



## PRODUCT OVERVIEW

The RGBW module is a four-channel controller for LED light sources. The four independent channels can be used to create any color combinations and is a less expensive alternative to the traditional DMX system. The RGBW module is an accessory to Dimonoff's well-known and proven RTM wireless smart node, providing additional features to the already rich RTM standard feature set. In order to suit all types of LED sources, the RGBW module is offered in two variants: constant current or constant voltage.

## AT A GLANCE

- Complete integration with Dimonoff's Gateways and Smart Central Management System including Dimonoff | SCMS and DOO-Express software platform.
- 4 Channel Constant Current or Constant Voltage Controller.
- Over 16 million different colors plus white level control (256 levels per channel with 0 being OFF and 255, full brightness).
- Highly scalable with up to 2 billion modules in a system.
- 10 stored color presets that users can easily pick from a color wheel with DOO-Express software.
- Transition time is programmable between 1 and 255 seconds for each preset.
- Real-time manual overrides.
- The Get current levels function returns current level for each channel and reports any non-functional output (burned, not connected or no supply).
- Can be set to respond to all RTM wireless smart node module internal functions or external stimuli such as motion sensor, keypad, push button, etc.
- Each node can be part of 14 different groups and 30 separate scenarios.
- Supports the RTM generic timers function to create sequences of presets.

## LUMINAIRES

The RGBW module can control decorative fixtures with RGB + White LED arrays. It enables color wall washing, bollards, bridge lighting, decorative fixtures and urban architectural enhancements, indoors or out. The RGBW module features solid state outputs up to 1 Amp with short circuit protection and open load detection.

## INSTALLATION

Convenient size for installation inside products due to its small form factor. They can also be fitted in NEMA4 enclosures for mounting outside fixtures.

## COMMUNICATION

The RTM node, when combined with a Digi radio, is built for low-latency communication, even in large networks. The fully bidirectional long-range RF mesh system, suitable for both rural and urban areas, works wirelessly over a robust 2.4GHz (900Mhz option) ISM (Industrial, Scientific and Medical certified) meshed radio signal.

Clients can choose from two radio options: Digi XBee Pro 2.4GHz or Digi Xbee Pro 900MHz. Both are made to work in a self-forming and self-restoring mesh network.

## SECURITY AND MAINTENANCE

Communication between devices flows through a private radio network and is protected by 128-bit AES encryption. Each node is uniquely serialized with an individual address. Additional security automatically forms when defining groups and scenarios.

Devices also feature extensive network and system health monitoring, plus a fall-back safety feature. Comprehensive reporting includes alarm data that can be used to optimize maintenance.

## SPECIFICATIONS

### ELECTRICAL/ELECTRONIC

#### *RGBW Constant voltage version:*

- Voltage provided by external LED driver: up to 60Vdc
- Maximum output power: 1A per channel
- PWM: Flicker free 1KHz switching

#### *Constant current version:*

- Voltage provided by external LED driver: up to 60Vdc
- Current setting options: 350, 525, 700, 1000mA
- PWM: Flicker free 1KHz switching

#### *RTM Voltage:*

- Operating range 120 to 480 Vac (+/- 10%) -50 and 60Hz
- Less than 1.5-watt consumption (may vary according to specific configuration)

### ENVIRONMENTAL

- Ambient temperature range: -40C to +70C
  - \*Note: integrator to verify actual internal maximum fixture temperature
- Relative humidity: up to 99% non-condensing

# RTM - RGBW 4 channel LED Controller

## RTM RADIO

	Digi XBee Pro 2.4 GHz (*RTM-XBP-IO-IC2)	Digi XBee Pro 900 MHz
Recommended range	Up to 300 meters/1000 ft between modules Communication range may vary widely depending on environmental factors.	
Transmit power	63 mW (+18 dBm)	up to 250 mW (+24 dBm)
Receiver sensitivity	101 dBm	101 dBm

## LISTINGS

- UL94V-0 flame retardant ABS with epoxy molding

### RTM

- U.S. FCC (XBee-PRO): MCQ-PS2CTH, Canada IC: 1846A-PS2CTH, Europe CE: ETSI, Australia: C-TICK, Japan: TELEC
- U.S. FCC (Digi XBee PRO 900MHz) Part 15.247 Class A: MCQ-XB900HP

## WARRANTY

Limited 5-year warranty (Up to 10-year extended available)

## DIMENSIONS (LENGTH X WIDTH X MAX HEIGHT) (IN/MM)

RTM: 4.75 x 2.65 x 1.53 in / 120.65 x 67.31 x 38.9mm

RGBW module: 4.75 x 2.65 x 1.4 in / 121 x 67 x 35 mm

## WIRING DIAGRAM

Please refer to the wiring diagram.

## ORDERING INFORMATION

MOD-RGBW (Please select any applicable)	Type
	CC7: constant current including a RTM-XBP-IO-IC2*
	CV: constant voltage including a RTM-XBP-IO-IC2*
	DIM: 0-10V 4 channel 40mA (add-on to RTM or RME)