LEVITON

ModHopper
Wireless ModBus/Pulse Transceiver

The ModHopper is a breakthrough mesh technology design that makes connecting ModBus and pulse devices simple and cost effective. Our "smart" ModHopper transceivers eliminate the need for costly wiring runs allowing users to capture meter data in the most challenging retrofit and campus environments.

- Designed specifically for wireless metering
- No software or programming required
- Devices automatically configure when powered
- Wireless "mesh" network—self healing, self optimizing
- Frequency hopping, spread spectrum (FHSS)
- Connect up to 32 ModBus and 2 pulse devices per ModHopper (expandable)
- Long distance communication (3000ft indoor/14 miles LOS)
- Visual display of signal strength (LEDs)
- Multiple independent network capability
- Reliable, constant two-way communication and packet verification
- Point to multi-point communication
- Five year warranty
- Field upgradable firmware

WIRELESS COMMUNICATION

Leviton developed a wireless ModBus/pulse transceiver to capture remote meter points. Our high-powered radios allow you to easily collect meter data from multiple buildings over long distances. Our unique "mesh" technology provides optimized routing of communications with no PC or software configuration, meaning the ModHopper works immediately "out of the box." This self-managed mesh network means that the system will function with high reliability where other wireless systems fail due to short- or long-term interference. ModHoppers can be used with any ModBus master or gateway making them an ideal solution for any project.

COMPATIBILITY

The ModHopper is compatible with virtually any ModBus RTU device, allowing customers the flexibility to use the ModHopper in existing ModBus applications. The ModHopper is a "smart" device, which requires no programming. If used with the Leviton EMB Hub or EMB HubLite, users can take advantage of numerous diagnostic tools, including a graphical display of the wireless mesh network.

APPLICATIONS

- Utility submetering (electric, gas, water, etc.)
- Tenant billing
- Metering in existing buildings (retrofit)
- Metering on campus environments
- Government advanced metering projects
- Multi-tenant submetering projects
- Industrial /manufacturing facilities
- Demand response
- Renewable energy—PV projects (inverters, string monitoring)

LEVITON®

ModHopper Wireless Modbus/Pulse Transceiver

SPECIFICATIONS	
Processor	60MHz ARM7 embedded CPU
LEDs	3 x RF, 2 x RS-485, 2 x Pulse, Alive, Alarm
POWER	
Power Supply	100-240VAC, 50/60Hz 0.5A, 12V 1A output, class 2
Power Input	9-30VDC, 900mA required
COMMUNICATION	
Protocols	ModBus RTU, 2-wire
Addressing	ModBus address may be set from 1 to 247 via dipswitch
Baud Rate	9600/19200 baud, N, 8, 1
RF	902-928MHz ISM band, 1W, frequency hopping spread spectrum (FHSS)
Range	3000ft (900m) typical indoor, 14 miles (22km) line of sight
INPUTS	
I/O	2x Pulse, dry contact, standard or KYZ, closure threshold 100 to 2.5Ω user selectable
Pulse Rate	User selectable to 10Hz, 50Hz, 100Hz, 250Hz • Pulse rate option 10Hz, minimum pulse width 50ms • Pulse rate option 50Hz, minimum pulse width 10ms • Pulse rate option 100Hz, minimum pulse width 5ms • Pulse rate option 250Hz, minimum pulse width 2ms
Storage	Pulse counts stored in non-volatile memory
Modbus	ModBus RTU, 2-wire, hard-wire connect up to 32 devices (expandable)
PHYSICAL	
Weight	1.25lbs (0.67 kg)
Size	6.5" x 4.5" x 2" (260mm x 64mm x 45mm)
ENVIRONMENT	
North America	32-122°F (0-50°C), 0-90% RH, non-condensing
CE	40-104°F (5-40°C), 0-90% RH, non-condensing
Altitude	2000M max
Pollution	Degree 2
CODES AND STANDARDS	
FCC ID	OUR-9XTEND or MCQ-XBPSX; FCC Part 15.247, Class A
IC (Industry Canada)	4214A-9XTEND or 1846A-XBPSX; IC: RSS-210
Encryption	Yes

ORDERING INFORMATION

CAT. NO	DESCRIPTION
R9120-500	ModHopper and Power Supply

As per SIPCO LLC, this product may be used in a system and employ or practice certain features and/or methods of one or more of the following patents:

SIPCO, LLC
U.S. Patent No. 7,103,511
U.S. Patent No. 6,914,893
U.S. Patent No. 6,891,838
U.S. Patent No. 5,714,931
U.S. Patent No. 6,233,327
U.S. Patent No. 7,397,907
U.S. Patent No. 6,618,578
U.S. Patent No. 7,079,810
U.S. Patent No. 7,295,128
U.S. Patent No. 7,263,073
U.S. Patent No. 7,480,501
U.S. Patent No. 6,437,692
U.S. Patent No. 7,468,661
U.S. Patent No. 7,053,767
U.S. Patent No. 7,650,425
U.S. Patent No. 7,739,378