

# Keilton + autani

## CR02-W Series Long-Range RTC USB Dongle



TX1 Antenna is included in the product package

### Description

The CR02-W is an advanced long-range dongle incorporating an Astronomical Real-Time Clock (RTC) module, specifically engineered for outdoor lighting applications. This device ensures accurate timekeeping functionality, maintaining precision even during power interruptions. The CR02-W acts as a central synchronization hub, coordinating all devices within a designated zone. When paired with the TX5 antenna (sold separately), it enables extended communication distances of up to 1,640 feet (500 meters), significantly enhancing network coverage and reliability in large-scale outdoor deployments.

### Features

- Flexible power options: Compatible with PPA102S.A1 through UTP devices, CR02-W-ENCL, or USB power supply
- Uninterrupted timekeeping: Internal battery maintains accurate time during power outages
- Enhanced signal propagation: 1dBi (TX1 Included) external antenna enables long-distance transmission up to 860ft
- Environmental resilience: IP65-rated for protection against dust and water ingress
- Astronomical Time-Clock

### Requirements

- Power source requirement: Compatible with UTP, CR02-W-ENCL, or USB power supply (not included)

### Note

- All application environments will not necessarily be able to achieve max signal range due to factors such as signal obstructions, interference, and luminaire/housing design. Testing is recommended to ensure optimal performance for the applications.

### Specifications

<b>Input Voltage</b>	USB 5V
<b>Input Current</b>	30mA Max
<b>Bluetooth Transmit</b>	TX1: 860ft Max, TX5 (not included): 1,640ft Max
<b>Radio Frequency</b>	2.4GHz ± 75MHz
<b>Bluetooth Version</b>	5.0
<b>Housing Material</b>	UL 94-V0
<b>Indoor/Outdoor Use</b>	Indoor Use Only
<b>Operating Temperature</b>	-30°C to 65°C, -22°F to 149°F
<b>Storage Temperature</b>	-30°C to 85°C, -22°F to 185°F
<b>IP Rating</b>	IP20
<b>Color</b>	White
<b>Warranty</b>	5 year warranty
<b>Compliance</b>	UL1376, RoHS
<b>Safety</b>	FCC ID: 2A26YLTKTVT2022 DID: D061367 DLC: NLTRC5KLOTN

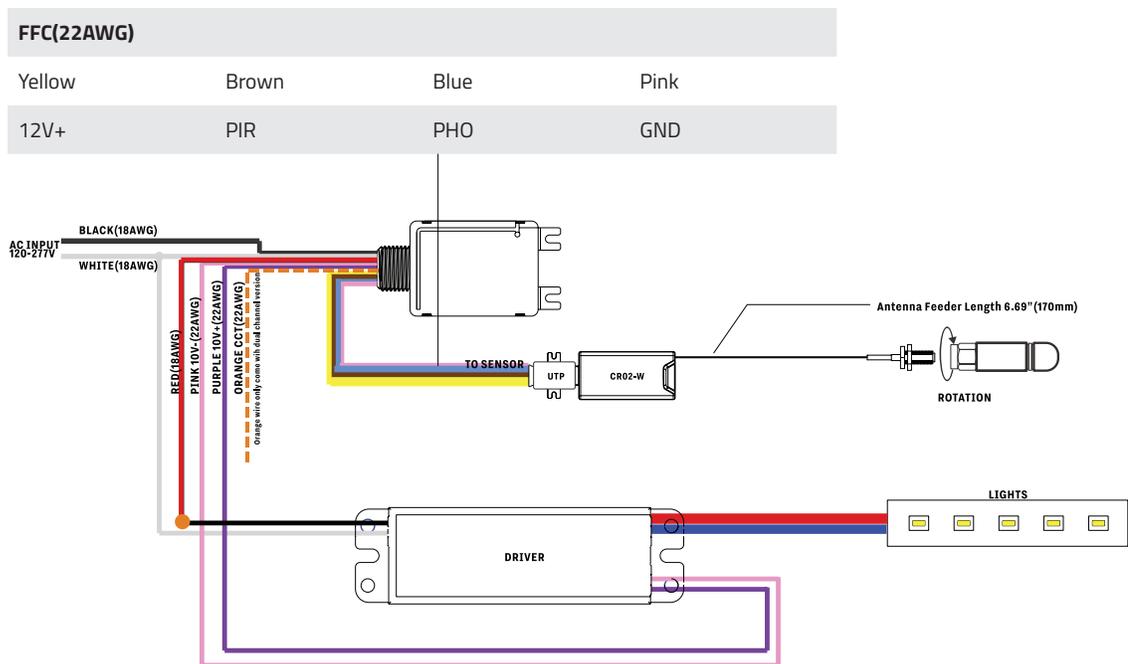
## Ordering Information

Model	Description
CR02-W.A0	Long-Range RTC Dongle

## Ordering Information - Accessories

Model	Description
PPA102S.A1	Fixture controller with CC cable output to power UTP
UTP	Accessory to power the USB-A devices via PH2.0 connector internal to fixture body
TX5	2.4G-5dbi Antenna
CR02-W-ENCL	Complete Enclosure: 120-347V, IP65 Rated, Includes CR02-W USB dongle, PPA102S.E1 power pack, UTP connector, TX5 5dbi antenna.

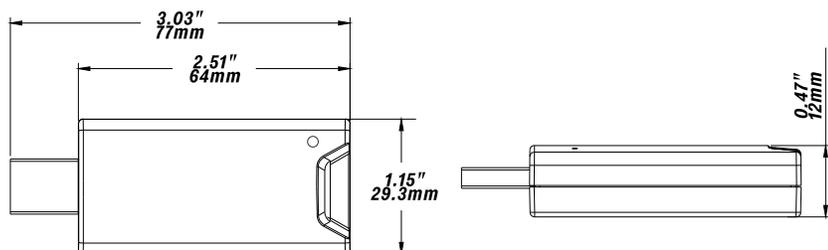
## Wiring



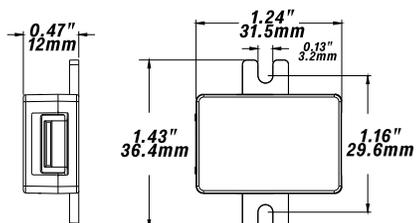
## Dimensions

Unit: inch/mm

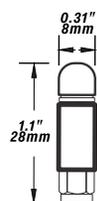
### CR02-W



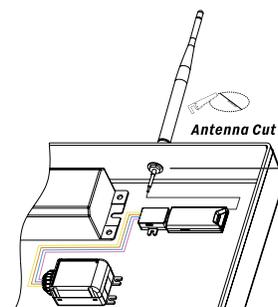
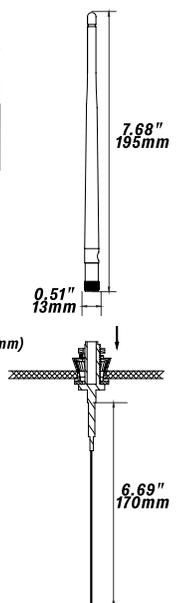
### UTP



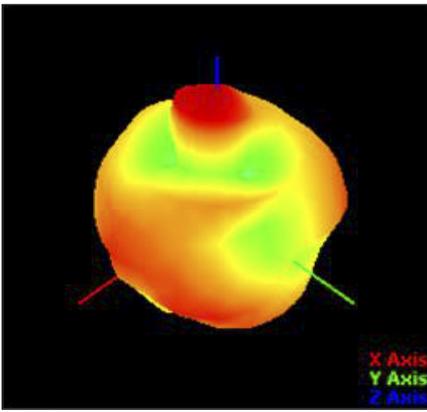
### TX1



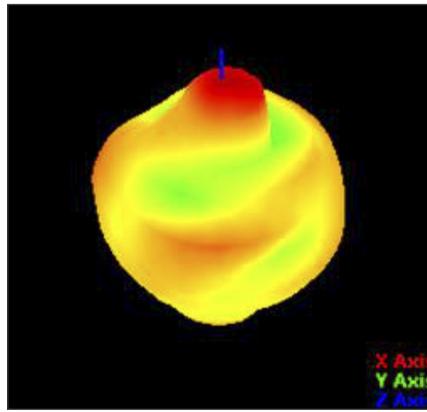
### TX5



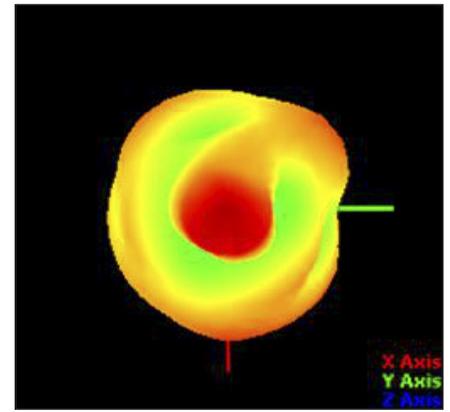
# TX1 Transmission



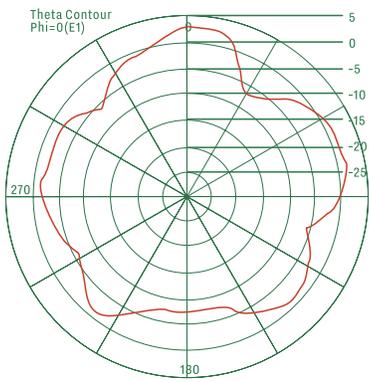
T45-P45



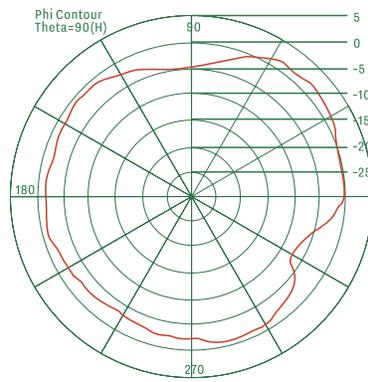
T45-P225



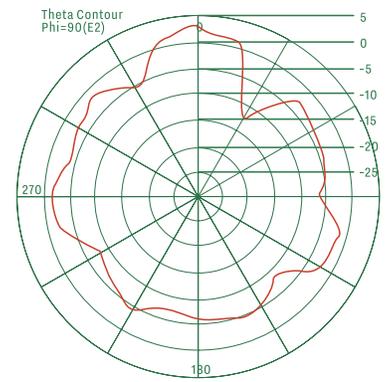
T0-P0



XOZ



XOY



YOZ

## Wireless Signal Strength

Transmission Distance      RSSI (dbm)

164ft (50m)                      -43

328ft (100m)                    -45

492ft (150m)                    -49

656ft (200m)                    -54

820ft (250m)                    -57

860ft (262m)                    -58



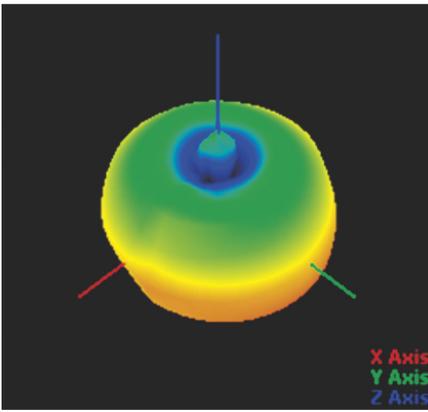
3.48  
2.5  
1.52  
0.54  
-0.44  
-1.41  
-2.39  
-3.37  
-4.35  
-5.33  
-6.31  
-7.29  
-8.27  
-9.25  
-10.23  
-11.21  
-12.19  
-13.17

## Coordination System Description:

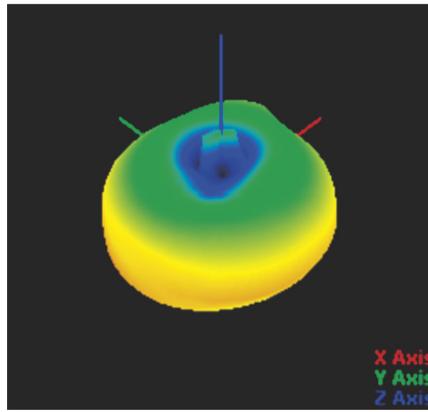
Line Colr	XYZ	Theta-Phi
Red L.	Axis X	Theta90-Phio
Green L.	Axis Y	Theta90-Phi90
Blue L.	Axis Z	Theta0

**Note: The test transmission distance of two CR02-W**

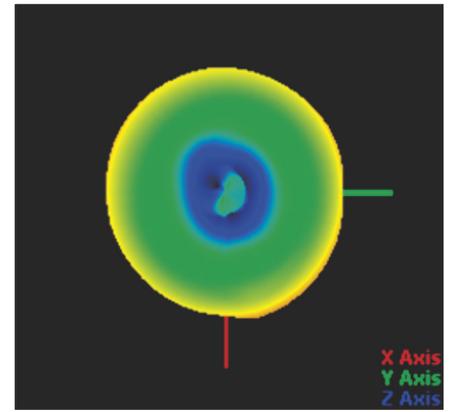
# TX5 Transmission



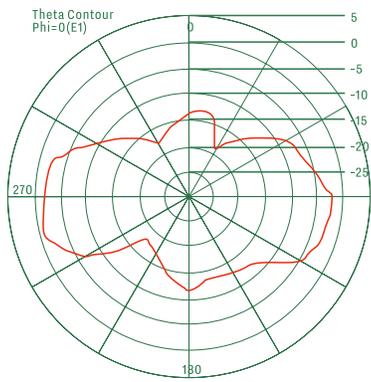
T45-P45



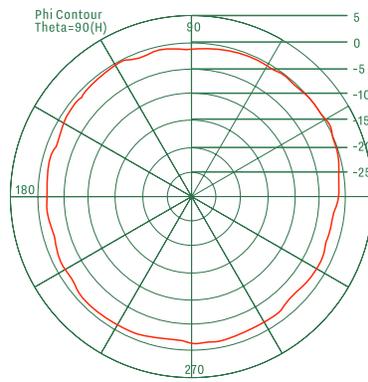
T45-P225



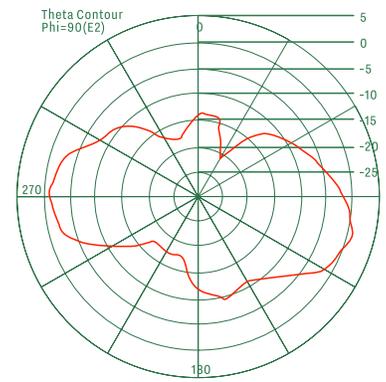
T0-P0



XOZ



XOY



YOZ

## Wireless Signal Strength

Transmission Distance      RSSI (dbm)

328ft (100m)                    -37

656ft (200m)                    -47

984ft (300m)                    -48

1312ft (400m)                  -59

1640ft (500m)                  -60

**Note: The test transmission distance of two CR02-W**



5.4  
3.89  
2.38  
0.87  
-0.65  
-2.16  
-3.67  
-5.18  
-6.69  
-8.21  
-9.72  
-11.23  
-12.74  
-14.26  
-15.77  
-17.28  
-18.79  
-20.31

Coordination System Description:  
Line Color    XYZ            Theta-Phi  
Red L.        Axis X        Theta90-Phi0  
Green L.      Axis Y        Theta90-Phi90  
Blue L.       Axis Z        Theta0

## Product Label

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## App Download

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## Contact Us

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