

SMART SECURITY & STREET LIGHT DISASTER PREVENTION SYSTEM

 **NDT ENGINEERING & AEROSPACE CO., LTD.**



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 **NDT ENGINEERING & AEROSPACE CO., LTD.**

NDT ENGINEERING & AEROSPACE CO., LTD.

is a manufacturing company for nondestructive testing system, aviation & automobile parts, eco-friendly energy system and LSAW pipe facilities. With many years of experience and know-how, we have made customer's satisfaction by offering the best product and service.

Eco-friendly energy business group produce energy control device regarding capacitor charging & discharging unit, solar & wind mill power amplifier and PTC carbon heating film.

We also produces waste management system such as industrial waste burner & boiler with steam generator and industrial dryer system.



1990's **1991** • Established NDT Engineering & Aerospace Co., Ltd.

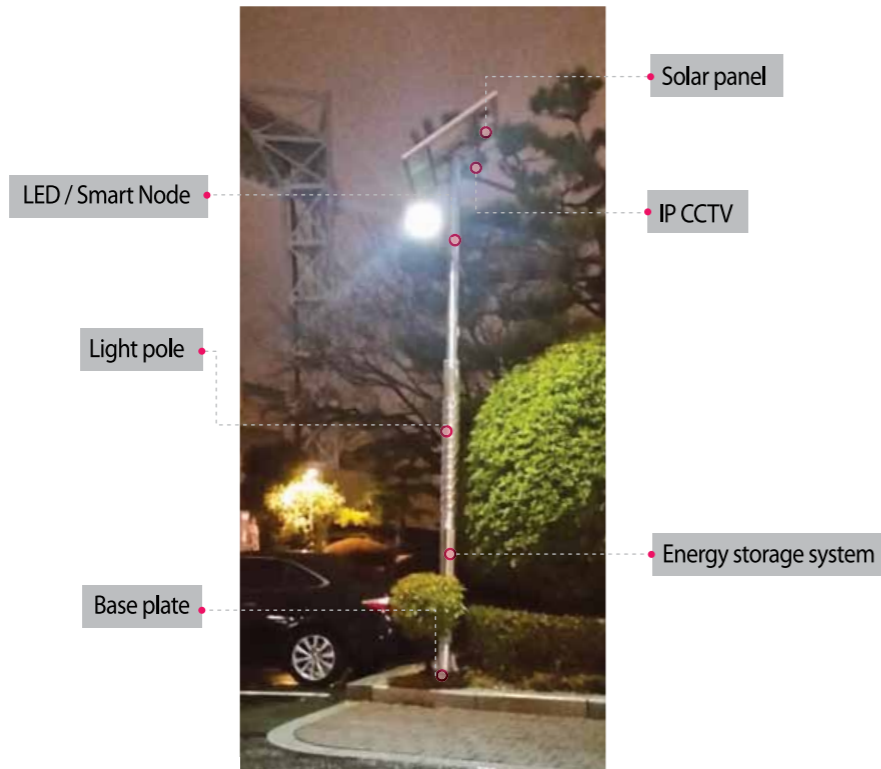
- 2000's**
- **2002** • Changwon factory construction, Extended FA business field
 - **2004** • ISO 9001 / 2000 certification
 - **2005** • Extended research institute
 - **2006** • Extended aviation / defense business field / Venture business certification
 - **2007** • AS 9100 / 2004 certification, ISO 14001 / 2004 certification
 - **2008** • Extended Masan Bongam factory, INNO_BIZ certification
 - **2009** • Extended automobile business field

- 2010's**
- **2010** • Extended aviation assembly business field
 - **2011** • Extended GoodHEAT business field, Extended Masan Bongam No.2 factor
 - **2012** • Expanded ECO Friendly business field
 - **2015** • 10 Million US dollar export memorial Award by KITA
 - **2016** • Jangyoungsil International Science Culture Prize

Solar security and street LED lighting

Solar security and street LED lighting

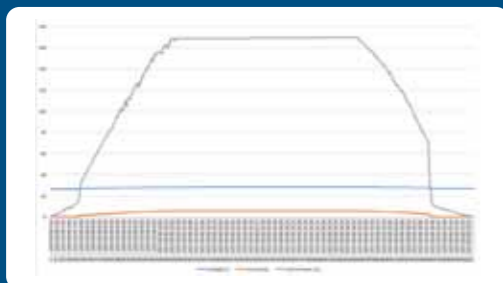
- No need external power – Micro ESS with Solar
- No influence against weather condition
- Strong against external damage – ESS in pole
- Long life ESS by using super capacitor+LiFePO4 battery



- Fast charging with high efficiency
- Charging to super capacitor and LiFePO4 battery
- LED light control

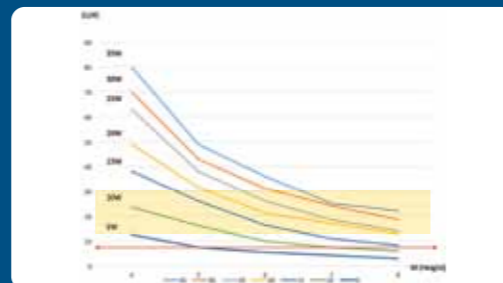
Developed the charging and discharging unit that amplifies solar energy more than 20% compared to direct charge by optimizing solar power. The charging and discharging system can be changed the setting parameter by using internal microcomputer.

Solar energy storage data by using 280W panel + Super capacitor + LiFePO4 battery



- Weather : Fine
- Average Temp : 3.5°C
- Charging Amount : 1255Wh
- Cloud : 0
- Max current : 5.977A
- 4.482 Times of 280W

Illuminance value of 43W LED security light in Lux

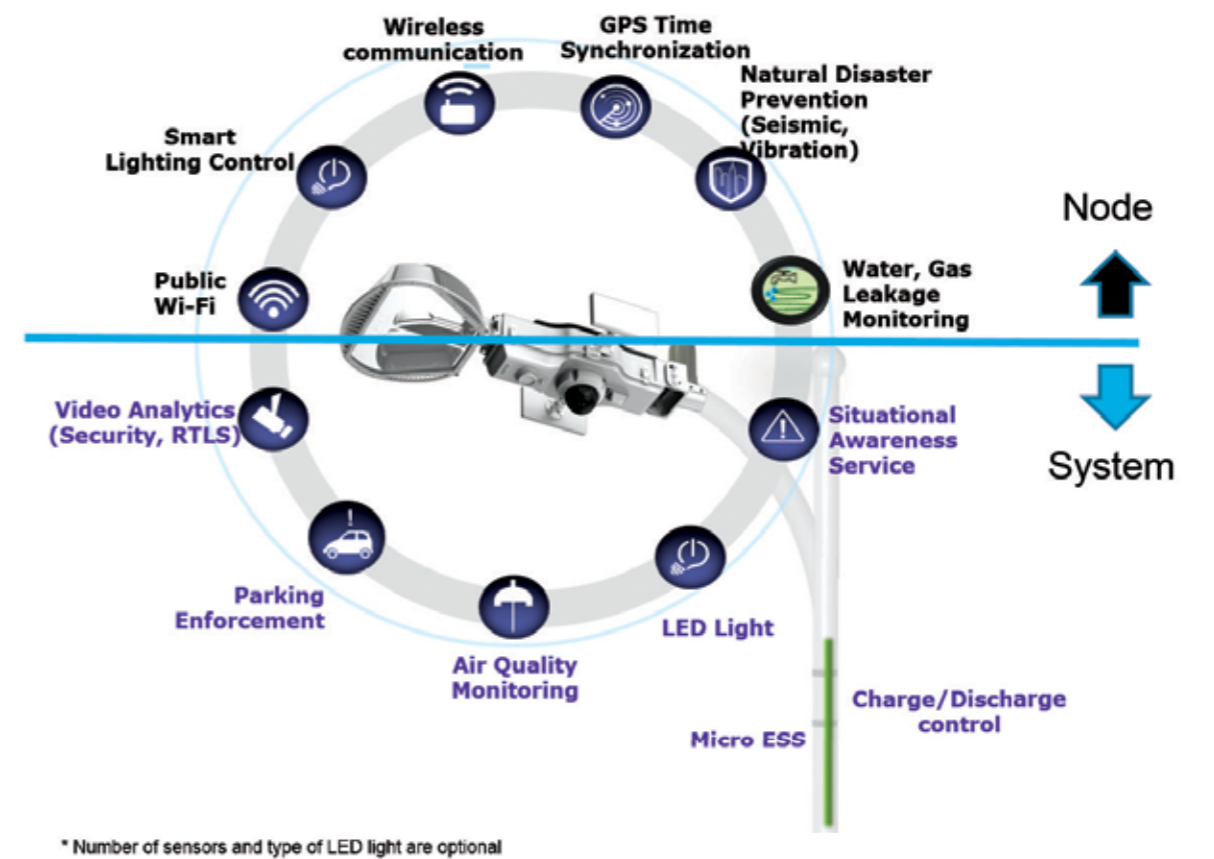
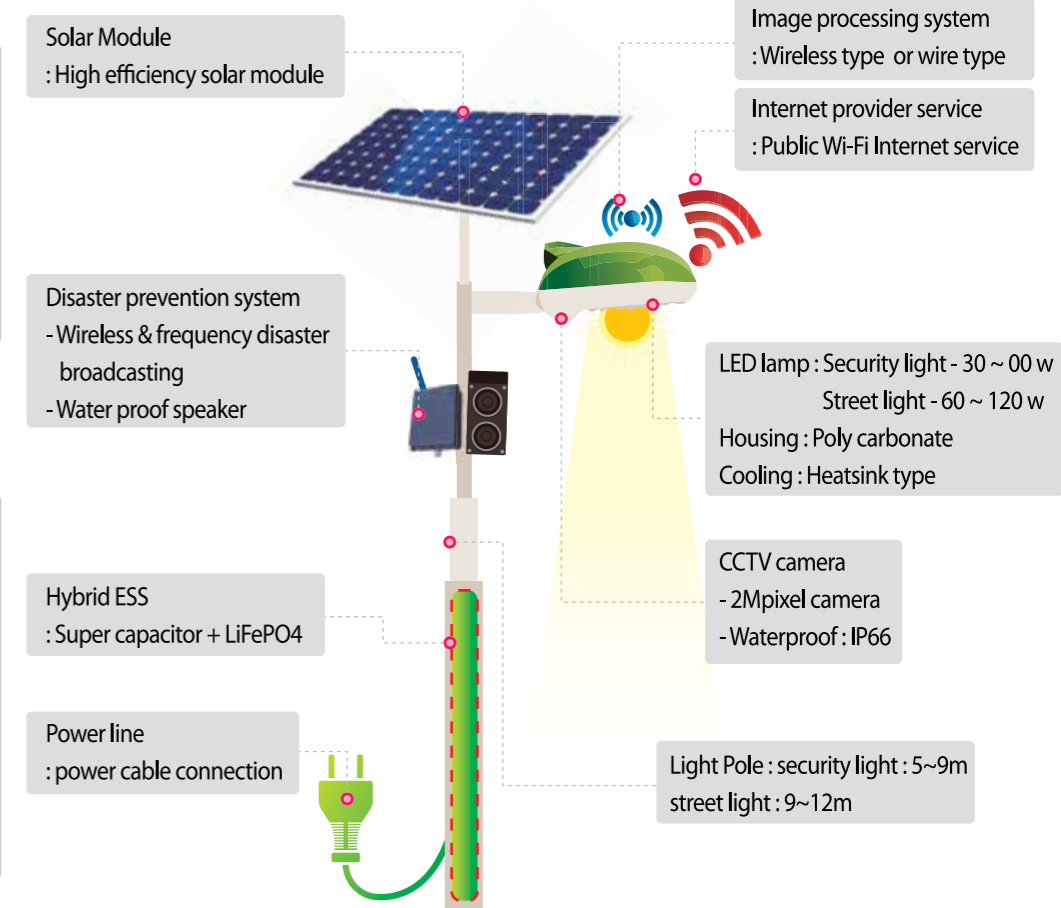


- *Requirement of Security light : 15~30 Lux/4m
- Normal illumination value of LED security and street lighting : 15 ~ 30Lux
- Minimum allowable illumination of value more than 5Lux

Smart Node System

Build the smart city infrastructure from "Smart Node" on the street and security light !

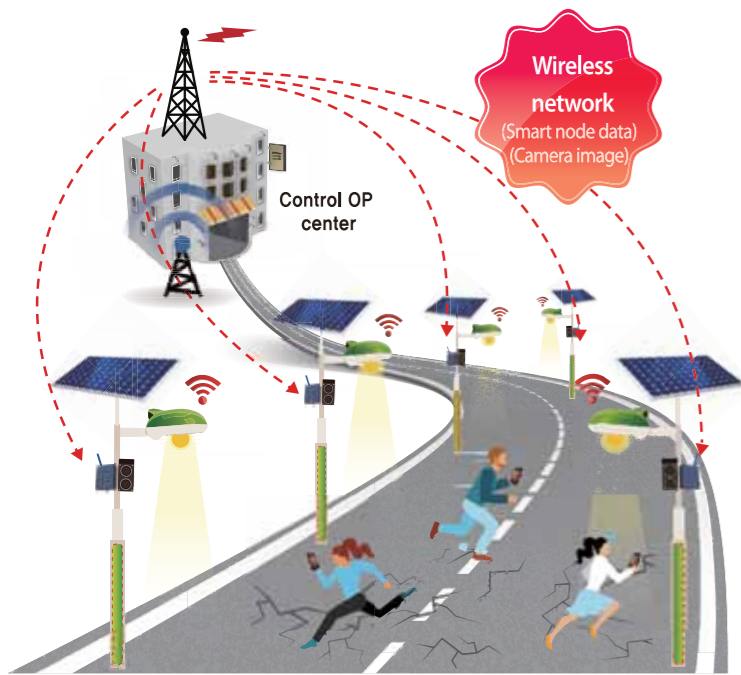
- ### Feature of system
- Standard DC based Smart LED Controller
 - Video analytics by IP camera
 - Transforms LED Fixture into IoT node with wireless communications
 - Emergency & Environments monitoring
 - Emergency warning service
- ### Advantage of solution
- Traffic monitoring
 - Road security service
 - Self-contained edge control device with expansion capability for a variety of Smart City Platforms
 - Very small power consumption - Less than 1kWh/24hrs
 - Security by design (PUF*)
- *Physically Unclonable Function



Platform of smart security light, Wi-Fi

Platform of smart security & street light system

Wi-Fi world in public place / ISP business



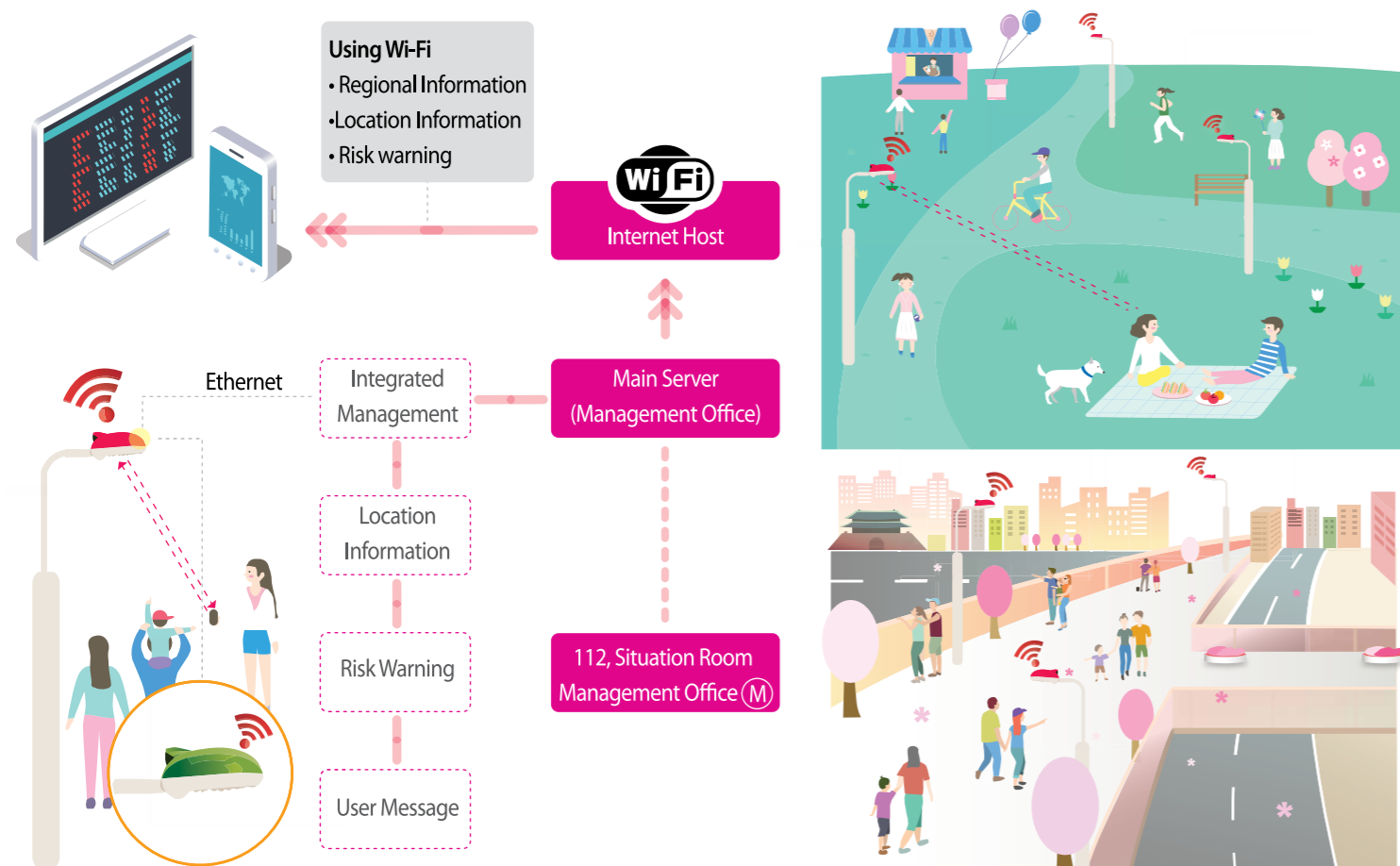
Control Op. center



CCTV image Analysis / Smart Parking Service / Crime Prevention

Wi-Fi world in public place / ISP business

- Develop tourist industries – outside Wi-Fi in public and tour place
- Supply free Wi-Fi to citizen – combined with advertisers and internet content service operator



Disaster prevention system

Disaster prevention system

Features of system

- Disaster broadcasting using wireless network(IP AMP) / frequency(Radio) transmission device
- Transmission to CCTV image & message
- Various services available (Music service, Announce service, etc)
- Warning broadcasting (Natural disaster + Social disaster)

Utilization of disaster prevention



Disaster prevention system

Real-time information on disaster situation



Platform of disaster prevention system

