

Support full functions of g30esli_interface #2139

New issue

Merged

gbiggs merged 37 commits into autowarefoundation:master from aohsato:feature/improve_ymc_interface on May 24, 2019

Conversation 29

Commits 37

Checks 0

Files changed 2 +1,072 -418



aohsato commented on Mar 20, 2019 • edited

New feature implementation

Implemented feature

This PR provides the new version of `g30esli_interaface` for supporting full functions of Yamaha Golfcar.
[autowarefoundation/autoware_ai#544](#)
`ds4` package is included as submodule in this moditication to manually control a vehicle by using joystick.

NOTE: The previous PR is [#1962](#).

Implementation description

Yamaha Golfcar [Academic Pack](#) version of [G30Es-Li](#) has the By-wire ECU based on CAN communication.

`g30esli_inteface` has the following features.

- A golfcar can be control by CAN communication. The source of the command can be selected from either `vehicle_cmd` or joystick input.
- A current status of golfcar, speed, steering, gear and more, are also obtained by CAN communication and provided to `vehicle_status` .
- A override function is implemented in this node by checking the press of throttle/brake pedals. You can experiment safely.

CAN message format is private, so we provide CAN communication and parsing functions as a binary `g30esli.a` in ymc package and use it in `g30esli_inteface` .

Reviewers

- yn-mrse

✓
- gbiggs

✓
- wep21

Assignees

No one assigned

Labels

type:new-feature

version:autoware-ai

Projects

None yet

Milestone

No milestone

Development

Successfully merging this pull request may close these issues.

None yet

5 participants



Please see [README](#) to know how to setup, parameters, and other details.

Steps to Test or Reproduce

Offline Test

1. Setup VCAN

```
$ sudo ip link add dev vcan type vcan  
$ sudo ip link set up vcan
```



2. Launch `g30esli_interface` with VCAN port

```
$ roslaunch ymc g30esli_interface.launch  
device:=vcan
```



3. Play CAN log ([example](#)) by `can_utils` and check `/vehicle_status`

```
$ canplayer vcan=can0 -I test_can.log
```



```
$ rostopic echo /vehicle_status  
---  
header:  
  seq: 3874  
  stamp:  
    secs: 1558060705  
    nsecs: 935375765  
  frame_id: "base_link"  
tm: ''  
drivemode: 1  
steeringmode: 1  
gearshift: 1  
speed: 0.0  
drivepedal: 0  
brakepedal: 0  
angle: 6.69999980927  
lamp: 0  
light: 0
```



On the terminal launching `g30esli_interface`, you can see CAN level vehicle status under Debug verbose

```
$ rosservice call  
/g30esli_interface/set_logger_level ros.ymc Debug
```



```
Status[181]  
speed.target = 0  
speed.actual = 0  
speed.desired = 0  
steer.target = -4
```



4-2. If you want to use [DS4 joystick](#), launch with `use_ds4` option and connect your joystick controller.

```
$ roslaunch ymc g30esli_interface.launch
device:=canX use_ds4:=true ds4_wired:=true #..
USB
```



or

```
$ roslaunch ymc g30esli_interface.launch
device:=canX use_ds4:=true ds4_wired:=false #..
Bluetooth
```



And then, your car should move by joystick controller. For controlling by `vehicle_cmd`, press PS button. Please see [README](#) to know DS4 button binding



aohsato requested review from **yn-mrse** and **wep21**
5 years ago



aohsato mentioned this pull request on Mar 20, 2019

[Feature] Support full functions of g30esli_interface #1962

Closed

2 tasks



gbiggs added `type:new-feature` `in progress` and removed `in progress` labels on Mar 21, 2019



aohsato changed the base branch from `develop` to `master` 5 years ago



wep21 requested changes on May 14, 2019

[View reviewed changes](#)

wep21 left a comment

Contributor

Could you add install directives for script directory and ds4 submodule to build with colcon?



aohsato commented on May 14, 2019 • edited

Author

[@wep21](#) I fixed that by adding "catkin_install_python" in 873379b.



gbiggs commented on May 14, 2019

Please add the sign-off line to your commits.



yn-mrse commented on May 14, 2019

I tested the operation until [94760dc](#) , but had the following problems.

Have these problems been solved?

- It takes longer to brake than previous versions.
- I can not start again after braking.



aohsato force-pushed the [feature/improve_ymc_interface](#) branch from **e1b57a8** to **42f4281** 5 years ago [Compare](#)



aohsato commented on May 15, 2019

Author

[@gbiggs](#) Thanks. I added using cherry-pick.



aohsato commented on May 15, 2019

Author

[@yn-mrse](#) Since you said those problems, I added braking logic in [cfd3f58](#) and restating logic in [7bf69ad](#). Thanks for your review.



gbiggs commented on May 15, 2019

[@yn-mrse](#) Please confirm if the problem you found has been fixed.



wep21 requested changes on May 16, 2019

[View reviewed changes](#)

ros/src/actuation/vehicles/packages/ymc/README.md

Outdated

[Show resolved](#)



yn-mrse reviewed on May 16, 2019

[View reviewed changes](#)

ros/src/actuation/vehicles/packages/ymc/

Outdated

[Show resolved](#)

```
node/g30esli_interfa
ce/g30esli_ros.cpp
```



yn-mrse reviewed
on May 16, 2019

[View reviewed changes](#)

```
ros/src/actuation/ve  
hicles/packages/ymc/  
node/g30esli_interfa  
ce/g30esli_ros.cpp
```

Outdated

 Show resolved



aohsato commented on May 17, 2019

Author

@wep21 @yn-mrse Thanks for your code review. I updated this PR with the more detailed testing process, please check if you can.



wep21 commented on May 17, 2019

Contributor

@aohsato I tried offline test as described above. I could obtain a desired result as following.

```
/usr/bin/zsh % /usr/bin/zsh %  
% /home/daisuke/autoware_ymc/ros/install/ymc/share/ymc/launch/g30esil_interface.launch http://localhost:11311 112x28  
[status[241]  
speed.target = 5  
speed.actual = 5.4  
speed.desired = 5  
steer.target = -1.6  
steer.actual = -2.4  
battery.charge = 62  
battery.voltage = 76.9  
battery.amperage = -45.1  
override.steer = 534  
override.accel = 0  
override.brake = 0  
override.flasher = 0  
mode = 8  
shift = 0  
brake = 0  
turn = 0  
warning = [ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 ]  
command[241]  
speed = 3.8363  
steer = -2.98569  
mode = 8  
brake = 0  
shift = 0  
alive = 241  
turn = 0  
flasher = 4  
  
% /usr/bin/zsh 58x30  
frame id: "base_Link"  
tm: ""  
drivemode: 1  
steeringmode: 1  
gearshift: 1  
speed: 5.5  
drivepedal: 0  
brakepedal: 0  
angle: 2.40000009537  
lamp: 0  
light: 0  
---  
header:  
seq: 3568  
stamp:  
secs: 1558069766  
nsecs: 793290441  
frame id: "base_Link"  
tm: ""  
drivemode: 1  
steeringmode: 1  
gearshift: 1  
speed: 5.40000009537  
drivepedal: 0  
brakepedal: 0  
angle: 2.40000009537  
lamp: 0  
light: 0  
---
```



wep21 reviewed
on May 17, 2019

[View reviewed changes](#)

```
ros/src/actuation/ve  
hicles/packages/ymc/  
node/g30esli_interfa  
ce/g30esli_ros.cpp
```

Outdated

 Show resolved



yn-mrse reviewed
on May 17, 2019

[View reviewed changes](#)

```
ros/src/actuation/vehicles/packages/ymc/node/g30esli_interface/g30esli_ros.cpp
```

Outdated

Show resolved



yn-mrse reviewed
on May 17, 2019

[View reviewed changes](#)

```
ros/src/actuation/vehicles/packages/ymc/node/g30esli_interface/g30esli_ros.cpp
```

Outdated

Show resolved



yn-mrse commented on May 17, 2019

[#2139 \(comment\)](#)

[@aohsato](#) [@gbiggs](#) The corresponding part has been verified at the code level.



yn-mrse commented on May 17, 2019

[@aohsato](#) Conducted an online test and confirmed the operation.

The parts necessary for the correction are as described above. It has been confirmed that it works without any problems if these patches are added.



gbiggs changed the title ~~[Feature] Support full functions of g30esli_interface~~ Support full functions of g30esli_interface on May 19, 2019



gbiggs commented on May 19, 2019

[@yn-mrse](#) [@wep21](#) Please confirm if your review comments have been dealt with satisfactorially, and if they have please set your review to "approved".

[@aohsato](#) Some of your commits are missing the DCO sign-off line.



wep21 previously approved
these changes on May 19, 2019

[View reviewed changes](#)

[@aohsato](#) Thank you for your modification. I checked the modification I pointed out.


23 hidden items

[Load more...](#)




aohsato added 18 commits [5 years ago](#)

- Refactor code, separated to g30esli_ros/interface ... e4e6897
- Move headers to include ... a75401c
- Add battery charge [%] topic -> /vehicle/battery ... a0b6784
- Fix names ... e88d8ac
- Apply clang-format ... c1301b4
- Add engaging topic and mutex for engage command ... 25a25f9
- Update LICENSE ... c06dda5
- Fix re-engage problem by adding 300ms wait ... 37c1273
- Add brake control (G30ESLI_BRAKE_SMOOTH) ... 5f9a018
- Fix CMake for colcon ... 7a39b57
- Add the command resetting logic for restart ... 161699d
- Add README ... c5e2fe4
- Fix README ... 0dcc799
- Fix bug of restarting condition and debug message ... 849615a
- Fix time initialization ... bc2f1da
- Fix unit in README ... fd3bf25
- Add engage condition to speed command by joystick ... 8785fbc
- Modify stop_keep_secs according to real vehicle test ... 714c7f5

 **aohsato** dismissed stale reviews from **wep21** and **yn-mrse** via 714c7f5 5 years ago



 **aohsato** force-pushed the `feature/improve_ymc_interface` branch from **6494016** to **714c7f5** 5 years ago [Compare](#)



aohsato commented on May 20, 2019

Author

[@yn-mrse](#) [@wep21](#) Thanks for your review!
[@gbiggs](#) I forgot that, pushed again by using cherry-pick.



yn-mrse approved these changes on May 20, 2019 [View reviewed changes](#)



gbiggs approved these changes on May 23, 2019 [View reviewed changes](#)



Merge branch 'master' into `feature/improve_ymc_interface` [Verified](#) b5e2b1d




gbiggs commented on May 24, 2019

The GitLab CI is failing because the binary format does not work in cross compilation (obviously), so I'm going to override the CI requirement and merge. The non-cross CI run compiles.




1



 **gbiggs** merged commit **56c9e17** into `autowarefoundation:master` on May 24, 2019



 **aohsato** deleted the `feature/improve_ymc_interface` branch 5 years ago



anubhavashok pushed a commit to NuronLabs/autoware.ai that referenced this pull request on Sep 7, 2021



Support full functions of `g30esli_interface` 85c235c
([autowarefoundation#2139](#)) ...



mitsudome-r added the **version:autoware-ai** label
on Jun 14, 2022