

**DESIWEMINER®**

***Desiweminer API***

**V 0.2**

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# 1 Summary

This document describes the API of Desiweminer. The API currently only allows read which is granted by default.

## 2 Protocol

The API listen port is 4028. The API command also support JSON format and return value as JSON corresponds the command which be sent for JSON.

The JSON reply format:

```
{
  "STATUS":[{
    "STATUS":"string",
    "When":number,
    "Code":number,           //error or command number.
    "Msg":"string",         //command description.
    "Description":"string"}], //cgminer version.
  "CMD":[{"data"}],        //data for cmd.
  "id":number               //1:data completion; 0:data be truncated.
}
```

The universal error code for all command shows in following table.

Code for error	Description
14	Invalid command
23	Invalid JSON format
45	Access denied

## 3 Readable API

### 3.1 version

Request for cgminer version.

Send:

```
{
  "command":"version"
}
```

Reply:

```
{
  "STATUS":[{
```



```
"STATUS":"S",
  "When":1693205317,
  "Code":22,
  "Msg":"CGMiner versions",
  "Description":"cgminer 4.11.1"}],
"VERSION":{
  "CGMiner":"4.11.1",
  "API":"3.7"}},
"id":1
}
```

## 3.2 summary

The status summary of the miner, such as pool difficulty accepted, found blocks and so on.

Send:

```
{
  "command":"summary"
}
```

Reply:

```
{
  "STATUS":{
    "STATUS":"S",
    "When":1693206129,
    "Code":11,
    "Msg":"Summary",
    "Description":"cgminer 4.11.1"}],
  "SUMMARY":{
    "Elapsed":15485,
    "MHS av":206852501.39,
    "MHS 5s":22683116.68,
    "MHS 1m":124393409.77,
    "MHS 5m":215309002.47,
    "MHS 15m":215820922.90,
    "Found Blocks":0,
    "Getworks":762,
    "Accepted":893,
    "Rejected":7,
    "Hardware Errors":1,
    "Utility":3.46,
    "Discarded":9037,
    "Stale":0,
    "Get Failures":0,
    "Local Work":942141,
```



```
"Remote Failures":0,  
"Network Blocks":62,  
"Total MH":3203193072389.0000,  
"Work Utility":2889696.06,  
"Difficulty Accepted":570927998.99682081,  
"Difficulty Rejected":4012762.08745800,  
"Difficulty Stale":0.00000000,  
"Best Share":524276597,  
"Device Hardware%":0.0000,  
"Device Rejected%":0.5380,  
"Pool Rejected%":0.6979,  
"Pool Stale%":0.0000,  
"Last getwork":1693206129}],  
"id":1  
}
```

### 3.3 config

Some miner configuration information.

Send:

```
{  
  "command":"config"  
}
```

Reply:

```
{  
  "STATUS":[{  
    "STATUS":"S",  
    "When":1693206728,  
    "Code":33,  
    "Msg":"CGMiner config",  
    "Description":"cgminer 4.11.1"}],  
  "CONFIG":[{  
    "ASC Count":1,  
    "PGA Count":0,  
    "Pool Count":3,  
    "Strategy":"Failover",  
    "Log Interval":5,  
    "Device Code": "",  
    "OS":"Linux",  
    "Hotplug":"None"}],  
  "id":1  
}
```



### 3.4 devs

Each available PGA and ASC with their details.

Send:

```
{
  "command":"devs"
}
```

Reply:

```
{
  "STATUS":[{
    "STATUS":"S",
    "When":1693207200,
    "Code":9,
    "Msg":"1 ASC(s)",
    "Description":"cgminer 4.11.1"}],
  "DEVS":[{
    "ASC":0,
    "Name":"K10Pro",
    "ID":0,
    "Enabled":"Y",
    "Status":"Alive",
    "Temperature":0.00,
    "MHS av":207904040.90,
    "MHS 5s":1145711626.59,
    "MHS 1m":271917190.91,
    "MHS 5m":212760277.42,
    "MHS 15m":213305168.49,
    "Accepted":959,
    "Rejected":7,
    "Hardware Errors":1,
    "Utility":3.49,
    "Last Share Pool":0,
    "Last Share Time":1693207198,
    "Total MH":3432496656090.0000,
    "Diff1 Work":799190406,
    "Difficulty Accepted":616640361.70939863,
    "Difficulty Rejected":4012762.08745800,
    "Last Share Difficulty":697871.66738400,
    "Last Valid Work":1693207198,
    "Device Hardware%":0.0000,
    "Device Rejected%":0.5021,
    "Device Elapsed":16510}],
  "id":1}
```



## 3.5 pool operation

### 3.5.1 pools

The status of each pool.

Send:

```
{  
  "command":"pools"  
}
```

Reply:

```
{  
  "STATUS":[{  
    "STATUS":"S",  
    "When":1693208688,  
    "Code":7,  
    "Msg":"3 Pool(s)",  
    "Description":"cgminer 4.11.1"}],  
  "POOLS":[{  
    "POOL":0  
    "URL":"stratum+tcp://sha256asicboost.auto.nicehash.com:9200#xnsb",  
    "Status":"Alive",  
    "Priority":0,  
    "Quota":1,  
    "Long Poll":"N",  
    "Getworks":879,  
    "Accepted":1028,  
    "Rejected":8,  
    "Works":1085882,  
    "Discarded":10554,  
    "Stale":0,  
    "Get Failures":0,  
    "Remote Failures":0,  
    "User":"NHbNf7vCRp7zDyVPeDBNkvgndkTTvtvKivrd.K10Pro",  
    "Last Share Time":1693208639,  
    "Diff1 Shares":899861008,  
    "Proxy Type":"socks5",  
    "Proxy":"10.254.106.2:10808",  
    "Difficulty Accepted":693583365.78687370,  
    "Difficulty Rejected":4710633.75484200,  
    "Difficulty Stale":0.00000000,  
    "Last Share Difficulty":1395743.33476800,  
    "Work Difficulty":1395743.33476800,  
    "Has Stratum":true,
```



```
"Stratum Active":true,  
"Stratum URL":"sha256asicboost.auto.nicehash.com",  
"Stratum Difficulty":1395743.33476800,  
"Has Vmask":true,  
"Has GBT":false,  
"Best Share":934535583,  
"Pool Rejected%":0.6746,  
"Pool Stale%":0.0000,  
"Bad Work":56,  
"Current Block Height":805141,  
"Current Block Version":536870912,  
}  
{  
"POOL":1  
"URL":"stratum+tcp://sha256asicboost.auto.nicehash.com:9200#xnsb",  
"Status":"Alive",  
"Priority":1,  
"Quota":1,  
"Long Poll":"N",  
"Getworks":11,  
"Accepted":0,  
"Rejected":0,  
"Works":0,  
"Discarded":0,  
"Stale":0,  
"Get Failures":0,  
"Remote Failures":0,  
"User":"NHbNf7vCRp7zDyVPeDBNkvgndkTTvtvKivrd.K10Pro",  
"Last Share Time":0,  
"Diff1 Shares":0,  
"Proxy Type":"socks5:",  
"Proxy":"10.254.106.2:10808",  
"Difficulty Accepted":0.00000000,  
"Difficulty Rejected":0.00000000,  
"Difficulty Stale":0.00000000,  
"Last Share Difficulty":0.00000000,  
"Work Difficulty":348935.83369200,  
"Has Stratum":true,  
"Stratum Active":false,  
"Stratum URL":"","  
"Stratum Difficulty":0.00000000,  
"Has Vmask":true,  
"Has GBT":false,  
"Best Share":0,
```





```
"Pool Rejected%":0.0000,  
"Pool Stale%":0.0000,  
"Bad Work":0,  
"Current Block Height":32824,  
"Current Block Version":536870912,  
}  
{  
  "POOL":2,  
  "URL":"stratum+tcp://sha256asicboost.auto.nicehash.com:9200#xnsb",  
  "Status":"Alive",  
  "Priority":2,  
  "Quota":1,  
  "Long Poll":"N",  
  "Getworks":10,  
  "Accepted":0,  
  "Rejected":0,  
  "Works":0,  
  "Discarded":0,  
  "Stale":0,  
  "Get Failures":0,  
  "Remote Failures":0,  
  "User":"NHbNf7vCRp7zDyVPeDBNkvgndkTTvtvKivrD.K10Pro",  
  "Last Share Time":0,  
  "Diff1 Shares":0,  
  "Proxy Type":"socks5",  
  "Proxy":"10.254.106.2:10808",  
  "Difficulty Accepted":0.00000000,  
  "Difficulty Rejected":0.00000000,  
  "Difficulty Stale":0.00000000,  
  "Last Share Difficulty":0.00000000,  
  "Work Difficulty":348935.83369200,  
  "Has Stratum":true,  
  "Stratum Active":false,  
  "Stratum URL": "",  
  "Stratum Difficulty":0.00000000,  
  "Has Vmask":true,  
  "Has GBT":false,  
  "Best Share":0,  
  "Pool Rejected%":0.0000,  
  "Pool Stale%":0.0000,  
  "Bad Work":0,  
  "Current Block Height":805117,  
  "Current Block Version":536870912,  
},
```



```
"id":1  
}
```

### 3.5.2 switchpool

Switch the specified pool number to the highest priority.

Send:

```
{  
  "command": " switchpool ",  
  "parameter": " pool_no",  
}
```

Reply:

```
{  
  "STATUS":[{  
    "STATUS":"S",  
    "When":1693220321,  
    "Code":27,  
    "Msg":"Switchingtopool  
2:'stratum+tcp://sha256asicboost.auto.nicehash.com:9200#xnsub",  
    "Description":"cgminer 4.11.1"}],  
  "id":1  
}
```

### 3.5.3 enablepool

Enable the specified pool.

Send:

```
{  
  "command": "enablepool",  
  "parameter": " pool_no",  
}
```

Reply:

```
{  
  "STATUS":[{  
    "STATUS":"I",  
    "When":1693220605,  
    "Code":49,  
    "Msg":"'Pool 2:'stratum+tcp://sha256asicboost.auto.nicehash.com:9200#xnsub' already enabled",  
    "Description":"cgminer 4.11.1"}],  
  "id":1  
}
```



### 3.5.4 disablepool

Disable the specified pool.

Send:

```
{
  "command":"disablepool",
  "parameter":" pool_no",
}
```

Reply:

```
{
  "STATUS":[{
    "STATUS":"S",
    "When":1693229561,
    "Code":48,
    "Msg":"Disabling pool 2:'stratum+tcp://sha256asicboost.auto.nicehash.com:9200#xnsub",
    "Description":"cgminer 4.11.1"}],
  "id":1
}
```

### 3.5.5 addpool

Add the specified pool.

Send:

```
{
  "command":"addpool",
  "parameter":"url,usr,password"
}
```

Reply:

```
{
  "STATUS":[{
    "STATUS":"S",
    "When":1693227027,
    "Code":55,
    "Msg":"Added pool 6: 'stratum+tcp://stratum.antpool.com:3333",
    "Description":"cgminer 4.11.1"}],
  "id":1
}
```



### 3.5.6 removepool

Remove the specified pool.

Send:

```
{
  "command":"removepool",
  "parameter":"pool_no"
}
```

Reply:

```
{
  "STATUS":[{
    "STATUS":"S",
    "When":1693229705,
    "Code":68,
    "Msg":"Removed pool 3:'stratum+tcp://stratum.antpool.com:3333'",
    "Description":"cgminer 4.11.1"}],
  "id":1
}
```

### 3.5.7 updatepools

Update pools. The parameter include at least one pool and the priority decided by the order.

Send:

```
{
  "command":"updatepools",
  "parameter":{"pools":[{"url":"urlstr","user":"userstr","pass":"passstr"},{"url":"","user":"","pass":"passstr"}...]}"
}
```

Reply:

```
{
  "STATUS":[{"STATUS":"S",
    "When":1702353587,
    "Code":200,
    "Msg":"Update pools success",
    "Description":"cgminer 4.11.1"}],
  "id":1
}
```

About reply code:

Code	Description
200	Update success
201	Update fail
8	No available pool



### 3.6 devdetails

Each device with a list of their static details. This lists all devices including those not supported by the 'devs' command.

Send:

```
{
  "command":"devdetails"
}
```

Reply:

```
{
  "STATUS":[{
    "STATUS":"S",
    "When":1693215535,
    "Code":69,
    "Msg":"Device Details",
    "Description":"cgminer 4.11.1"}],
  "DEVDETAILS":[{
    "DEVDETAILS":0,
    "Name":"K10Pro",
    "ID":0,
    "Driver":"Desiweminer",
    "Kernel":"",
    "Model":"K10Pro",
    "Device Path":""}],
  "id":1
}
```

### 3.7 stats

This command shows the miner running data such as fan speed, work time, hashrate and so on. There only shows part of data about "STATS".

Send:

```
{
  "command":"stats"
}
```

Reply:

```
{
  "STATUS":[{
    "STATUS":"S",
    "When":1693218429,
    "Code":70,
    "Msg":"CGMiner stats",
    "Description":"cgminer 4.11.1"}],
  "id":1
}
```



```
"STATS":{  
  "STATS":0,  
  "ID":"K10Pro0",  
  "Elapsed":27784,  
  "Calls":0,  
  "Wait":0.000000,  
  "Max":0.000000,  
  "Min":99999999.000000,  
  "Model":"K10Pro",  
  "ASIC":"TaiShan2",  
  "Firmware":"20230805FF",  
  "Software Version":"4.11.1-08400-g27d4664c",  
  "MAC":"32:26:ca:00:38:ea",  
  "Ctrl Board":"k8_v1.6",  
  "Ctrl Board SN":"H01X2P22307050006",  
  "Debug":1,  
  "PM State":2,  
  "BIN Version":0,  
  "BIN Number":61,  
  "Chip Count":1092  
  "Bad Chip Count":0  
  "Mining Mode":2  
  "Temp":67,  
  "Error Chip": "",  
  "Stratum Disconnect":0,  
  "Error Code": "",  
  "Boot Time":126.725616,  
  "Boot Temp":34,  
  "Coarse Tune Time":1639.452293,  
  "Fine Tune Time":3262.959120,  
  "Tune Status":4,  
  "Tune Time":4922.877731,  
  "Raise Freq Done":1,  
  "Raise Freq Time":325.874367,  
  "Custom Power Ratio":27.000000,  
  "Liquid Cooling":0,  
  "Startup Times":56,  
  "System Uptime":27942,  
  "Target Ctrl Temp":67,  
  "MHS(Rated)":167000000.000000,  
  "Hashrate Boost Ratio":0.000000,  
  "Profit Boost Ratio":0.000000,  
  "Current Electric Price":0.010000,  
  "Current BTC Price":29410.220703,
```



"Current Network Hashrate":395110000,  
"Current Block Reward":6.359291,  
"Profit Dayli":0.000000,  
"MHS(Ideal)":167349688,  
"Freq":219,  
"MHS(Sample)":167000000.000000,  
"MHS(1m)":167000000.000000,  
"MHS(2m)":167000000.000000,  
"MHS(5m)":167000000.000000,  
"MHS(15m)":167000000.000000,  
"MHS(30m)":167000000.000000,  
"MHS(1h)":167000000.000000,  
"MHS(2h)":167000000.000000,  
"MHS(Avg)":166000000.000000,  
"PR(1m)":99.355503,  
"PR(2m)":99.316208,  
"PR(5m)":99.296016,  
"PR(15m)":99.320548,  
"PR(30m)":99.326432,  
"PR(1h)":99.340717,  
"PR(2h)":99.338964,  
"PR(Avg)":98.736776,  
"PSU Model":20,  
"PSU Firmware":2,  
"PSU Input Voltage":233.350000,  
"PSU Output Voltage":13.665000,  
"PSU Output Current":274.300000,  
"PSU Input Power":3998,  
"PSU Output Power":3744,  
"PSU Fan Speed":7500,  
"PSU Temp AMB":38,  
"PSU Temp HOT":55,  
"PSU Efficiency":0.936937,  
"PSU Error":0,  
"Chip voltage":262,  
"W/T(1m)":23.940120,  
"W/T(2m)":23.940120,  
"W/T(5m)":23.940120,  
"W/T(15m)":23.940120,  
"W/T(30m)":23.940120,  
"W/T(1h)":23.940120,  
"W/T(2h)":23.940120,  
"W/T(Avg)":24.084337,  
"Fan Count":4,



"0 PWM":207  
"0 Speed":6210  
"1 PWM":207  
"1 Speed":6240  
"2 PWM":245  
"2 Speed":7170  
"3 PWM":245  
"3 Speed":7110  
"Board Count":3  
"0 SN":"H0152730628KPA526T2BV00610011"  
"0 Online":1  
"0 Chip Count":364  
"0 Bad Chip Count":0  
"0 Bad Chip Ratio":0.000000  
"0 Tune Status":3  
"0 MHS(Ideal)":56020782  
"0 Freq":220  
"0 MHS(Sample)":55715637.563455  
"0 MHS(1m)":55750854.783592  
"0 MHS(2m)":55894324.732760  
"0 MHS(5m)":55842655.026126  
"0 MHS(15m)":55881218.956472  
"0 MHS(30m)":55361158.283143  
"0 MHS(1h)":27962282.379783  
"0 MHS(2h)":14147807.856558  
"0 MHS(Avg)":54389972.772039  
"0 PR(1m)":99.181424  
"0 PR(2m)":99.438194  
"0 PR(5m)":99.345720  
"0 PR(15m)":99.414738  
"0 PR(30m)":98.483979  
"0 PR(1h)":49.447872  
"0 PR(2h)":24.723936  
"0 PR(Avg)":96.745837  
"0 Low Hash":0  
"0 Temp":62  
"0 MW":98  
"0 HW":0  
"0 ULVT PMOS(Avg)":4271  
"0 ULVT NMOS(Avg)":3102  
"0 LVT PMOS(Avg)":13299  
"0 LVT NMOS(Avg)":6106  
"0.107 Bad":0  
"0.107 Disabled":0





```
"0.107 Freq":194
"0.107 MW":0
"0.107 HW":0
"0.107 PR":52.105798
"0.159 Bad":0
"0.159 Disabled":0
"0.159 Freq":194
"0.159 MW":0
"0.159 HW":0
"0.159 PR":73.168190
"0.331 Bad":0
"0.331 Disabled":0
"0.331 Freq":194
"0.331 MW":0
"0.331 HW":0
"0.331 PR":75.697572
"0.218 Bad":0
"0.218 Disabled":0
"0.218 Freq":221
"0.218 MW":0
"0.218 HW":0
...}],
"id":1
}
```

### 3.8 coin

Showing coin info.

Send:

```
{
  "command":"coin"
}
```

Reply:

```
{
  "STATUS":[{
    "STATUS":"S",
    "When":1693219649,
    "Code":78,
    "Msg":"CGMiner coin",
    "Description":"cgminer 4.11.1"}],
  "COIN":[{
    "Hash Method":"sha256",
    "Current Block Time":1693217334.313215,
    "CurrentBlockHash":
```



```
"0000000000000000000000000000000094ce4e22be9afef6741303a72bc319409c004de39251",  
  "LP":true,  
  "Network Difficulty":55621444139429.57031250}],  
  "id":1  
}
```

### 3.9 restart

Restart mining.

Send:

```
{  
  "command":"restart"  
}
```

Reply:

```
{  
  "STATUS":"RESTART",  
  "id":1  
}
```

### 3.10 reboot

Reboot the miner.

Send:

```
{  
  "command":"reboot"  
}
```

Reply:

```
{  
  "STATUS":"REBOOT",  
  "id":1  
}
```

## 4 Writable API

### 4.1 ascset

The device id is constant zero because of only one device and the subparameter must be json format.

About the reply code:

Code	Description
------	-------------



119	success
120	fail

### 4.1.1 suspend mining

Stop mining with shutting down psu output and stopping fan.

Send:

```
{  
  "command": "ascset",  
  "parameter": "device_id,suspend"  
}
```

Reply:

```
{  
  "STATUS": [{"STATUS": "S",  
    "When": 1702375506,  
    "Code": 119,  
    "Msg": "ASC 0 set OK",  
    "Description": "cgminer 4.11.1"}],  
  "id": 1  
}
```

### 4.1.2 resume mining

Resume mining.

Send:

```
{  
  "command": "ascset",  
  "parameter": "device_id,resume"  
}
```

Reply:

```
{  
  "STATUS": [{"STATUS": "S",  
    "When": 1702375642,  
    "Code": 119,  
    "Msg": "ASC 0 set OK",  
    "Description": "cgminer 4.11.1"}],  
  "id": 1  
}
```



### 4.1.3 set power limit

Set power limit and restart mining.

Send:

```
{
  "command":"ascset",
  "parameter":"device_id,
                powerlimit,
                {"value":"power_value"} "
```

Reply:

```
{
  "STATUS":[{"STATUS":"S",
              "When":1702364811,
              "Code":119,
              "Msg":"ASC 0 set OK",
              "Description":"cgminer 4.11.1"}],
  "id":1
}
```

### 4.1.4 set mining mode

It must provide all the parameters if under “smartboost”. Otherwise, only need “mode” parameter, but switching into “smartboost” mode.

Restart mining if switching into a different mode.

Send:

```
{
  "command":"ascset",
  "parameter":"device_id,
                workmode,
                {"mode":"modestr",
                "electricity_price":"float",
                "coin_price":"float",
                "block_reward":"float",
                "network_hashrate":"int",
                "power_limit":"int"}"
```

The “modestr” support:

- low\_power
- normal
- high\_performance
- smartboost



Reply:

```
{ "STATUS": [{"STATUS": "S",
  "When": 1702367408,
  "Code": 119,
  "Msg": "ASC 0 set OK",
  "Description": "cgminer 4.11.1"}],
  "id": 1
}
```

## 4.1.5 set timezone

Send:

```
{
  "command": "ascset",
  "parameter": "device_id,timezone,
               {"value": "timezonestr"}"
}
```

Reply:

```
{
  "STATUS": [{"STATUS": "S",
  "When": 1702374930,
  "Code": 119,
  "Msg": "ASC 0 set OK",
  "Description": "cgminer 4.11.1"}],
  "id": 1
}
```

Note: Timezonestr like America/New\_York.

## 4.1.6 help

Show all the ascset subcommand.

Send:

```
{
  "command": "ascset",
  "parameter": "device_id,
               help"
}
```

Reply:

```
{
  "STATUS": [{"STATUS": "I",
  "When": 1702372738,
  "Code": 118,
  "Msg": "ASC 0 set help: suspend & resume & powerlimit & workmode & timezone",
  "Description": ""}],
  "id": 1
}
```



```
"Description":"cgminer 4.11.1"}],  
  "id":1  
}
```