

APPLICATIONS

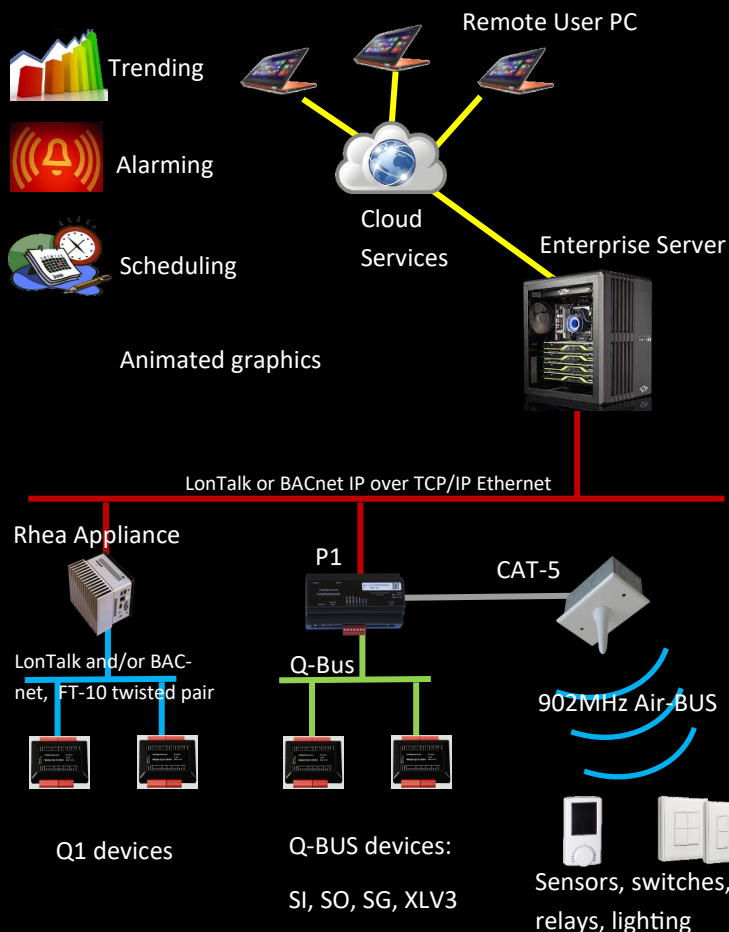
- AHU — Air Handling Units
- MZN — Multi-zone AHU
- EF— Exhaust Fans
- FCU — Fan Coil Units
- HPU — Heat Pump Units
- RTU — Roof Top Units
- VAV — VAV and VVT Terminal Equipment
- NRG —Energy Shedding, manager
- BTU —Energy (BTU) Calculator
- IRR —Irrigation
- LTG— Lighting
- STA — Statistics calculator, 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
10 x Universal Inputs	All inputs have 12 bit resolution
Resistive	Same as above
Voltage	0-10V DC
Current	0-20mA DC
8 x Digital Outputs	
	Triac rated at 1A @ 24V AC w/ external power supply
4 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
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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)

