



# **LanWorks**

TCP/IP Sockets library by Icosagon

# Introduction

LanWorks is a TCP/IP Sockets library. It simplifies the process of creating sockets by using different predefined functions. Developers can include this “LanWorks.h” library in their projects and with one function they can set up a working sockets client or server.

## Dependencies

```
// Standard Libraries
#include <stdio.h> // Standard IO
#include <stdlib.h> // Standard Library
#include <string.h> // String Library
#include <unistd.h>

// Connectivity Libraries
#include <netdb.h>
#include <netinet/in.h>
#include <sys/socket.h>
#include <sys/types.h>
#include <arpa/inet.h>
```

## Functions

### **void client\_set\_ip(char \*\_lanworks\_ip)**

Set the Server's IP Address to which client will connect to.

### **char client\_get\_ip()**

Get the Server's IP Address to which client will connect to.

### **void lanworks\_set\_port(int \_port)**

Set the Socket's port.

### **int lanworks\_get\_port()**

Get the Socket's port.

## **void socket\_write(char \_lan\_buffer[max\_char])**

Write data to socket

## **char \*socket\_read()**

Read data from socket

## **int client\_init()**

Initialize Client or create a socket client and connect to a server. Will return 1 if successfully connected else it will return 0 and prints the error code.

## **void client\_loop(int sockfd)**

Example function. This function executes a chat client loop. The program will terminate if the user types exit and enter.

## **void client\_close()**

Close the socket to which the client is connected to.

## **int server\_init()**

Initialize Server or create a socket server and bind, listen, accept the client socket. Will return 1 if successfully connected else it will return 0 and prints the error code.

## **void server\_loop(int sockfd)**

Example function. This function executes a chat server loop. The program will terminate if the user types exit and enter.

## **void server\_close()**

Close the socket to which the client is connected to.

# Error Codes

## Server

Error code	Description	Function
LS001	Socket creation failed	socket()
LS002	Socket bind failed	bind()
LS003	Socket listen failed	listen()
LS004	Socket accept failed	accept()
LS005	Socket close failed	close()

## Client

Error code	Description	Function
LC001	Socket creation failed	socket()
LC002	Socket connect failed	connect()
LC003	Socket close failed	close()

