

APP949 – Upgrading from the PP610, PP612 to RT260

Application Note

It is recommended that all customers use the RT260 for new designs, instead of the PP610 and PP612. The RT260 has many improvements over the PP610. The PP610 and PP612 will be available for many years for legacy designs.

To help customers change their designs, following are the main differences between the RT260 lighting controller and the older PP610/PP612 controllers.

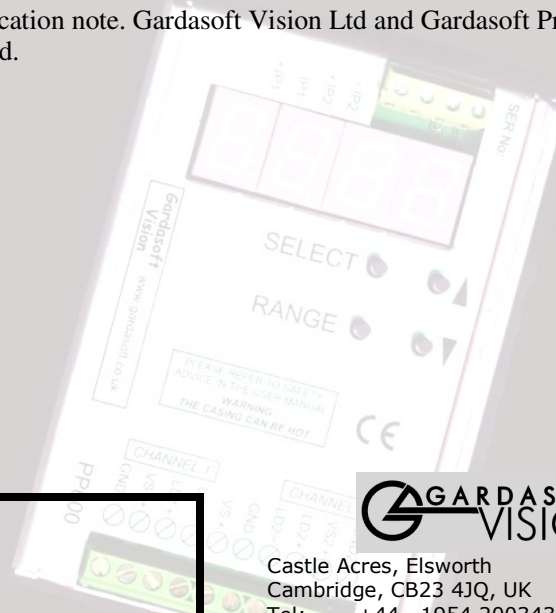
| Feature | RT260 | PP610, PP612 |
|----------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Output Modes | Continuous, pulse and switch mode with 5us delay. Selected mode has 2 intensities with 5ms delay. | Continuous, pulse, selected 2 or 4 intensities. Switch mode can be achieved but with about 500us delay |
| Brightness Setting | Current rating or voltage rating is set for each light, then a percentage brightness is set | Output current is set directly as a current |
| Power Control | Constant current output with SafeSense™ and SafePower™ | Constant current output |
| Output current continuous | Up to 4A | Up to 4A, but see application note APP909 |
| Output Current pulsed | Up to 20A in 5mA steps | Up to 10A in 0.25mA/2.5mA steps |
| Pulse Timing Repeatability | Approx 0us up to 5ms pulse width, otherwise 5us. No variation with output current | Approx 3us. Below 1A the timing can vary as the current changes |
| Delay Timing Repeatability | Approx 1us up to 5ms delay, otherwise 100us. | Approx 5us up to 5ms. Below 1A the delay gets longer |
| Pulse Timing | 20us to 1 second | 20us to 1.3 seconds |
| Pulse Shape | 0.2us rise time for some lights | 1us to 2us rise time |
| Fast Pulsing | Optional | Optional |
| Internal Trigger | Available. Also TR command can be used to trigger once via RS232 | Not available |
| Configuration Interface | RS232 only | Front panel and RS232 |
| Front Panel | No display or buttons | 4 digit display and 4 buttons |
| RS232 Commands | Commands and command format is different from PP610, the new command set is common across all RT controllers | |
| Port Settings | 115200 baud, 8, N, 1, no handshaking | 9600 baud, 8, N, 1, no handshaking |
| Fault Detection | Measurement of output voltage and current and fault detection | No measurement or fault detection |
| Lighting Protection | SafeSense™ allows safe overdriving. Retrigger delay can be set | Average current limiting feature |
| Connections | Pluggable screw terminals | Screw terminals |

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|---------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Power Supply Voltage | 24V to 48V. SafePower™ gives flexibility in PSU selection. The supply current is likely to be lower than for the PP610. | 12V to 48V |
| Reverse PSU polarity protection | Protected | No protection |
| Trigger Inputs | 3V to 24V at 3mA. Trigger can be rising or falling edge | 5V at 3mA to 24V at 20mA. Rising edge only |
| CCS-type Connectors | Not available. An adapter cable is available for 12V, 24V and HLV lights. | Fitted to PP612 |
| Lighting Wiring | Lighting cannot be commoned at all. | Lighting is “common positive.” So an RGB light can have a common positive connection |
| Long lighting cables | Greater stability of the lighting output. Twisted pair cable recommended | Long cables can cause some oscillation of the output. Twisted pair cable recommended |
| Camera Power Output | 12V at 1.4A | Not available |
| Power Dissipation | Typically 2W per channel. No heatsinking required. | Linear output which can give high heat dissipation requiring heat sinking of the controller. See application note APP909 |
| Firmware Upgrade | Can be upgraded on site using Gardasoft Maintenance program using RS232 | Requires a new chip to be supplied |
| Mounting | Panel mount using captive M3 nuts. PP704 DIN rail kit available | DIN rail or M4 tapped holes. PP701 DIN rail kit available |
| Dimensions | 112mm long by 97mm wide by 62mm high | 118mm long by 76mm wide by 27mm high |

Disclaimer

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