Information Sheet – Rayzig Software

The Rayzig System has multiple software facets:

Firmware – to control the hardware

Rayzig – Communications, Configuration and Control Firmware

RayDal - Firmware for the DALI Master module

RaxMega – Firmware for the Gateway xMega processor

WBxMega – Firmware for the Wire-Bridge & IP Bridge modules

Raymon – PC Based - Command and Control Software

Rayweb – Web-based control software

Firmware

The hardware in all modules use the open source Light Weight Mesh stack from Atmel, which provides a basis for the communication system between modules. Added to this is the command and control software that is used within the module. There are a number of modules that have more than one processor, so there is a necessity to provide suitable code to operate between the communications system and the configuration and control software. This is provided specifically for the modules that require it. Any new module that may be developed could require additional firmware.

Once a system is configured, it is possible to operate without using either Raymon or Rayweb software, however, there are many benefits of using them.

Raymon

This is the PC based software that is used to configure and act as a conduit to the Rayzig network. The PC running Raymon will communicate through the Rayzig Gateway, that is defined within the software, to gain access to the Rayzig Network. The gateway holds details of the modules that have been defined for that Rayzig network, and also provides mechanisms to:

- System setup parameters and security details;
- Setup and modification of module configuration and control details;
- Show Module status and emulate modules;
- Test modules;
- Save module details;
- Define zones and themes;
- Show details of events that have occurred within Network modules;
- Save configuration details to PC files, or transfer details to the MySQL databases;
- Provide access to multiple sites;

- Define DALI configurations and scenes;
- Provide Over the Air Updates (OTAU) to keep modules up to date;
- Show Input Battery Alerts;
- Provide external connection through the LanTronix LAN Interface;
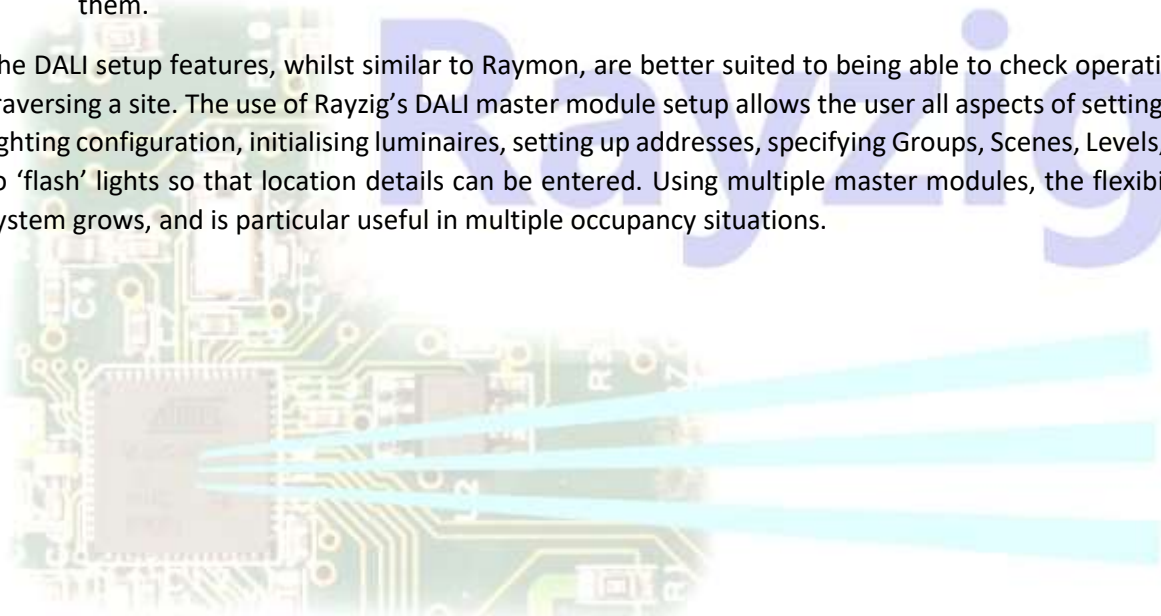- Interface to the RPi based Web Server based application software – Rayweb;

Rayweb

Rayweb is a Web Server based application running on a Raspberry Pi single board computer, which is integrated within the Rayzig Gateway. The RPi has its' own LAN interface and runs a LAMP stack, along with additional services to give a functional mobile control and configuration system for the Rayzig Network.

Rayweb offers many of the features found within Raymon, as well as some features which are only to be found in the Rayweb software, such as Multi-occupancy setup, configuration and control.

Rayweb allows setup of users, whereby they can be limited to a designated number of modules, zones and themes. Once defined the Administrator, or User, is limited to only those modules allocated to them.

The DALI setup features, whilst similar to Raymon, are better suited to being able to check operations whilst traversing a site. The use of Rayzig's DALI master module setup allows the user all aspects of setting up a DALI lighting configuration, initialising luminaires, setting up addresses, specifying Groups, Scenes, Levels, and then to 'flash' lights so that location details can be entered. Using multiple master modules, the flexibility of the system grows, and is particular useful in multiple occupancy situations.

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