AeroScout T4p Parts Replenishment Tag

Leverages Standard Wi-Fi Networks to Enable Most Cost Effective and Easy to Deploy Parts Replenishment Solution

Overview

A major challenge for manufacturers is to keep line-side inventory low while preventing inventory stock-outs that could cause production stoppages. Manual processes and barcode scanning of empty containers are inefficient and are neither reliable nor consistent. With wired call-button solutions, manufacturers need to add expensive wired infrastructure and don't receive the flexibility required to support frequent line layout changes. Thus, the industry needs wireless and automated parts replenishment solutions (e-Kanban) for optimal results.

AeroScout offers the most cost effective and easy to deploy solution for parts replenishment by eliminating the requirement of additional wired line-side infrastructure and by leveraging standard Wi-Fi networks. The AeroScout T4p Parts Replenishment Tag is a Wi-Fi device that serves as a wireless Kanban solution on production lines. The tag is battery operated and does not require any hard wiring – this enables flexibility to quickly support production line layout changes. In addition, since the tag supports complete bi-directional, Wi-Fi communication, the AeroScout solution does not require a dedicated network for communicating parts replenishment requests and status indications. There is no need to deploy and maintain an additional proprietary network.

The AeroScout T4p Tag is built into a ruggedized enclosure that was designed for manufacturing environments. The tag includes industrial buttons for parts replenishment calls and a dual-color LED for call status indications and system acknowledgements. The T4p Tag can be easily mounted next to each parts container or any other area requiring inventory replenishment.

The AeroScout Parts Replenishment Solution automates and streamlines the complete business process:

- When additional parts are needed on the production line, a worker uses a call button located on the T4p Tag to send a parts replenishment request
- The worker receives a distinct visual indication from the LED that the request has been received and is in-process
- The worker then receives different visual indications of progress in the replenishment process – for example, indicating that parts are on the way
- Once the parts have arrived successfully, the tag is reset
- The AeroScout Parts Replenishment solution can also be integrated to third-party applications such as inventory management systems

Solution Benefits

- Reduces line-side inventory by enabling "just in time" parts delivery
- Prevents inventory stock-outs and production disruptions
- Decreases inventory carrying costs and storage space
- Improves labor productivity
- Records plant floor demand metrics to enable process improvements

Wi-Fi Parts Replenishment Solution drives lean manufacturing cost-effectively

- Leverages Wi-Fi infrastructure and does not require dedicated network
- No hard wires makes solution easy to deploy and maintain
- Enables flexible support of production line layout changes
- Industrial grade tag design
- Comprehensive solution automates and streamlines the complete parts replenishment process

Key Features

Call Button Messaging

The T4p Tag includes two industrial-grade call buttons that are configurable to fit specific use cases. For example, one call button can be set to send a parts replenishment call and the other can be configured to confirm the arrival of the requested parts.

Visual Indications

Dual-color LED enables a variety of status indications through different combinations of LED colors and blinking sequences. For example, a flashing red light can indicate that the parts replenishment request has been logged, and a flashing green light can indicate that parts are on the way.

Tag Management

T4p Tags are easily programmed over a Wi-Fi network to enable configuration updates and the addition of parts replenishment stations.

Long Battery Life

The T4p Tag's batteries last up to four years which keeps total cost of ownership and maintenance costs low. The batteries are replaceable, and the tags also have an optional, external DC input.

Flexible Mounting

Tags are easily mounted next to parts containers using screws or tie wraps. Since the tags are battery powered and require no wired network connectivity, they also are simple to move when factory layout changes occur.

Rugged Enclosure

The tag has a ruggedized enclosure and is designed to operate in harsh manufacturing environments.

Third-Party Application Interface

AeroScout software provides an open API for integration with third-party applications such as warehouse management or ERP systems.

AeroScout T4p Tag Specifications

RADIO

- Compliant with 802.11b networks (2.4 GHz)
- Transmission power: Up to +15dBm, ~32mW
- Indoor range: Up to 60m (200 feet)

PHYSICAL AND MECHANICAL

- Dimensions: 180mm x 85mm x 45mm (7.0" x 3.4" x 1.7")
- Weight: 550g (1.2 lbs) with 2 Alkaline 1.5V D batteries
- 2 Call Buttons

FUNCTIONALITY

- Typical update rates (configurable):
  - o 15 seconds – when waiting for system acknowledgement
  - o 1 minute – when waiting for parts delivery
- LED blinking indications at 25% duty cycle (configurable)

ENVIRONMENTAL SPECIFICATIONS

- Temperature: 0°C to +50°C (-22°F to +167°F)
- Humidity: 95%, condensing
- Housing is water and dust resistant (IP54)

ELECTRICAL

- 2 x D alkaline 1.5V batteries (replaceable)
- Battery life: up to 4 years (dependent on usage scenario and other factors)
- External 5V DC input

CERTIFICATIONS

- Radio:
  - o FCC Part 15, sub-part C class B, sub-part B
  - o EN 300-328, EN 301-489
- Safety:
  - o CE, cTUVus (EN60950)

Ordering Information

For ordering and pricing information on the T4p Tag and accessories, contact AeroScout at info@aeroscout.com and refer to the AeroScout T4p Tag line of products (TAG-4100).

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