DT Series Passive Modbus RTU / IoT Gateway

Features

- Passive Modbus RTU Network Tap
- Apiotics-Supported Hardware [1]
  - -Connect to your Cloud Server
  - -Develop a Custom Web Application
- Cellular, WiFi, and Ethernet Options
- Monitor up to Two Modbus Networks
- DB9, M12, and Screw Terminal Options
- Half or Full Duplex RS-485, Up To 16 Mbps
- Electrically Isolated, 15kV ESD Protection
- 5V DC, 150 mA (300 mA cellular)
- Hardware Network Isolation Available

Application

- Industrial Process Monitoring
- Power Generation Data Acquisition
- Weather Station Reporting
- Building Management Supervision

Description

DT Series passive Modbus RTU taps allow you to monitor Modbus RTU network traffic *without reconfiguring your Modbus network*. Before the DT Series, connecting to the cloud required controller logic modifications, upgrades, and adding additional nodes to the bus.

[1] http://www.apiotics.com

Theory of Operation

DT Series devices use an electrically-isolated Modbus interface. RS-458 (also referred to as EIA-485/TIA-485) busses up to 16 Mbps are supported in both half-duplex and full-duplex wiring configurations. The Modbus tap is completely passive; it is electrically prevented from transmitting on the bus. Additional hardware-based security mechansims are available to increase isolation between the Modbus network and the Internet-connected network.

Data flows are re-assembled into Modbus request/response messages and passed thru an on-device filter before relaying to the cloud. Standard filters allow for matching on node address, request type (e.g. coil, input, register), direction (read/write), and index. Filtered data is then relayed to the cloud via the Internet-connected interface. Cellular connectivity is available over LTE Cat M cellular networks (AT&T and Verizon) using a user-provided SIM card. Ethernet connectivity supports IPv4 and IPv6 networks up to 1Gbps. Wireless 802.11n support is also available.

Device configuration and messaging is managed by the Apiotics IoT Web Application platform (www.apiotics.com). MicroArx provides an open-source, cloud-hosted IoT web application for device configuration, management, and data visualization. This application can be used to direct Modbus messages to the cloud hosting or data analytics provider of your choice. The open-source IoT web application can also be customized to suit your particular needs.

For more information, please send e-mail to info@microarx.com