

Long Range Wireless Communication Now with Bluetooth®

Wireless coverage of up to 100 meters in line-of-sight & long-range communication of up to 400 meters with relay function

1

Trigger Warning Lights, Indicator Lights, Alarms/Voice Alerts, and more!

Input from Switches, Relays,
Sensors and More



INPUT



OUTPUT

Rotating Lights, Indicator Lights
Audible Alarms and More



2

Mirror Device Statuses with Optional LED Modules!



Easily Add LED Units

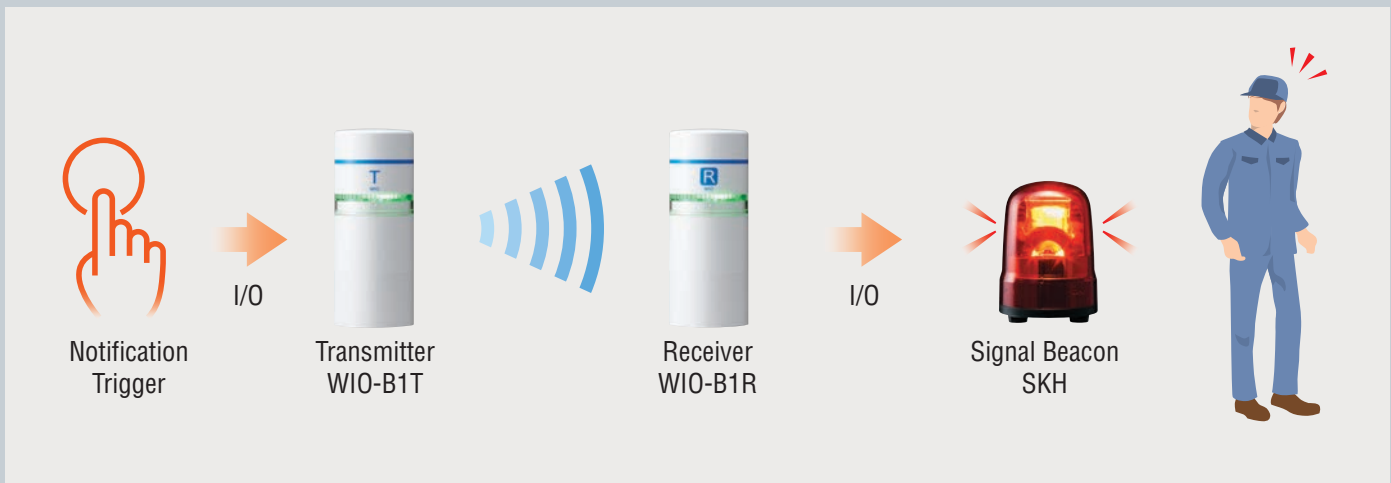
Maintenance Support Call-Light

Customer Challenges

In the event of unexpected shutdowns beyond operator control, maintenance personnel are required to resolve the problem. However, maintenance personnel may not be in their office or in close proximity, and locating them causes costly delays.

Recommendations

By installing a wireless call light system, maintenance can be notified even in remote locations on site for immediate response



Visualizing Equipment in Blind Spots

Customer Challenges

Poor visibility from the on-site office prevents staff from seeing the equipment operation status. This leads to delayed responses to processing completion and equipment shutdown, resulting in decreased productivity.

Recommendations

By installing signal lights that mirrors the equipment in a visible location from the on-site office, response times to issues and problems improve to maximize productivity and efficiency.



Abnormal Equipment Notification

Wirelessly notify abnormalities of remoted legacy equipment.



Issue

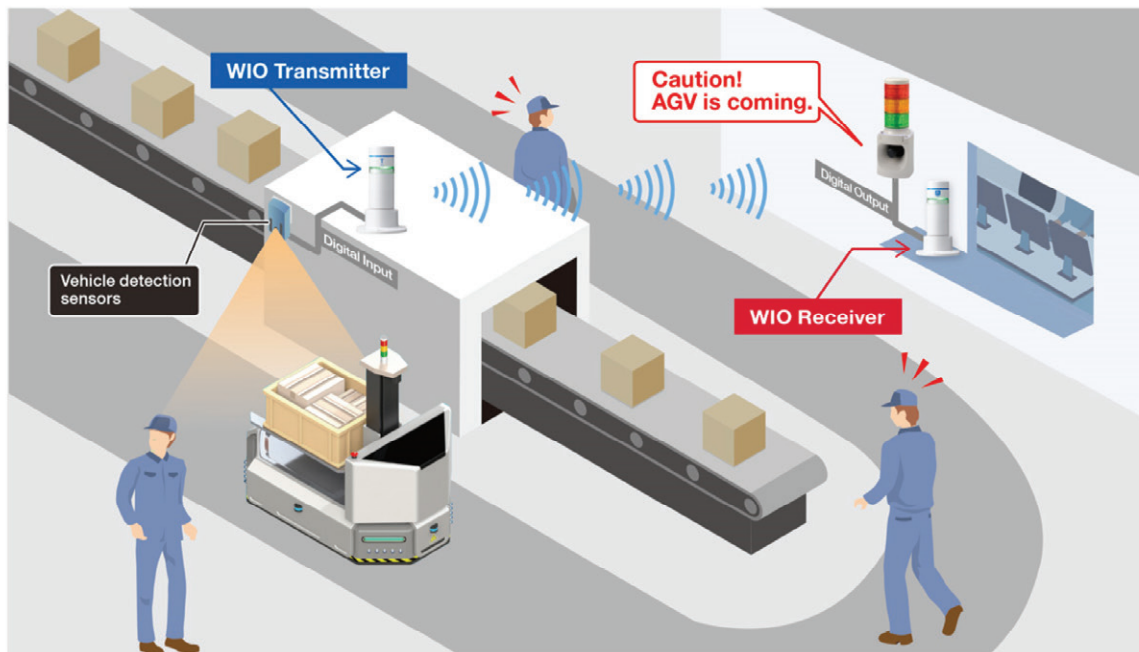
Through the implementation of IoT in the factory, the equipment on the production line are managed thoroughly. However, auxiliary equipment like chillers is worn out and lacks remote monitoring. Malfunction of chiller can be fatal for production line, so we have to establish a system that enables remote abnormal notifications.

Proposal

By inputting the abnormal output contacts from auxiliary equipment into WIO, it enables to wirelessly transmit abnormal notifications to the control room. This helps to make prompt responses to issues and improve productivity. WIO is simple to set up, as transmitter and receiver are automatically paired whenever the power is turned on.

Notification of approaching AGV in blind area

Notify AGV passing in advance with sound and light to prevent collisions with workers.



Issue

The aisles for workers and AGVs on the production line are adjacent to each other, and there is a risk of collision between workers and AGVs.

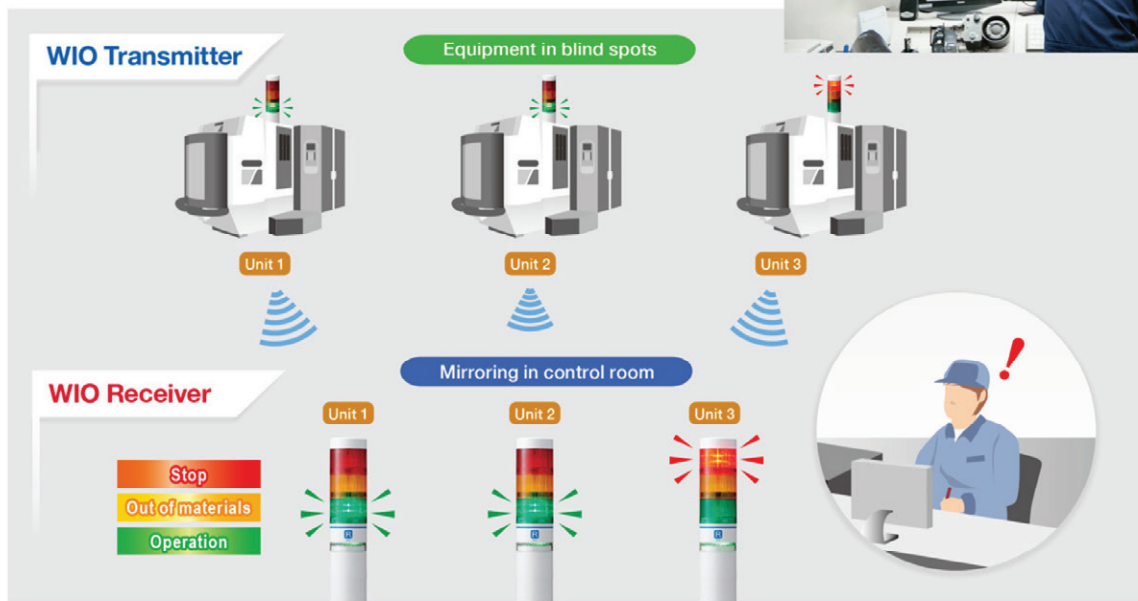
Proposal

Vehicle detection sensors detect the passing of AGVs and wirelessly transmit the information to the blind area. The workers in the area can promptly notice the approaching AGV through light and sound alerts, which helps to prevent accidents.

WIO is simple to set up, as transmitter and receiver are automatically paired whenever the power is turned on.

Visualization of blind spots

Notify the operating status to the control room separated from the factory floor.



Issue

Factory equipment in the blind spots can not be seen from the control room and the operation status can not be assessed. This causes delays for detecting any functional conditions such as completed operation or abnormal termination.

Proposal

Implementing additional signal towers mirroring to the signal towers installed to the equipment allows the operator to immediately notice and respond to any issues occurred, thereby improving productivity. The transmitter and receiver are automatically paired when activated to facilitate establishment of machine status mirroring.

Fire safety measures for man power-saving equipment.

Alerting remotely with light, sound, and email to prevent fatal accidents.



Issue

Machining equipment, such as welding robots, operates independently, even at night and holidays. These machines operate at high temperatures, posing a risk of ignition. In the event of fire, late worker response could result in a fatal accident.

Proposal

When the heat detection sensor detects an abnormality, (1) a rotating beacon (SKH) at the shop floor alerts nearby workers. Additionally, (2) the abnormality signal is wirelessly transmitted to the factory office, where the Network Signal Tower (NHV) alerts office workers with LED and sounds. (3) The Network Signal Tower (NHV) connected to the WIO receiver has an email transmission function, and an emergency email is sent. Even if there are no operators on site, workers can be notified. These products support workers to respond quickly and minimize the occurrence of fatal accidents.

How To Prevent Forklift Accidents

The signal tower warns pedestrians of forklift approaching towards crosswalks, blind corners and intersections.



Issue

While forklifts frequently operate in the same areas as pedestrians and workers, the intersections and blind corners are often common areas of collisions because of limited visibility. It is necessary to ensure that they can work safely in such areas.

Proposal

Install signal towers(LKEH) at crosswalks, blind corners and intersections. In case the vehicle detection sensor detects a forklift, WIO wirelessly controls LKEH to alert pedestrians with light and sound, minimizing the risk of collision. WIO is easy to install because of its simplicity to set up, as transmitter and receiver are automatically paired whenever the power is turned on.

Notifying AGV Approaches at Multiple Locations

Notify the approaching AGV using lights and sounds to ensure the safety of the workers.



Issue

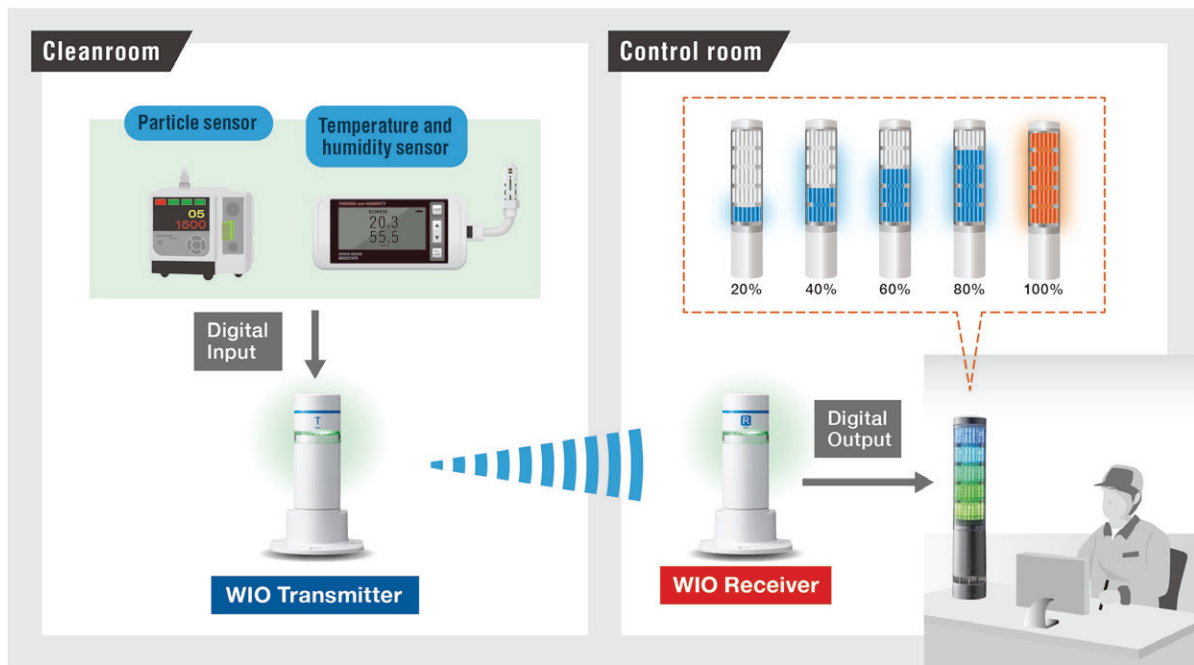
AGV frequently moves around the factory floors for replenishing component parts and transporting goods, but there is a risk of collision accidents between the AGV and workers at entry/exit doors or blind spots.

Proposal

To ensure the safety of workers, a vehicle detection sensor system has been installed within the factory. This system detects AGV when approaching and shows signals by rotating lights. By utilizing WIO, it enables wireless control of the rotating lights, notifying to locations slightly distant from the sensor and simplifying layout adjustments when AGV change its route. Additionally, audible products can be connected to the WIO receiver to notify the surrounding area of component and cargo arrivals through melodies or voice alerts.

Remote Notification of Temperature and Humidity

The signal tower in the control room displays the temperature and humidity levels in the cleanroom.



Issue

Highly regulated environments, such as clean rooms, require high-performance environmental measurements to ensure consistent operation within specifications. It is essential to periodically check if the measured value inside the clean room exceed the threshold level.

Proposal

Connecting WIO to the temperature and humidity sensors installed in the cleanroom enables remote notifications from the clean room to the control room. When the sensor detects a threshold value, it triggers a contact input to the WIO transmitter, which then sends the input information to the paired receiver. The receiver, connected to the Signal Tower LA6, visually informs the cleanroom's conditions to the administrator.

Requesting Supervisor Support in the Factory

| Wireless andon system to minimize downtime.



Issue

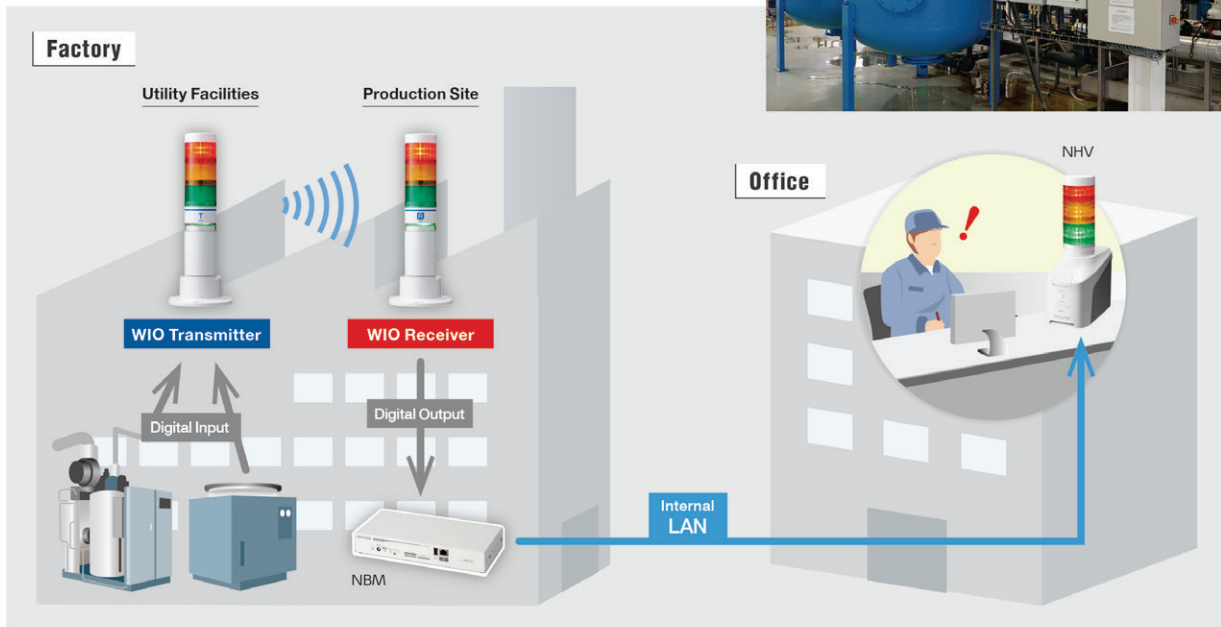
When any abnormality occurs on the assembly line, workers stay in their positions and request support to their supervisor, but currently, there are no effective call system which helps to maintain productivity.

Proposal

When a worker requires support to supervisor, they touch the touch sensor of Signal beacon NE installed at the site. The NE displays red to indicate the call status, and inputs a contact into the WIO transmitter simultaneously. The RT lights up, and a message is played via remote WIO receivers to request support and minimize downtime.

Visualization of utility facilities

Notifies the abnormalities occurred in production site and office to separated utility facilities.



Issue

Even if an abnormality occurs in utility facilities such as boilers and compressors installed apart from the production site, it may not be noticed until it affects the equipment.

Proposal

WIO transmits radio for abnormalities to the production site and can also send alerts to neighboring offices using NHV via the existing internal LAN. WIO is easy to set up since the transmitter and receiver automatically pairs by turning on the power. This reduces installation costs and enables visualization of abnormalities.