

**NEXIOT**

*Your Partner in Smart Manufacturing*

Future Factory In Today



2022

# I4.0 Tech DAY



## nDAS6000 Series

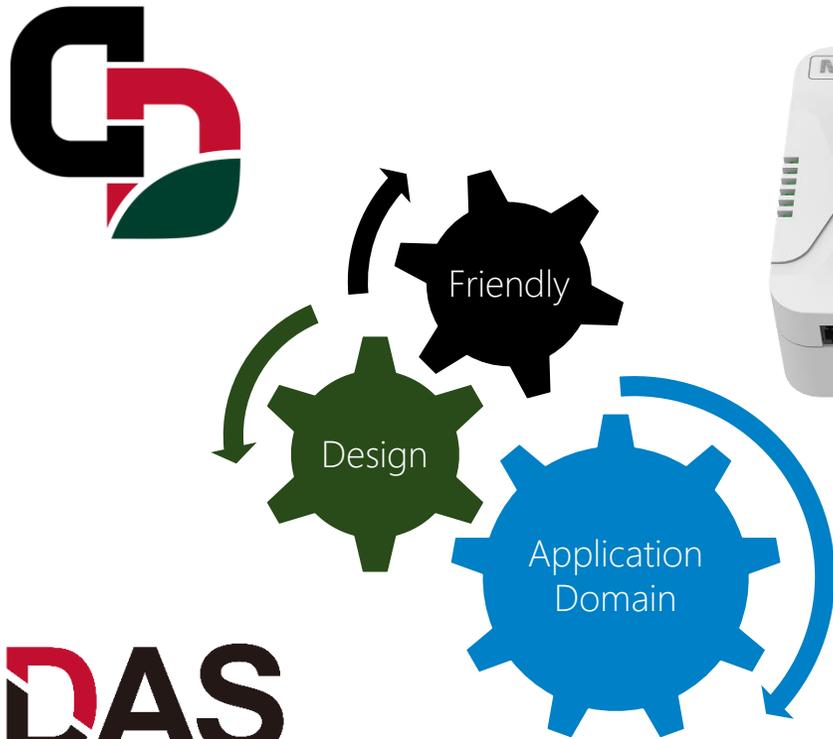
**NexAloT Data Acquisition System**

IoT Automation Product  
Div.

# What is nDAS?

## nDAS

Born for remote IoT applications

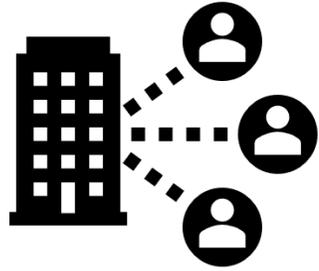


- **Application Domain**  
Green Power, Energy Management, Remote Control, HVAC & AQUA, FA, Reduce human carbon emissions
- **Design**  
Integration, Deconstruction and Reorganization, reuse and modules design
- **Friendly**  
VIC-Flow is a drag-and-drop interface that allows users to build User Define Function Blocks and Protocol.

# nDAS

**NexAIoT Data Acquisition System**

# Why you need nDAS



## Remote Management

- When your device is far away
- When you need to know the status of your device



# nDAS

**NexIoT Data Acquisition System**

# Why you need nDAS



## Remote Application

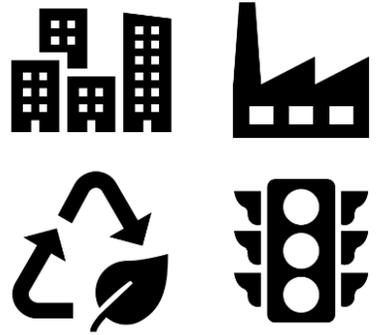
- When you need to do device data acquisition
- When you need device data networking



# nDAS

**NexIoT Data Acquisition System**

# Why you need nDAS



## Application Domain

- Green Power, Energy Management, Remote Control, HVAC & AUQA, FA,
- When you need to Reduce human carbon emissions



# nDAS

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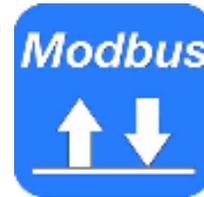
# Why you need nDAS



TCP/IP, REST API  
Modbus TCP, SQL, OPCUA

## Industrial Protocols are required

- When your industrial communications need to data exchange



# nDAS

**NexAloT Data Acquisition System**

# Why you need nDAS



Email, Line  
WeChat, Teams

## Real-time data and status are required

- When your engineers need to handle processes



Microsoft Teams

# nDAS

**NexAloT Data Acquisition System**

# ► What nDAS can offer you

## Benefit 1

### Remote monitoring and control based on HTML5

- nDAS utilize cross-platform HTML5 web pages to allow users to monitor and operate devices remotely



# nDAS

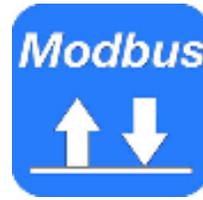
**NexAloT Data Acquisition System**

# What nDAS can offer you

## Benefit 2

### Rich Protocols and communications support

- nDAS provides common communication protocols such as IoT, IT, industry, consumer and semiconductor, which can provide different field needs



# nDAS

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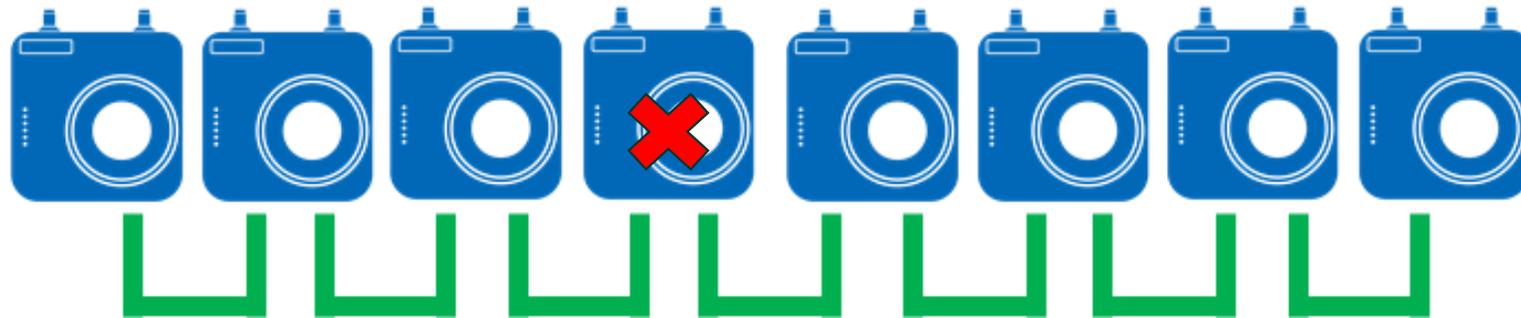
# What nDAS can offer you

## Benefit 3

### Daisy-Chain Networking and RS-485

- Daisy-Chain Lan (Break Auto-bypass)
- TCP / RS-485 can support Modbus TCP/RTU data exchange
- TCP and RS-485 can work independently
- TCP support Dual-LAN, Ring and Daisy-Chain

Auto-bypass  
48 hrs



# nDAS

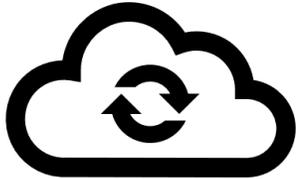
NexAloT Data Acquisition System

# What nDAS can offer you

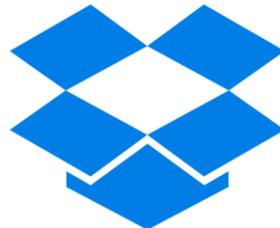
## Benefit 4

### Data Storage and Cloud Storage

- Over 10,000 sample data can be recorded locally
- Provide Private Server Source Code can Intranet upload
- Supports free space to upload data directly to the cloud drive  
Dropbox, One drive, Google drive



Private Server



Dropbox



OneDrive



Google Drive

# nDAS

NexAIoT Data Acquisition System

# ► What nDAS can offer you

## Benefit 5

### Data to cloud and Situation room

- Support cloud services such as Azure and AWS
- Simple setup to easily connect to the cloud



# nDAS

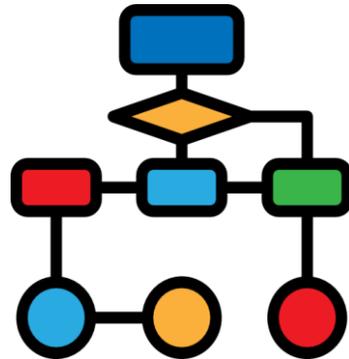
**NexAloT Data Acquisition System**

# What nDAS can offer you

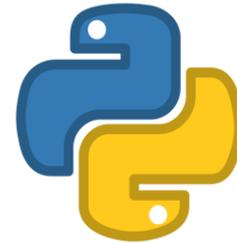
## Benefit 6

### Users can develop their own functions

- nDAS provides a **flexible** development environment, as simple as a **flow chart**, and you can make your own functions
- VIC-Flow provides a **drag-and-drop** interface. When the function block is not enough for your use, you can use Python to build a **user define function block**, and you can use **Open Libraries** in Python.



VIC-Flow

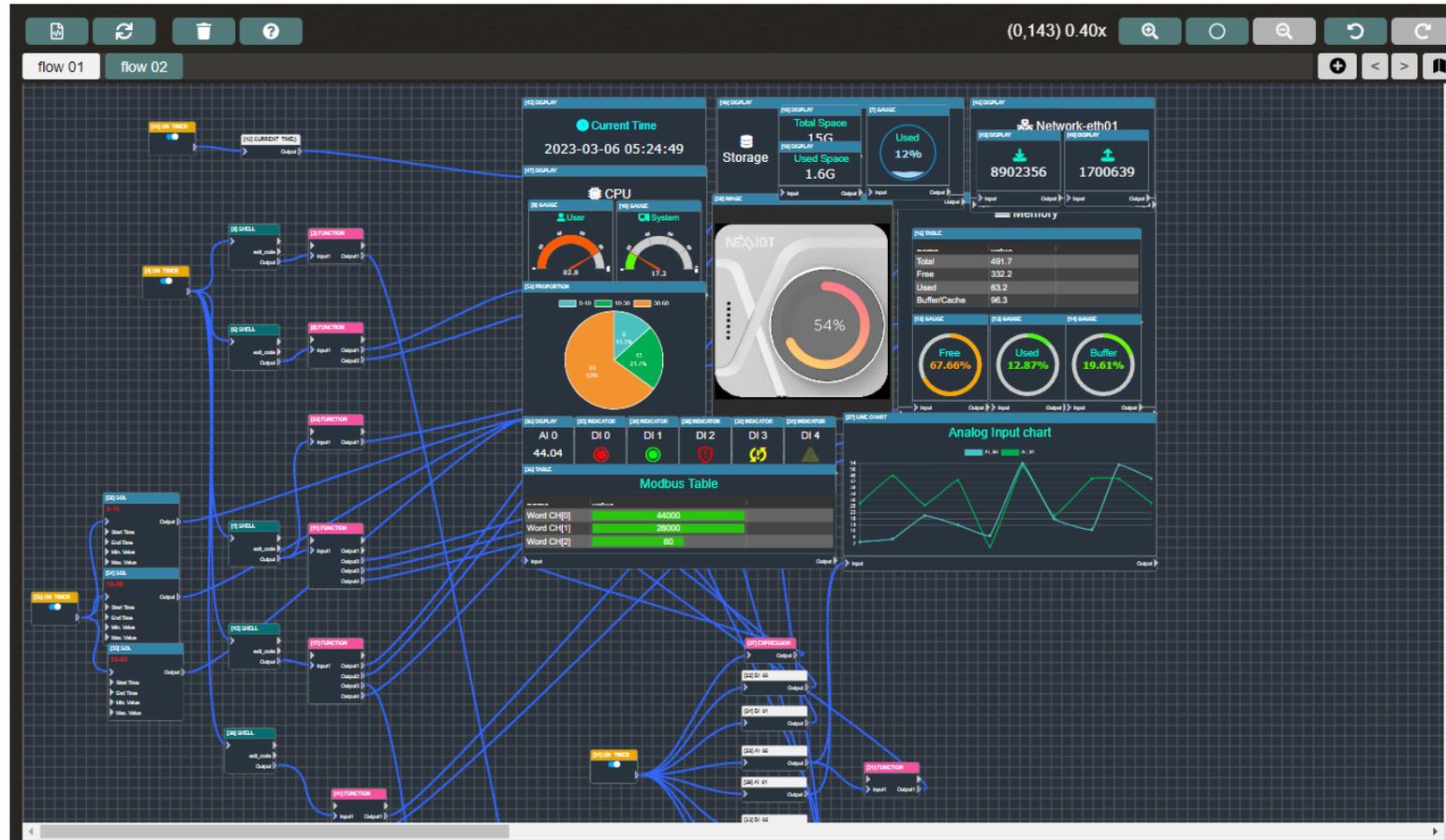


Python

# nDAS

**NexAloT Data Acquisition System**

# What nDAS can offer you



# nDAS

## NexAIoT Data Acquisition System

# What nDAS can offer you



# nDAS

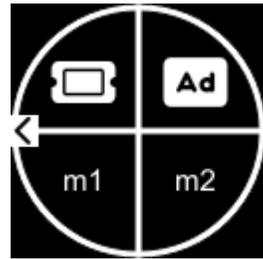
**NexIoT Data Acquisition System**

# What nDAS can offer you

## Customized OLED Menu

### Benefit 7

- Users can create their own graphics in the Menu



General Network Wireless Time & Date **OLED**

**OLED**

Menu	Enable	Show	Type	Index	Menu Tag	Tag	Min.	Max.	Step
0	<input checked="" type="checkbox"/>	Show	Image	View	<input type="checkbox"/>		0	0	1
1	<input checked="" type="checkbox"/>	Show	MODBUS TCP01 Word	0	<input type="checkbox"/>		20	30	1
2	<input checked="" type="checkbox"/>	Show	I/O DO	0	<input type="checkbox"/>		0	0	1
3	<input checked="" type="checkbox"/>	Show	I/O AI	1	<input type="checkbox"/>		0	0	1
4	<input checked="" type="checkbox"/>	Show	I/O DI	3	<input type="checkbox"/>		0	0	1
5	<input checked="" type="checkbox"/>	Show	MODBUS COM0 Bit	0	<input type="checkbox"/>		0	0	1
6	<input checked="" type="checkbox"/>	Show	CALC	5	m1		0	65536	1
7	<input checked="" type="checkbox"/>	Show	CALC	0	m2	abc	0	65536	0.1
8	<input type="checkbox"/>	Show	CALC	0			0	65536	1
9	<input type="checkbox"/>	Show	CALC	0			0	65536	1
10	<input type="checkbox"/>	Show	CALC	0			0	65536	1
11	<input type="checkbox"/>	Show	CALC	0			0	65536	1
12	<input type="checkbox"/>	Show	CALC	0			0	65536	1

**OLED**

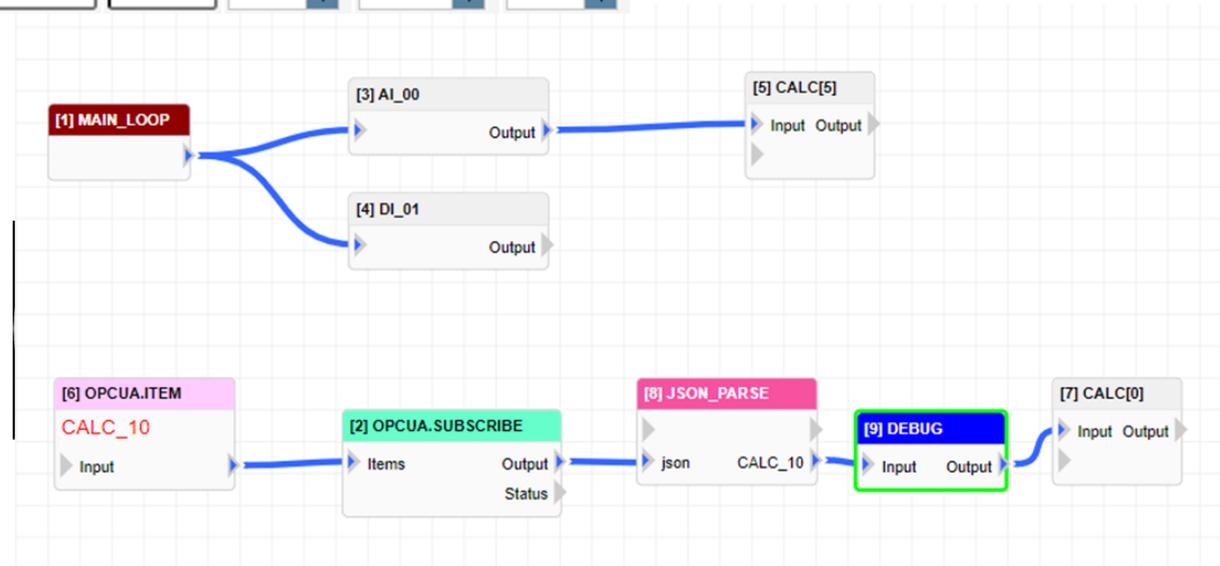
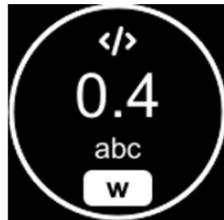
Name	Value
Initial Screen	<input type="checkbox"/>
Initial Screen	Menu 00
Reset	Submit
<b>PIN Password</b>	
Enable	<input type="checkbox"/>
Change PIN P	Submit
<b>Action</b>	
Home	
Back	
Knob Right	
Knob Left	
<b>Menu Action</b>	
Menu1	Submit

# nDAS

NexAloT Data Acquisition System

# What nDAS can offer you

6	<input checked="" type="checkbox"/>	Show	CALC	5	m1		0	65536	1
7	<input checked="" type="checkbox"/>	Show	CALC	0	m2	abc	0	65536	0.1



```

def OnOledCalcWrite(id, value):
    if id== 0:
        print("[OnCalcWrite] id=',id, 'value=', value)
        item = OPCUA_ITEM("CALC_10")
        item.data_type = OPCUA_ITEM.DATA_DOUBLE
        item.data = value
        OPCUA.WRITE("OPCUA00_10_12_1_171_48010", item)
  
```

# nDAS

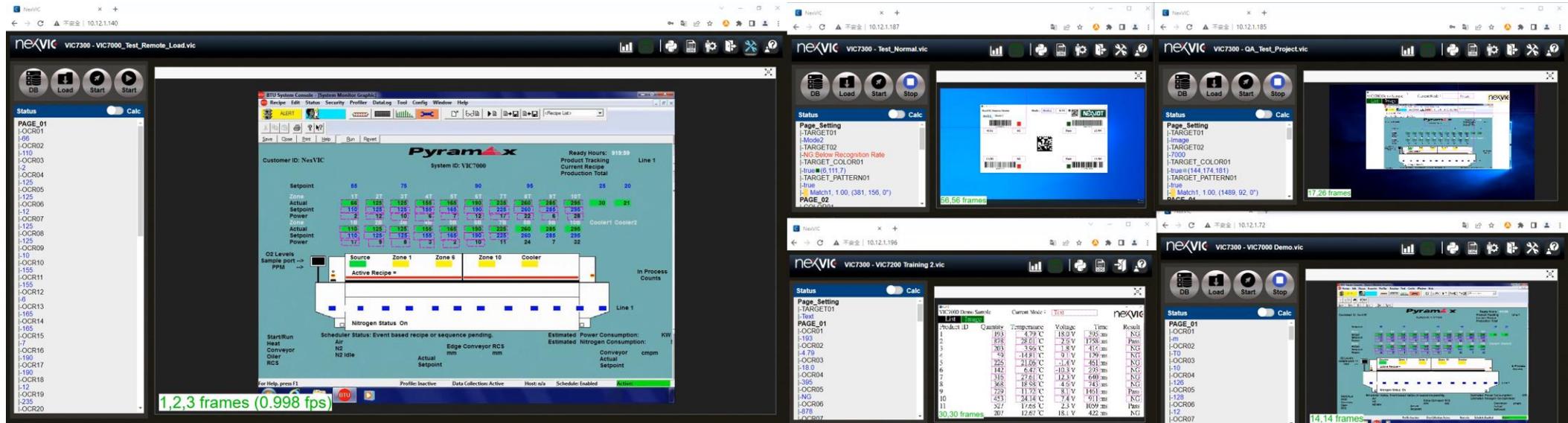
NexAIoT Data Acquisition System

# What nDAS can offer you

## Benefit 8

### Broadcast Update

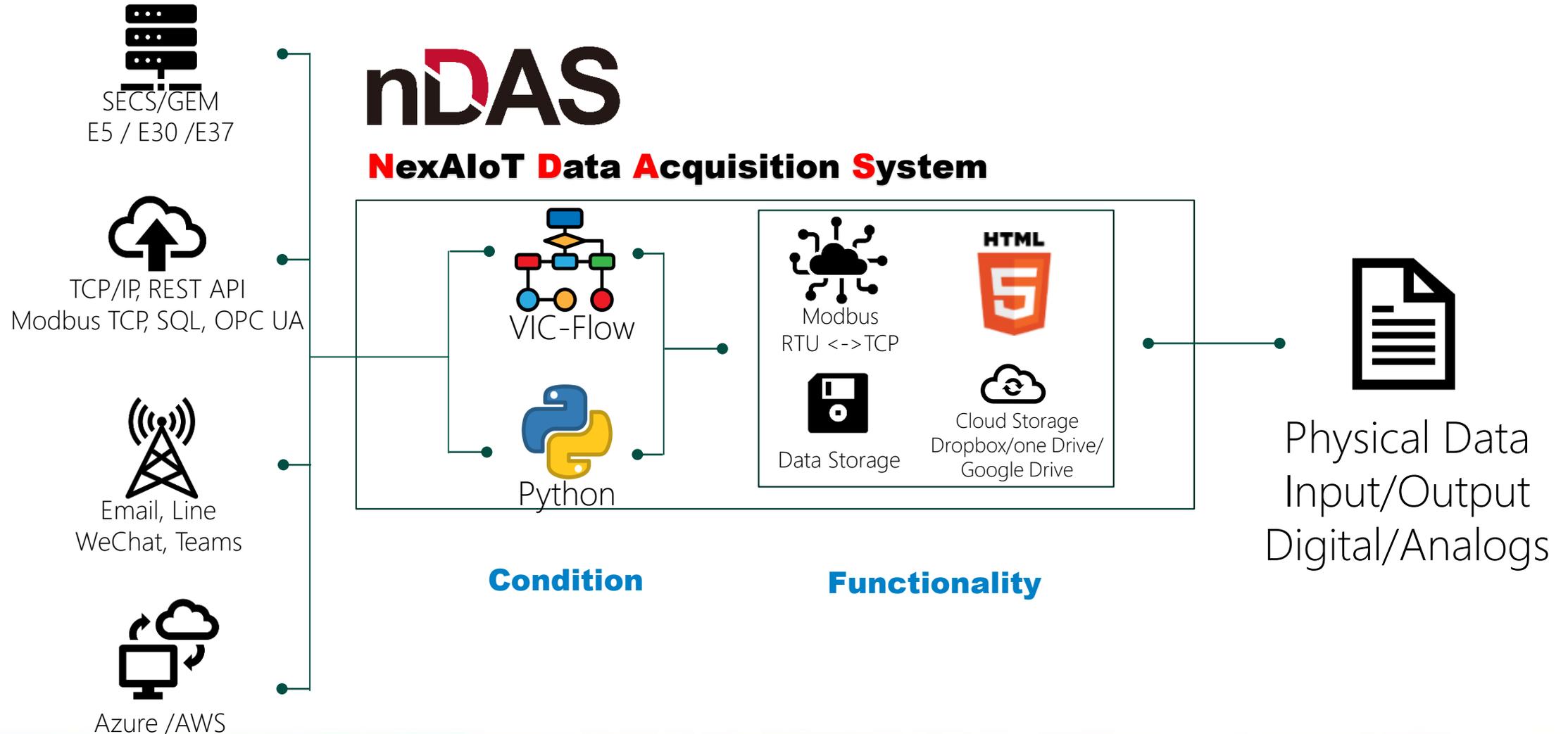
- Quickly update nDAS settings



# nDAS

## NexAIoT Data Acquisition System

# nDAS system building block



# nDAS6000 Series

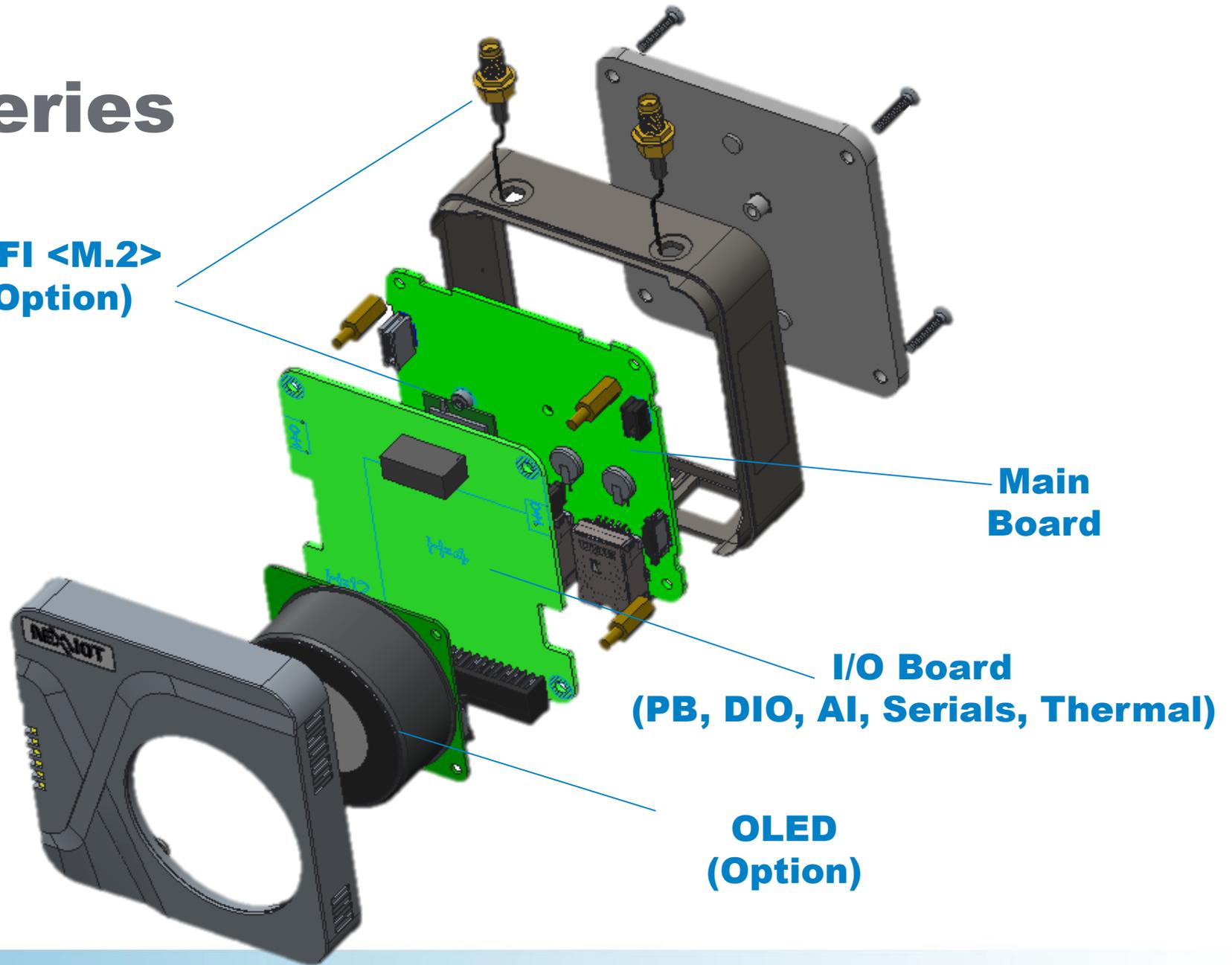


Model	nDAS6000	nDAS6017	nDAS6050	nDAS6051	nDAS6056	nDAS60XX-OLED	nDAS60XX-WIFI
P/N	10ND0600000X0	10ND0601700X0	10ND0605000X0	10ND0605100X0	10ND0605600X0	TBA	TBA
Description	Gateway	8x AI (24 Bit ADC)	8x DI & 8x DO	16x DI	16x DO	Graph and Text Display 128 x 128	IEEE802.11 a/b/g/n/ac Wi-Fi
AI (Isolation)		Voltage: $\pm 150$ mV, $\pm 500$ mV, $\pm 1$ V, $\pm 5$ V, $\pm 10$ V (Default) Current: $\pm 20$ mA, 0 ~ 20 mA, 4 ~ 20 mA (DIP Switch)					
DI (Isolation)			Wet Contact: Logic 0: 0~ $\pm 3$ V DC Logic 1: $\pm 10$ ~ $\pm 30$ V DC	Wet Contact: Logic 0: 0~ $\pm 3$ V DC Logic 1: $\pm 10$ ~ $\pm 30$ V DC			
DO (Isolation)			NPN (Sink), 30VDC, 500mA		NPN (Sink), 30VDC, 500mA		
Power	Isolation, DC 9~30V						
Networking	RS-485, Dual-LAN (DHCP/Static), Daisy-Chain, Ring, WIFI (Option)						
Operation Temperature	Wide Temp. -25~70°C, 95% RH (OLED and WIFI only 0~50°C)						
Protocol	REST API, TCP/IP, Modbus RTU/TCP, OPCUA, SECS/GEM Equipment, Line, WeChat, Mail, Teams, SQL Client						
Modbus RTU/TCP Converter	Modbus TCP and RTU for Address Mapping						
Data to Log/Cloud	Local Data log, Data Log to Cloud Storage (Google Drive, Dropbox, One Drive), Azure, AWS S3/IoT, Private Server (TCP)						
VIC-Flow	Function Condition and Function block Operators, Sample Dashboard						

# nDAS6000 Series



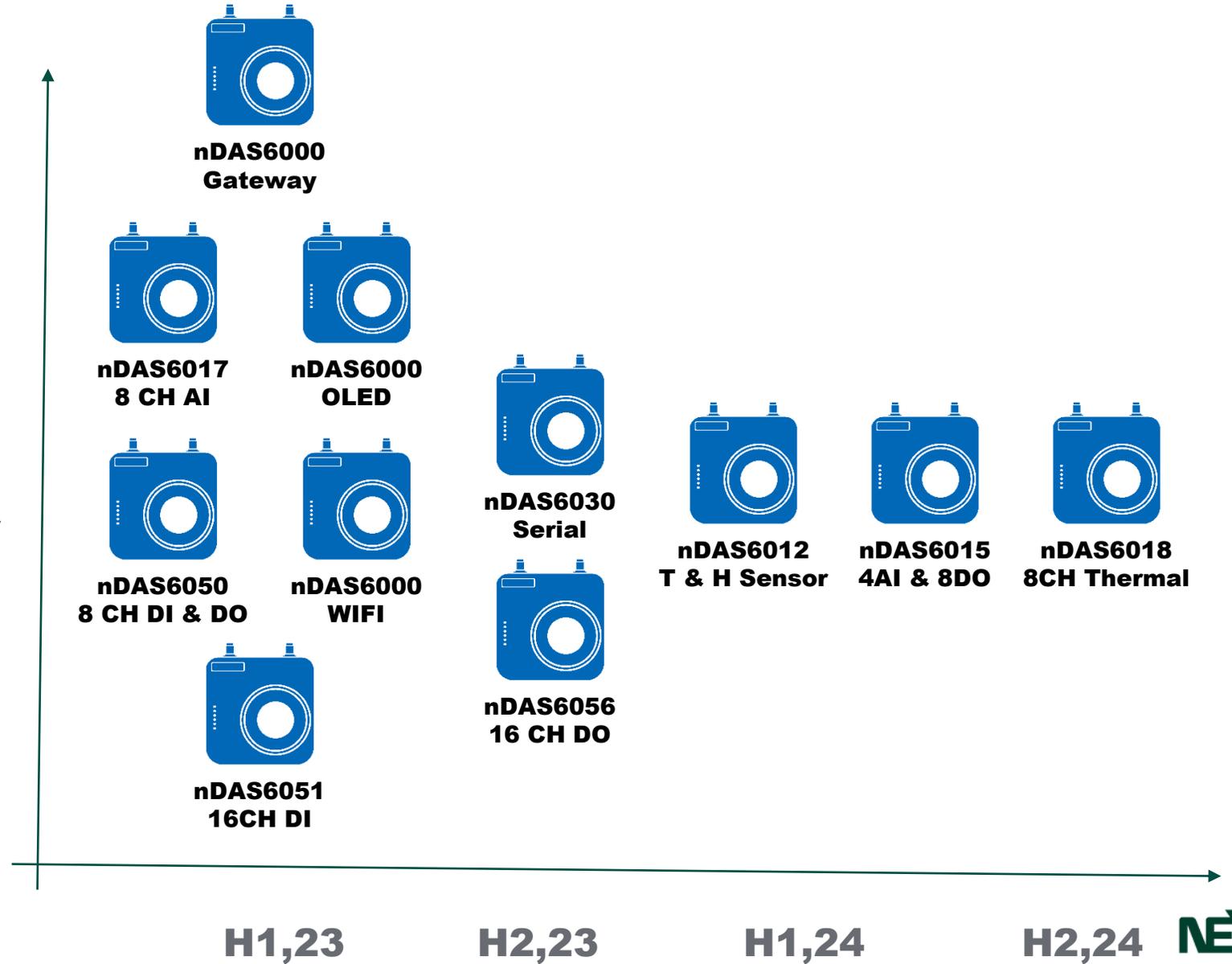
**WIFI <M.2>  
(Option)**



# Product Roadmap



## nDAS Series family





VIC-Flow Dashboard

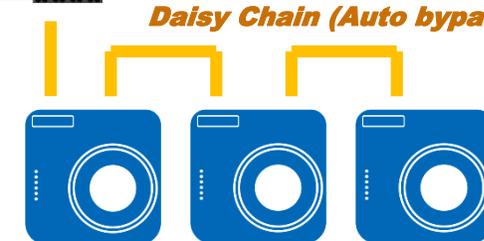
nHMI



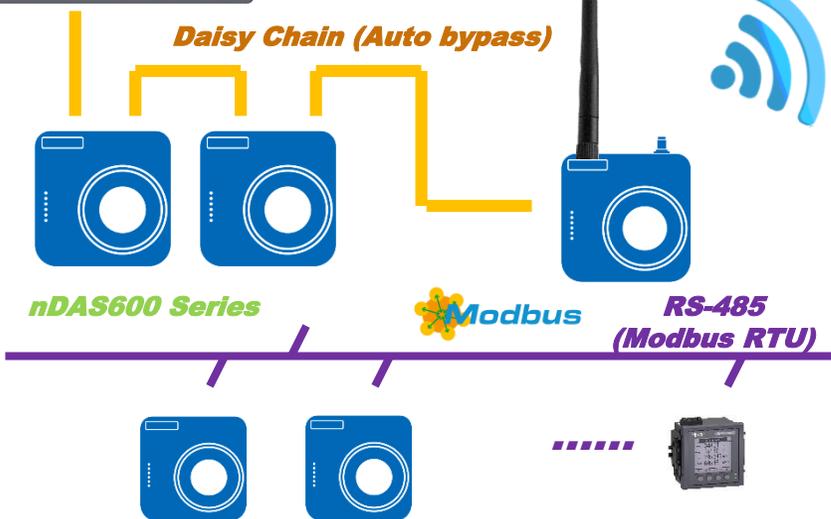
# nDAS IoT Smart Device



nPAC



Daisy Chain (Auto bypass)



nDAS600 Series

Modbus

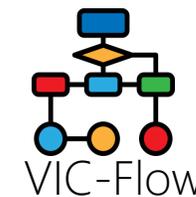
RS-485 (Modbus RTU)

3<sup>rd</sup> Party Modbus RTU Unit

SECS/GEM  
E5 / E30 / E37

TCP/IP, REST API  
Modbus TCP, SQL, OPCUA

Email, Line  
WeChat, Teams



VIC-Flow



Python



# Case Study – SMT - Power Management



## Daisy-Chain Networking and RS-485

- Daisy-Chain Lan (Break Auto-bypass)
- TCP / RS-485 can support Modbus TCP/RTU data exchange
- TCP and RS-485 can work independently
- TCP support Dual-LAN, Ring and Daisy-Chain

nDAS

Multi-Circuit  
Power Meter

Modbus RTU

Auto-bypass  
48 hrs.

## • Reduce expense

Reduce cabling costs with daisy chain

## • Flexibility

Built-in VIC-Flow can establish simple logical condition

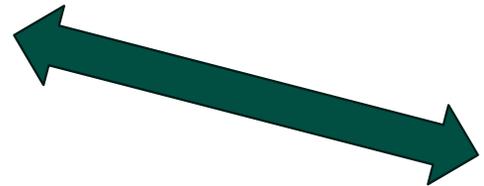
## • Quickly

It has an HTML5 based Dashboard that displays the UI quickly

## • Easily

Easily connect to the host without Gateway

# Case Study – Production Line – Equip. Status Monitor



## Data Input / Output

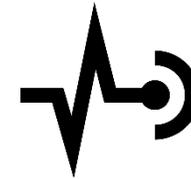
- **Physical Data**  
Digital I/O or Analogs I/O
- **OT Protocol**  
Modbus RTU/TCP Master & Slave  
OPCUA Client & Server
- **IT Protocol**  
REST API  
TCP/IP
- **SEMI Protocol**  
SECS/GEM E5/E30/E37

## Real-time data and status are required

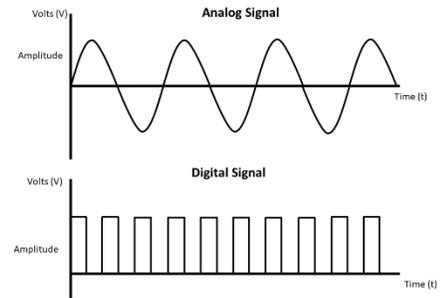
- When your engineers need to handle processes
- **Mail and Teams support Local Intranet**



Active Message



Sensor or Data



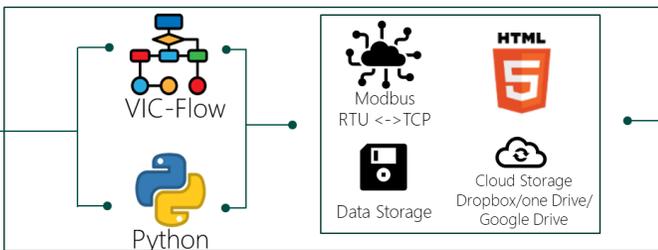
TCP/IP, REST API  
Modbus, TCP, SQL, OPC UA



Email, Line  
WeChat, Teams

## nDAS

**NexAIoT Data Acquisition System**



Condition

Functionality

Physical Data  
Input/Output  
Digital/Analog



# Case Study – Remote Small-Scale Equipment

- **Free-Service**

If your application is **Remote** and **Small-Scale**, you can use **free services** such as free cloud drives and social software.

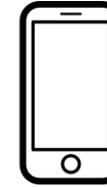
- **Easily**

**No system integration** is required, just set an account and password to run.

- **Remotely**

All settings including Dashboard are based on **HTML5** and can be viewed by browser.

Customized OLED  
Menu & Data  
by yourself



## Data Storage and Cloud Storage

- Over 10,000 sample data can be recorded locally
- Provide Private Server Source Code can Intranet upload
- Supports free space to upload data directly to the cloud drive  
Dropbox, One drive, Google drive



Private  
Server



Dropbox



OneDrive



Google Drive



# NEXAIOT

*Your Partner in Smart Manufacturing*

掃一下 發現更多



🔍 新漢智能 In Action-智...



詳情請洽工作人員



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Service : [iAutomation@nexaiot.com](mailto:iAutomation@nexaiot.com)