

Scapi Raspberry PI TCP/IP server

Scapi is a simple server application which controls the Raspberry PI3 (and hopefully other versions also) GPIO's.

It communicates with the device through simple TCP/IP protocol.

Usage

Just run "scapi" file under raspberry pi terminal with sudo privileges.

Server address and port are obtained from the device host, but can be optionally set as application arguments.

How to run with default address and port:

```
$pi@raspberrypi: sudo ./scapi
```

How to run with optional address and port:

```
$pi@raspberrypi: sudo ./scapi -a 192.169.0.152 -p 7438
```

Scapi Raspberry PI TCP/IP server Options:

- v, --version** Displays version information.
- h, --help** Displays this help.
- a <ip address>** Server address
- p <port>** Server port which server will listen
- l** Enable logging to file. Disabled by default

If you enable logging, log file will be created in the same directory where the scapi is. When it exceeds 30 MB it will be deleted and recreated due to keep small footprint.

Specification

Every tcp packet must end with CRLF Packet format is as follows:

PACKET:

Command keyword	Pin number	Assign operator	Pin value	Command separator	Pin mode (optional)	CRLF
GP	nn or ?	=	1 HIGH 0 LOW	;	mode 0 - input mode 1 - output	CRLF

Where "nn" is Raspberry BCM pin number.

Exapmles:

(Set pin 17 value to HIGH and pin mode to output)

GP17=1 mode 1;

(Set pin 17 value to LOW)

GP17=0;

(Read pin 17 value)

GP17=?;

(Set pin 17 value to HIGH and pin 9 to low)

GP17=1;GP9=0;

(Set pin 17 mode to output and pin 9 to input)

GP17=1 mode 1;GP9=1 mode 0;

If the packet is sent successfully server will response with the same string or with the error description. The "mode" keyword is not returned in the response. If the pin mode couldn't be set successfully corresponding error string is returned.