LA-POE Socket Communication Sample Program (Linux C++)

Description

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1. Overview

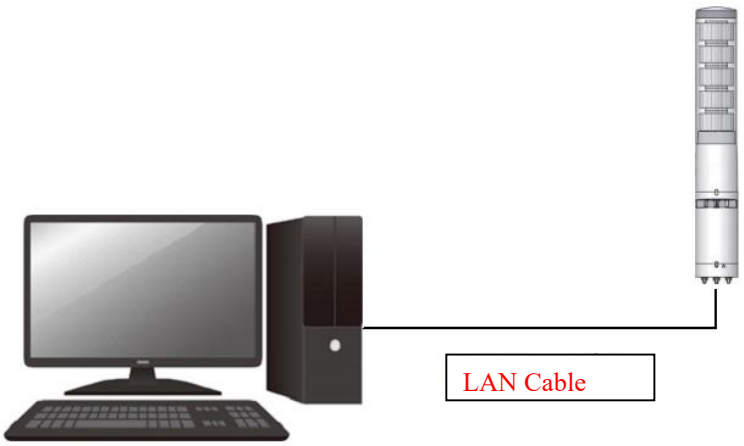
This is an outline of sample programming to control LA6-POE via socket communication.

The programs are intended to control the unit using Linux C++ without using the DLLs provided by PATLITE.

1.1. System Overview

The system configuration diagram of this program is as follows.

The sample program controls one LA6-POE by socket communication.



2. Development environment

The development environment of the sample program is shown below.

Development Environment		Remarks
Development OS	Ubuntu	18.04
Development Language	C++	
App Type	CUI application	
Development Tools	g++	7.5.0

2.1.1. Building an Environment

・Compiling Sample Programs

Use Makefile in the project folder of the sample program to perform compilation with Make command.

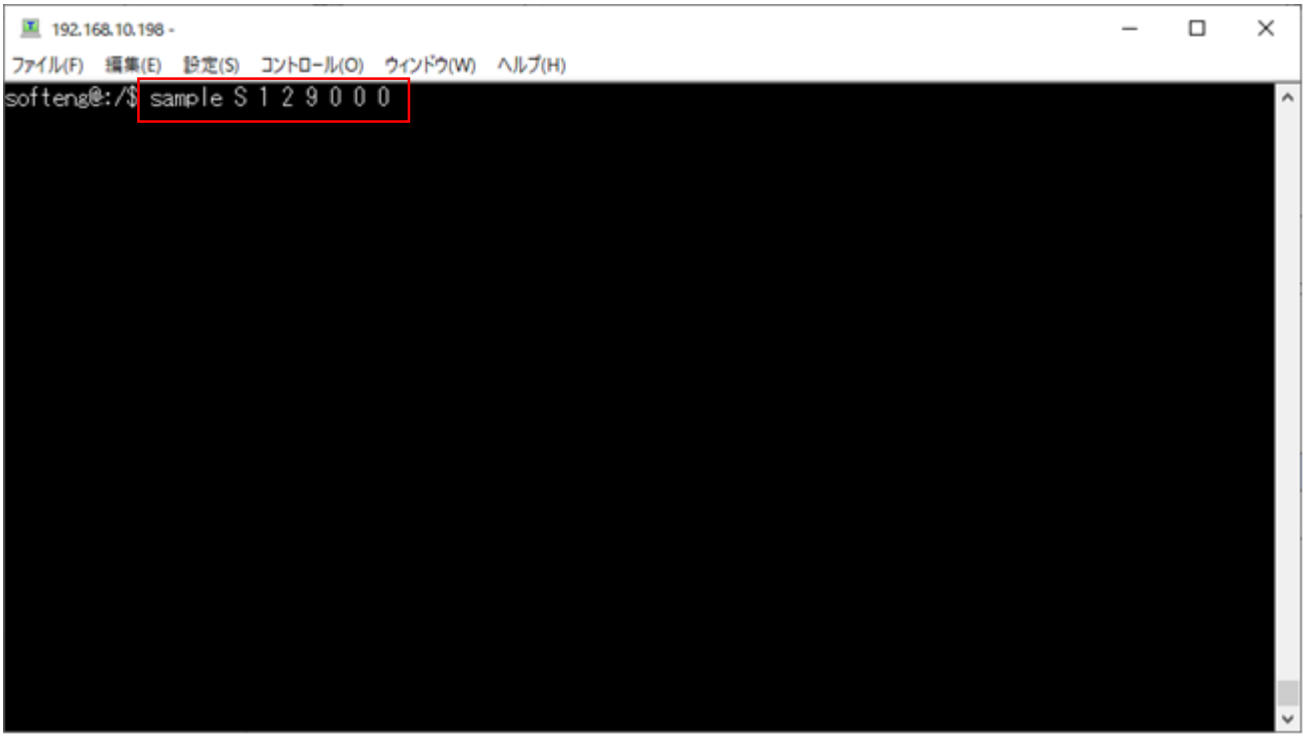
If compilation is successful, a sample is created.

```
$ make
g++ main.cpp -o sample
$ ls
$ Makefile main.cpp sample
```

3. Application Overview

3.1. Command Operation

On the console, commands are executed by specifying command line arguments.



3.1.1. Command List

Command Name	Description
Smart Mode Control Commands	Run Smart Mode with the specified group number
Mute Command	Controlling ON/OFF of the alarm during smart mode
STOP/Pulse Input Command	When transmitted during time trigger mode, pattern stop/restart is controlled. When transmitted during pulse trigger mode, pattern transitions.
Operation Control Command	Controls LED unit pattern for each tier and alarm pattern (1 to 3).
Detailed Operation Control Commands	Controls the color and operation pattern for each LED unit tier and alarm pattern (1 to 11).
Clear Command	Turn off LED unit and stop alarm.
Restart Command	Restart LA6-POE
Status Acquisition Command	Used to acquire status of signal lines/contact inputs and the status of the LED unit and alarm.
Detailed Status Acquisition Command	Used to acquire status of signal lines/contact inputs, LED unit and alarm status, and color information for each tier.
Write Command	Controls continuous on and flashing patterns for LED Unit tiers 1-3 and alarm patterns 1 and 2.
Read Command	Used to acquire continuous on and flashing of LED Unit tiers 1-3 and

	alarm patterns 1 and 2.

3.1.2. Smart Mode Control Commands

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	T
2	Group Number	1~15

Example: ./sample T 1

3.1.3. Mute Control Commands

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	M
2	Alarm ON/OFF	ON:1, OFF:0

Example: ./sample M 1

3.1.4. STOP/ pulse-input command

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	P
2	STOP Input/Trigger Input	STOP input ON/Trigger input: 1, STOP input: 0

Example: ./sample P 1

3.1.5. Operation Control Commands

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	S
2	LED Pattern 1	Off: 0 Continuous On: 1 Flash: 2 No change: 9
3	LED Pattern 2	
4	LED Pattern 3	
5	LED Pattern 4	
6	LED Pattern 5	
7	Alarm Pattern	Stop: 0 Pattern 1: 1 Pattern 2: 2 Alarm Sound when simultaneous alarm input: 3 No change: 9

Example: ./sample S 1 2 9 0 0 1

3.1.6. Detailed Operation Control Commands

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	D
2	LED Unit 1	Off: 0 Red: 1 Amber: 2 Lemon: 3 Green: 4 Sky: 5 Blue: 6 Purple: 7 Pink: 8 White: 9
3	LED Unit 2	
4	LED Unit 3	
5	LED Unit 4	
6	LED Unit 5	
7	Flashing Operation	Flashing OFF: 0 Flashing ON: 1
8	Alarm Pattern	Stop: 0 Pattern: 1 Pattern: 2 Pattern: 3 Pattern: 4 Pattern: 5 Pattern: 6 Pattern: 7 Pattern: 8 Pattern: 9 Pattern: 10 Pattern: 11

Example: ./sample D 1 2 3 4 5 1 1

3.1.7. Clear Command

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	C

Example: ./sample C

3.1.8. Restart Command

Execute command with the following command line arguments

No.	Command Line Argument	Value

1	Command ID	B
2	Password	Password set during password setup in the Web Setup Tool

Example: ./sample B patlite

3.1.9. Status Acquisition Command

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	G

Example: ./sample G

3.1.10. Detailed Status Acquisition Command

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	E

Example: ./sample E

3.1.11. Write command

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	W
2	Operation Data	Bit7: LED tier 3 Flashing (OFF:0, ON:1) Bit6: LED tier 2 Flashing (OFF:0, ON:1) Bit5: LED tier 1 Flashing (OFF:0, ON:1) Bit4: Alarm pattern 2 (OFF:0, ON:1) Bit3: Alarm pattern 1 (OFF:0, ON:1) Bit2: LED tier 3 Continuous On (OFF:0, ON:1) Bit1: LED tier 2 Continuous On (OFF:0, ON:1) Bit0: LED tier 1 Continuous On (OFF:0, ON:1)

Example: ./sample W 145

→ "LED tier 3 Flashing," "Alarm pattern 2," and "LED tier 1 Continuous On"

3.1.12. Read Command

Execute command with the following command line arguments

No.	Command Line Argument	Value
1	Command ID	R

Example: ./sample R