

Firmware for STM32

Subsystem for collision avoidance

Proximity sensor driver

Expander driver

Routine for initialization, data processing and error checking

Subsystem for movement control

Encoder's data acquisitor

Calculator of inverse and forward kinematics

Calculator of acceleration and deceleration

Subsystem for task execution of servo manipulators

Checker of servo's position

Subtask executor

Task executor

Subsystem for communication with high level

A protocol parser

Executor of commands

Hardware Abstraction Layer (HAL)

RCC, Timers, GPIO, UART, I2C, EXTI

Service routines

Global timer

Global Initializator

Global shutdown