PP520 - LED Lighting Controller with Ethernet Interface

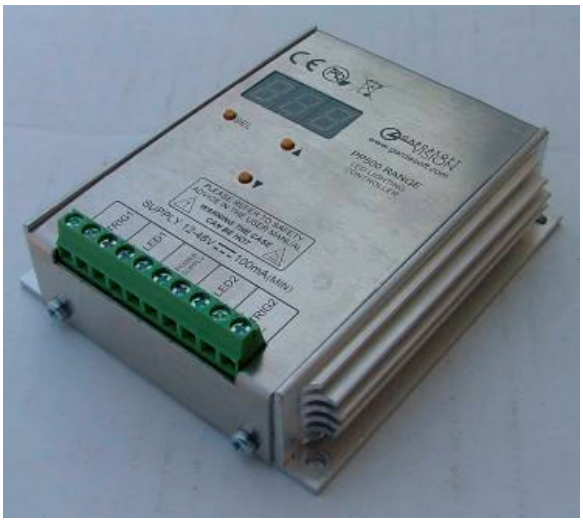
Ethernet – the future for Machine Vision

Uses Same Cabling as GigE

Configure Using Web Browser

SafeSense™ Technology

Integrates with Machine Vision Software



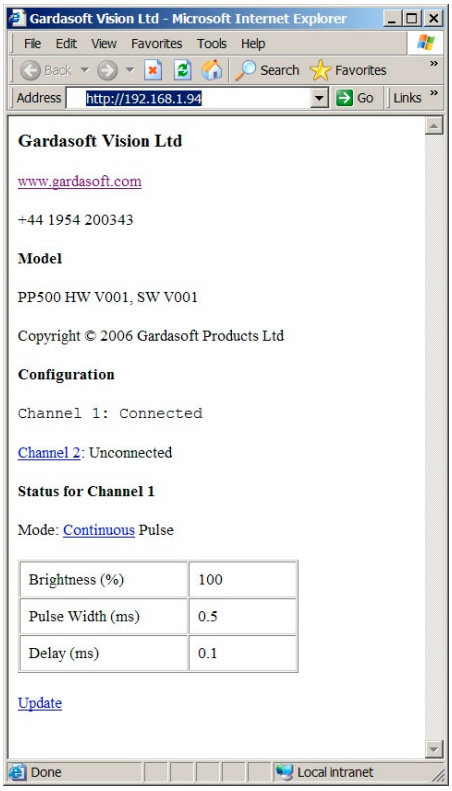
Miniature Web Server

The PP520 LED Lighting controller has all the features of Gardasoft's LED Lighting controllers with the addition of an Ethernet connection. The PP520 acts as a miniature web server and can be controlled by image processing software on a remote PC.

With the introduction of GigE cameras, the machine vision market is moving towards Ethernet. The advantage of Ethernet is that it is fast, long distance, standardised worldwide and implementation is inexpensive.

Flexible Operation

The PP520 provides control of LED lighting for machine vision applications. It includes the power regulation, intensity control, timing and triggering functions required for machine vision systems.



Three modes of operation are provided separately for each channel:

Continuous:	Output is a continuous current.
Pulsed:	Output is pulsed once per trigger.
Switched:	Output switched according to a digital input.

Three Ways to Configure

Firstly, a Web Browser can be used to access its web pages allowing status to be viewed and parameters to be changed.

Secondly, simple string commands can be sent from an application program using TCP/IP or UDP. The Gardasoft Vision website www.gardasoft.com has a free download of a demonstration program (with fully commented source) showing how the PP520 can be controlled from a PC using Visual Basic.

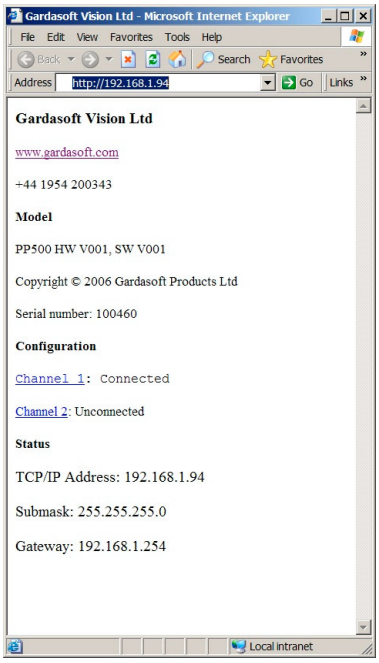
Thirdly, the PP520 can be configured using the front panel display and buttons. This is a very popular and easy to use interface which has been proven on many of Gardasoft's products.

The configuration is stored in non-volatile memory.

GARDASOFT VISION

Patented SafeSense™ Technology

The PP520 provides automatic, operation with current-rated and voltage-rated lighting, providing plug and play operation. Using the technology set out in our patent application, the PP520 detects the connection and disconnection of a light. On connection, the PP520 will automatically sense the current rating of the light.



Continuous Monitoring for Fault Detection

The PP520 monitors the output voltage and current continuously for sudden and long term changes. When an unexpected change occurs, a fault is alerted and the output is disabled. The PP520 can detect lighting that fails open or short circuit, lighting which is overheating or degrading over time and single LED failures, depending on conditions.

Ethernet Features

The PP520 needs an IP address. It can be configured to work using a specific IP address entered using the front panel or using a Dynamic Host Configuration Protocol (DHCP) server, which supplies a temporary IP address. If a Domain Name Server (DNS) is present, the PP520 can be accessed by machine name. For example, "PP520_100113" can be entered into the browser address bar.

The Ethernet connection is provided on a standard RJ45 connector and with two link status lights.

Specification

	PP520
User interface	Ethernet plus push button and display.
Output channels	Two independent constant current outputs with SafeSense™.
Output current	From 0mA to 10A in steps of 2.5mA. Up to 4A per channel continuous or 10A pulsed.
Trigger inputs	2 opto-isolated digital inputs. Require 5V to 24V.
Pulse width timing	From 20us to 999 milliseconds in steps of 20us. Timing repeatability 0.1us
Delay from trigger to pulse	From 20us to 999 milliseconds in steps of 20us. Timing repeatability 1us
Output voltage	0V to 47V.
Supply voltage	Regulated 12V to 48V. The supply voltage must be at least 1V higher than the output voltage required by the lighting.
Dimensions	118mm long by 76mm wide by 27mm high (excluding DIN fixing).
Weight	240g excluding DIN fixing.
Mounting	DIN rail or panel mounting.

Also available is the PP500 which is set up from the front panel only.

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