WatchNET IoT
Connect Any Thing, Connect Any Where
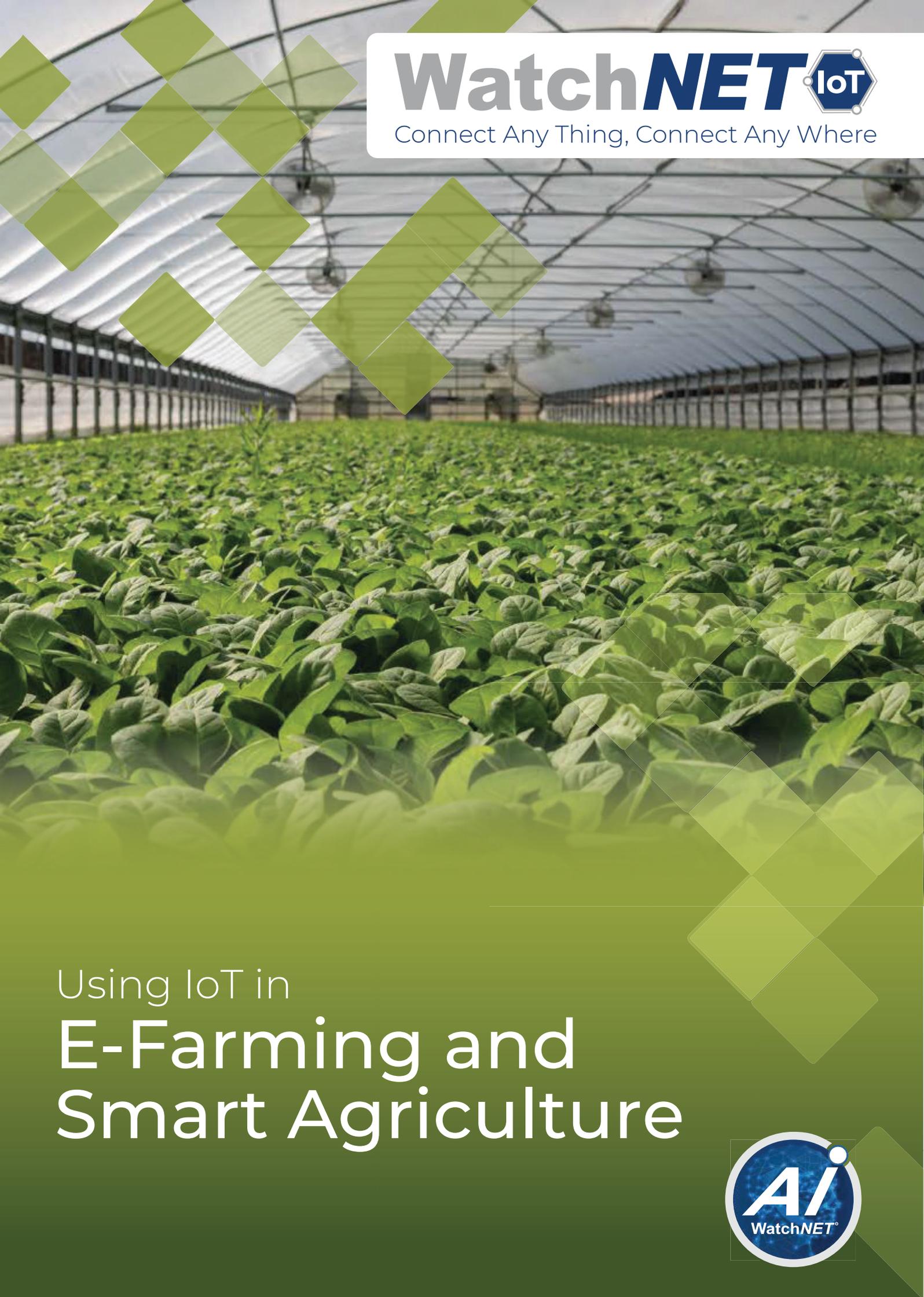
Using IoT in
E-Farming and Smart Agriculture

E-Farming and Greenhouse Farm Monitoring

Watch*NET* IoT devices provide reliable, flexible, and more efficient environmental monitoring solutions to master growers' greenhouse owners.

The long-range LoRa wireless devices can be easily installed which helps save a lot of labor cost and is easily scalable to suit any future expansion.

Our dashboard includes E-Maps and graphs that help to give great data visualization for quick, actionable decisions for the best results.

Soil moisture, soil temperature, electrical conductivity of water, carbon dioxide, light, air quality, water presence or dryness, wind pattern and many other variables can be monitored.

pH Level
Carbon Dioxide
Current Meter
Moisture Level
Temperature
Light Intensity
Soil Temperature
Water Leak

How System Works?

Wireless IoT Sensors

IoT Gateway

WatchNET Cloud & APP

Measurable Key Metrics

Moisture level of the soil or planters with different grow media

Wireless Soil Moisture Sensor

This soil moisture sensor measures the quantity of water contained in a material, such as soil on a volumetric or gravimetric basis. These oil-water sensors provide promising new opportunities for automating greenhouse irrigation according to plant needs to obtain an accurate measurement.

WLRC-S22

Temperature of the room or greenhouse facility from different points

Wireless Temperature and Humidity Sensor For Low Temperature

This commercial-grade temperature and humidity sensor can be used to monitor the temperature and humidity of a low-temperature environment and notify personnel by SMS, email or phone call when the values go out of the optimal range, through Watch*NET*'s hosted web platform. This sensor is rugged and IP65 rated for a humid and moist environment. This device has a magnetic back panel that can be mounted on any metal surface.

WLRC-S17

Light intensity sensors at different points

Wireless Light Sensor

This commercial-grade indoor wireless light sensor can detect the intensity of light in LuX of the environment. This can be used in many industries where the intensity of the light matters, like in a greenhouse. This device can be used along with the Watch*NET* smart power outlet (WLRI-P11M) to create an automated lighting system. Light sensors can be used as a part of predictive maintenance where light intensity is vital.

WLRC-S20

Monitors level of carbon dioxide at different points

Wireless CO$_2$/Temperature/ Humidity Sensor

This wireless carbon dioxide detector makes it ideal to install in greenhouses. A proper carbon dioxide measuring device is integral to a good facility safety system, as it gives a real-time level of the measure of carbon dioxide and could send out an alarm when it is less or in excess.

WLRI-S41

Monitor the level of acidity and temperature of the water in a water storage tank

Wireless pH Sensor

This specialized water pH/temperature sensor is factory calibrated and ready to use out of the box. Ideal to use in an indoor or outdoor facility that is away from the main building. A 12VDC power supply is required for the operation. It's wireless long-range signal makes it ideal for a pool house, farmhouse, etc.

WLRI-S23

Monitor electrical conductivity, soil temperature and moisture all with a three-in-one sensor to ensure best nutrient absorption by plant

Wireless Soil Moisture/Temperature/ Electrical Conductivity Sensor

This sensor can be used for monitoring soil moisture levels and soil temperature values in precision farming and environmental monitoring applications. It provides the data required for cost-efficient irrigation, crop yield optimization and protection of our natural resources. It is designed to work in any type of soil. It consumes less electricity and has a 5TE interface. It is ideal for solar-powered remote applications.

WLRC-S34

Monitor the overall power through current meters

Wireless 1-Phase Current Meter with 1x 150A Clamp-On

This commercial-grade current meter can be used to monitor the usage of electric current by any equipment whether it is single-phase or three-phase.The device comes in a sealed box making it moisture-proof and withstands extreme conditions. This device can be installed on any metal surface as it comes with a built-in magnet. The core of this sensor that goes around the live wires can be opened and they are easy to install on an existing set-up. These monitors can also help in predictive maintenance of any equipment and ideal if used for residential purposes.

WLRC-M1150

Wireless 3-Phase Current Meter with 3x 150A Clamp-On

This commercial-grade current meter can be used to monitor the usage of electric current whether it is single-phase or three-phase.The device comes in a sealed box making it moisture-proof and withstands extreme conditions. This device can be installed on any metal surface as it comes with a built-in magnet. The core of this sensor that goes around the live wires can be opened and they are easy to install on an existing set-up. These monitors can also help in predictive maintenance of any equipment and are ideal in a commercial set-up. They help monitor the overall power usage and also make sure that fans and motors run efficiently.

WLRC-M3150

Monitor water leaks in grow rooms and water storage areas

Wireless Water Leak Detector with Rope Sensor

This sensor helps detect water leak detection accurately and sends out notifications immediately. Supervised online/offline status and battery monitoring ensures the readiness of the product when it occurs. Water detection rope can be extended up to 300m (1000ft) for monitoring larger rooms.

WLRC-D14

Wireless Siren

This wireless annunciator can be used with any Watch*NET* IoT device to generate a siren, which can be triggered by a condition/event on another device. This device has high powered speakers and LED lights, and definitely gets the attention of the personnel around. Multiple alert tones can be assigned to different alarm conditions.

WLRI-SR1

Wireless LoRa Valve Keeper

This commercial-grade current meter can be used to monitor the current usage of any equipment whether it is single-phase or three-phase.The device comes in a sealed box making it moisture-proof which helps it withstand extreme weather conditions. This device can be installed on any metal surface as it comes with a built-in magnet. The core of this sensor that goes around the live wires can be opened and they are easy to install on an existing set-up. These monitors can also help in predictive maintenance of any equipment.

WLRI-V11

Generic Architecture of WIRELESS Smart Farming

Multifunctional I/O
AC / DC Motor Controller

FERTIGATION

Exhaust

Shelter System Control

Smart Valve Relay

pH Sensor
Soil Moisture
Temperature / Humidity
Lighting
NPK Sensor
Automation Controller
Water Leakage
Water Tank Level

LoRa
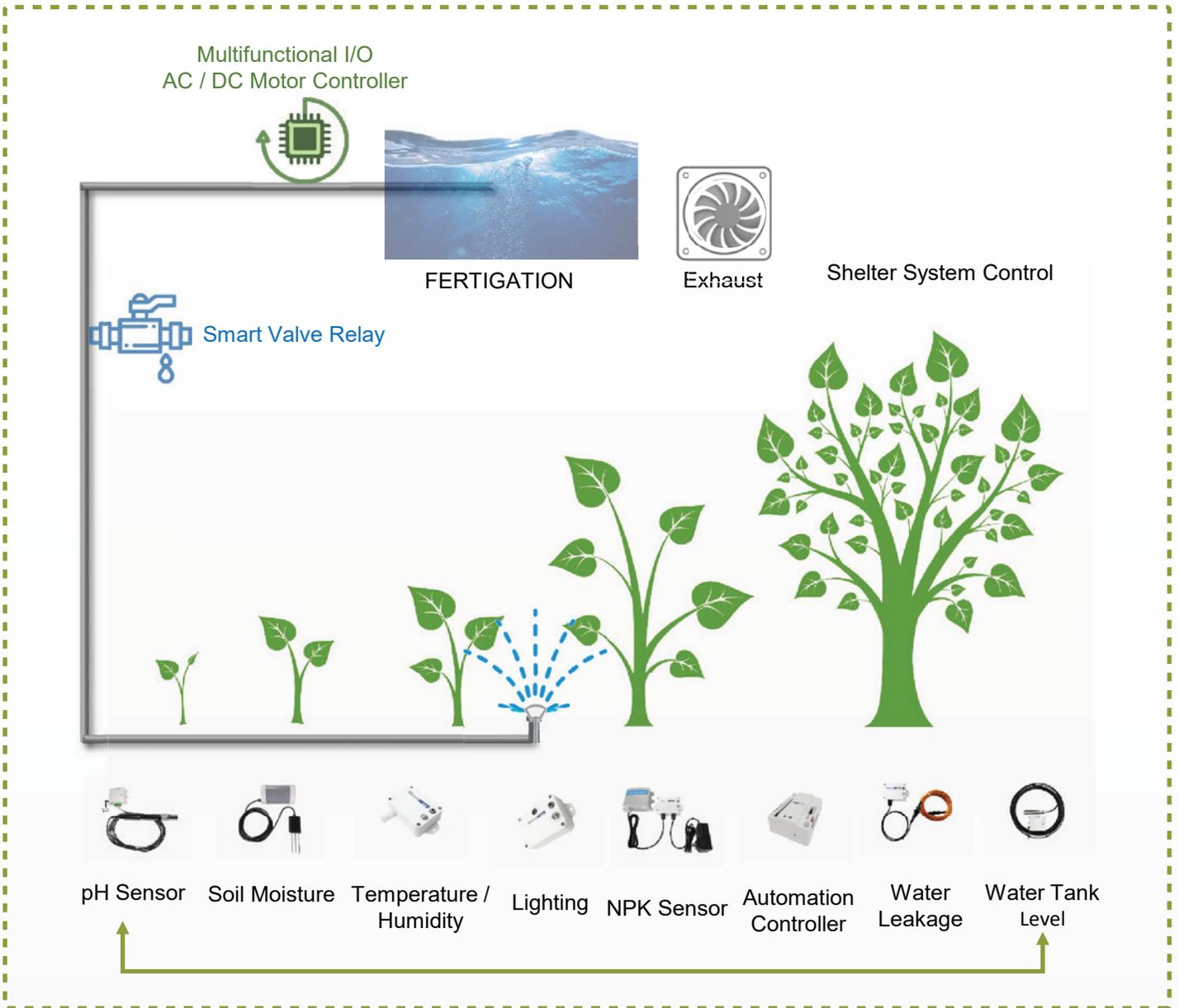
WIRELESS GATEWAY

IoT DATA ENGINE

SMART FARMING ANALYSIS Dashboard

Smart Agriculture Benefits

Increased Production

Data Security

Predictive Analysis

Remote Access & Control

Cost Saving

Energy & Water Conservation

Smart Agriculture

Real Time Visibility

Optimize Farm Operations

Smart Agriculture Sensors

Wireless Soil Moisture	Wireless Water Leak Detector with Rope
WLRC-S22	WLRC-D14

CO_2 / Temperature / Humidity	Wireless Light Sensor
WLRI-S41	WLRC-S20

Wireless 3-Phase Current Meter with 3x 150A Clamp-On	Wireless Soil Moisture/ Temperature/ Electrical Conductivity Sensor
WLRC-M3150	WLRC-S34

Wireless Temperature & Humidity Sensor For Low Temperature	1-Phase Current Meter with 1x 150A Clamp-On
WLRC-S17	WLRC-M1150

Wireless pH Sensor	Wireless LoRa Valve Keeper
WLRI-S23	WLRI-V11

Wireless Siren	
WLRI-SR1	

Gateways

Watch*NET* IoT gateways are one of the smart and intelligent devices within our IoT ecosystem.

It collects data from devices that do edge-based processing and then sends it to the cloud for storage, display and analytics.

This gateway works as a stand-alone controller to link devices connected to it and triggers actions accordingly to input logic to output devices. Basic or complex rules can be set on this gateway that can work in an online or offline state within the network.

• Edge-based data processing
• LAN, WAN and connectivity
• Low Bandwidth consumption
• Built-in Wi-Fi Gateway

Wireless Smart IoT Gateway

This intelligent smart gateway provides cloud connection and control of devices connected. Supporting multiple technologies for communication such as LAN and WiFi makes this gateway deployment easy in any building. Easy installation and configuration make it ideal for small or large projects of environmental monitoring and control. The built-in powerful antenna is capable of receiving long-range signals.

WLRI-G11

Mini Smart Gateway

This small form factor smart gateway provides cloud connection and local control of devices connected to it. It is economical, easy to install and its configuration makes it ideal for small projects of environmental monitoring. The built-in powerful antenna is capable of receiving long-range signals.

WLRI-G12

Watch*NET* IoT Cloud Software & Mobile APP

1. **Around-the-clock monitoring**
2. **Compatible with over 100 of sensors & devices (LoRa & NB-IoT)**
3. **Real-time status update**
4. **Instant alerts and notifications**
5. **Customizable Dashboard & Floor Layouts with Quick Data Visualization**
6. **Manage data from one platform**
7. **Intuitive report with accurate historical records**
8. **Powerful eMAP - Data visualization with actionable decisions**
9. **Enhanced data logging**
10. **Impressive web-based interface and mobile APP**
11. **Powerful offline linkage feature enables the devices to act in critical scenarios, even if the gateway is not connected to the internet**
12. **Intelligent analytical engine can provide smart suggestions and warnings**

WatchNET®
SECURITY SINCE 2000

20
YEARS

WatchNET IoT Industry Solution

Products of Watch*NET* are Certified with:

CE FC UL

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