

CMotionControl : public rclcpp::Node

+ CMotionControl()
+ ~CMotionControl()

velSub_ : rclcpp::Subscription<geometry_msgs::msg::Twist>::SharedPtr
chassisParams_ : ChassisParams
conversionParams_ : RobotConversionParams
rpm_ = : std::array<float, 4>

normalizeValues() : void
publishRpm() : void
velocityCallback() : virtual void
calculateKinematic() : virtual void

- rpmPub_ : rclcpp::Publisher<iotbot_interface::msg::RotationSpeed>::SharedPtr
- motorParams_ : MotorParams

- setChassisParams() : void
- setMotorParams() : void
- calculateRobotProperties() : void

CMotionDifferentialNode : public CMotionControl

+ CMotionDifferentialNode()
+ ~CMotionDifferentialNode()

- velocityCallback() : void
- calculateKinematic() : void

CMotionOmnidirectionalNode : public CMotionControl

+ CMotionOmnidirectionalNode()
+ ~CMotionOmnidirectionalNode()

- velocityCallback() : void
- calculateKinematic() : void

CShieldNode : public rclcpp::Node

+ CShieldNode()
+ ~CShieldNode()

- rpmSub_ : rclcpp::Subscription<iotbot_interface::msg::RotationSpeed>::SharedPtr
- rpmPub_ : rclcpp::Publisher<iotbot_interface::msg::RotationSpeed>::SharedPtr
- batteryPub_ : rclcpp::Publisher<iotbot_interface::msg::Battery>::SharedPtr
- currentTime_ : rclcpp::Time
- lastTime_ : rclcpp::Time
- deltaTime_ : rclcpp::Duration
- serialPort_ : CShield
- serialSendData_ : SSerialRequestData
- serialReceiveData_ : SSerialResponseData

- run() : void
- rpmCallback(rpmMsg : const iotbot_interface::msg::RotationSpeed::SharedPtr) : void
- checkIfRpmMsgIsNew() : void
- publishRpm() : void
- publishVoltage() : void

CShield

+ CShield()
+ CShield()
+ openPort() : bool
+ openPort() : bool
+ closePort() : void
+ isPortOpened() : bool
+ send() : bool
+ receive() : bool

- SSerialParams params_
- uart_ : std::unique_ptr<mraa::Uart>
- isPortOpened_ : bool

- readParamFile() : bool
- initParamStruct() : void
- setBaudrate() : bool
- setMode() : bool
- setFlowControl() : bool
- fillTxBuffer() : bool
- fillDataFromRxBuffer() : bool
- setTxBufferWith() : template void
- getValueFromRxBuffer() : template void