## 基本信息

* 项目id（projId）：2488

## 用户登录接口

* 路径：<https://api.123321yun.com/api/user/login>
* 参数：username、password、vcode（授权码）（可选）
* 返回值：
* {  
   "msg": "Welcome!",  
   "code": 200.0,  
   "data": "45b572b6-0d95-4a55-86ec-3dfdbcfffa03"  
  }

## 查询项目基础信息

* 路径：<https://api.123321yun.com/api/project/queryProject>
* 参数：projId
* 返回值：
* {  
   "msg": "Success",  
   "code": 200.0,  
   "data": [  
   {  
   "energyConsumption": "[[2019],[2018],[2017]]",  
   "address": "马家龙金龙工业城",  
   "city": "深圳市",  
   "county": "南山区",  
   "projectType": {  
   "name": "设备",  
   "id": 1  
   },  
   "delFlag": "0",  
   "imgUrl": "4e23e8fea302e378893de331ee6af3ef",  
   "province": "广东省",  
   "constructionTime": "2020-02-20",  
   "name": "机床云",  
   "typeId": "1",  
   "id": 2488,  
   "state": "1"  
   }  
   ]  
  }

## 查询项目下的区域列表

* 路径：<https://api.123321yun.com/api/region/queryRegionByProject>
* 参数：projId
* 返回值：
* {  
   "msg": "Success",  
   "code": 200.0,  
   "data": [  
   {  
   "projId": "2488",  
   "name": "A车间",  
   "id": 3062  
   },  
   {  
   "projId": "2488",  
   "name": "B车间",  
   "id": 3069  
   },  
   {  
   "projId": "2488",  
   "name": "C车间",  
   "id": 3070  
   }  
   ]  
  }

## 汇总区域下的设备状态

* 路径：<https://api.123321yun.com/api/region/computeRegionDeviceNumber>
* 参数：projId、regionId（可选）
* 返回值
* {  
   "msg": "Success",  
   "code": 200.0,  
   "data": [  
   {  
   "name": "A车间",  
   "warnDeviceNum": 0,  
   "id": 3062,  
   "errorDeviceNum": 1,  
   "sumDeviceNum": 36  
   },  
   {  
   "name": "B车间",  
   "warnDeviceNum": 0,  
   "id": 3069,  
   "errorDeviceNum": 0,  
   "sumDeviceNum": 27  
   },  
   {  
   "name": "C车间",  
   "warnDeviceNum": 0,  
   "id": 3070,  
   "errorDeviceNum": 0,  
   "sumDeviceNum": 32  
   },  
   {  
   "name": "未分区",  
   "warnDeviceNum": 0,  
   "id": -1,  
   "errorDeviceNum": 0,  
   "sumDeviceNum": 0  
   }  
   ]  
  }

## 查询项目的设备列表

* 路径：<https://api.123321yun.com/api/device/queryDeviceByProject>
* 返回值：
* [
    
     
   {
    
   "deviceType": {
    
   "name": "数据驾驶舱",
    
   "id": 3848
    
   },
    
   "regionId": "3062",
    
   "nameplateParams": {},
    
   "name": "11号机",
    
   "produceTime": "2020-02-21",
    
   "model": "31A",
    
   "id": 21860,
    
   "brand": "兄弟",
    
   "projectId": "2488"
    
   },
    
   {
    
   "deviceType": {
    
   "name": "生产详情",
    
   "id": 3849
    
   },
    
   "regionId": "3062",
    
   "nameplateParams": {},
    
   "name": "11号机",
    
   "produceTime": "2020-02-21",
    
   "model": "31A",
    
   "id": 21877,
    
   "brand": "兄弟",
    
   "projectId": "2488"
    
   },
    
   {
    
   "deviceType": {
    
   "name": "实时数据\_brother",
    
   "id": 3850
    
   },
    
   "regionId": "3062",
    
   "nameplateParams": {},
    
   "name": "10号机",
    
   "produceTime": "2020-02-21",
    
   "model": "31A",
    
   "id": 21887,
    
   "brand": "兄弟",
    
   "projectId": "2488"
    
   },
    
   {
    
   "deviceType": {
    
   "name": "实时数据\_Mitsubshi",
    
   "id": 3851
    
   },
    
   "regionId": "3069",
    
   "nameplateParams": {},
    
   "name": "1号机",
    
   "produceTime": "2020-02-21",
    
   "model": "M700",
    
   "id": 21891,
    
   "brand": "三菱",
    
   "projectId": "2488"
    
   }
    
  ]

## 查询车间所有设备属性快照

* 路径：<https://api.123321yun.com/api/device/queryRegionDeviceParamStatus>
* 参数：regionId

## 查询单个设备的属性快照接口

* 路径：<https://api.123321yun.com/api/device/queryDeviceParamStatus>
* 具体返回值：
* {  
   "deviceType": {  
   "name": "数据驾驶舱",  
   "id": 3848  
   },  
   "errorParamNum": 1,  
   "controllerId": "EBOX0027190116",  
   "modifyStatus": 0,  
   "regionName": "A车间",  
   "jsonParams": [  
   {  
   "qs": 3,  
   "realValue": 100.0,  
   "flag": "a\_96342",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130210",  
   "paramName": "任务进度",  
   "value": 10000.0  
   },  
   {  
   "qs": 3,  
   "realValue": 307.0,  
   "flag": "96354",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130221",  
   "paramName": "运行时长",  
   "value": 307.0  
   },  
   {  
   "qs": 3,  
   "realValue": 8061051.0,  
   "flag": "96365",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130232",  
   "paramName": "生产批次",  
   "value": 8061051.0  
   },  
   {  
   "qs": 3,  
   "realValue": 66.7,  
   "flag": "a\_96343",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130211",  
   "paramName": "时间稼动率",  
   "value": 667.0  
   },  
   {  
   "qs": 3,  
   "realValue": 153.0,  
   "flag": "96355",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130222",  
   "paramName": "停止时长",  
   "value": 153.0  
   },  
   {  
   "qs": 3,  
   "realValue": 97.39,  
   "flag": "a\_96344",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130212",  
   "paramName": "性能稼动率",  
   "value": 9739.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_run",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130223",  
   "paramName": "运行",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "a\_96345",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130213",  
   "paramName": "良品率",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_stop",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130224",  
   "paramName": "停止",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 10.0,  
   "flag": "96353",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130220",  
   "paramName": "不良品数",  
   "value": 10.0  
   },  
   {  
   "qs": 3,  
   "realValue": 1.0,  
   "flag": "m\_96362",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130229",  
   "paramName": "模穴数",  
   "value": 1.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "a\_96346",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130214",  
   "paramName": "设备综合效率",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_fail",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130225",  
   "paramName": "故障",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 96.95,  
   "flag": "a\_96347",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130215",  
   "paramName": "当前效率",  
   "value": 9695.0  
   },  
   {  
   "qs": 3,  
   "realValue": 10.0,  
   "flag": "m\_96359",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130226",  
   "paramName": "不良产量",  
   "value": 10.0  
   },  
   {  
   "qs": 35,  
   "realValue": 115258.0,  
   "flag": "96348",  
   "unitName": "件",  
   "realQs": 11,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130216",  
   "paramName": "本批产量",  
   "value": 115316.0  
   },  
   {  
   "qs": 3,  
   "realValue": 230.0,  
   "flag": "m\_96360",  
   "unitName": "秒",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130227",  
   "paramName": "理论周期",  
   "value": 230.0  
   },  
   {  
   "qs": 3,  
   "realValue": 615.0,  
   "flag": "96349",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130217",  
   "paramName": "当班产量",  
   "value": 78.0  
   },  
   {  
   "qs": 3,  
   "realValue": 50000.0,  
   "flag": "m\_96361",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1130228",  
   "paramName": "计划产量",  
   "value": 50000.0  
   },  
   {  
   "qs": 35,  
   "realValue": 237.0,  
   "flag": "96490",  
   "unitName": "秒",  
   "realQs": 35,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139653",  
   "paramName": "加工周期",  
   "value": 237.0  
   },  
   {  
   "qs": 3,  
   "realValue": 3291.6666666667,  
   "flag": "96492",  
   "unitName": "时",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139665",  
   "paramName": "预计完成",  
   "value": 1.185E+7  
   }  
   ],  
   "oldOffline": false,  
   "deviceId": "21527",  
   "deviceName": "1号机",  
   "errorTimeSum": 0,  
   "runTimeSum": 31450406523,  
   "offline": false,  
   "warnEventSum": 15,  
   "regionId": "3062",  
   "warnParamNum": 1,  
   "errorEventSum": 14,  
   "projectId": "2488",  
   "status": 1,  
   "timestamp": 1668135351977  
  }

## 查询项目所有设备属性快照

* 地址：<https://api.123321yun.com/api/device/queryProjectDeviceParamStatus>
* 参数：projId
* 返回值：
* {  
   "msg": "Success",  
   "code": 200.0,  
   "data": [  
   {  
   "deviceType": {  
   "name": "数据驾驶舱",  
   "id": 3848  
   },  
   "errorParamNum": 0,  
   "controllerId": "EBOX0027190116",  
   "modifyStatus": 0,  
   "regionName": "A车间",  
   "jsonParams": [  
   {  
   "qs": 3,  
   "realValue": 627.0,  
   "flag": "96349",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139765",  
   "paramName": "当班产量",  
   "value": 104.0  
   },  
   {  
   "qs": 3,  
   "realValue": 8061051.0,  
   "flag": "96365",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139776",  
   "paramName": "生产批次",  
   "value": 8061051.0  
   },  
   {  
   "qs": 3,  
   "realValue": 10.0,  
   "flag": "96353",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139766",  
   "paramName": "不良品数",  
   "value": 10.0  
   },  
   {  
   "qs": 3,  
   "realValue": 237.0,  
   "flag": "96490",  
   "unitName": "秒",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139777",  
   "paramName": "加工周期",  
   "value": 237.0  
   },  
   {  
   "qs": 3,  
   "realValue": 409.0,  
   "flag": "96354",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139767",  
   "paramName": "运行时长",  
   "value": 409.0  
   },  
   {  
   "qs": 3,  
   "realValue": 3291.6666666667,  
   "flag": "96492",  
   "unitName": "时",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139778",  
   "paramName": "预计完成",  
   "value": 1.185E+7  
   },  
   {  
   "qs": 3,  
   "realValue": 204.0,  
   "flag": "96355",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139768",  
   "paramName": "停止时长",  
   "value": 204.0  
   },  
   {  
   "qs": 3,  
   "realValue": 103.0,  
   "flag": "a\_96342",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139758",  
   "paramName": "任务进度",  
   "value": 10000.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_run",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139769",  
   "paramName": "运行",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 66.7,  
   "flag": "a\_96343",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139759",  
   "paramName": "时间稼动率",  
   "value": 667.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_stop",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139770",  
   "paramName": "停止",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 177.47,  
   "flag": "a\_96344",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139760",  
   "paramName": "性能稼动率",  
   "value": 9747.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_fail",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139771",  
   "paramName": "故障",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "a\_96345",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139761",  
   "paramName": "良品率",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 10.0,  
   "flag": "m\_96359",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139772",  
   "paramName": "不良产量",  
   "value": 10.0  
   },  
   {  
   "qs": 3,  
   "realValue": 69.0,  
   "flag": "a\_96346",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139762",  
   "paramName": "设备综合效率",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 230.0,  
   "flag": "m\_96360",  
   "unitName": "秒",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139773",  
   "paramName": "理论周期",  
   "value": 230.0  
   },  
   {  
   "qs": 3,  
   "realValue": 96.95,  
   "flag": "a\_96347",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139763",  
   "paramName": "当前效率",  
   "value": 9695.0  
   },  
   {  
   "qs": 3,  
   "realValue": 50000.0,  
   "flag": "m\_96361",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139774",  
   "paramName": "计划产量",  
   "value": 50000.0  
   },  
   {  
   "qs": 3,  
   "realValue": 115342.0,  
   "flag": "96348",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139764",  
   "paramName": "本批产量",  
   "value": 115342.0  
   },  
   {  
   "qs": 3,  
   "realValue": 1.0,  
   "flag": "m\_96362",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1139775",  
   "paramName": "模穴数",  
   "value": 1.0  
   }  
   ],  
   "oldOffline": false,  
   "deviceId": "21861",  
   "deviceName": "10号机",  
   "errorTimeSum": 0,  
   "runTimeSum": 31456365700,  
   "offline": false,  
   "warnEventSum": 0,  
   "regionId": "3062",  
   "warnParamNum": 0,  
   "errorEventSum": 0,  
   "projectId": "2488",  
   "status": 1,  
   "timestamp": 1668144556863  
   },  
   {  
   "deviceType": {  
   "name": "生产详情",  
   "id": 3849  
   },  
   "errorParamNum": 0,  
   "controllerId": "EBOX0027190116",  
   "modifyStatus": 0,  
   "regionName": "A车间",  
   "jsonParams": [  
   {  
   "qs": 3,  
   "realValue": 122.0,  
   "flag": "96399",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140230",  
   "paramName": "晚班加工数",  
   "value": 122.0  
   },  
   {  
   "qs": 3,  
   "realValue": 162.47,  
   "flag": "a\_96380",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140211",  
   "paramName": "性能稼动率",  
   "value": 9747.0  
   },  
   {  
   "qs": 3,  
   "realValue": 666.0,  
   "flag": "96402",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140233",  
   "paramName": "晚班首时加工数",  
   "value": 666.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "a\_96381",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140212",  
   "paramName": "良品率",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.1,  
   "flag": "96403",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140234",  
   "paramName": "晚班末时稼动率",  
   "value": 10.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.61,  
   "flag": "96400",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140231",  
   "paramName": "晚班稼动率",  
   "value": 61.0  
   },  
   {  
   "qs": 3,  
   "realValue": 66.7,  
   "flag": "a\_96379",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140210",  
   "paramName": "时间稼动率",  
   "value": 667.0  
   },  
   {  
   "qs": 3,  
   "realValue": 6.62,  
   "flag": "96401",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140232",  
   "paramName": "晚班首时稼动率",  
   "value": 662.0  
   },  
   {  
   "qs": 3,  
   "realValue": 8061051.0,  
   "flag": "96384",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140215",  
   "paramName": "生产批次",  
   "value": 8061051.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_stop",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140237",  
   "paramName": "停止",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 613.0,  
   "flag": "96385",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140216",  
   "paramName": "早班上电时长",  
   "value": 613.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_fail",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140238",  
   "paramName": "故障",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 55.0,  
   "flag": "a\_96382",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140213",  
   "paramName": "设备综合效率",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 666.0,  
   "flag": "96404",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140235",  
   "paramName": "晚班末时加工数",  
   "value": 666.0  
   },  
   {  
   "qs": 3,  
   "realValue": 96.95,  
   "flag": "a\_96383",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140214",  
   "paramName": "当前效率",  
   "value": 9695.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "f\_run",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "DI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140236",  
   "paramName": "运行",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 203.0,  
   "flag": "96388",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140219",  
   "paramName": "早班待机时长",  
   "value": 203.0  
   },  
   {  
   "qs": 3,  
   "realValue": 409.0,  
   "flag": "96386",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140217",  
   "paramName": "早班加工时长",  
   "value": 409.0  
   },  
   {  
   "qs": 3,  
   "realValue": 2.37,  
   "flag": "m\_96408",  
   "unitName": "时:分",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140239",  
   "paramName": "早班起始时间",  
   "value": 237.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "96387",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140218",  
   "paramName": "早班故障时长",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 19.95,  
   "flag": "m\_96409",  
   "unitName": "时:分",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140240",  
   "paramName": "晚班起始时间",  
   "value": 1995.0  
   },  
   {  
   "qs": 3,  
   "realValue": 100.0,  
   "flag": "m\_96410",  
   "unitName": "时",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140241",  
   "paramName": "EBOX时针校准",  
   "value": 100.0  
   },  
   {  
   "qs": 3,  
   "realValue": 6.77,  
   "flag": "96391",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140222",  
   "paramName": "早班首时稼动率",  
   "value": 677.0  
   },  
   {  
   "qs": 3,  
   "realValue": 2804.0,  
   "flag": "96493",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140244",  
   "paramName": "本月产量",  
   "value": 2804.0  
   },  
   {  
   "qs": 3,  
   "realValue": 10.0,  
   "flag": "96392",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140223",  
   "paramName": "早班首时加工数",  
   "value": 10.0  
   },  
   {  
   "qs": 3,  
   "realValue": 115342.0,  
   "flag": "96494",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140245",  
   "paramName": "本批产量",  
   "value": 115342.0  
   },  
   {  
   "qs": 3,  
   "realValue": 104.0,  
   "flag": "96389",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140220",  
   "paramName": "早班加工数",  
   "value": 104.0  
   },  
   {  
   "qs": 3,  
   "realValue": 100.0,  
   "flag": "m\_96411",  
   "unitName": "分",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140242",  
   "paramName": "EBOX分针校准",  
   "value": 100.0  
   },  
   {  
   "qs": 3,  
   "realValue": 6.67,  
   "flag": "96390",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140221",  
   "paramName": "早班稼动率",  
   "value": 667.0  
   },  
   {  
   "qs": 3,  
   "realValue": 1.0,  
   "flag": "m\_96412",  
   "unitName": "",  
   "realQs": 3,  
   "dataType": "AM",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140243",  
   "paramName": "件次比",  
   "value": 1.0  
   },  
   {  
   "qs": 3,  
   "realValue": 55.0,  
   "flag": "96395",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140226",  
   "paramName": "晚班上电时长",  
   "value": 55.0  
   },  
   {  
   "qs": 3,  
   "realValue": 361.0,  
   "flag": "96396",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140227",  
   "paramName": "晚班加工时长",  
   "value": 361.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "96393",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140224",  
   "paramName": "早班末时稼动率",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "96495",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AD",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140246",  
   "paramName": "上批产量",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "96394",  
   "unitName": "件",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140225",  
   "paramName": "早班末时加工数",  
   "value": 0.0  
   },  
   {  
   "qs": 3,  
   "realValue": 141.0,  
   "flag": "a\_96378",  
   "unitName": "%",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140209",  
   "paramName": "任务进度",  
   "value": 10000.0  
   },  
   {  
   "qs": 3,  
   "realValue": 239.0,  
   "flag": "96397",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140228",  
   "paramName": "晚班故障时长",  
   "value": 239.0  
   },  
   {  
   "qs": 3,  
   "realValue": 0.0,  
   "flag": "96398",  
   "unitName": "分钟",  
   "realQs": 3,  
   "dataType": "AI",  
   "isString": false,  
   "newProtocol": false,  
   "id": "1140229",  
   "paramName": "晚班待机时长",  
   "value": 0.0  
   }  
   ],  
   "oldOffline": false,  
   "deviceId": "21876",  
   "deviceName": "10号机",  
   "errorTimeSum": 0,  
   "runTimeSum": 31456880151,  
   "offline": false,  
   "warnEventSum": 0,  
   "regionId": "3062",  
   "warnParamNum": 0,  
   "errorEventSum": 0,  
   "projectId": "2488",  
   "status": 1,  
   "timestamp": 1668144556866  
   }  
   ]  
  }

## 查询多个属性快照

* 地址：<https://api.123321yun.com/api/device/queryMultiDeviceParamStatus>
* 参数：paramIds （属性id）（多个用逗号分隔）
* 返回值
* {
    
   "msg": "Success",
    
   "code": 200.0,
    
   "data": [
    
   {
    
   "qs": 3,
    
   "realValue": 239.0,
    
   "flag": "96397",
    
   "unitName": "分钟",
    
   "realQs": 3,
    
   "dataType": "AI",
    
   "isString": false,
    
   "newProtocol": false,
    
   "id": "1140228",
    
   "paramName": "晚班故障时长",
    
   "value": 239.0
    
   },
    
   {
    
   "qs": 3,
    
   "realValue": 0.0,
    
   "flag": "96398",
    
   "unitName": "分钟",
    
   "realQs": 3,
    
   "dataType": "AI",
    
   "isString": false,
    
   "newProtocol": false,
    
   "id": "1140229",
    
   "paramName": "晚班待机时长",
    
   "value": 0.0
    
   }
    
   ]
    
  }

## 批量查询属性的历史数据

* 地址：<https://api.123321yun.com/api/device/queryDeviceParamHistoryData>
* 参数：deviceId、start、end、metric（属性标签 flag）
* 返回值：
* {  
   "code": 200,  
   "msg": "Success",  
   "data": [  
   {  
   "datetime": 1544586328,  
   "ccc": 16888,  
   "lqhswd": 29.59006690979004  
   },  
   {  
   "datetime": 1544586388,  
   "ccc": 16888,  
   "lqhswd": 29.63584327697754  
   }  
   ]  
  }

## 查询共有设备类型

* 路径：<https://api.123321yun.com/api/devicetype/queryDeviceTypeList>
* 返回值：
* [
    
   {
    
   "parent": 501,
    
   "imageUrlPc": "0f1e647b2fc24e079474bd427013500b,run:b2586d6938694255af75c21cd6264b93",
    
   "imageUrl": "be9c23ab334a4f4d908bdc822a1aa990,run:059c72a98876456aa3fa3ba59f341388",
    
   "name": "冷水机",
    
   "id": 1
    
   },
    
   {
    
   "parent": 501,
    
   "imageUrlPc": "0964cc17c944474ea8c65f96c4b1d4f4,run:1d4f9d7e6ec544c2a1b9e68743b30bd1",
    
   "imageUrl": "4a550ba016dc4ca2ba15d7d7f7f88bab,run:03bc9fa080f8430ea5a87c8fd721f7c7",
    
   "name": "风冷热泵",
    
   "id": 10
    
   }
    
  ]

## 查询项目私有设备类型

* 路径：<https://api.123321yun.com/api/devicetype/queryPublicTypeList>
* 参数：projId
* 返回值：同查询共有设备一致

## 查询设备类型详细属性信息

* 路径：<https://api.123321yun.com/api/devicetype/queryDeviceType>
* 参数：id（设备类型id）
* 返回值：
* {
    
   "parent": 508,
    
   "imageUrlPc": "d916b890ab5c431a9bb214ce0c0ba111",
    
   "imageUrl": "8d0783d9390741298c1c5c4886084a21",
    
   "name": "实时数据\_Fanuc",
    
   "deviceTypeParams": [
    
   {
    
   "deviceTypeId": "3857",
    
   "flag": "s\_96626",
    
   "unitName": "",
    
   "isOutput": "0",
    
   "dataType": "AI",
    
   "isFloat": "0",
    
   "id": 96626,
    
   "paramName": "当前操作模式",
    
   "isHide": "0"
    
   },
    
   {
    
   "deviceTypeId": "3857",
    
   "flag": "s\_96627",
    
   "unitName": "",
    
   "isOutput": "0",
    
   "dataType": "AI",
    
   "isFloat": "0",
    
   "id": 96627,
    
   "paramName": "机台运行状态",
    
   "isHide": "0"
    
   }
    
   ],
    
   "id": 3857
    
  }