

Onyx UPower Pro 22 Programming Manual

Document History

<i>Version</i>	<i>Date</i>	<i>Author</i>	<i>Description</i>
1.0	2020/10/22	Jerry Liao	First Release
1.01	2021/01/12	Jerry Liao	Add BatteryData structure

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Onyx SDK Status Code

Status	Value	Description
STATUS_SUCCESS	0	The API works without any issue
STATUS_FAILED	1	SDK execute failed
STATUS_INVALID_PARAMETER	2	Input parameter is invalid
STATUS_NOT_SUPPORT	3	API not support

Function Description

OnyxApiStatus upowerApiInitialize();

Initialize the API.

Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerApiUninitialize();

Please use this API before close the process.

Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerLogControl(**bool** bEnable);

Log function initialization It will generate the log file under /tmp/upower_sdk.log.

Parameters:

<i>bEnable</i>	Enable the setting
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetProductName(**char** *strProduct);

Get product name.

Return values:

<i>strProduct</i>	String for product name
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetFirmwareVersion(**char** *strVersion);

Get firmware version.

Return values:

<i>strVersion</i>	String for firmware version
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetSerialNumber(char *strSerialNumber);

Get UPower serial number.

Return values:

<i>strSerialNumber</i>	String for serial number
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerSetSerialNumber(char *strSerialNumber);

Set UPower serial number. It takes effect after device reboot.

Parameters:

<i>strSerialNumber</i>	String for serial number
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerRebootDevice();

Reboot the device.

Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetACStatus(bool* bIsPlugIn);

Check the AC power is plug in or not.

Return values:

<i>bIsPlugIn</i>	true: plug in, false: plug out
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetDCOutVoltage(int* nVoltage);

Get DC output voltage of UPower.

Return values:

<i>nVoltage</i>	Output voltage
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetDCOutStatus(**int*** anStatus);

Get DC output status of UPower.

Return values:

<i>anStatus[0]</i>	Output voltage select.
<i>anStatus[1]</i>	DC output cable connection. 1: Connect, 0, Disconnect

Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetBoardId(**int*** nBoardId);

Get Board Id of UPower.

Return values:

<i>nBoardId</i>	Board Id
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetTotalPercentage(**int*** nPercentage);

Get total percentage of batteries.

Return values:

<i>nPercentage</i>	Remain total percentage of batteries
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerSetLedColor(**int** nIndex, **int** Red, **int** Green, **int** Blue);

Set the LED color on UPower.

Return values:

<i>nIndex</i>	Index of LED
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<i>Red</i>	0~255
<i>Green</i>	0~255
<i>Blue</i>	0~255

Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerResetLedColor();

Reset the LED to previous status.

Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerGetBatteryInfo(**int** nBatteryNumber, **BatteryData*** rawData);

Get batteries information.

Parameters:

<i>nBatteryNumber</i>	Index of battery
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Return values:

<i>BatteryData</i>	Structure of battery information
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Returns:

Please refer to Onyx SDK status code

OnyxApiStatus upowerUpdateFirmware(**char*** filename, **bool** bForceUpdate);

Update UPower firmware version.

Parameters:

<i>filename</i>	Firmware file path:
<i>bForceUpdate</i>	true: Ignore firmware version confirmation

Returns:

Please refer to Onyx SDK status code


```
struct BatteryData
{
    unsigned char ReportID;
    unsigned short BatteryMode;
    unsigned short Temperature;
    unsigned short Voltage;
    short Current;
    short AverageCurrent;
    unsigned short RemainPercentage;
    unsigned short RemainingCapacity;
    unsigned short FullChargeCapacity;
    unsigned short AverageTimeToEmpty;
    unsigned short AverageTimeToFull;
    short ChargingCurrent;
    unsigned short ChargingVoltage;
    unsigned short GaugeStatus;
    unsigned short CycleCount;
    unsigned short DesignCapacity;
    unsigned short DesignVoltage;
    unsigned short ManufactureDate;
    char SerialNumber[22];
    unsigned char Status;

    // XXL Battery Extend Data
    unsigned short LogIndex;
    char FullyChargeDate[8];
    unsigned short FccThreshold;
    unsigned short FccBackup;
    unsigned short CycleCountThreshold;
    unsigned short LifetimeMaxPackVoltage;
    unsigned short LifetimeMinPackVoltage;
    short LifetimeMaxCurrent;
    short LifetimeMinCurrent;
    unsigned short SmbLedBlink;
    unsigned short FullChargeVoltage;
    unsigned short DateRecord;
    unsigned short TimerRecord;
    unsigned short BatteryFirstUseTime;
```

```
    unsigned short PackMode;  
};
```