

HARREL IOT GATEWAY

The Harrell IoT gateway are designed and manufactured by HIS GROUP, the leading manufacturers of IIOT solutions in India. Smart IOT Device is a versatile device which reads the MODBUS memory map of any RS-485 MODBUS protocol device and sends the data to the cloud server. The data stored can be viewed as per customer requirement on dashboard. SID is an ideal solution for online monitoring of RS-485 MODBUS data. SID mainly consists of GSM module and microcontroller-based control circuit. SID supports generic MODBUSRTU protocol for data acquisition and uses MQTT protocol to communicate with IT application database on cloud. The Device can be easily configured within one minute to send your data on Any MQTT Server dash board.



Modbus / RTU to Wi-Fi / Ethernet

- Transmit Modbus/RTU/TCP Data to cloud.
- Flexible RTU Device Address Settings.
- Configurable Read Start Addresses.
- Maximum 20 Entries for Time Schedule Report.

Secured Radio Communication

- AES 128 Data Encryption
- Provides 4 layer security

Web Configure Tools

- User-Friendly, Model Auto Detection
- TCP device reading parameter setting
- RTU device reading parameter setting
- Micro-USB Interface

Industrial Application

Flow Meter interface to IoT gateway

- You can connect 5 to 10 devices using Modbus RTU

Energy Meter interface to IoT gateway

- You can connect 5 to 10 devices using Modbus RTU

Chiller interface to IoT gateway

- You can connect 5 to 10 devices using Modbus RTU

Diesel generator interface to IoT gateway

- You can connect 5 to 10 devices using Modbus RTU

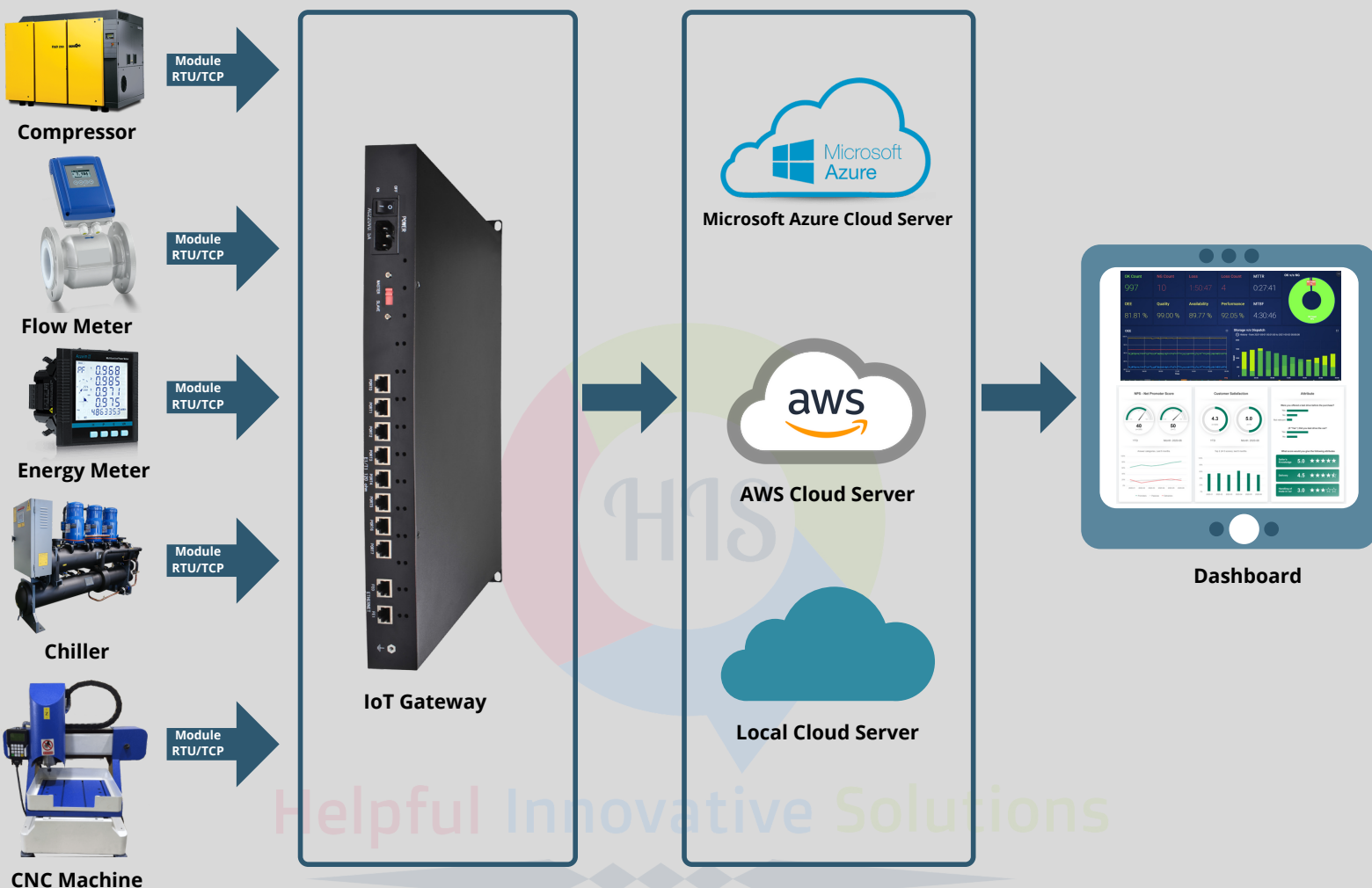
CNC machine interface to IoT gateway

- You can connect 5 to 10 devices using Modbus RT

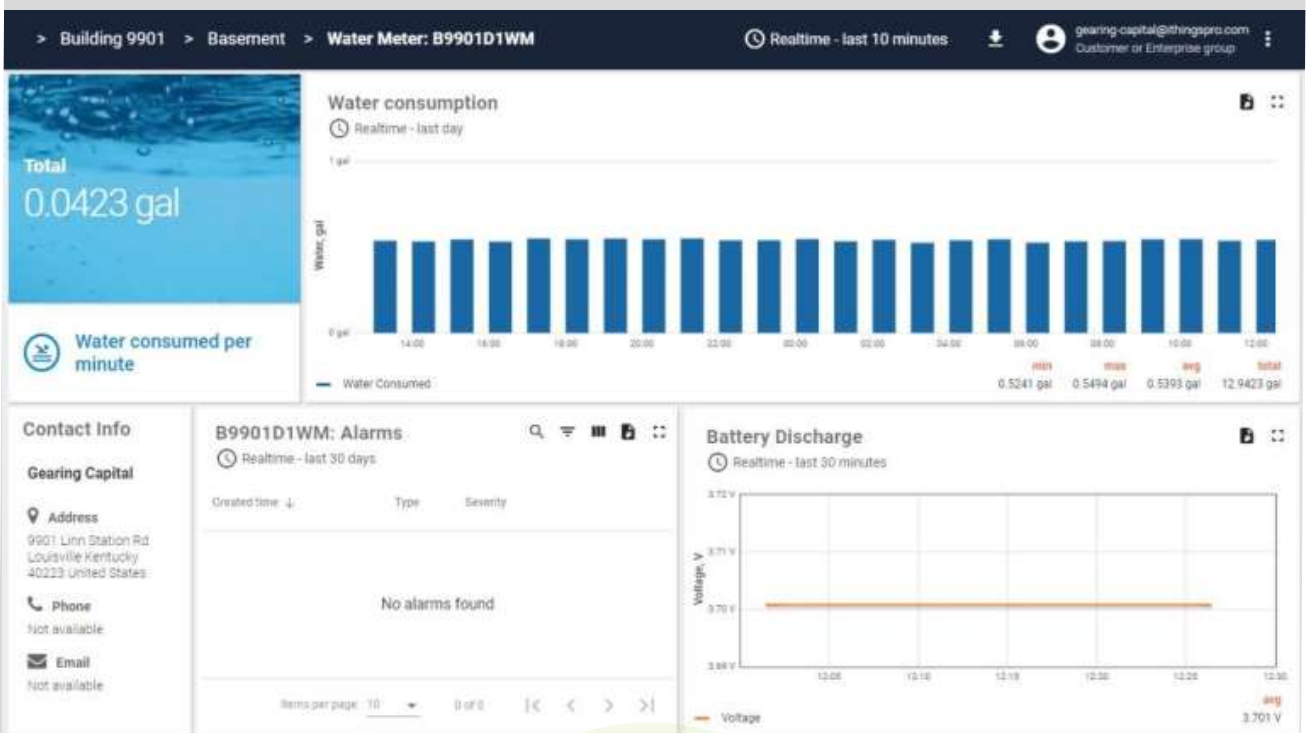
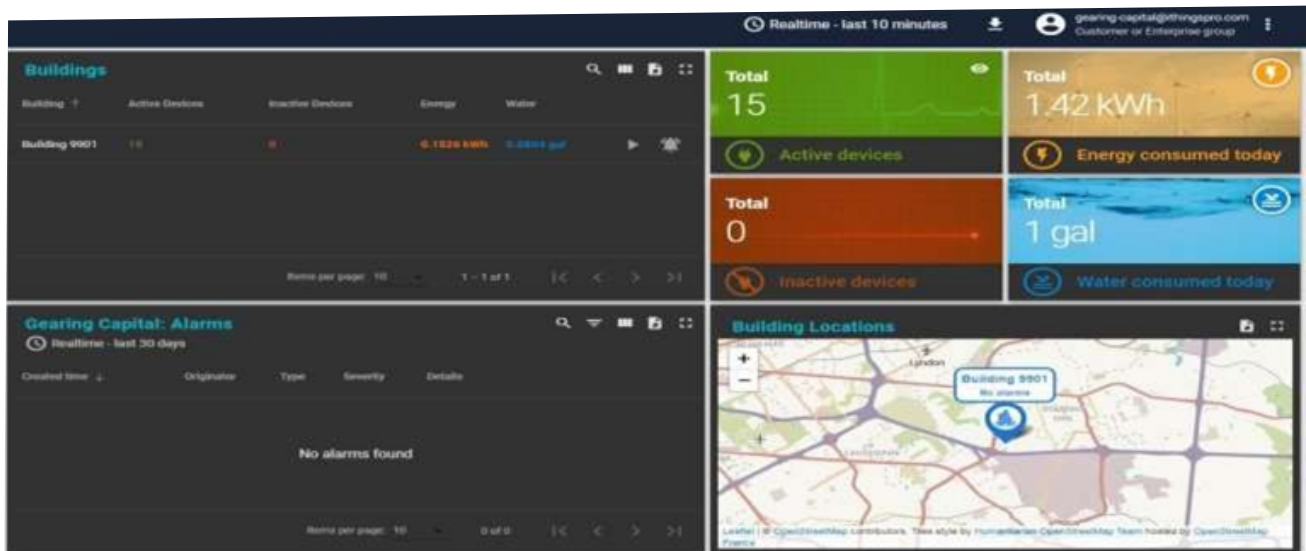
Key Features

- SMS / Email Notification
- MQTT Protocol
- JSON Data Format
- Cloud Base Support System
- 4 USB ports
- 4G/LTE Compatible
- Ethernet / RS-485 Input Port

System Architecture using IoT Gateway and Cloud Server :



Dashboards



Interface

• CPU • OS (Preinstalled) • USB • DRAM • Main Storage • Storage Expansion • Ethernet Port • System LED	Quad ARM A53 1.5 Ghz 32 Bit Ubuntu Mate USB 2.0 hosts x 4, Type A connector DDR2 SDRAM 256MB 8G Micro SD Micro SD expand to 16G/32G/64G 2 x 10/100/1000MBase-T RJ45, Auto Negotiation, Auto-MDI/MDIX 1 x PWR: Green On 2 x Ethernet Ports: Link: Green On, Activity: Green Blinking
• Reset	1 x Reset button (Programmable)

Software

• OS • Web Server • Terminal Server (SSH)	Ubuntu Mate uHttpd, luCI Web Interface, Apache*
• Kernel • System Shell • Text Editor • File System • Internet Protocol Suite	Secure encrypted communications between two untrusted hosts over an insecure network GNU/Linux kernel v4.4 ASH (default), BASH* vim, nano*
• Programming Language Support • Flow-based programming • Internet Security Suite • Cryptographic • Linux Board Support Packages (BSP)	JFFS2, NFS, Ext3, Ext4, VFAT, OverlayFS, NTFS TCP, UDP, IPv4, IPv6, SNMPv2, v3, ICMP, ARP, HTTP, CHAP, PAP, DHCP, NTP, NFS, SSH, PPP, SFTP, RSYNC, SSL, SCP Lua, Perl*, Python* Node-RED (Modbus TCP and Serial contribution package included) OpenVPN, IPsec, Netfilter/iptables AES, SHA, OpenSSL, random generator GCC C/C++ cross development tool chain Kernel/filesystem

Power Requirements

• Input Voltage • Reverse Polarity Protect • Input Current • Power Consumption	5V Yes 2A@5V Max 8W@5VDC full traffic, suggest to reserve 15% tolerance
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Mechanical

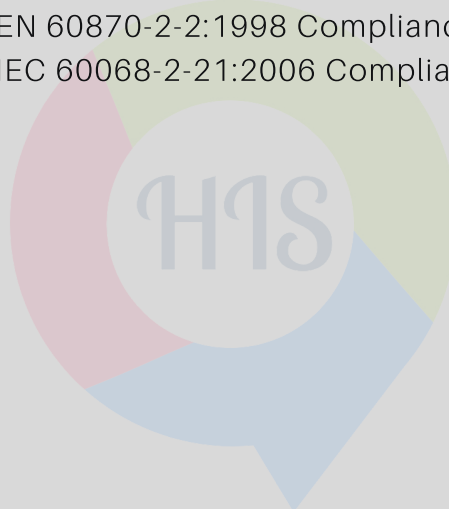
• Installation	DIN Rail
• Enclosure Material	Fiber
• Dimension	50 x 151 x 120 mm(W x H x D) / without DIN Rail Clip
• Ingress Protection	IP30
• Weight	~220g without package

Environmental

• Operating Temperature & Humidity	-40°C~75°C , 5%~95% Non- Condensing
• Storage Temperature	-40°C~85°C
• MTBF	>200,000 hours at 40° full cycle
• Warranty	1 years

Approval

• Safety	EN 60950-1 Compliance EN 62368-1:2014/AC:2017 Compliance IEC 60255-27:2013 Compliance
• EMC	EN61000-6-2/EN61000-6-4 Compliance
• EMI	CISPR 22, FCC part 15B Class A Compliance
• Environmental	EN 60870-2-2:1998 Compliance IEC 60068-2-21:2006 Compliance



Helpful Innovative Solutions