



工业互联网产业联盟
Alliance of Industrial Internet

工业数据采集产业研究报告

工业互联网产业联盟

2018年9月



工业互联网产业联盟

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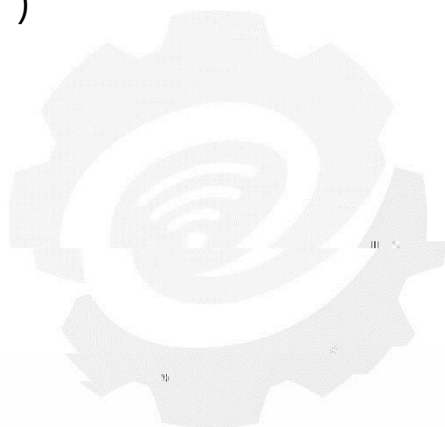
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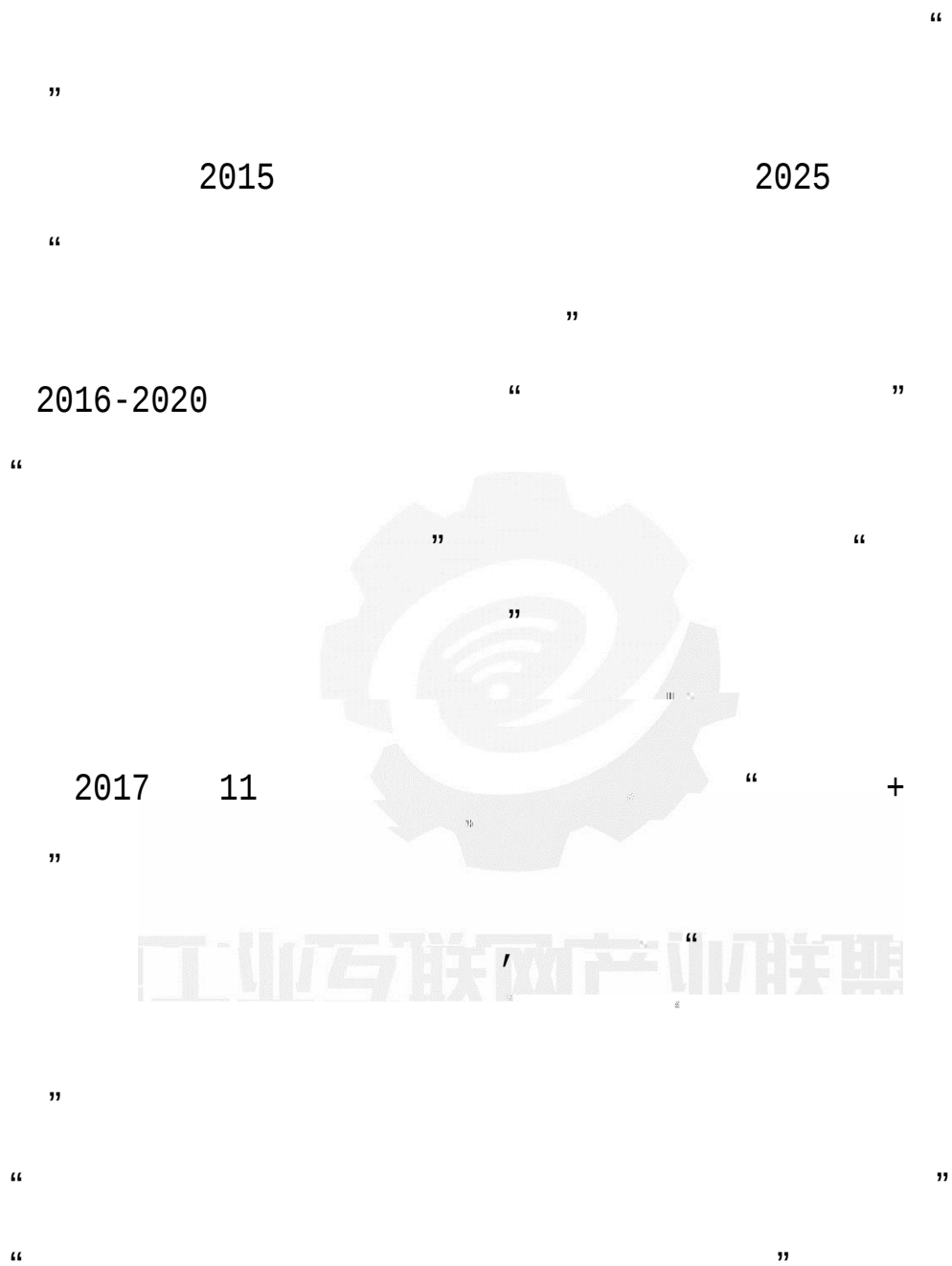
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工业互联网产业联盟

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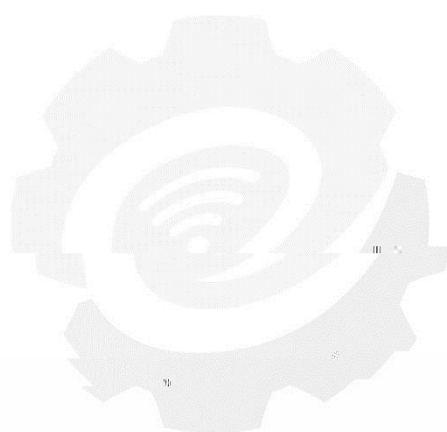
MES ERP

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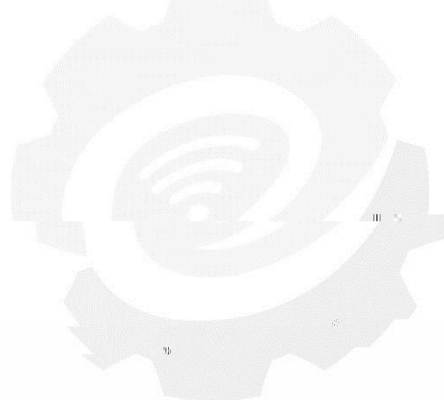


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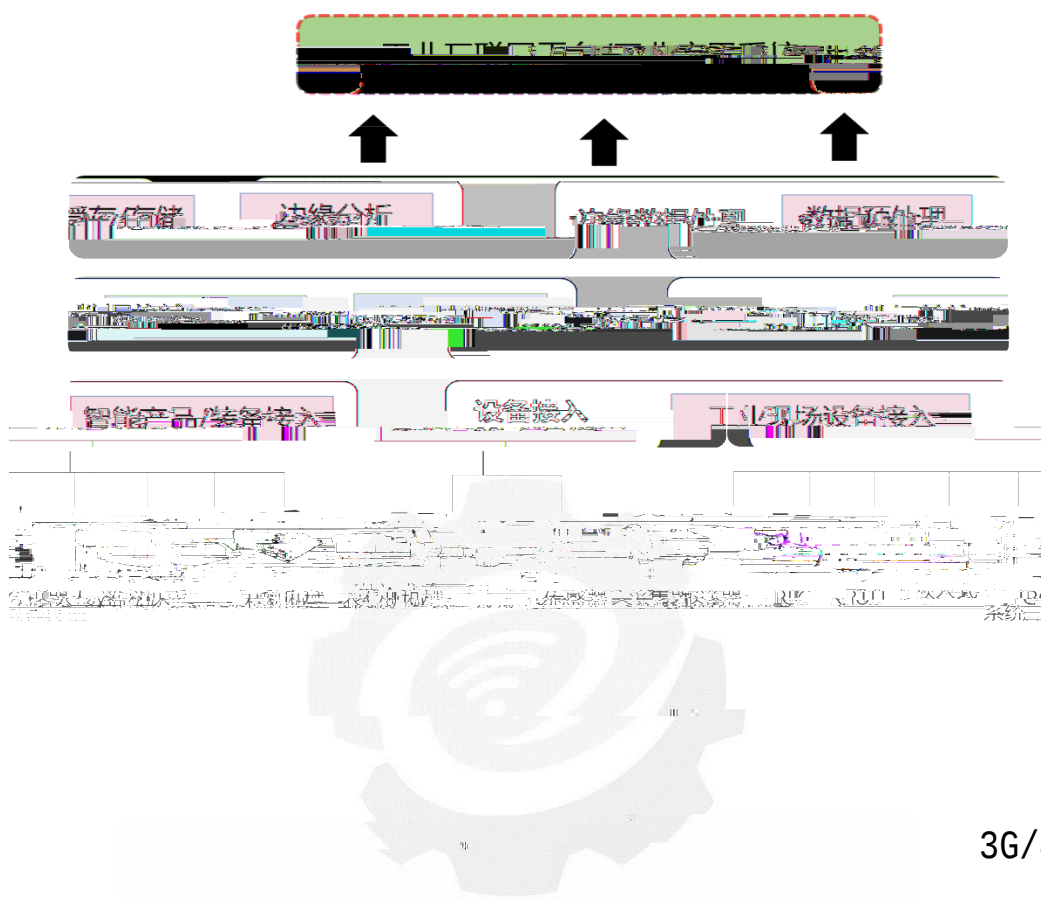
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3G/4G NB



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NB-IoT

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Modbus CAN Profinet

HTTP MQTT

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1.

TSN

SDN NFV WLAN NB-IoT 5G

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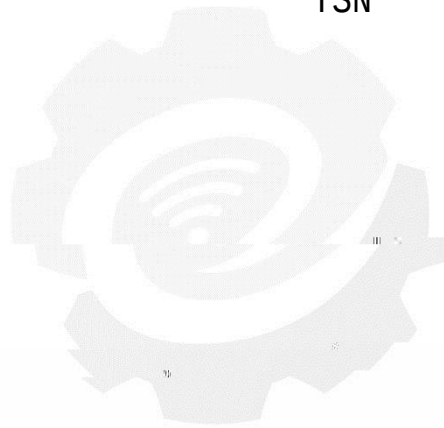
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Profibus Modbus

CAN LonWorks HART Profinet EthernetIP Modbus/TCP

EtherCAT

TSN



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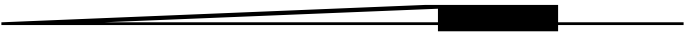
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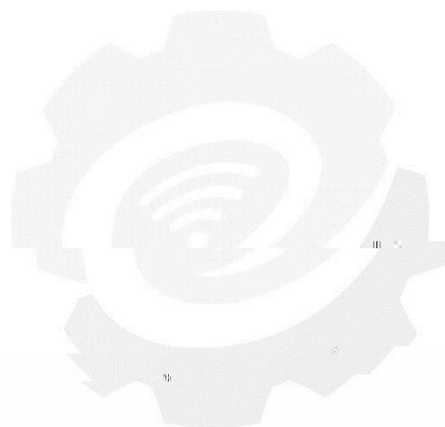
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2 RTU/PLC/DCS/IPC/

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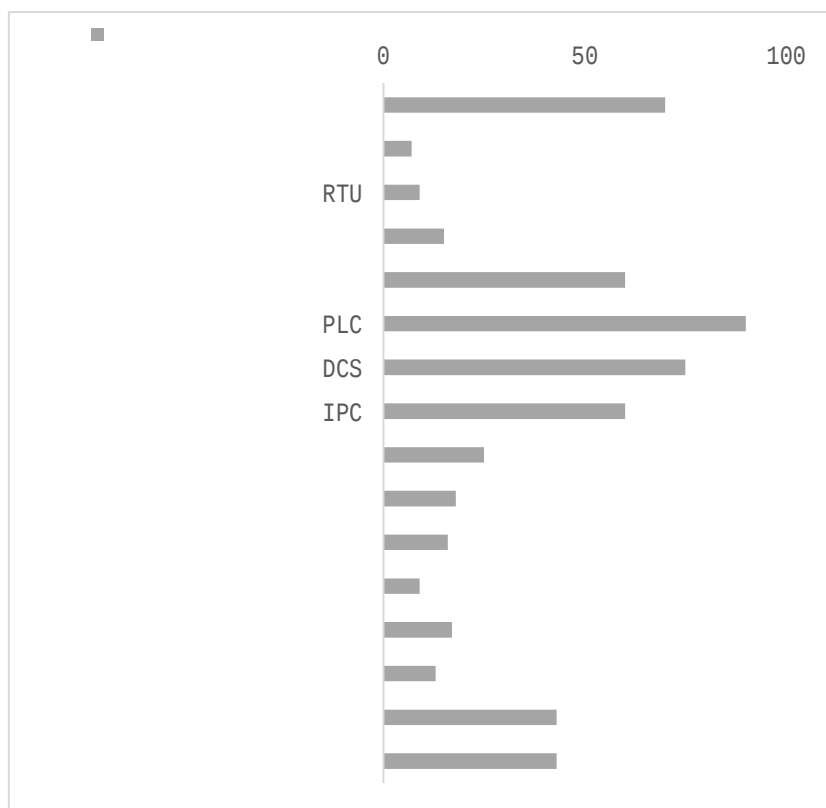


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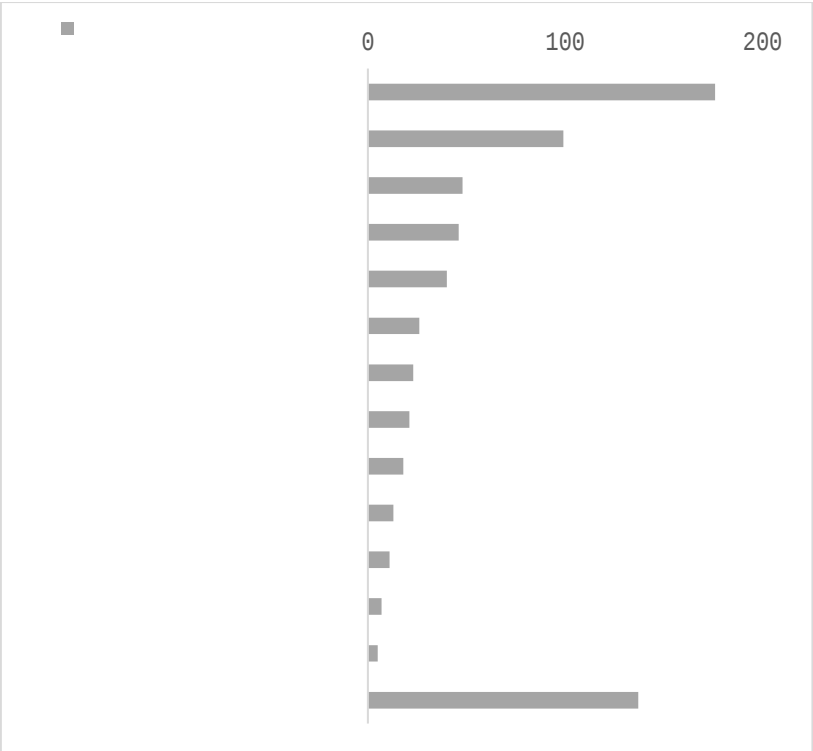


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Profibus Modbus CAN

LonWorks HART Profinet EthernetIP



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TSN NB-IoT 4G/5G

TSN

RFID Zigbee

WIFI

AGV

WIA-PA/FA

WirelessHART ISA100.11a

4G/5G

NB-IoT

1.

工业互联网产业联盟

Profibus CAN

LonWorks HART Modbus

OLT

PON

ONU

IT

Type

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PON

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PON

ONU

4. TSN

TSN

IEEE

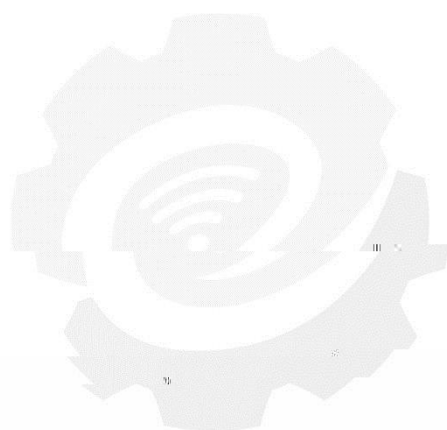
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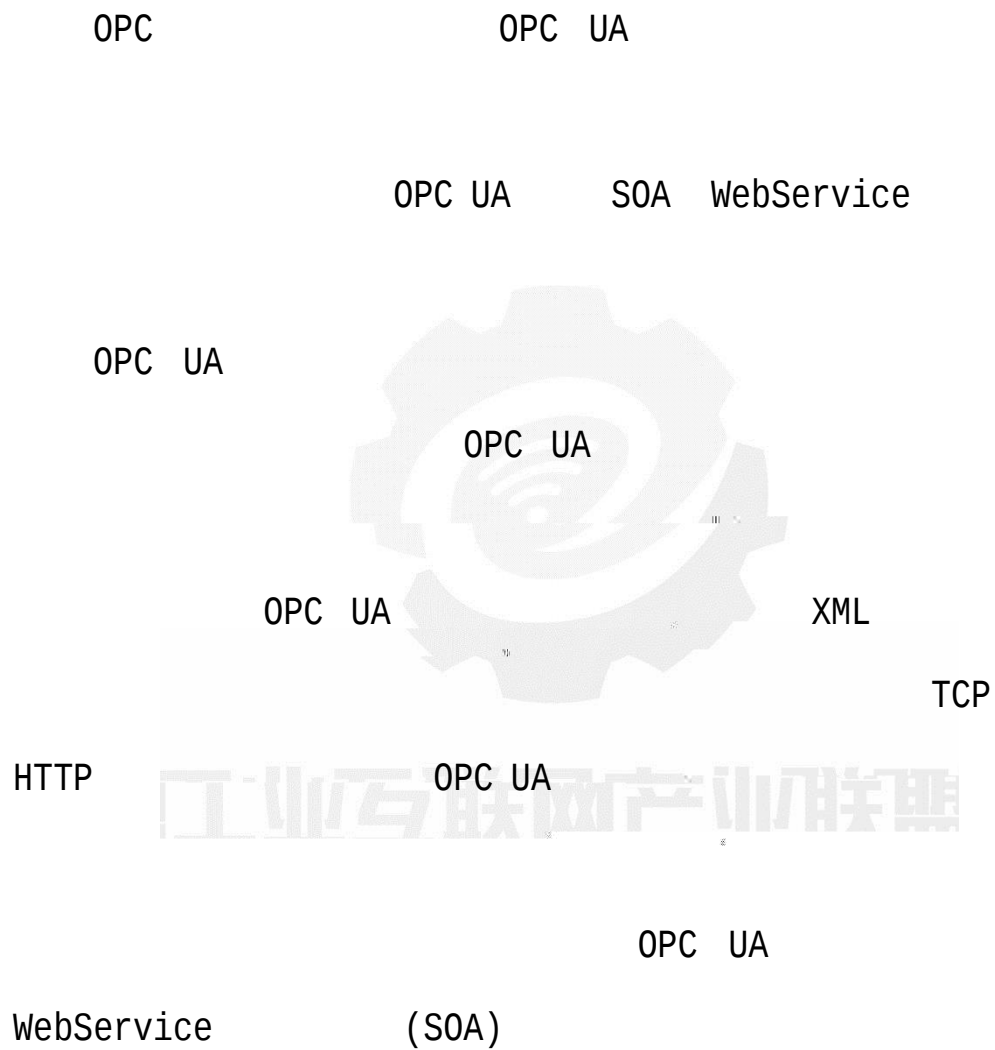
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WiFi Zigbee WirelessHART

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OPC UA

OPC UA

OPC

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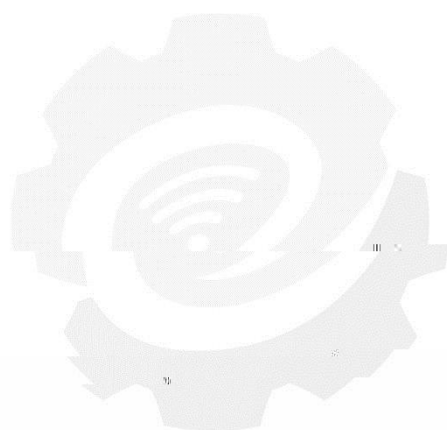
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RFID

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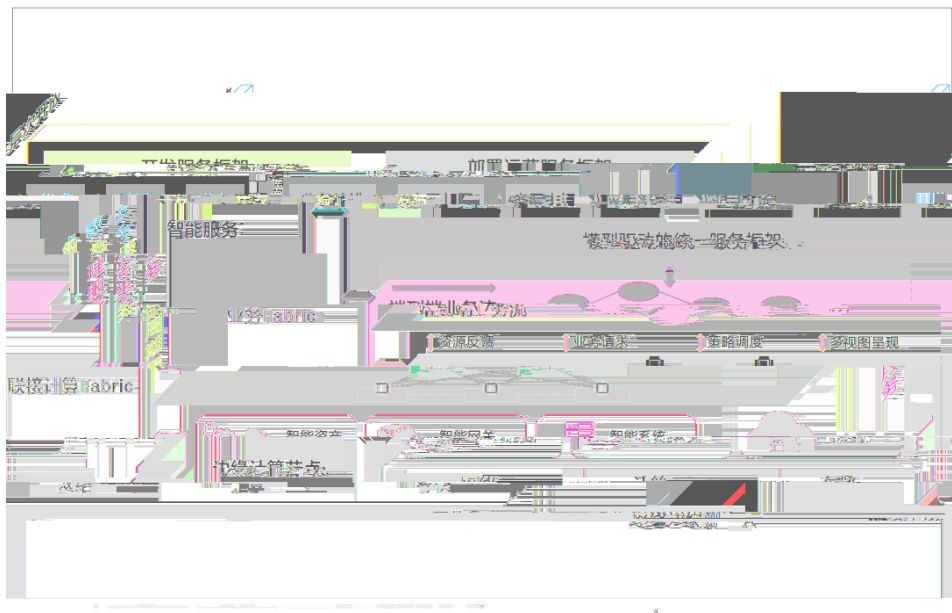
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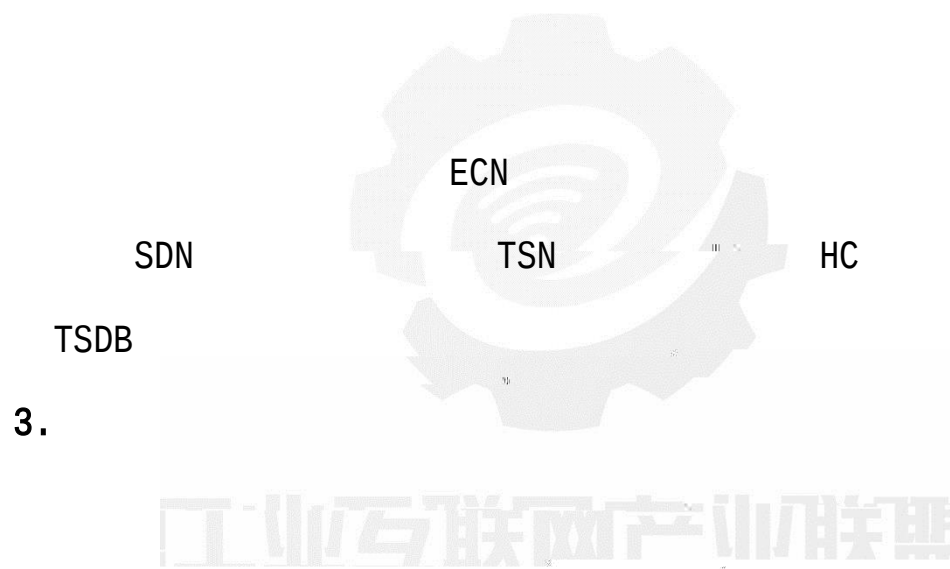


Fabric

CCF(Connectivity and Computing Fabric)

OICT

ECN(Edge Computing Node)



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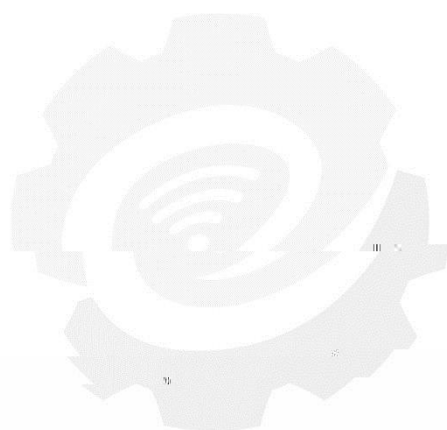
Artificial Intelligence

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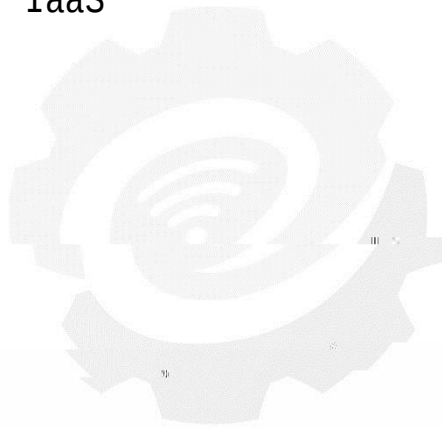
工业互联网产业联盟

7*24

IaaS

PaaS

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420

ONU

RS232/485

Profibus

Profinet

Modbus

OPC UA

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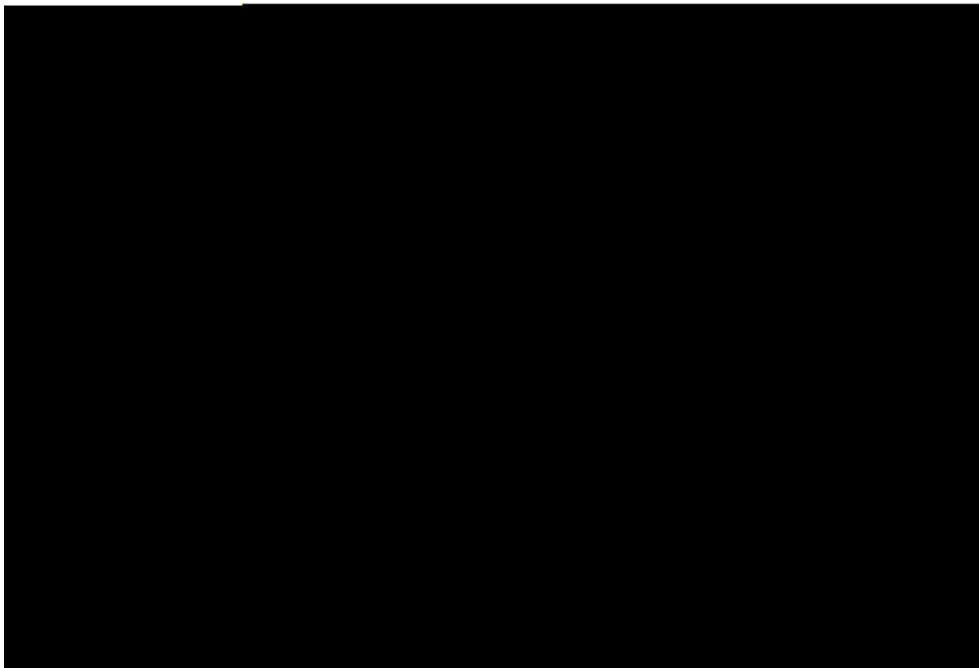


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(ICT)

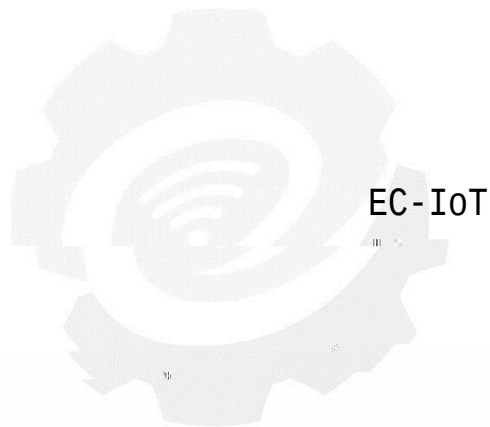
ICT

ICT

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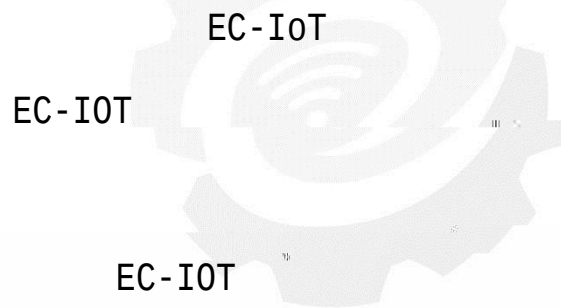
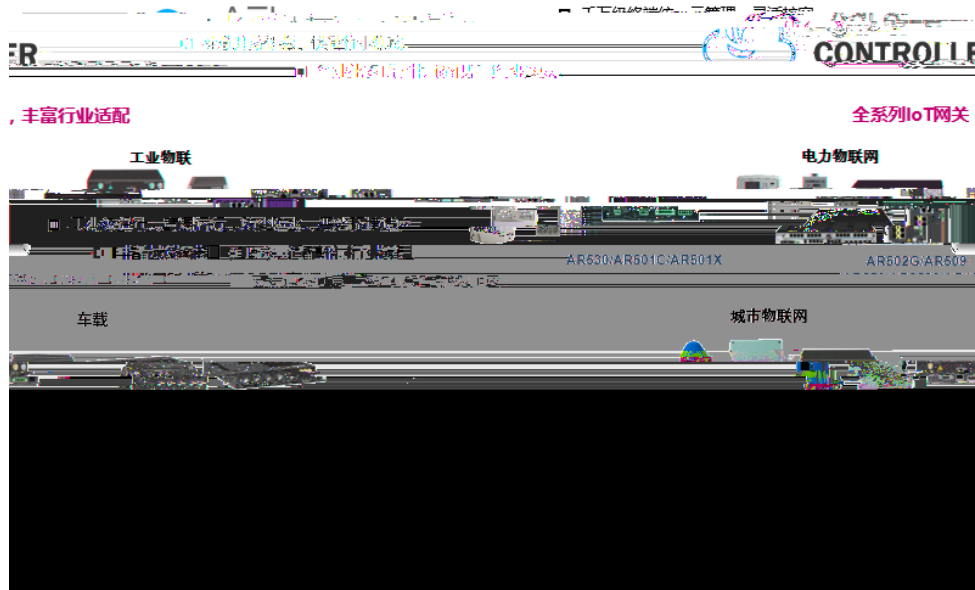


AR

API/eSDK

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EC-IoT 产品全家福



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1500

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2G/3G/4G/5G

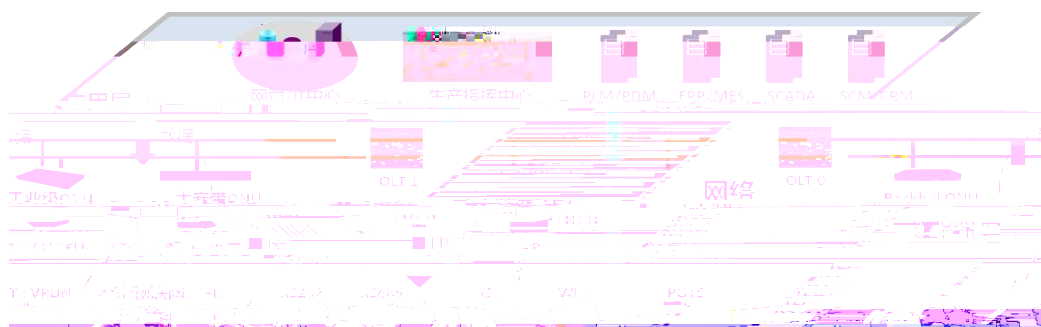
IMS

ICT

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PON
PON (Passive Optical Network)
PON PON

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PON

2.

MES

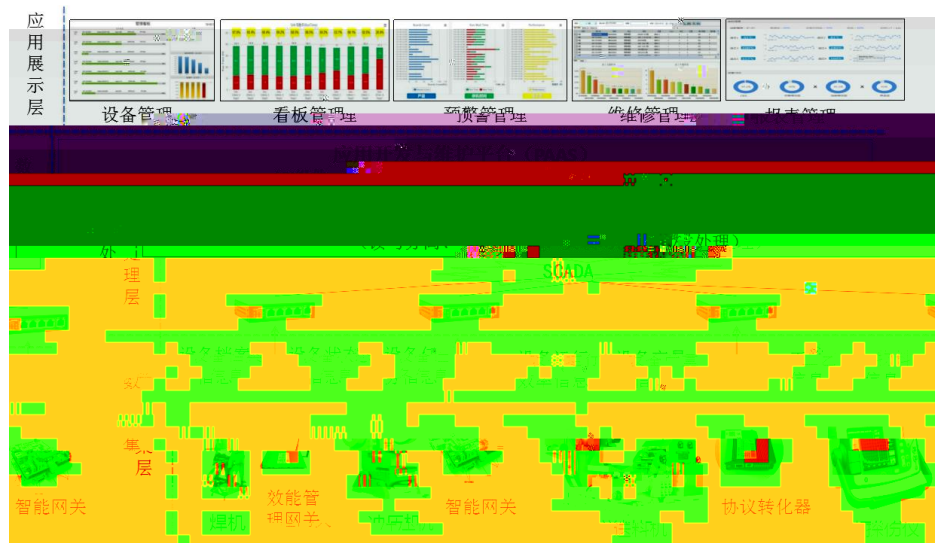
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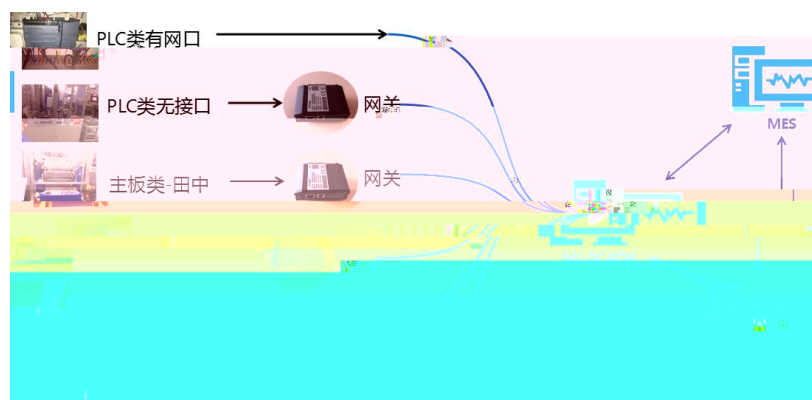
2.

MES



SCADA

MES



Modbus RTU	MQTT	MC	Hostlink	Modbus TCP
PPI	Profinet			485BD

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MES

MES



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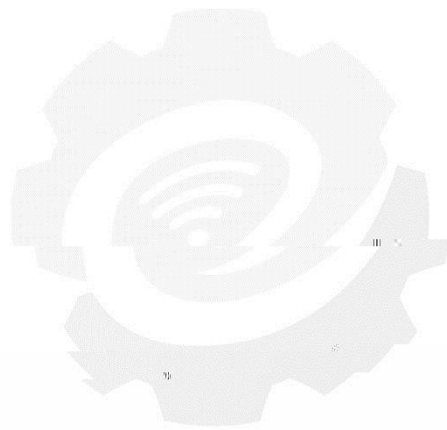
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HiaCloud/HiaCube/HiaEdge“ - - ”

1.



HiaCube

HiaCube

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2.



HiaCube

Profinet Profibus-DP Modbus

TCP/RTU SNMP OPC/OPC UA RESTful

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HiaCube

MES WMS ERP

OPC UA RESTful

HiaCube

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Honeywell Niagara Framework



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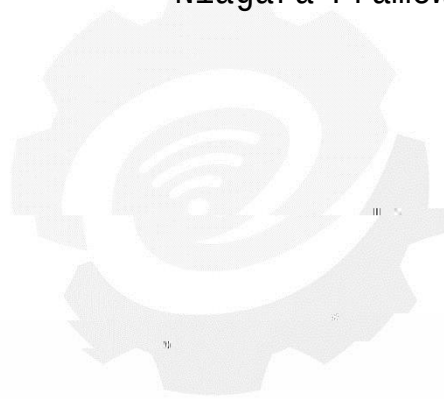
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EMS

Niagara Framework

EMS

NiagaraFramework



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Tridium JACE

Tridium JACE

modbus-RTU modbus-TCP

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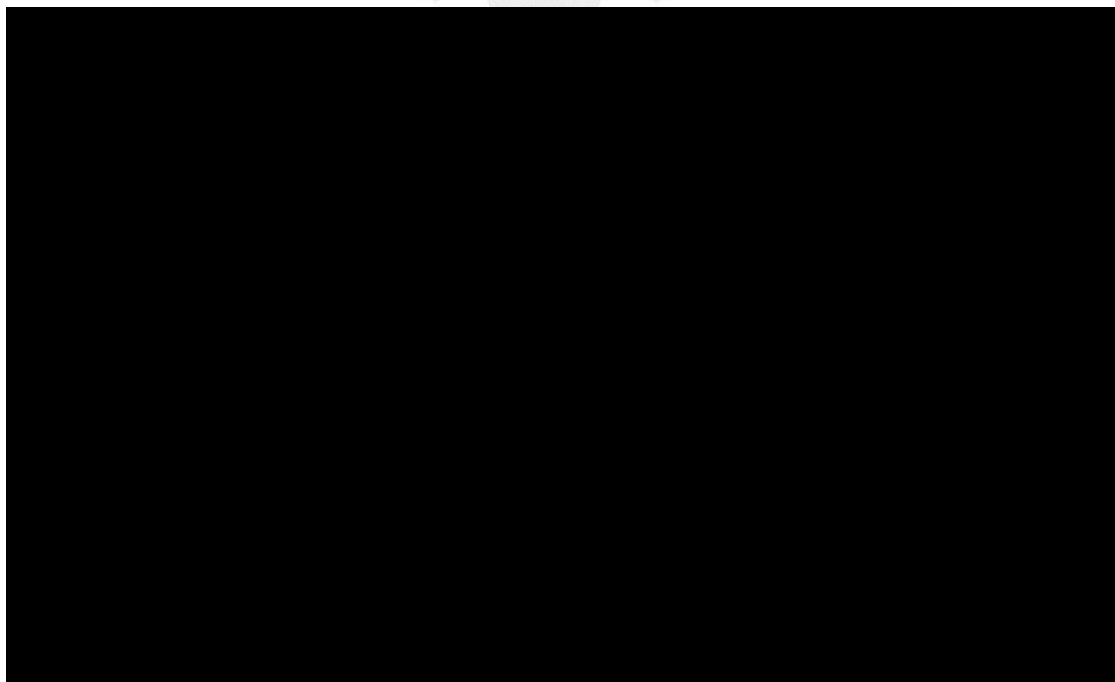
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Ýý0A Ýİ315 = MES

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 0.v > % Ôæ#E +U Ý1*< = C^H } = F b ´73\$~2ôüL1×
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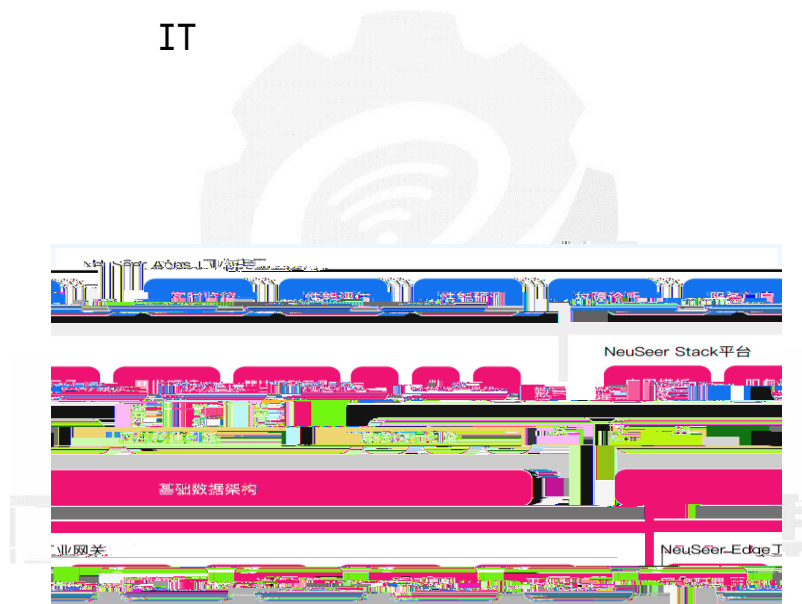


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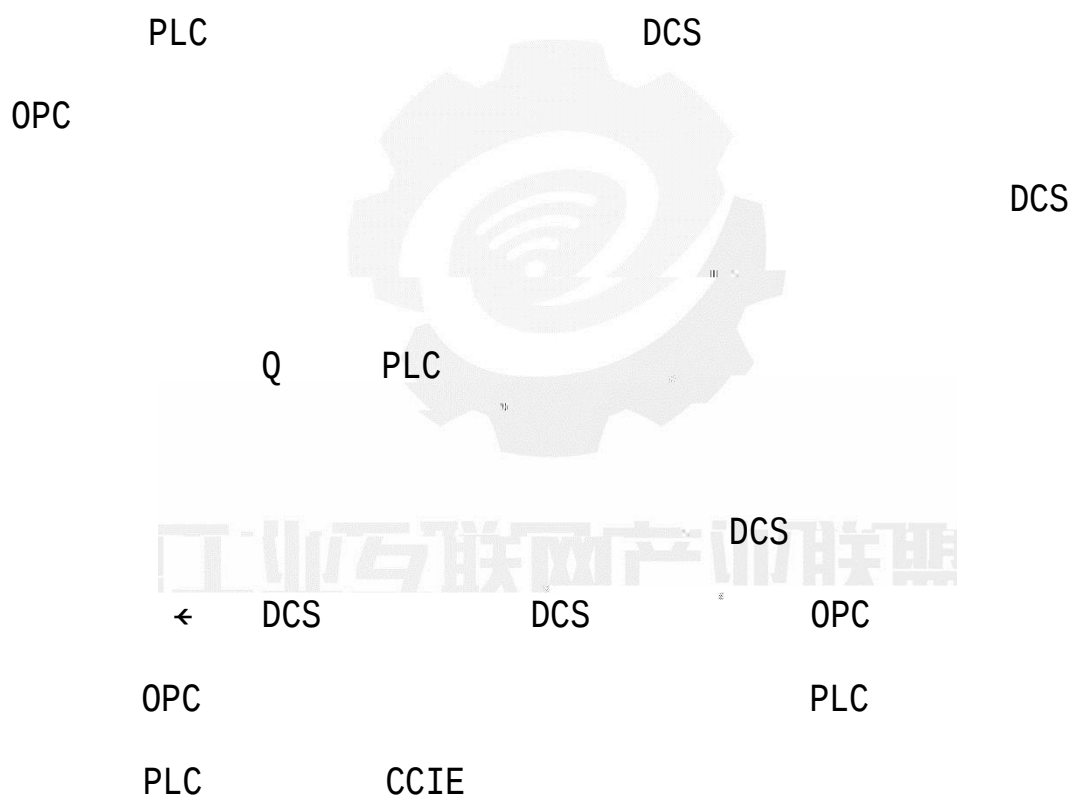
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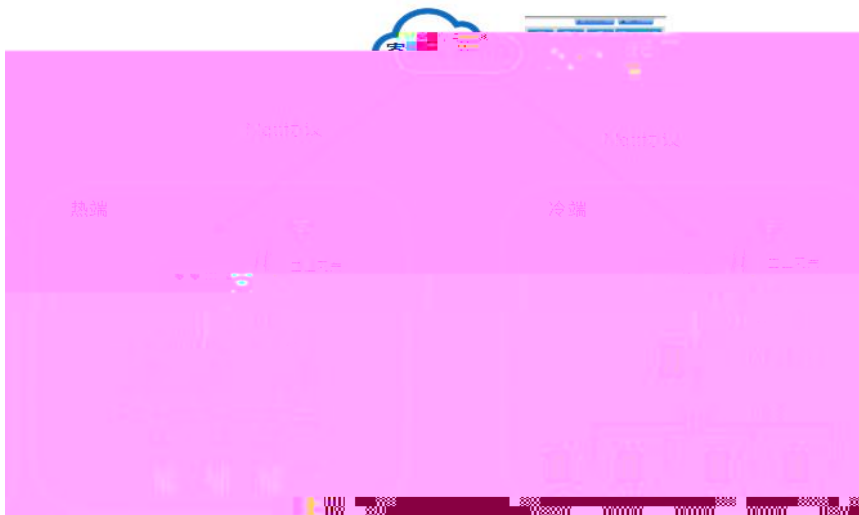
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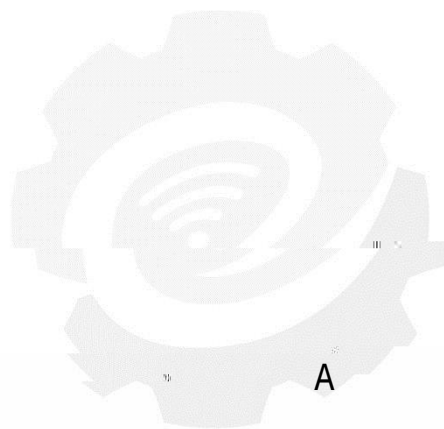
PLC DCS





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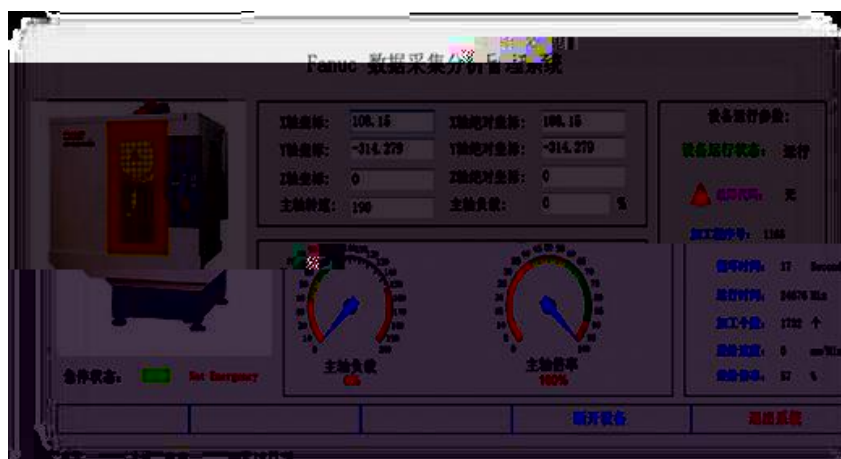
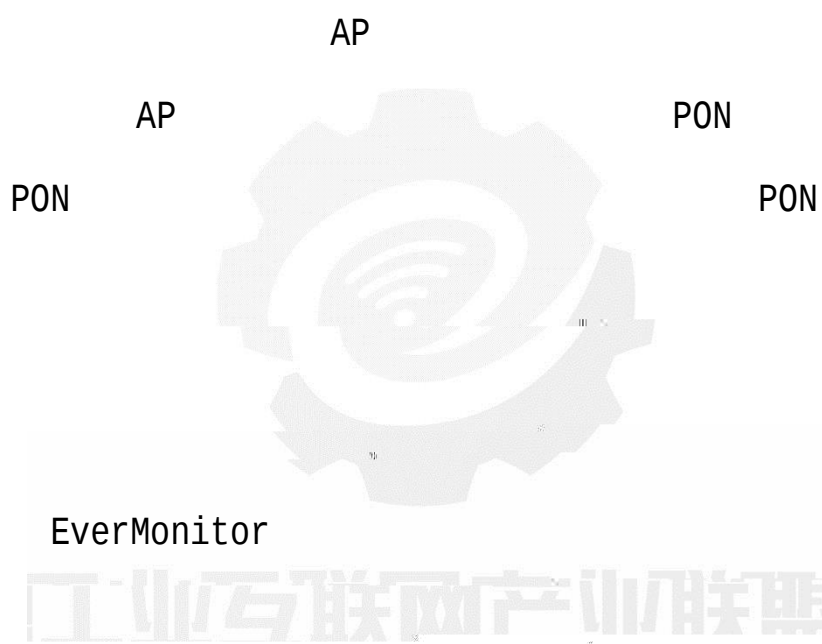
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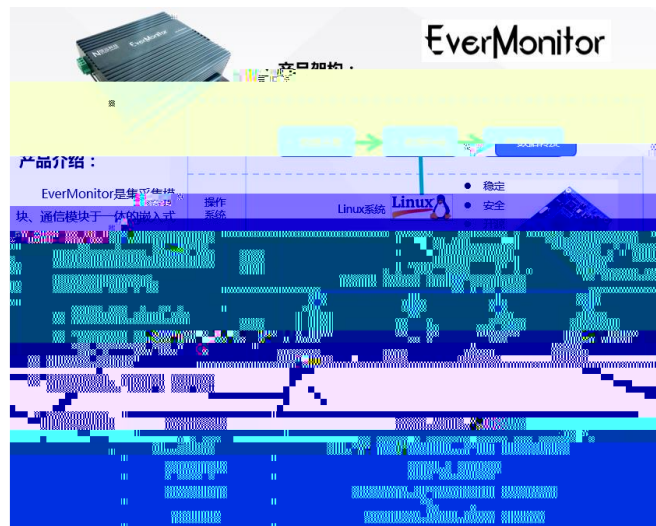
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EverMonitor

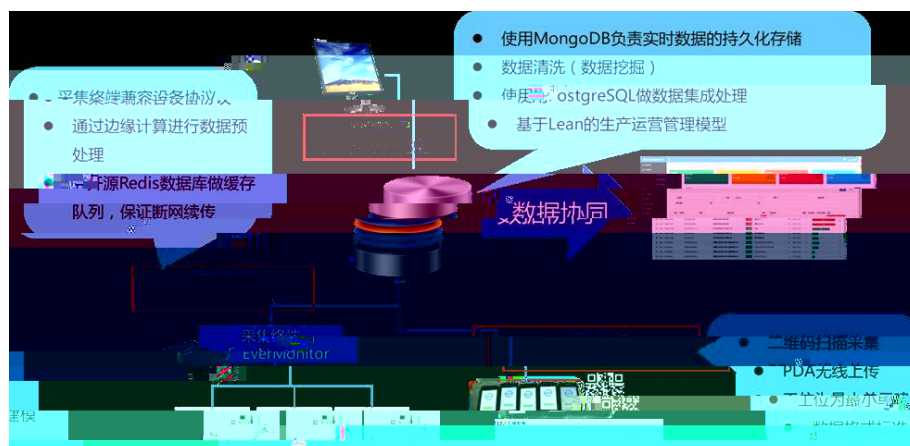
Arm-Linux

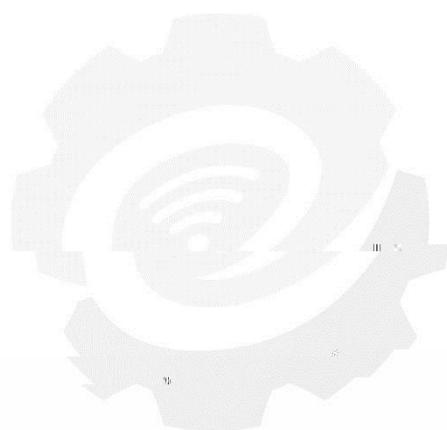
ModBus OPC CAN Profibus



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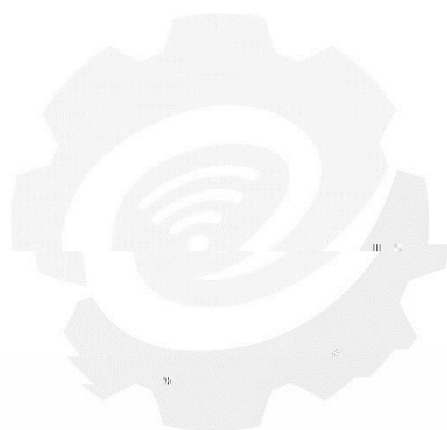
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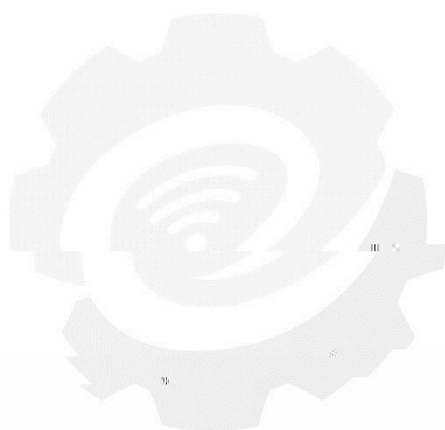


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Modbus

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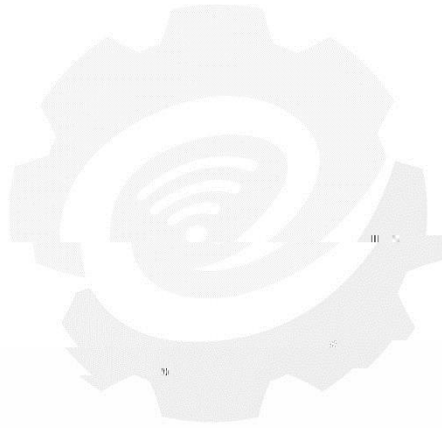
1.	5G		the 5th generation of communication technology
2.	CAN		Controller Area Network
3.	CC-Link		Control&Communication Link
4.	DCS		



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23.	OPC	OLE	OLE for Process Control
24.	OPC UA	OPC	OPC Unified Architecture
25.	ORS		Object Identifier Resolution System
26.	PaaS		Platform as a Service
27.	PLC		Programmable Logic Controller
28.	Profibus		Process Field Bus
29.	Profinet	Profibus	Profinet
30.	RFID		Radio Frequency Identification
31.	SaaS		Software as a Service

32. SCADA

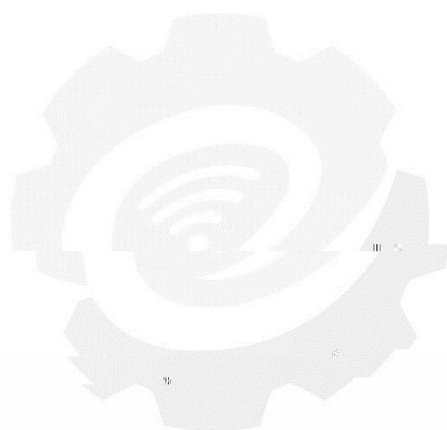


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- [16] NIST Current Standards Landscape for Smart Manufacturing Systems 2016.1
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- [28] 2017.7



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