

APPLICATIONS

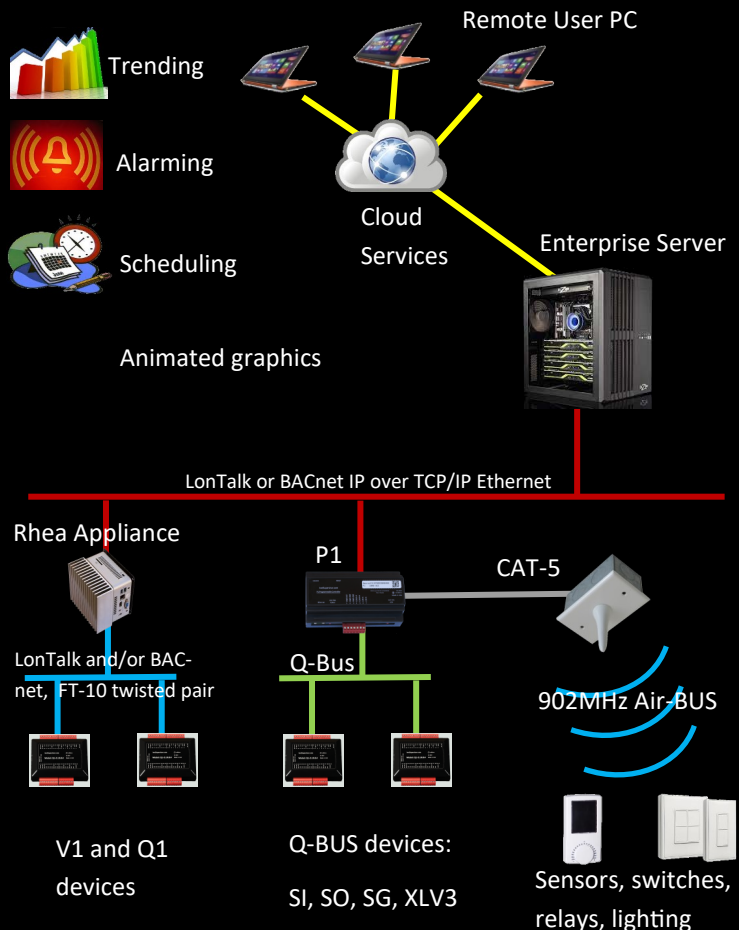
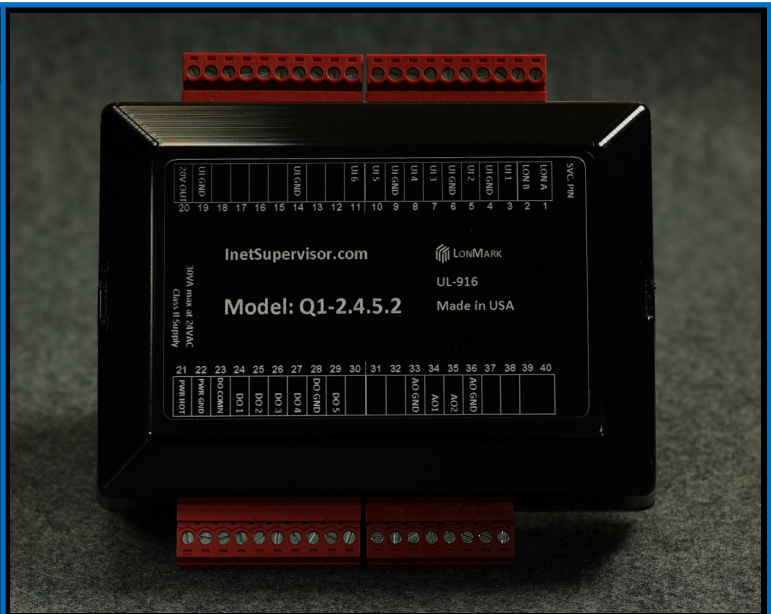
- AHU — Air Handling Units
- MZN — Multi-zone AHU
- EF— Exhaust Fans
- FCU — Fan Coil Units
- HPU — Heat Pump Units
- RTU — Roof Top Units
- VAV — VAV and VVT Terminal Equipment
- NRG —Energy Shedding, manager
- BTU —Energy (BTU) Calculator
- IRR —Irrigation
- LTG— Lighting
- STA — Statistics calculator, i.e. get average valve position of a large number of FCUs

OVERVIEW

The Q1 Series are microprocessor based configurable controllers designed to control, optimize and improve energy efficiency of variety of equipment. All controller features are adjustable with DeviceEditor (part of NetworkManager) software that is free to our customers. The Q1 uses FT-10 transceiver for best in its class networking over twisted pair of wires. FT-10 networks are polarity and topology free. The network utilizes open standard LonTalk and BACnet/IP protocols for interoperability and ease of data exchange.

Q1 features 10 PID loops that are either used by software applications, or when available, are exposed as generic PID for free use with spare I/O.

Q1 supports variety of sensors including thermistors Type II (recommended), and Type III, and custom thermistor array. 4-20mA sensors are well supported with on-board 20VDC output. All sensors types are software configurable.



I/O CONFIGURATION

NOTE: No Hardware Jumpers required to configure I/O

2 x Analog Inputs The first two inputs accept resistive signals only.

Resistive Thermistor 10KΩ Type II and Type III
(Type II is recommended)
Potentiometer with custom scaling
Dry contact

4 x Universal Inputs All inputs have 12 bit resolution

Resistive Same as above
Voltage 0-10V DC
Current 0-20mA DC

5 x Digital Outputs
Triac rated at 1A @ 24V AC w/ external power supply

2 x Analog 20mA max at 30°C, 8bit resolution
0 or 10VDC Digital / Binary

STATUS LIGHTS

LED

Device status GREEN Pulsing green = Normal
Off = No power or other fault

Service pin GREEN OFF = Normal, running
ON = No application

AGENCY APPROVALS

Safety Certifications UL916 Energy Management Equipment CSA C22.2#205 Issue 1983/06/01 (R2009) Signal Equipment standard

WARRANTY

Standard 2-year warranty.



UL916 RoHS



MECHANICAL

Hardware

Processor FT-6050, 8bits, 80MHz
Memory 128k application memory
Transceiver FTT-10; 78kbps
Indicators Multicolor LED, power, status
Comm Ports RJ11, LON, TTL

Power

Supply Voltage 24VAC; 50/60Hz; Class II
Max 30VA
Typical 6VA plus peripherals
Fuse 1.85A auto-resettable

Enclosure

Material ABS/PC
Color Black
Installation 35mm DIN
Connectors Removable (RED)

Environment

Temperature 0°-70°C (32°-158°F)
Humidity 0-90% non-condensing
Storage -20°- 70°C (-4° - 158°F)

Differential Pressure Sensor

20 bit medical-grade pressure sensor is temperature compensated. Pressure range is 0-4in H2O. Pressure ports positive and negative are software swappable for ease of installation.

