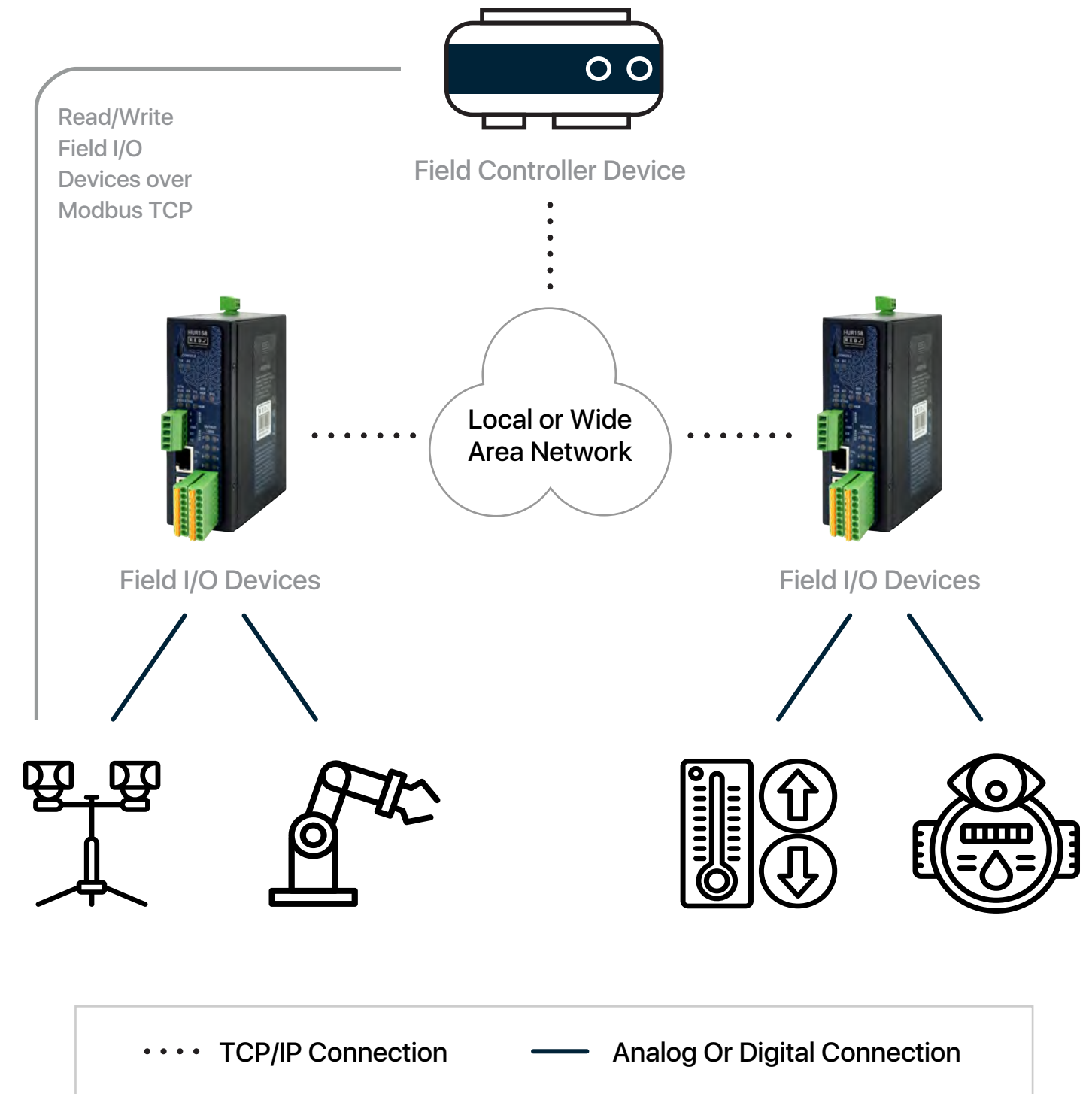# HUR658
Modbus TCP
Remote I/O Devices

with 8 Channel 0-10V and 0-20mA Selectable Analog Input
and 2 x 10/100Base-T(x) Ports,
1 x RS232 and 1 x RS485 Serial Ports

Main Features

- Supports 2 x 10/100Base-T(X) ports
- Supports Full/Half-Duplex, auto MDI/MDI-X on each port
- Supports 1 x RS232 and 1 x RS485 Serial Connection up to 921600 Baud
- Embedded web interface for ease of use
- Instant switch between Server-Client Operating Modes with buttons
- Up to 10 client connection in Server Mode
- DHCP Server Capability
- Easy to follow Device Status on web interface
- Device Address changeable via web interface
- Modbus TCP to RTU Gateway functionality for Modbus packages with different addresses (Different than device own address)
- Easy to follow Device Parameters such as Device Up Time, Modbus read counter etc. on web interface
- Easy to follow Serial and Ethernet data packages on web interface
- Black List and White List based IP Filter in TCP Server Mode
- Firmware Upgrade over Web
- 2 firmware storage capability on same device (1 active only)
- 100 - 240V AC (120 – 370V DC), 50Hz to 60Hz AC wide range power input
- Wide operating temperature range from -30 to 70 °C
- Rugged Metal IP-40 housing design
- DIN-Rail mounting

Read/Write Field I/O Devices over Modbus TCP

Field Controller Device

Local or Wide Area Network

Field I/O Devices

Field I/O Devices

•••• TCP/IP Connection   —— Analog Or Digital Connection

HUR Series Modbus TCP Remote Input/Output (I/O) Devices are designed for facilities of rugged industry and infrastructure.

HUR Series Modbus TCP Remote I/O Devices are tailored to perform various features such as wide temperature, wide range power input range... etc. HUR Series Modbus TCP Remote I/O Devices offers different I/O combinations, which provide greater flexibility and are compatible with many different applications that makes them the perfect choice for establishing a cost-effective remote I/O system.

Technical Specifications

ETHERNET SWITCH TECHNOLOGY

Ethernet Standards	• IEEE 802.3 for 10Base-T • IEEE 802.3u for 100Base-T(X) • IEEE 802.3x Flow Control
Mac Table	• 1K MAC address entry
Processing	• Store-and-Forward
Memory	• 448K bits packet • buffer memory

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MODBUS TCP CHARACTERISTICS

Modbus Protocol	• Modbus TCP
Modbus Address	• Default value is 0x01 • Changeable via Web Interface
Modbus TCP to RTU Gateway Functionality	• Modbus TCP packages with different addresses (Different than device own address) converted to Modbus RTU and sent to Serial interface and serial packages received are sent to Ethernet side after converting to Modbus TCP
Monitoring Parameters	• Modbus Read counter • Time counter (in seconds) • FW version • Device Up Time • Serial and TCP packages

CONNECTORS AND PORTS

Console Port	Micro USB connection for LOG in 115200 baud
10/100T(X) RJ45 Ports	Ethernet Connection on 2 ports
Serial Ports	• 5 pin wired Terminal Connection • Tx, Rx, GND for RS232 • A and B for RS485
Reset Buttons	Reset to Client and Reset to Server Operating modes buttons

I/O CONNECTORS AND INDICATORS

I/O Connector
- Terminal Connectors
- Analog Inputs: Polarity is import ant and all inputs references to Common point. 2 Common points 8 Analog Inputs total 10 connection pins.
- 0-10V and 0-20mA Selectable Analog Input

Analog Input Features
- 16-bit resolution with no missing codesThroughput: 250 kSPS

Operation Mode Selection Switches
- 8 pin Switch to select operation mode of each Analog Input either 0-10V or 0-20mA
- Switch Position ON: 4-20mA
- Switch Position OFF: 0-10V

LED INDICATORS

Power indicator	Power LED
10/100T(X) Indicators	Activity LEDs: ETH1, ETH2 and HUR (Activity of device itself)
System Indicators	Status LED, Tx and Rx of data LEDs and Server LED (LED ON: Server Operating Mode, LED OFF: Client Operating Mode)
System LED	Flashes during normal operation of I/O module
Console Indicators	Tx and Rx of data LEDs

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POWER

Input Range	100 - 240V AC (120 – 370V DC), 50Hz to 60Hz AC input
Reverse Polarity Protection	Withstand Voltage: 3kV AC
	Isolation Resistance: 100M Ohms / 500V DC / 25 °C / 70% RH
Thermal Shutdown and Current Limit Protection	115% ~ 190% rated output power
	Protection type: Hiccup mode, recovers automatically after fault condition is removed

PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

Enclosure	Metal, IP 40
Dimensions	43 x 95 x 124 (w x d x h) mm
Weight	~380gr
Storage Temperature	-40 to 85 °C
Operating Temperature	-30 to 70 °C
Operating Humidity	10% to 95% Non-condensing

Ordering Information

HUR658: 8 Channel 0-10V and 0-20mA Selectable Analog Input Modbus TCP Remote IO Device, 2x 10/100 T(x) ETH ports, 1 x RS232 & 1 x RS485, 100 - 240V AC (120 – 370V DC), 50Hz to 60Hz AC Power Input

PRODUCT SELECTION

Model	5-48V (max. 60V) DC Power input	100 - 240V AC (120 – 370V DC), 50Hz to 60Hz AC Power Input	2 x 10/100 T(x) ETH ports	1 x RS232 and 1 x RS485 Serial Ports	8 Channel 5-275V AC-DC, 100mA Digital Optocoupler Output	8 Channel Digital 5Amp. Relay Output	8 Channel 12-275 AC-DC, 60mA Digital Optocoupler Input	8 Channel 0-10V and 0-20mA Selectable Analog Input	5 Channel 4-20mA Analog Output
HUR158	●		●	●	●				
HUR168	●		●	●		●			
HUR258		●	●	●	●				
HUR268		●	●	●		●			
HUR358	●		●	●			●		
HUR458		●	●	●			●		
HUR558	●		●	●				●	
HUR595	●		●	●					●
HUR658		●	●	●				●	
HUR695		●	●	●					●

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