Future is this

HALONIX

SMART
LIGHTING
SOLUTIONS

SMART & CONNECTED

w.e.f January 2023
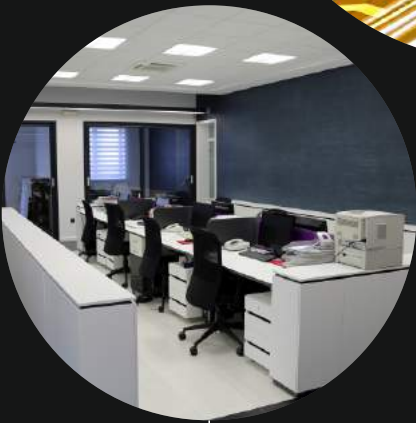
About Halonix

Halonix Technologies Pvt Ltd is amongst India' fastest growing electrical company. It caters to both retail and institutional buyers with its innovative, economical and smart-tech offerings across Lighting, Fans and Smart/IOT Products. The company has been a forerunner in the development of energy-efficient lighting solutions in various segments like PSU's, Government, Railways, Airports, NHAIs, Manufacturing Industries, IT/ITES, Corporates, Hospitality and Healthcare. With the credo of Make in India and Made for India, Halonix's success has been built on its unparalleled ability to develop, validate and deploy solutions that are relevant and suitable for Indian conditions. Because of its relentless key focus on innovation across the product range, the brand is widely accepted by end customers & business influencers like architects & electrical consultants throughout India.

Halonix is one of the few companies in India with a fully accredited NABL self-certified laboratory and state-of-the-art R&D laboratory within its manufacturing plant, allowing its dedicated R&D and design teams to push the envelope and develop cutting-edge products tailor -made for Indian consumers. The company has state-of-the-art manufacturing facilities and has been accredited with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 certifications. It is also the first company to set up a pan-India dedicated service network for lighting to cater to the need of retail and institutional segments. Its wide distribution network comprising of over 800 dealers & distributors and 20 depots ensures that its products are made available across the length and breadth of a country.

Spearheading the technological revolution, Halonix is one of the top 5 brands in the lighting industry. Halonix has continuously driven relevant technological innovations such as DJ Speaker bulb, Air Purifier Ionizer bulb, Plug & Play Fire Alarm, Smart Wi-Fi Plug, Motion sensor bulb, multi- wattages in one product solutions, RF wireless based Smart Lighting, Bluetooth based solution, Architectural Lighting, Facade Lighting to its product portfolio with an in-house product design and development team.

Halonix has also launched innovative products in the Fans segment by combining innovation and user-centric design to create greater value for its customers. Some path breaking innovations include Morpheus - India's first retractable blade chandelier fan, Halo - a novel design IOT fan, Cuboid - a low ceiling lighting and fan solution and Smart IOT Fan Kit amongst others.
Halonix has launched a range of wifi security cameras under its sub- brand Halonix Shield, amongst its security camera products is India' first totally wireless security camera with in- built battery that lasts upto 30 days.

Pan-India After Sales
Service & Support

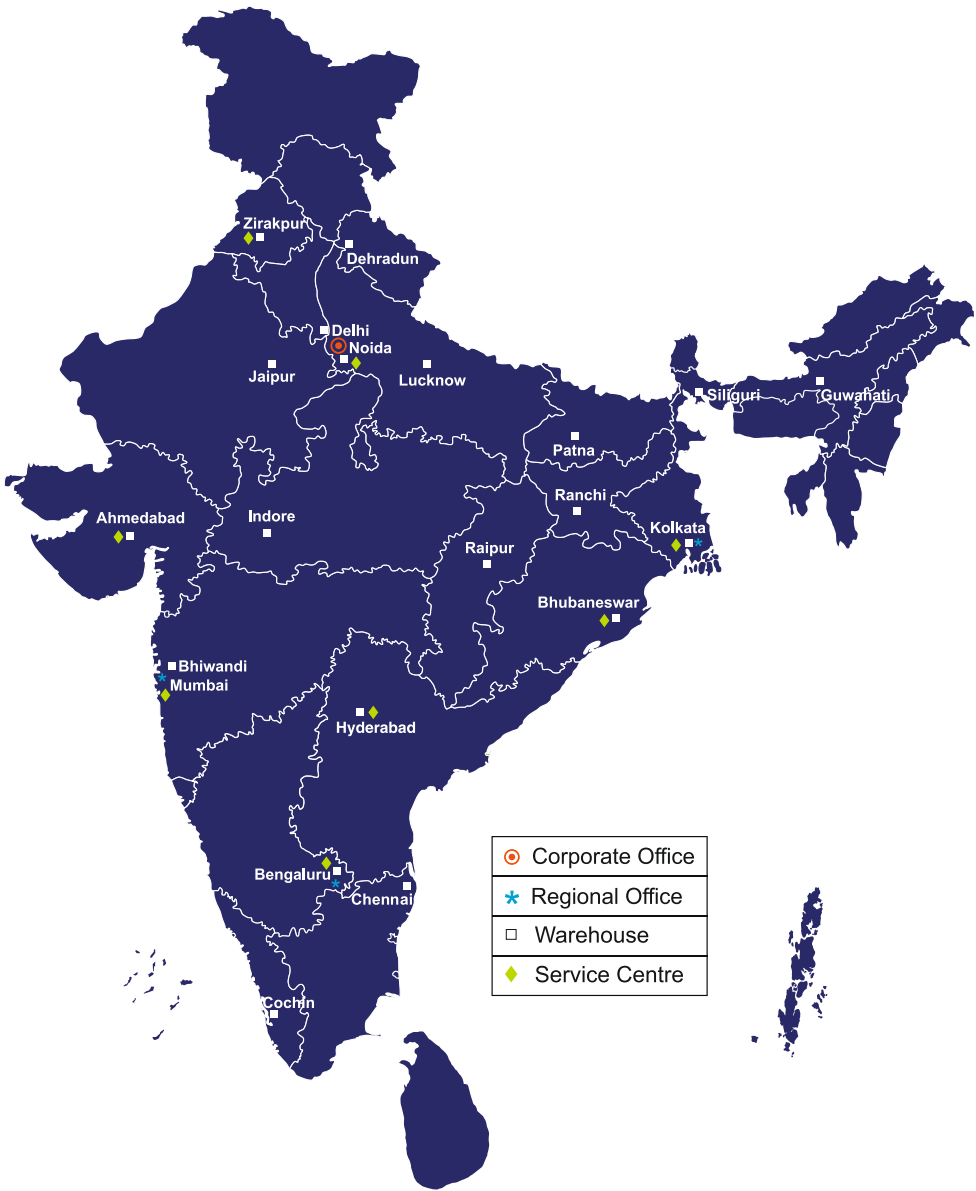Excellent Performance
With Best Quality LEDs

Certificate No : T-4106

NABL Accredited Lab At
Manufacturing Plant

LED Product Certified
Under Crs

Pan India Presence

⊙ Corporate Office
★ Regional Office
□ Warehouse
◆ Service Centre

Our Network

Corporate Office	: Noida
Regional Offices	: Bengaluru,Kolkata, Mumbai
Warehouses	: (North) Delhi,Dehradun, Jaipur, Lucknow, Noida, Zirakpur
	(East) Bhubaneswar, Guwahati, Siliguri, Kolkata, Patna, Ranchi
	(South) Bengaluru, Cochin, Chennai, Hyderabad,
	(West) Ahmedabad, Bhiwandi, Indore, Raipur,

Smart Lighting Solution

Lighting is the vital part of our life without it we unable to even predict the life. Lighting is a type of electromagnetic energy that enable our eyes to see the object and it can be natural or artificial light using many light sources like earlier days FTL's, CFL's, MH and now its Era of LED's.

By continuous improvement in lighting technologies we all are already moreover switch over to LED's that give is durability, longer life span, reliability, flexibility and more important piece of mind to forget the maintenance. Smart Lighting is the next step of lighting that provide similar benefit in addition of flexibility to user of saving more energy, accessing, controlling and monitoring of individual light or groups of lights, protection against theft & failure if any and to troubleshoot within period of time along with flexibility of playing with light fitting to improve the space aesthetic without compromising the safety and security.

We Halonix running for "better to Excel" in providing of smart lighting solution to our user by adopting and incorporating intelligence within the light luminaires by using advance electronic control system with wireless communication technologies. we are serving our nation to provide design, made in India technologies based smart lighting product solution while providing safety and security at the same time. We also come out with many smart solution for Indoor and Outdoor lighting application those having inbuilt battery back up to illuminate the area in case of power off or auto pre-programmable RTC based dimming to save more energy without compromising the optimum illumination level.

ASSET MONITORING

DIMMING

TIME BASED SCHEDULING

SENSOR BASED INTERFACE

LUMINAIRE BURN HOURS

REPORTING GENERATION

DASHBOARD

ENERGY MONITORING
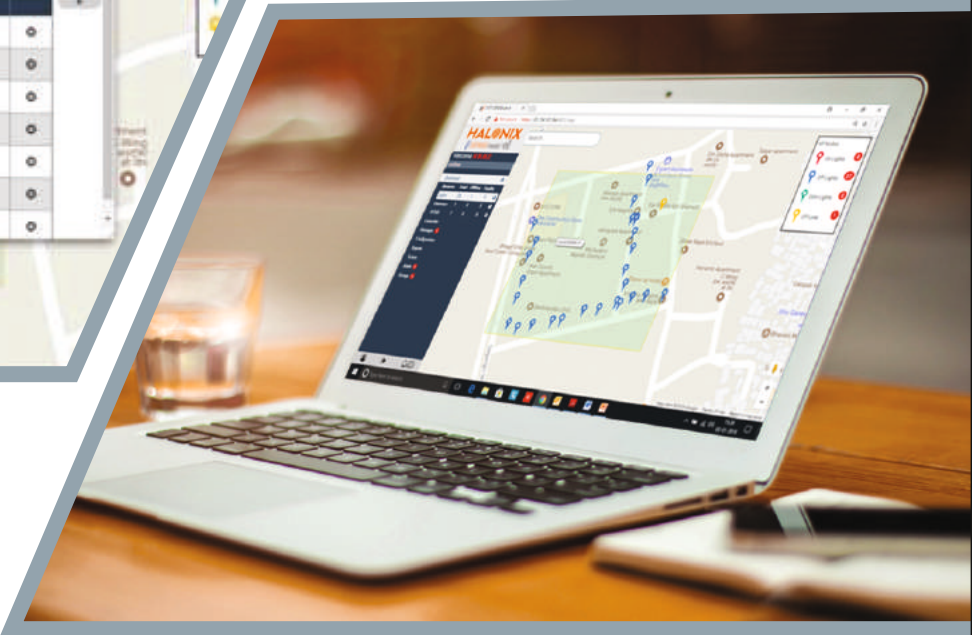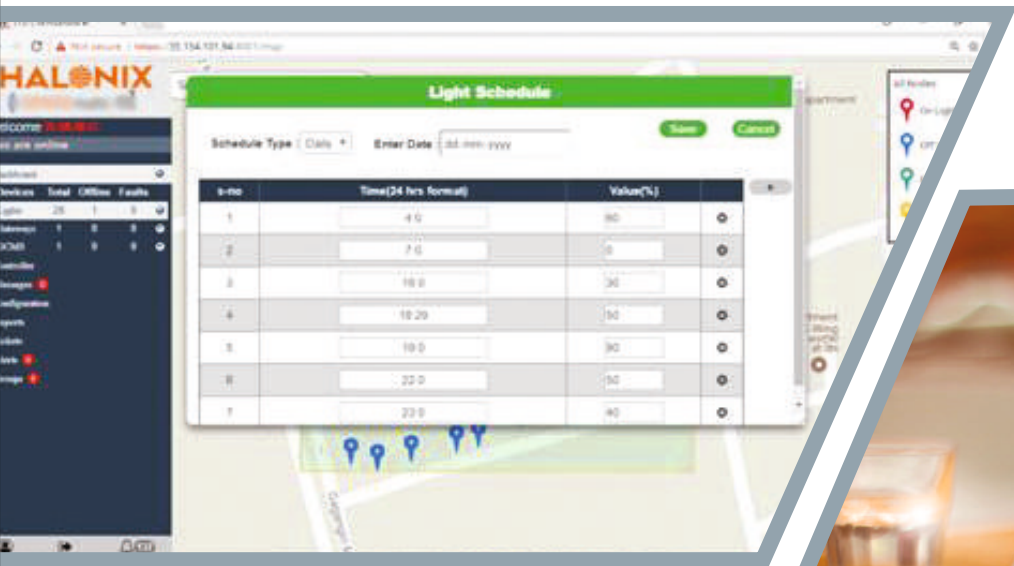
LOCATION MAPPING

ALERTS & ALARMS

System Architecture

Halonix is providing smart lighting solution in such a way that an user can control and monitor individual or group of lights remotely & wirelessly via mobile or desktop with respect to its actual installation site.

Each Individual light communicating to each other over free band RF frequency and forming the strong MESH network. The RF Mesh forming in such a way to avoid communication breakage nodes to nodes hence it's minimize the data losses aside due to higher data rate multiple sensors like Pollution, environment, noise, light and many more can be integrated with this same control system.

This system gives flexibility and scalability to user as administrator to add/delete/update users with different control zones accessing and maintenance rights.

Smart Street Lighting Solution with Group & Individual Control & Monitoring

Halonix is providing Smart street light solution to various users with respect to their need and application and completely customized the solution to make it more user friendly. Smart street light solution can work over RF (Sub-GHz/Zig Bee Mesh/LoRA) I GPRS I GSM I PLC technologies. this system enable communication between street light using RF Transceiver module by creating RF Mesh network based on IEEE 802..15.4 Protocol supporting long range using multiple hopping with secured communication with industry accepted 128-bit AES encryption security.

Smart street lighting solution can be classified in following types based on Control and monitoring methodology.
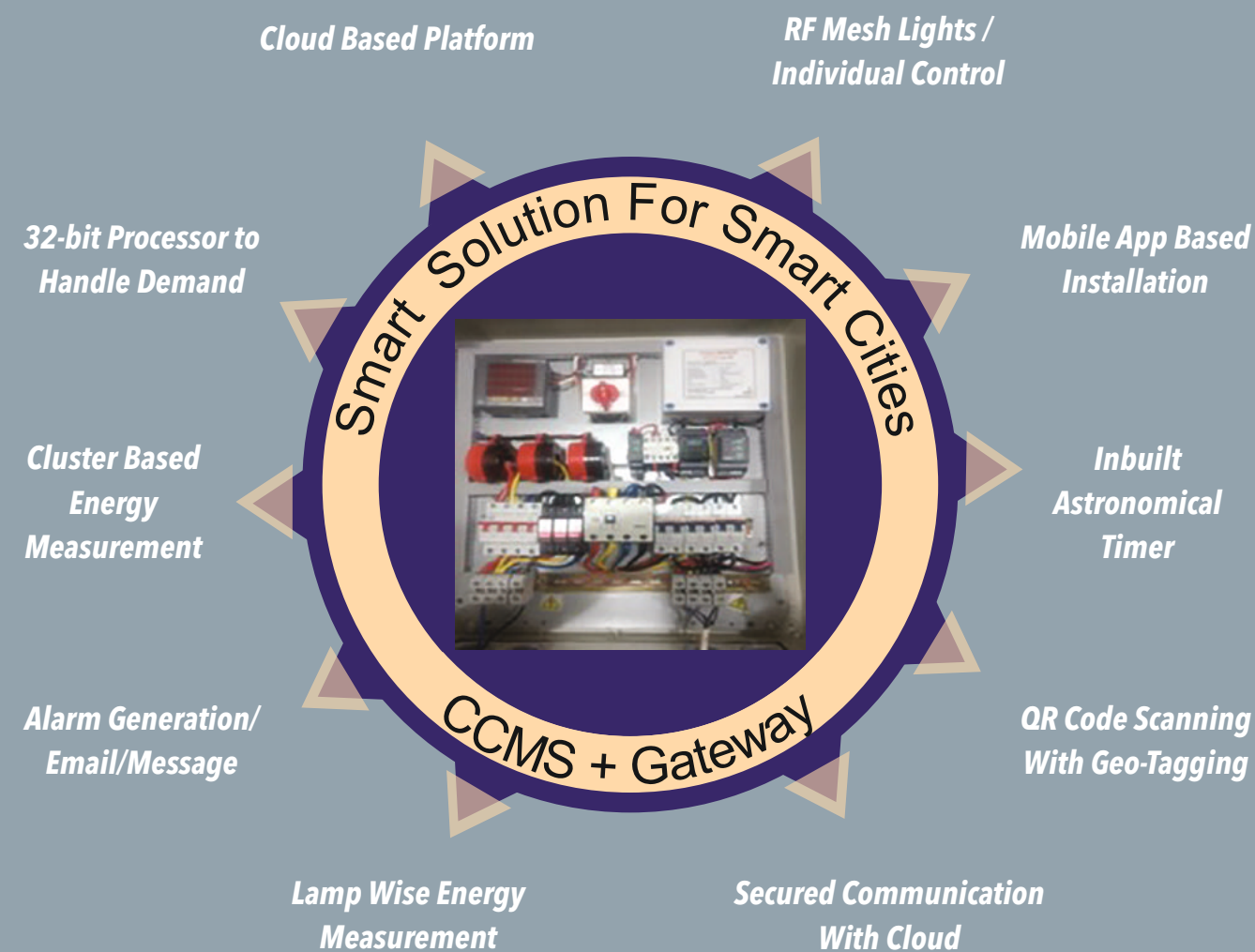
Group Controlling And Monitoring

Group Controlling and monitoring enable user to monitoring of all electrical parameters over single or three phase power system with fault alerts based on defined parameters for over/Under voltage, low load, high load, power off , system fault and many more. This is independent unit and can be used for existing or new street light network and work over GSM technology for remotely access.

This system is like one of smart feeder panel made of CRCA duly powder coated sheet contain fuses,Contactors, MCCB, MCB, multi-function energy meter , smart GSM based IOT device and many more components. This smart system can be known as CCMS – Central control and monitoring System" .

Halonix's CCMS system can be utilize as per customer specific requirements and classified in following application:

▶ CCMS System for group control and monitoring.
▶ CCMS System for group control and monitoring with group dimming of street lights.
▶ CCMS System for group control and monitoring with group dimming of street lights with individual fault.

Cloud Based Platform

**RF Mesh Lights /
Individual Control**

**32-bit Processor to
Handle Demand**

**Mobile App Based
Installation**

Smart Solution For Smart Cities

CCMS + Gateway

**Cluster Based
Energy
Measurement**

**Inbuilt
Astronomical
Timer**

**Alarm Generation/
Email/Message**

**QR Code Scanning
With Geo-Tagging**

**Lamp Wise Energy
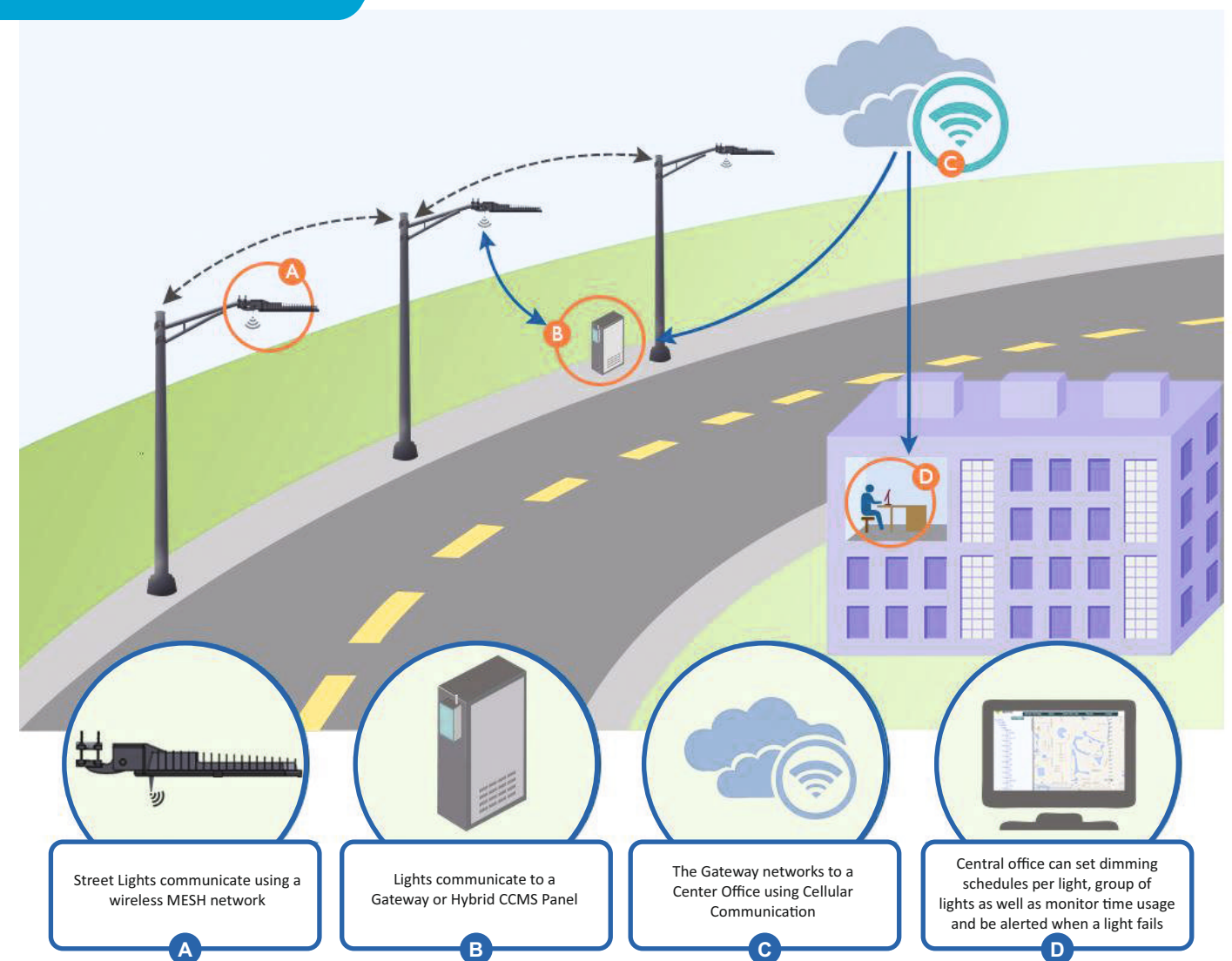Measurement**

**Secured Communication
With Cloud**

Individual Street Light Control & Monitoring

This individual control and monitoring of street light works in similar manner as explain in CCMS system however only difference here each street light having inbuilt or external RF controller (duly in IP65 Box with mounting accessories or with NEMA adaptor & Socket) which communicate to each street light and form the MESH or Star network based on type of RF controller used with LED Street Light. By adopting multiple hopping its cover long distance and multiple data can be transfer. User can control and monitor group of light or individual light remotely using android app based software and complete data storage over cloud.

This communication is dual way communication and will let enable user to know whether given any command accepted or executed by group of light or any specific light pole.

How It Works

A

B

C

D

Street Lights communicate using a wireless MESH network
A

Lights communicate to a Gateway or Hybrid CCMS Panel
B

The Gateway networks to a Center Office using Cellular Communication
C

Central office can set dimming schedules per light, group of lights as well as monitor time usage and be alerted when a light fails
D

TECHNICAL SPECIFICATIONS - Smart Street Lighting System

PARAMETER	SMART STREET LIGHT
Wattage (W)	45/60/90/100/120/150/170/200/240/270/300
LED Used	LM80 certified LED
Housing	Aluminium PDC with embossed/engraved of brand
Front Cover	Clear toughened glass
Lens	Suitable high efficient secondary lens
Lumen Maintenance	50000 hours @ L70
Control Gear	Isolated Electronic CC driver with PWM/Analog Dimming Control
Internal Wiring	Insulated Cu wire
Hardware	SS & MS Zinc plated and passivated
Ingress Protection	IP66
Lumen Efficacy	≥ 100lm/w
Rated Voltage	230V AC 50 Hz
Operating Temperature	-10°C - 50°C
Power Factor (at rated power)	>0.9
THD (at rated power)	≤ 10%
CCT	5700K±500K
CRI	≥70
Mounting Bracket	Suitable upto 60mm mounting
Surge Protection Device	10KV
Standard	IS10322, LM79
Application	Street/Roadways Lighting
	Smart Cities Project
	Municipal Corporations/Municipalities/
	Development Authorities
	MLA/MP Projects, Industries, Institutional
	CSR Projects
	Street Circles and Pathways
	Industries

*Customized specification based smart lighting solution also available as per demand

Technical Specifications - Hybrid Central Control & Monitoring Feeder Panel (CCMS)

PARAMETER	HYBRID CCMS SPECIFICATIONS
Integrated Hybrid RTU	In-built power supply, GPRS, Ethernet, RF for server communication, inbuilt Battery to power up IOT Gateway.
Input voltage	9 VDC (415V AC to DC Converter provided as separate module)
Power Consumption	<10W
Electrical safety	Galvanic isolation between high-voltage and low-voltage terminals.
Operating conditions	-20°C to +55°C operating.
Antenna	External IP Protected top mounted Antenna for GPRS & RF Communication
Additional Interfaces	RS485
	RS232 (RJ11)
	Relay Out- 3
	Digital Input- 3
	Analog Input- 2
Battery Backup	Upto 24 Hrs. For IOT Device
Server Communication	GPRS
Network Security	TLS 1.2
	AES128/192/256
Protocol	MQTT/HHTPS for interaction with Halonix platform
CCMS Panel	Inbuilt Contactors, MCB's MCCB.s , rotary switch and other components
Server Communication	GPRS, Ethernet, Optical fiber Ethernet
Network security	AES 128/256 Mesh, TLS 1.2 for interaction with platform.
Communication Type	RF Mesh Network
IoT Gateway to Device ratio	1:70 with clear line of sight

*Customized specification based smart lighting solution also available as per demand

Note:
- Inbuilt/External RF Control System for Individual Control & Monitoring.
- PLC based step dimming with control and monitoring.
- Customized specification based smart lighting solution also available as per demand.
- Customized CCT CW/NW/WW colour available on request.
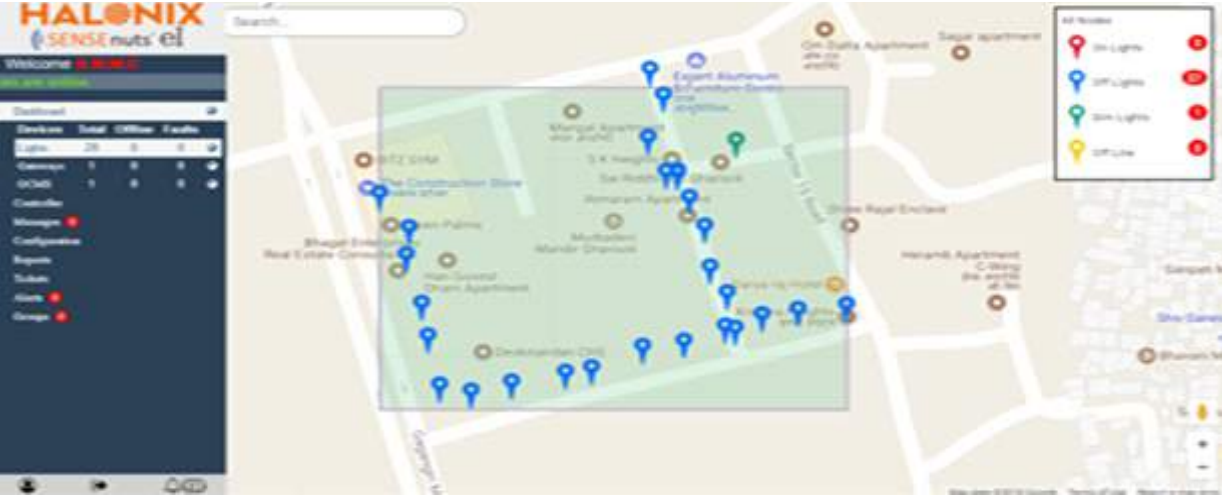-Hybrid central control & monitoring feeder panel (CCMS)
-RF Controller
-Software

Technical Specifications - RF Controller

PARAMETER	RF Controller (external/ Inbuilt interconnected with each LED Luminaires- for Wireless ON/OFF/Dimming & Individual Fault
Input Voltage	90 to 440V AC
Power Consumption	<1.5W
Dimming Control	Analog Dimming
Surge Protection	6KA max in differential mode + 10KV External
Max Load	Suitable upto max 500W LED Load
Electrical safety	Galvanic isolation between high-voltage and low-voltage terminals, Short Circuit protection, Open Circuit protection etc.
Operating Conditions	-10 °C to +55 °C operating -20 °C to +75 °C storage
Energy Measurement	24bit Analog Front-end
Wireless Communication	Self-healing, self-forming RF Mesh Protocol
Frequency Band	based on IEEE 802.15.4 standard ISM band (2.4GHz) or 865-867 MHz
Transmit Power	-32 to 10dBm or -32 to 22dBm (special case)
Data Rate	250 kbps
Network Security	Multi-layer security AES128/192/256
Mounting	Inbuilt within luminaire of External connected with IP65 mounting structure

*Customized specification based smart lighting solution also available as per demand

Software Application for remotely accessing of smart lighting system

Halonix HSMART "Sensenuts EI " software application run over mobile and desktop both and suitable to control & monitor of limitless led luminaires & controller. It is having following below major features required for smart led street lighting system over figure tips. All the data coming from the CCMS feeder panels can be monitor using Web application. This platform is capable to manage the data traffic coming from all these field devices. Web application can be accessed from a web browser using a desktop / laptop connected to internet.-
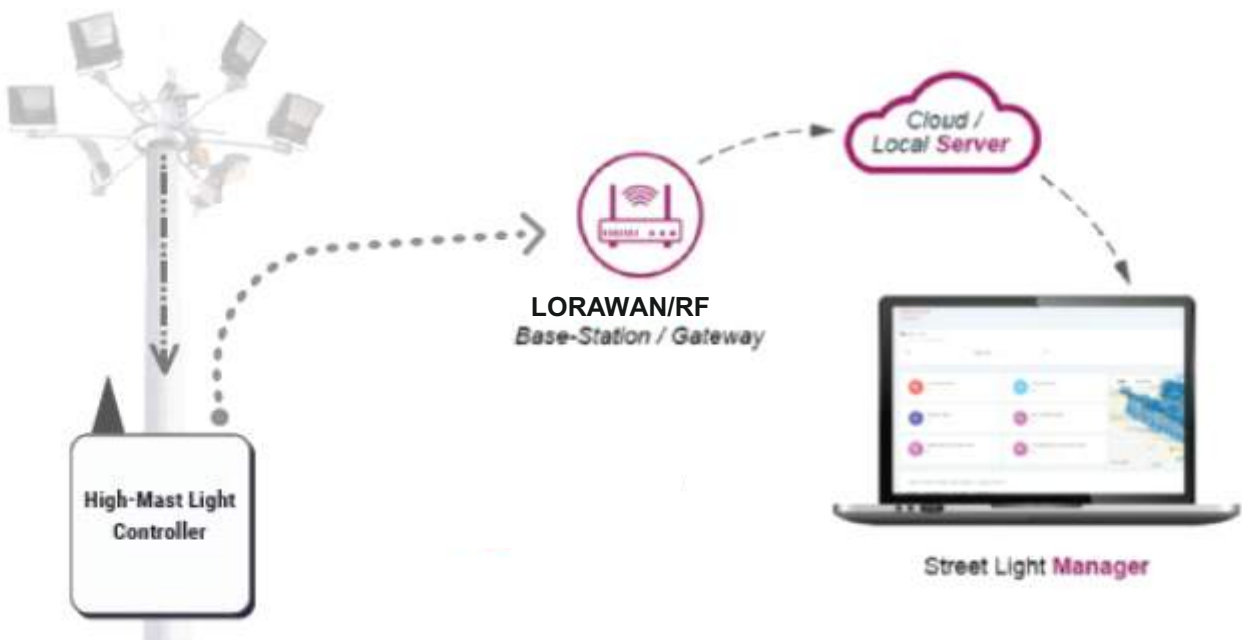

Key Features

- Smart ON/OFF and dimming - Reduces power consumption due to automation of lights
- Automatic street light control throughout the year on basis of precise sunrise and sunset time
- User friendly processing and handling - More interactive and responsive system
- Dashboard & Analytics - Single window to complete & getting relevant information
- Map View - Spontaneous representation of street lights over Google map with their live status
- Open Sensor Interface: Allow addition of a new sensor in the network
- Open API for third party integration
- Scheduled summary reports to the user/admin
- User defined zone controlling and monitoring
- Real time data to detect faults, theft or dead lamps-Driving customer satisfaction through increased service levels and reducing maintenance costs
- Solution can be customized as per client specific requirements

Smart High-Mast Lighting Solution With Group Dimming

Halonix's Smart High-Mast Light Controller Solution is designed to create an overarching digital control system that is based on the concept of IoT. Halonix's Smart High-mast Light controller provides a seamless integration option of installing external below to High-mast. This option provides better installation and serviceability for field technicians. This model can control lighting loads phase-wise Without comprising on functionality.

Key Features

▶ Remote ON/OFF

▶ Analog Dimming (1-10 V)

▶ LORAWAN/ R-F Communication

▶ Contactors Output

▶ IP 65 Rated

Technical Specifications - Hybrid High-Mast Controller

PARAMETER	Hybrid High-Mast Controller
Integrated Hybrid RTU	In-built power supply, GPRS, Ethernet, RF for server communication, inbuilt Battery to power up IOT Gateway.
Input voltage	9 VDC (415V AC to DC Converter provided as separate module)
Power Consumption	<10W
Operating conditions	-20°C to +55°C operating.
Antenna	External IP Protected top mounted Antenna for GPRS & RF Communication
Battery Backup	Upto 24 Hrs. For IOT Device
Network Security	TLS 1.2, AES128/192/256
Protocol	MQTT/HHTPS for interaction with Halonix platform
Control Panel	Inbuilt Contactors, MCB's MCCB.s , rotary switch and other components
Server Communication	GPRS, Ethernet, Optical fiber Ethernet
Communication Type	RF Mesh Network/ Star Network
IoT Gateway to Device ratio	1:24 upto 30meter height highmast
Dimming Control	Analog Dimming wireless
Electrical safety	Galvanic isolation between high-voltage and low-voltage terminals, Short Circuit protection, Open Circuit protection etc.
Frequency Band	ISM band (2.4GHz) or 865-867 MHz
Transmit Power	-32 to 10dBm or -32 to 22dBm (special case)
Data Rate	250 kbps
Network Security	Multi-layer security AES128/192/256
Mounting	External connected with IP65 mounting structure

*Customized specification based smart lighting solution also available as per demand

Smart Street Light & Flood Light With Auto On/Off & Dimming Based on LDR/RTC/IRSENSE TECHNOLOGY

Conventional street light need to turn ON/OFF by either human Being or with timer switch, Halonix Smart Street Light having inbuilt Auto ON/OFF features with flexibility of client of select the specific Technology like as RTC / LDR/ IRSense. These are independent street lights to each other and turn ON/OFF Automatically as per their inbuilt technological programming.

▶ 0-100% dimming customization Auto ON/OFF

▶ Auto ON OFF at specific time.

▶ Auto ON OFF based on RTC sun set and sun rise timing.

▶ Energy saving by dimming throughout the operation during night.

▶ No flickering during dimming at lower level.

▶ Uniform light distribution even at lower dimming to get optimum illumination level.

TECHNICAL SPECIFICATIONS

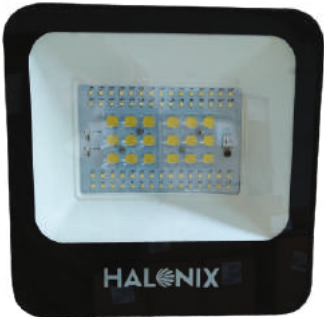| Sr. No.	Parameter	Street Light - LDR	Street Light-RTC / Street Light-IRSENSE	Flood Light IRSENSE RTC
1	Technology LED Used	LDR-Light Dependent Resistor	RTC- Real time Clock IRSense- Infrared radiation Sensing	
2	Auto ON/OFF)	Auto ON/OFF	RTC-Auto ON/OFF- 6PM-ON, 6AM-OFF IRSENSE- Auto ON/OFF Dusk to Dawn	
3	Dimming	NA	Pre-programmable Dimming**	
4	Wattage	30W/45W/60W/72W/80W	30W/45W/60W/72W/90W	60W/90W/100
5	LED Used	LM80 certified LED		
6	Housing	Aluminium PDC with embossed/engraved of Brand		
7	Front Cover	Clear toughened glass	Clear toughened glass	Clear toughened glass
8	Lense	Suitable high efficient secondary lens		
9	Lumen Maintenance	50,000 hours @ L70		
10	Control Gear	Isolated Electronic CC driver		
11	Hardware	SS & MS Zinc plated and passivated		
12	Ingress Protection	IP66		
13	Lumen Efficacy- at rated operating wattage	≥ 100lm/w	≥ 110lm/w	≥ 110lm/w
14	Rated Voltage	230V AC 50 Hz		
15	Operating Temperature	-10°C~ 50°C		
16	Power Factor	>0.9 at rated operating wattage		
17	THD(at rated power)	≤ 10% at rated operating wattage		
18	CCT	5700K to 6500 K		
19	CRI	≥70		
20	Mounting Bracket	Suitable for 40-60mm mounting	Suitable for 40-60mm mounting	U-clamp mounting
21	Surge Protection Device	External on Demand only		
22	Standard	IS10322, LM79		
23	Application	Street / Roadways Lighting. Municipal Corporations/ Municipalities/ Development Authorities. MLA/MP Projects. Industries, Institutional, Street Circles and pathways.		

*Customized specification based smart lighting solution also available as per demand
**Dimming with RTC based lights only and not with IRSENSE based product

Smart Street & Flood Light With Inbuilt Inverter Technology With auto On/Off & Dimming & Emergency Power Back-up

Halonix's smart Inverter series of street light bring revolution to street light application by providing 2-4 hours back up in case input grid power off. Inverter Street light comes with inbuilt Li-ion battery with smart RTC/IRSENSE based auto ON OFF Dimming features. Inverter series of street light bring following key features to user:

Key Features

▶ Inbuilt Battery to power up the street light in case input voltage off.

▶ Provide optimum illumination during input voltage off by auto switch over to min. 10W load over Battery.

▶ Provide 2-4 hours back up.

▶ Auto battery charging with inbuilt BMS system to protect the battery.

▶ Protection from over charging and battery deep discharging.

▶ Easy replacement of battery.

▶ Uniform light distribution.

▶ RTC/IR sense based auto ON/OFF & dimming

▶ Li-ion battery 3.7V 5.2AH comes with min. 500 life cycle with BIS Certification.

Technical Specifications - Inverter Street Light & Flood Light

PARAMETER	Inverter Street Light-RTC/IR SENSE	Inverter Flood Light-RTC/IR SENSE
Technology	RTC- Real time Clock	IRSense- Infrared radiation Sensing
Auto ON/OFF	RTC-Auto ON/OFF- 6PM-ON, 6AM-OFF	
Dimming	IRSENSE- Auto ON/OFF- Dusk to Dawn	
Wattage	Pre-programmable Dimming	
LED Used	30W/45W/60W/72W/90W 60W/90W/100W	
Housing	LM80 certified LED	
Front Cover	Aluminium PDC with embossed/engraved of Brand	
Lense	Clear toughened glass	
Inverter Load	Suitable high efficient secondary lens	
Lumen Maintenance	10W max or 1500 lm at Battery fully charged STC	
Control Gear	50,000 hours @ L70	
Hardware	Isolated Electronic CC driver with on board BMS	
Ingress Protection	SS & MS Zinc plated and passivated	
Lumen Efficacy- at rated	IP66	
operating wattage	≥ 110lm/w	
Battery Back-up	2 to 4 hours at Battery fully charged STC	
Dimming	Inbuilt pre-programmable dimming optional**	
Rated Voltage	230V AC 50 Hz	
Operating Temperature	-10℃~ 50℃	
Power Factor	>0.9 at rated operating wattage	
THD(at rated power)	≤ 10% at rated operating wattage	
CCT	5700K to 6500 K	
CRI	≥70	
Mounting Bracket	Suitable for 40-60mm mounting	
Surge Protection Device	External on Demand only	
Standard	IS10322, LM79	
Application	Street / Roadways Lighting	
	Municipal Corporations/ Municipalities/ Development Authorities MLA/MP Projects	
	Industries, Institutional, Street Circles and pathways	

*Customized specification based smart lighting solution also available as per demand
**Dimming with RTC based lights only and not with IRSENSE based product

Smart LED Street Light With Motion Sensor

Halonix Smart Street Light with inbuilt Motion Sensor based technology Gives more energy saving to user over LED Load consumption. The street light operate normally at 30% brightness and once any motion detected it Comes to 100% brightness for 2 minute and then again come down to 30% Brightness.

Key Features

▶ 50% Add on energy saving over LED Load.

▶ Movement identification within industries.

▶ Maintain optimum lighting level throughout night with energy saving.

▶ No add on sensor.

Dimming

Full brightness

Technical Specifications - LED Street Light With Motion Sensor

PARAMETER	LED STREET LIGHT WITH MOTION SENSOR
Technology	Motion sensor based dimming
Auto ON/OFF	NA
Motion Sensor Range	5-7 meter pole
Wattage	45W/72W/90W/100W/120W
LED Used	50,000 hours @ L70
Housing	Aluminium Die Cost
Front Cover	Clear toughened glass
Lense	Suitable high efficient secondary lens
Lumen Maintenance	50,000 hours @ L70
Control Gear	Isolated Electronic CC driver
Protection	Open & short circuit, surge protection
Hardware	SS & MS Zinc plated and passivated
Ingress Protection	IP66
Lumen Efficacy	≥ 110lm/w at rated operating wattage
Operating Temperature	-10^{0}C~ 50^{0}C
Power Factor	>0.9 at rated operating wattage
THD(at rated power)	≤ 10% at rated operating wattage
CCT	5700K to 6500 K
CRI	≥70
Motion Sensor	PIR Motion sensor based auto dimming**
Mounting Bracket	Suitable for 40-60mm mounting
Surge Protection Device	10KV inbuilt on demand
Standard	IS10322, LM79
Application	Street / Roadways Lighting
	Municipal Corporations/ Municipalities/ Development Authorities· Industries, Institutional

*Customized specification based smart lighting solution also available as per demand
** Dimming mode operation at 30% load, at motion comes to 100% load and customizable as per demand

Smart Inverter Batten- Aluminium /PC

Halonix Smart Inverter series Batten is a vital solution for all the offices , Industries and all areas where input power goes off frequently. Inverter batten comes with inbuilt Li-ion Battery that give adequate power back up and avoid interruption in the user's operation due to power failure. This innovative batten is easily ready to fit in replace of existing batten. Its comes with inbuilt Battery management system to protect the battery from various factors and provide good life of battery. This batten brings following key features to users:

Key Features

▶ Inbuilt Battery to power up Batten in case input 230V AC not available.

▶ Provide optimum illumination during input voltage off by auto switch over.

▶ Provide 3-4 hours back up at rated battery charging at STC

▶ Auto battery charging with inbuilt BMS system to protect the battery.

▶ Protection from over charging and battery deep discharging.

▶ Easy replacement of battery.

▶ Uniform light distribution.

▶ Li-ion battery comes with min. 500 life cycle with BIS Certification.

▶ 2nos. 3.7V Li-ion 19WH used.

Technical Specifications - Inverter LED Batten

Sr. No.	Parameter	Inverter LED Batten- Aluminium Body - 4Feet	Inverter LED Batten- PC Body - 4Feet	Inverter Batten - 2Feet
1	Body	Aluminium Extrusion	Polycarbonate (PC)	Aluminium Extrusion
2	Wattage	18W/20W/22W/25W	20W	30W/36W/40W
3	LED Used	High power high brightness LM80 certified LED		
4	Front Cover	Milky Diffuser		
5	Lumen Maintenance	50,000 hours @ L70		
6	Control Gear	Isolated Electronic CC driver with on board BMS system		
7	Battery	Li-ion Lithium Ion BIS certified Battery 3.7 V		
8	Inverter Load	8-10W at STC Battery Fully Charged	3-5W at STC Battery Fully Charged	8-10W at STC Battery Fully Charged
9	Back up	1.5-2 Hours at STC	1.5-2 Hours at STC	1.5-2 Hours at STC
10	Protection	Over charging, Deep discharging, Thermal compensation		
11	Ingress Protection	IP20	IP20	IP65
12	Lumen Efficacy	≥ 100lm/w at rated operating wattage		
13	Rated Voltage	230V AC 50 Hz		
14	Operating Temperature	-10˚C~ 50˚C		
15	Power Factor	>0.9 at rated operating wattage		
16	CCT	5700K to 6500 K		
17	CRI	≥70		
18	Mounting	Wall/Surface Mounting with U fix clamp		
19 20	Compliance testing Standard	IS10322, LM79		

*Customized specification based smart lighting solution also available as per demand

Smart Led Batten & 2x2 Panel With Motion Sensor

LED Batten with inbuilt Motion sensor further add on energy saving upto 50% and widely used in warehouses, shopping malls, parking, Resident Societies and indoor application where lighting required based on MotionAnd mount at 3-4 meter height from ground.

Technical Specifications - LED Batten / 2x2 Panel With Motion Sensor

PARAMETER	LED BATTEN / 2X2 PANEL WITH MOTION SENSOR
Technology	Motion sensor based dimming
Dimming	ON/OFF or 30%/100% Brightness customizable
Motion Sensor Range	3-4 meter
Housing-Wattage-Length	Polycorbonate-20W-4feet Aluminum-10W-2feet Aluminium-20W-4Feet
2x2 panel	2x2 panel CRCA housing 36W- inbuilt Motion sensor
LED Used	High brightness LM80 certified LED
Front Cover	PC milky diffuser
Lumen Maintenance	50,000 hours @ L70
Control Gear	Isolated Electronic CC driver
Ingress Protection	IP20
Lumen Efficacy	≥ 100lm/w at rated operating wattage
Rated Voltage	230V AC 50 Hz
Operating Temperature	-10°C~ 50°C
Power Factor	>0.9 at rated operating wattage
THD(at rated power)	≤ 10% at rated operating wattage
CCT	5700K to 6500 K
CRI	≥70
Mounting Bracket	Wall/surface/recessed mounting
Standard compliance	IS 10322, LM 79
Application	Mall, parking, workhouses, office, halls, shopping complex, housing societies.

*Customized specification based smart lighting solution also available as per demand

Smart Inverter Bulk Head Lighting System

Halonix smart Inverter series of Bulk Head is similar to Inverter Street light in functionality except limited to 10W only. This is vital Solution for the outdoor area lighting and can be used for offices & Industries. Inverter Bulk Head light comes with inbuilt Li-ion Battery with auto switch over operation at Battery in case input 230V AC goes off. This having following key features to user :

Key Features

▶ Inbuilt Battery to power up the Bulk Head light in case input 230V AC not available.

▶ Provide optimum illumination during input voltage off by auto switch over to min. 4.5W load over Battery.

▶ Provide 3-4 hours back up.

▶ Auto battery charging with inbuilt BMS system to protect the battery.

▶ Protection from over charging and battery deep discharging.

▶ Easy replacement of battery.

▶ Uniform light distribution.

▶ Li-ion battery comes with min. 500 life cycle with BIS Certification.

▶ 3.7V 19WH Li-ion battery used.

Technical Specifications - Inverter Led Bulkhead Light

PARAMETER	INVERTER LED BULKHEAD LIGHT
Wattage	10W
LED Used	High power high brightness LM80 certified LED
Housing	PC
Front Cover	Milky diffuser
Lumen Maintenance	50,000 hours @ L70
Control Gear	Isolated electronic CC driver with BMS system
Battery	Li-ion Lithium Ion BIS certified battery 3.7 V
Inverter Load	4.5W at battery operation
Back-up	3-4 Hours
Protection	Over charging, Deep discharging, Thermal compensation
Ingress Protection	IP66
Lumen Efficacy	≥ 100lm/w at rated operating wattage
Rated Voltage	230V AC 50 Hz
Operating Temperature	-10°C - 50°C
Power Factor	>0.9 at rated operating wattage
CCT	5700K to 6500 K
CRI	≥70
Mounting	Wall mounting
Standard compliance	IS10322, LM79

*Customized specification based smart lighting solution also available as per demand

Smart Indoor Lighting With Control System

HALONIX providing smart wireless Indoor Lighting solution with multiple option for the customer in providing convenience to control and monitor the group or individual lights over figure tips based on RF Remote application and remotely control & monitoring the complete lighting luminaires from control room over cloud based system using RF 2.4GHz and GPRS technologies.
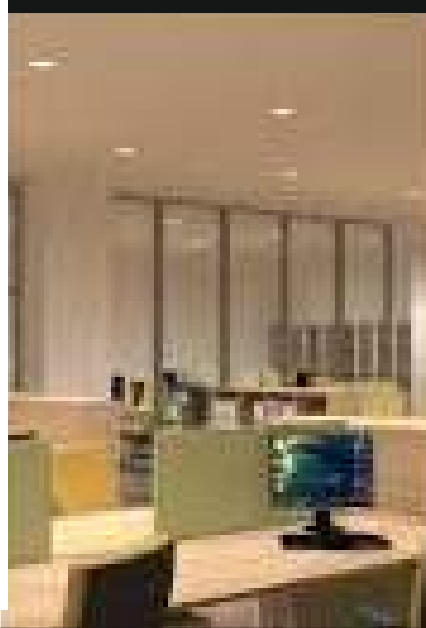
Smart Indoor Lighting With Remote Control System

Halonix Providing various LED Product such as LED Down lighter, LED Panel or any Indoor lighting luminaire with our smart LED Driver & inbuilt RF control system for controlling the individual and group of lights using RF Remote.
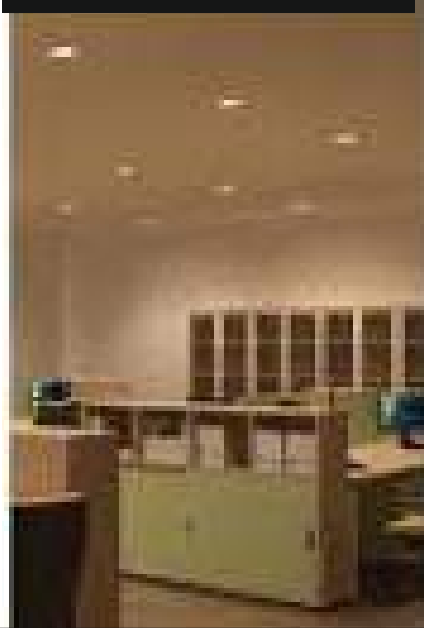
Full on 100%   Dimmed to 75%   Dimmed to 50%

Key Features

▶ Handheld remote based controlling

▶ Individual or Group controlling of luminaires

▶ Energy saving due to remote based dimming for individual or group of luminaires together

▶ No impact over electrical parameters

▶ A remote can control 256 nos. of luminaires

▶ Individual luminaires communicating directly with Remote

▶ Remote based ON/OFF/DIMMING of individual or group of LED luminaires

▶ Wide range to control the luminaires

▶ Easy to switch over on smart panel and downlighter without changing any wiring or ceiling mounting type

RECOMMENDED USAGE

HOME   EXHIBITION HALL   HOSPITALITY   RETAIL   FURNITURE CABINATES   HOSPITAL   OFFICE

Smart 2 X 2 Panel With Remote/App Based Control & Monitoring System
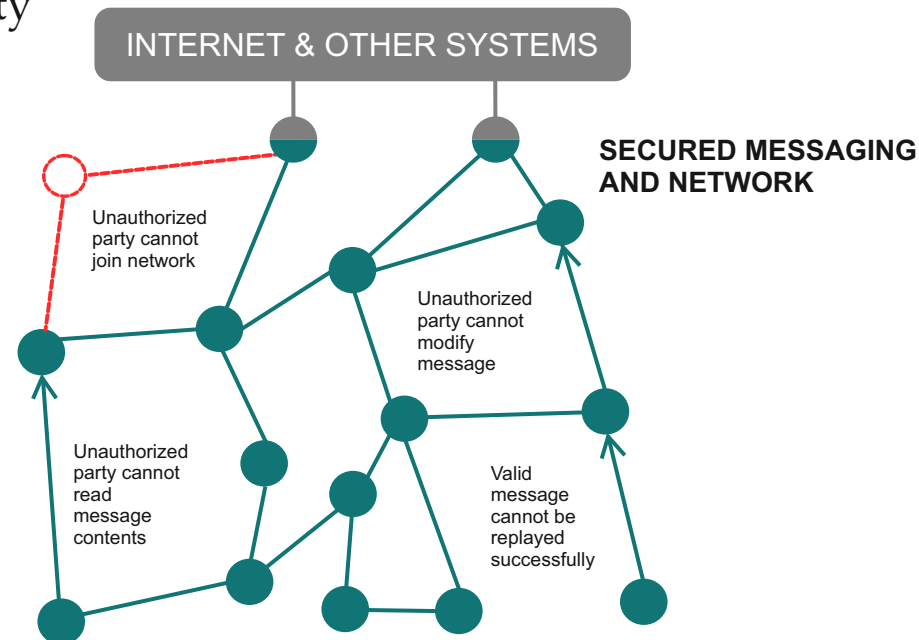
Halonix providing 2x2 LED Panel for offices & industries considering to increase the energy efficiency and accessing of control and monitoring of individual or group of lighting luminaires with IOT device over cloud within the building and remotely from any place. This is the App based GPRS system, IOT Gateway creating a mesh network over RF 2.4 GHz with all the LED luminaires and highly secures with AES advance security. System is designed to add any numbers of LED Luminaires over cloud software. Multiple sensors such as environment, light sensor, occupancy sensor and many more customized functions are also possible.

Security

Secured Connectivity

INTERNET & OTHER SYSTEMS

SECURED MESSAGING
AND NETWORK

Unauthorized party cannot join network

Unauthorized party cannot modify message

Unauthorized party cannot read message contents

Valid message cannot be replayed successfully

Message confidentiality

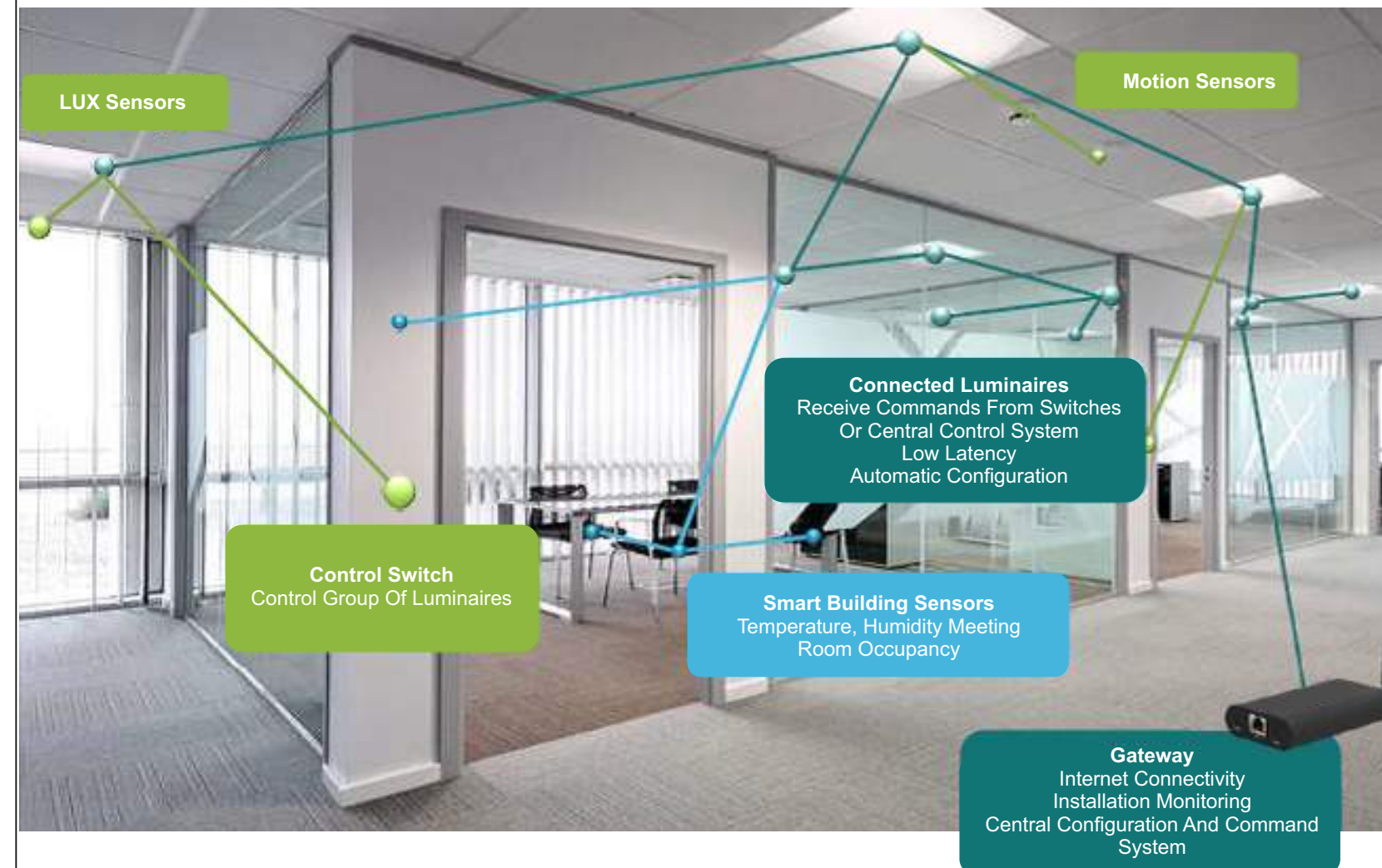Every message encrypted with AES128 advanced security.

Key Features

▶ Every luminaire connecting with each luminer and creating a mesh network hence all luminaires are always connected to IOT with each other and communication gateway device

▶ User can control and monitor the individual LED panel or group of panels at real time as well can do the programming with respect to ON/OFF and dimming level

▶ Using App/control room, user can see the real time status remotely from any place of individual and group of lights

▶ Multiple sensors can also be added when required

▶ Dual way communication to monitor the faults arises and resolution status

▶ All electrical parameters can be monitored

▶ Individual dimming level can be programmed for each panel

▶ Panels are available in 30W to 42W

▶ Customized solutions can be done as per requirement

▶ No limitation of adding luminaires to make whole building smart over same IOT platform

▶ Wireless communication, doesn't need to be changed to change in existing wiring and ceiling mounting type

RECOMMENDED USAGE

INDUSTRIAL AREAS

EXHIBITION HALL

HOSPITALITY

RETAIL

HOSPITAL

OFFICE

How It Works

Mesh communication in office

LUX Sensors

Motion Sensors

Connected Luminaires
Receive Commands From Switches
Or Central Control System
Low Latency
Automatic Configuration

Control Switch
Control Group Of Luminaires

Smart Building Sensors
Temperature, Humidity Meeting
Room Occupancy

Gateway
Internet Connectivity
Installation Monitoring
Central Configuration And Command
System

Halonix Mesh provides optimized operation for connected lighting:

▶ No limit in scale enabling large scale luminaire installations and extension to smart building applications

▶ High availability and reliability independent of the environment and conditions

▶ Low latency data transfer for real-time luminaire control

▶ Easy installation and commissioning with automatic devices pairing

▶ High energy-efficiency for low power battery operated sensors and actuators enabling sensor-based luminaire control and smart building sensors

▶ Future proof with over the air updated in all devices

▶ Easy to install & maintain

HALONIX IN-HOUSE MANUFACTURING & TESTING MACHINE

SHEARING
Shearing is a process where sheet cutting
is done according to PCB size

BRUSHING
Brushing is the cleaning process
after cutting

PRINTING
There are three types of printing, Circuit printing,
Masking printing & Legend printing

ETCHING
In etching it removes excess copper, ink stripping
and removing ink from printed circuit

OVEN
Baking masking ink

TARGET HOLE
It's a guide hole for printing and CNC

CNC
CNC is a process for drilling and routing

BBT
BBT is a process used for testing PCB circuit

V-CUT
Depanalization for break pcb

PRESS
The press is where cutting and
routing is done

EXPOSING
Exposing film for Circuit, Masking
& Legend

UV
Cure ink

GLOSSARY

Alternating Current (AC): Electrical current in which the flow of electric charge continually reverses direction.

Ambient Lighting: Lighting that is designed to provide uniform light levels throughout an area.

Beam Angle: Size of the cone of light produced by lighting source measured in degrees.

CCT (Color correlated temperature): The absolute temperature of a blackbody whose chromaticity most nearly resembles that of the light source. Usually specified in Kelvin (K). The lower the Kelvin temperature, the warmer the light feels, or appears. CW: 5500-7000K; NW: 4000-5500K; WW: 2700-3200K

CRCA: Cold rolled cold annealed

CRI: Color rendering international system to rate lighting device ability to render object colors. CRI range (0-100) Natural outdoor light has a CRI of 100.

Diffuser: Optical element used to mix light ray to improve uniformity of light.

Direct Current (DC): Electrical current in which the flow of electric charge moves in one direction only.

Efficacy: The light output of a light source divided by the total electrical power input to that source, expressed in lumens per watt (lm/W).

Goniophotometer: A photometric device for testing the luminous intensity distribution, efficiency and luminous flux of luminaires.

Glare: Glare is caused by brightness of any objects within the visual field which is brighter than the adaptation level of eye.

Heat Dissipation: This is the transition of thermal energy form a hotter object to a cooler object. In case of LED products heat sinks made from high quality aluminium and other alloys accomplish this.

Illuminance: The intensity of light falling on a surface area. Its unit is lux (lx).

Infrared: Electromagnetic radiation with wavelength range from 700 nm – 3000 nm.

IP: Ingress Protection, Degree of protection against dust and water.

LED: Light emitting diode solid state semiconductor device that converts electrical energy directly into light.

Luminaires: Lighting fixture complete with lamp, housing, power supply and optical components used to direct light.

Luminous Efficacy: Measurement of how effective the light source is converting electrical energy to lumens of visible light. Usually expressed in lumens per watt (lm/W).

Light Intensity: It is the measure of light output in specified direction.Its unit is Candela(cd).

Luminance: Luminance is the measure of the brightness of a surface upon the eye. It is the ratio of luminous intensity to the area.

MS: Mild Steel, A material that is used in housing of luminaires.

Power Factor: The active power divided by the apparent power (i.e., product of the rms input voltage and rms input current of a driver).

Ultraviolet (UV): Invisible radiation that is shorter in wavelength and higher in frequency than visible violet light. UV rays are light waves that are similar to the light from the sun. UV radiation can cause oxidation, fading of colors of furniture, carpet, draperies and art work.

Uniformity: It is the ratio of minimum to average illuminance.

Watt: The unit of electrical power as used by an electrical device during its operation. Many lamps come with rating in watt to indicate their power consumption.

NOTES:
- All dimensions are in 'mm'
- Tolerance-Dimensions ±10mm; Beam angle ±10 degree
- The image depicted in the catalogue may vary from the actual product
- ØB: cut out dimension
- HALONIX TECHNOLOGIES PVT. LTD. reserves the right to make any changes in the design and data without any prior notice

Notes

Halonix Technologies Pvt. Ltd.
B - 31, Phase-2, Noida, (U.P.) - 201305. Tel: +91 - 120 - 4756100, Fax: +91 - 120 - 4756101

REGIONAL OFFICES
EAST
Halonix Technologies Pvt. Ltd.
67B Ballygunge Circular Road, Ballygunge Park Tower, 9th Floor, Kolkata - 700019,
Tel: +91 - 033 - 40081849

WEST
Halonix Technologies Pvt. Ltd.
The Affairs Office No.1402, 14th Floor, Plot No. 9, Sector 17, Sanpada, Navi Mumbai, Thane - 400705
Tel: +91 - 022 - 35120050

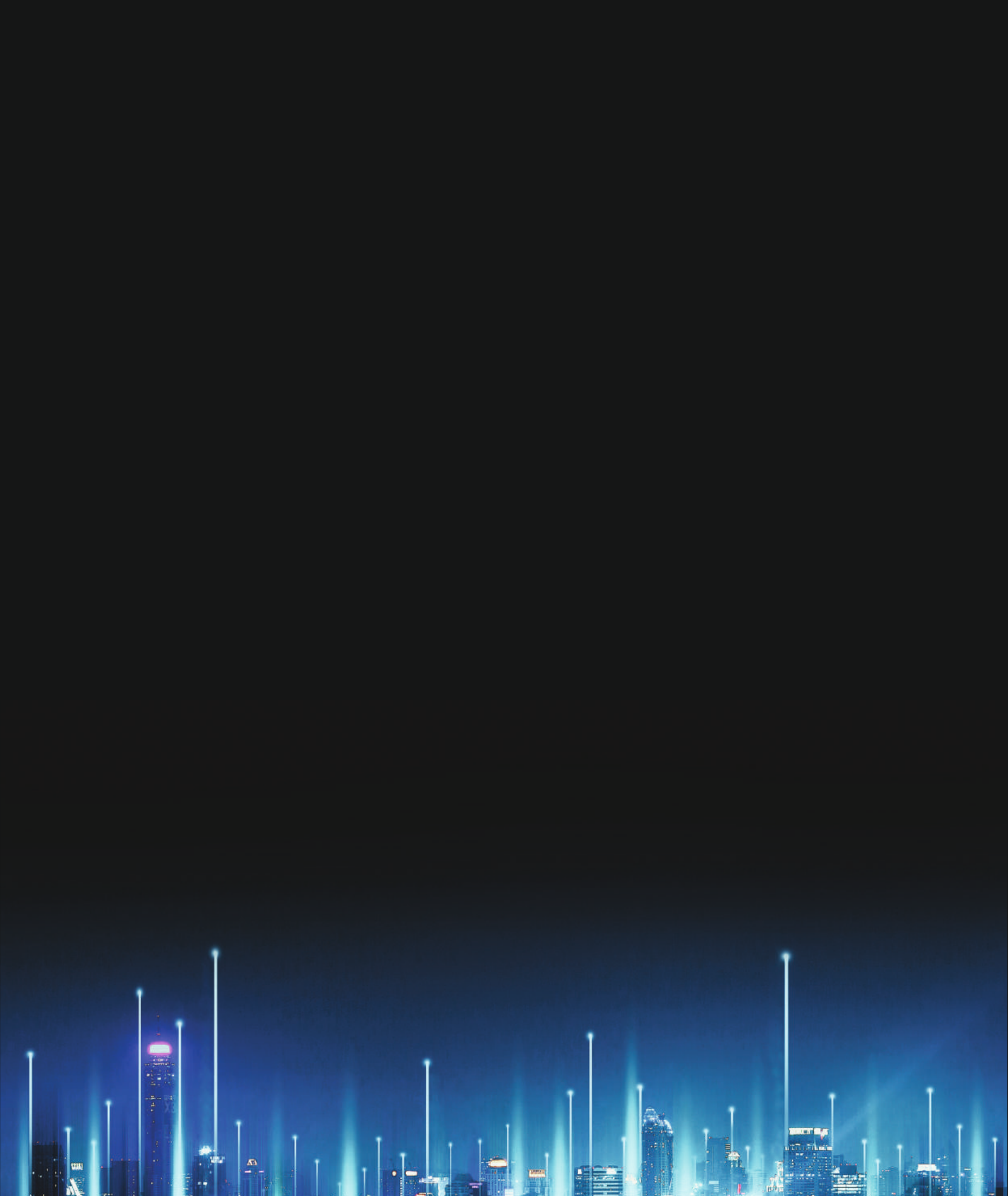**SOUTH**
Halonix Technologies Pvt. Ltd.
No.6, "Legacy" 1st Floor, Convent Road, Richmond Town, Bengaluru - 560025,
Tel: +91 - 080 - 41125296

MANUFACTURING UNIT
Halonix Technologies Pvt. Ltd.
Plot No.5, Sector 12, IIE SIDCUL, Haridwar, Uttarakhand - 249403