

GigaTera® ecology Service System - GeSS
Lighting control system

Nowadays, lighting is not merely about the traditional concept of "lighting up darkness." but about controlling the intensity of lighting automatically based on the movement of people or objects, traffic, and sunshine.

There are similar requirements for the control system to save energy. In the past, simple power saving was good enough, but there is an increasing demand for a new control system considering the economical impact for energy consumption and maintenance costs to extend the system easily as well as the environmental aspect to minimize carbon emissions and light pollution.

Developed based on this trend, the GigaTera lighting control system is an eco-friendly system with minimized energy consumption and emissions. In addition, it has wireless, wired, and sensor control systems to provide the most stable and economical lighting control solutions.



GATEWAY GESS



The Gateways allows communication with command between the GeSS system and node

- This action is carried by using 2G/3G wireless connection and Ethernet
- Through wireless connection, the lighting fixtures and node can be monitored and controlled

APPLICATION

Highway, Roadway, Street

SPECIFICATIONS

Model	Power	Luminous Efficacy	Luminous Flux	Color Temperature	CRI	Weight	Input Voltage	Operation Temperature
MA 150	150W	145 lm/W	21 750 lm	5000K (3000K, 4000K available)	80 Ra	7,5 kg	AC100 ~ 240 V AC100 ~ 277V	- 30 °C ~ +60 °C

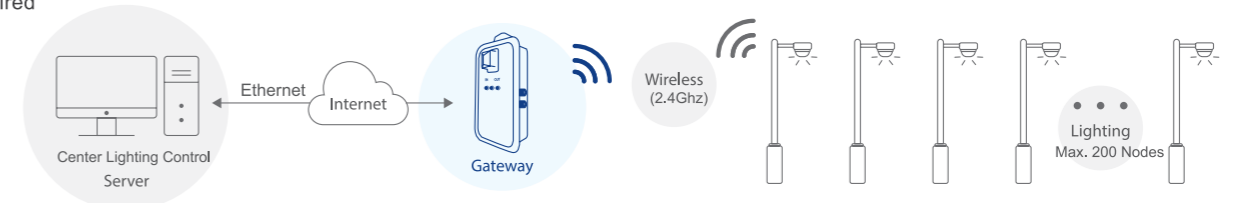
SYSTEM CONFIGURATION

• Wireless

*For local control only due to the distance limitation



• Wired



*** Notes** | Up to monidirectional *LOS@200M is valid between the gateway and the first node.
One gateway can be used to control up to 200 roadway lightings.

Lighting Control System

Wired / Wireless Control Device

GUI Operation Program - This is a PC operation program that allows users to manage the lighting control and settings when the lighting system is managed through a central control. The major functions include monitoring the status of the lighting device, on/off control, and brightness adjustment.

USB Converter Unit - This is connected to the PC's USB port. In this device, the received control command is converted into a RS-485 communication signal and transmitted to the master unit.

Master Unit (Master Unit-C: wired lighting control unit) - This device transmits the control command of the GUI operation program to the slave unit using a wired RS-485 signal. It can control and manage the status of a maximum of 32 slave units.

Slave Unit - This is a device that is installed on the interior of the lighting device. This is a module that analyses the control command received from the master unit and controls the lighting system.



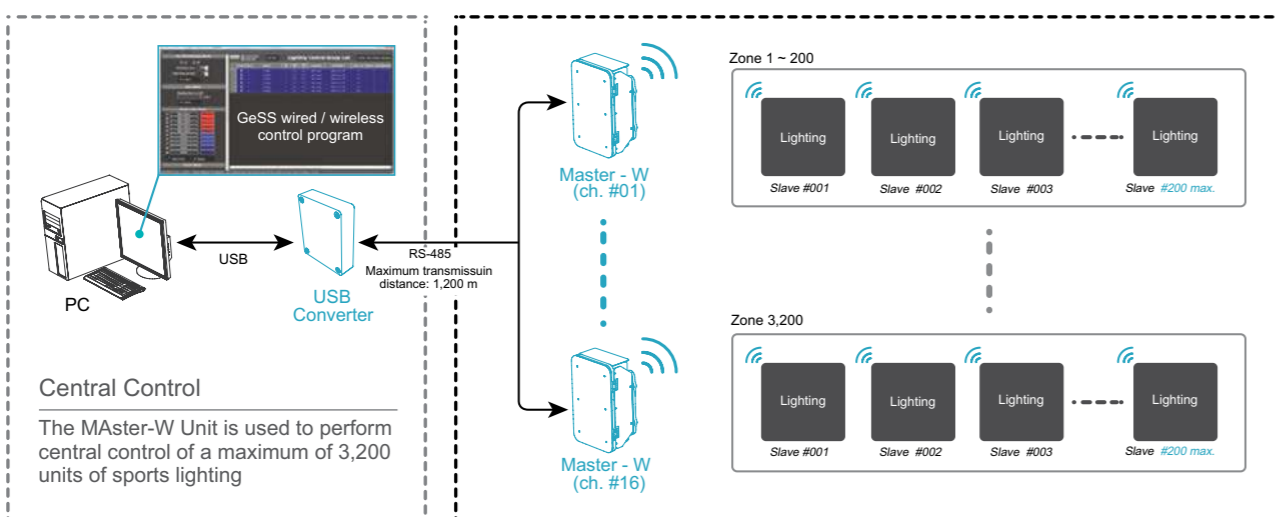
GUI Operation Program



USB Converter Unit



Master Unit



The GeSS sports wireless control solution uses the GUI (Graphic User Interface) program to implement integrated wireless control functions, interlinking the wireless nodes found in the product with the master device installed in the worksite.

Wired Control Solution

RS-485 communication based GigaTera control solution

GeSS sports wired control solution supports the self-protocol of the RS-485 communication method.

The self-protocol can use the Multidro function to generate the network of the device that is connected to the single RS-485 serial port.

One unit of the master device can be connected with a maximum of 32 units of the slave device and can perform a maximum of 1,200m of serial communications. Also, the Daisy Chain and Ring-tone Topology in the design ensure that even if a cable disconnection or communication error occurs in a specific section, the system as a whole can operate normally.

Wireless Control Solution

DMX - 512

The DMX-512 protocol is the standard method for connecting lighting device and lighting control modules. This protocol has been in use since 1986 and is considered to be the global standard.

Because this protocol is very simple and sturdy, it is still used widely in various lighting facilities for stage lighting or scenic lighting. It supports the lighting on/off function and even offers brightness control. Recently, it has been widely used in the sports lighting to create a range of various entertainment effects.

