Drone Fireworks
Interface Mini™
Industry: Entertainment

Summary

Customer Challenge

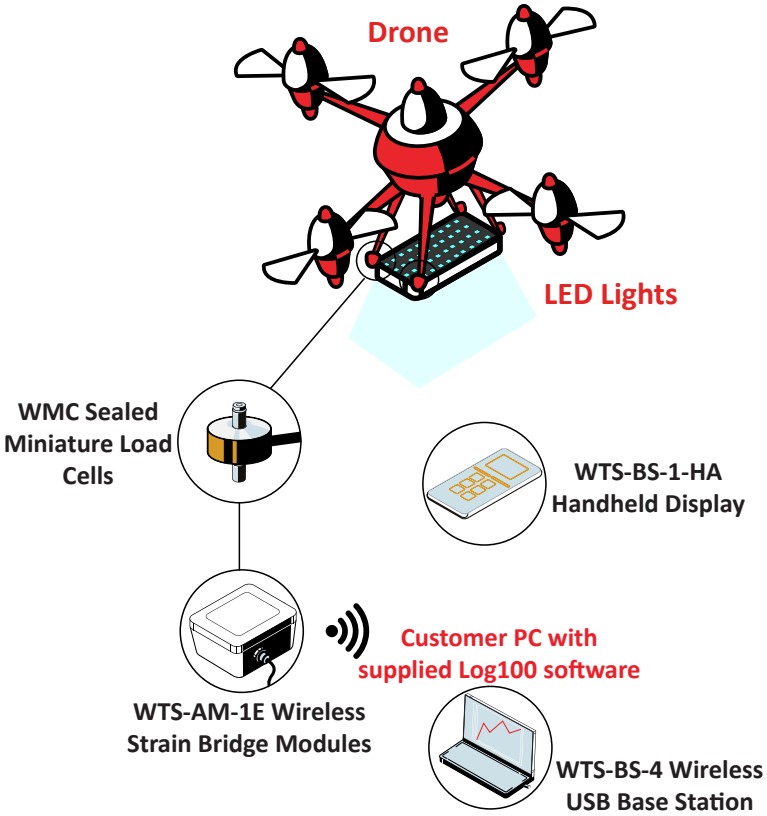
Drone fireworks have become increasingly popular in recent years. During drone firework and light shows, drones are equipped with LED lights, flying in synchronized patterns to create displays in the night sky. A force measuring and monitoring system is needed for the weight of the LED or the forces generated by fireworks explosions.

Interface Solution

Four Interface WMC Sealed Stainless Steel Miniature Load Cells are installed to the necessary propeller motors measure the attached LED lights. Each are connected to a WTS-AM-1E Wireless Strain Bridge Transmitter Modules. The WMC's measure the weight of the LED lights to monitor weight shifting or any uneven weight distributions. Data results are wirelessly transmitted directly to the customer's laptop through the WTS-BS-4 Wireless Base Station, or to the WTS-BS-1-HA Wireless Handheld Display for Multiple Transmitters

Results

The four WMC load cells accurately measured and monitored the weight of the attached LED light and maintained stability of the propeller motors to when the drone was in air performing the fireworks show.



Materials

- Four WMC Sealed Stainless Steel Miniature Load Cells
- Four WTS-AM-1E Wireless Strain Bridge Transmitter Modules with Log100 software
- WTS-BS-4 Wireless Base Station with USB Interface in Industrial Enclosure
- WTS-BS-1-HA Wireless Handheld Display for Multiple Transmitters
- Customer PC

How It Works

1. The drone's legs that carry the LED light are each fitted with a WMC Sealed Stainless Steel Miniature Load Cell. Each are connected to a WTS-AM-1E Wireless Strain Bridge Transmitter Modules. The load cells detect any uneven weight distribution and communicate with the individual propeller motors to increase RPM's and balance the weight accordingly.
2. Data results are wirelessly transmitted directly to the customer's laptop through the WTS-BS-4 Wireless Base Station, or to the WTS-BS-1-HA Wireless Handheld Display for Multiple Transmitters.

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FORCE MEASUREMENT SOLUTIONS

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