computer and peripherals users can also use household items to clean their computers and peripherals. Below is a listing of items you may need or want to use while cleaning your computer or computer peripherals.

Keep in mind that some components in your computer may only be able to be cleaned using a product designed for cleaning that component, if this is the case it will be mentioned in the cleaning tips.

- **Cloth** - A piece of cloth is the best tool to use when rubbing up a component. Although paper towels or tissues can be used on most hardware as well, we still recommend you to rub it with a piece of cloth.
- **Water or 70% rubbing alcohol** – You may moisten a piece of cloth a bit with some water or rubbing alcohol and rub it on the computer. Unknown solvents may be harmful to the plastics parts.
- **Vacuum cleaner** - Absorb the dust, dirt, hair, cigarette particles, and other particles out of a computer can be one of the best methods of cleaning a computer. Over time these items can restrict the airflow in a computer and cause circuitry to corrode.
- **Cotton swabs** - Cotton swaps moistened with rubbing alcohol or water are excellent tools for

wiping hard to reach areas in your keyboard, mouse, and other locations.
- **Foam swabs** - Whenever possible it is better to use lint free swabs such as foam swabs.

<u>**Note:**</u>

We strongly recommended that you should shut down the system

before you start to clean any single components.

Please follow the steps below.

1. Close all application programs.
2. Close operating software.
3. Turn off power switch
4. Remove all device
5. Pull out power cable

Scrap Unit Recycling

If the computer equipment need the maintenance or are beyond repair, we strongly recommended that you should inform us as soon as possible for the suitable solution. For the computers that are no longer useful or work well, please contact with worldwide distributors for recycling.

The worldwide distributors show on the following website:

http://www.onyx-healthcare.com.tw/Contact.php

Note:

Computer and battery pack should follow the national requirement to dispose unit