pyulog 설치

```
python: ver 3.8.10 (https://www.python.org/downloads/release/python-3810/
 (설치시 add PATH 체크 필수)
 pyulog: https://github.com/PX4/pyulog
  (pyulog python 버전 확인)
  1. 경로설정(pyulog 설치 폴더 내)
  C : \ \ W \ I \ N \ D \ O \ W
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  C:\Users\ihpar\Documents\MATLAB\pyulog-master\pyulog-master
 2. pyulog 설치: python setup.py build install
  C:\Users\jhpar\Documents\MATLAB\pyulog-master\pyulog-master>python setup.py
  build install
  running build
running build_py
 creating build creating build\lib creating build\lib\pyulog
 copying pyulog\ulog2csv.py -> build\lib\pyulog
copying pyulog\ulog2kml.py -> build\lib\pyulog
copying pyulog\ulog2csv.py -> build\lib\pyulog
copying pyulog\ulog1init_.py -> build\lib\pyulog
creating build\lib\test
 creating build\lib\test
copying test\test_ulog2csv.py -> build\lib\test
copying test\__init__.py -> build\lib\test
UPDATING build\lib\pyulog/_version.py
set build\lib\pyulog/_version.py to '0.9.0'
running install
running bdist_egg
running egg_info
running egg_info
creating pyulog.egg-info\PKG-INFO
writing pyulog.egg-info\PKG-INFO
writing dependency_links to pyulog.egg-info\dependency_links.txt
writing entry points to pyulog.egg-info\requires.txt
writing requirements to pyulog.egg-info\requires.txt
writing top-level names to pyulog.egg-info\top_level.txt
writing manifest file 'pyulog.egg-info\SOURCES.txt'
adding license file 'LICENSE.md' (matched pattern 'LICEN[CS]E*')
reading manifest file 'pyulog.egg-info\SOURCES.txt'
reading manifest file 'pyulog.egg-info\SOURCES.txt'
installing library code to build\bdist.win-amd64\egg
running install_lib
creating build\bdist.win-amd64\egg
creating build\bdist.win-amd64\egg
creating build\bdist.win-amd64\egg
creating build\bdist.win-amd64\egg
pyulog
  running egg_info
creating build\bdist.win-amd64\egg\pyulog
creating build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\core.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\core.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\core.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\info.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\messages.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\params.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\params.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\params.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\ulog2csv.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\ulog2kml.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\_version.py -> build\bdist.win-amd64\egg\pyulog
copying build\lib\pyulog\_init_.py -> build\bdist.win-amd64\egg\pyulog
creating build\bdist.win-amd64\egg\test
copying build\lib\test\test_ulog2csv.py -> build\bdist.win-amd64\egg\test
copying build\lib\test\test_ulog2csv.py -> build\bdist.win-amd64\egg\test
byte-compiling build\bdist.win-amd64\egg\pyulog\core.py to core.cpython-38.pyc
byte-compiling build\bdist.win-amd64\egg\pyulog\extract_gps_dump.py
```

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creating dist creating dist creating 'dist\pyulog-0.9.0-py3.8.egg' and adding 'build\bdist.win-amd64\egg' to it removing 'build\bdist.win-amd64\egg' (and everything under it)
 pyulog-0.9.0-py3.8.egg c:\users\jhpar\appdata\local\programs\python\python38\lib\site-packages Adding pyulog 0.9.0 to easy-install.pth file Installing ulog2csv-script by geriet to CiVI
 Processing pyulog-0.9.0-py3.8.egg
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Adding pyulog 0.9.0 to easy-install.pth file
Installing ulog2csv-script.py script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog2csv-exe script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog2kml-script.py script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog2kml.exe script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog2kml.exe script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog_extract_gps_dump-script.py script to
C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog_info-script.py script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog_info-exe script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog_info.exe script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
                                                                                                                                                                                                                           to
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 Installing ulog_messages-script.py script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
Installing ulog_messages.exe script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
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 Installing dog_inessages.exe script to c. voers input (hippbata loc linstalling ulog_params-script.py C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
 Installing ulog_params.exe script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
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n s t a 1 1 e e:\users\jhpar\appdata\local\programs\python\python38\lib\site-packages\pyulog-0.9.0-py3.8.egg
Processing dependencies for pyulog==0.9.0
Searching for numpy
Reading https://pypi.org/simple/numpy/
 https://files.pythonhosted.org/packages/fa/f2/f4ec28f935f980167740c5af5a1908090a48a564bed5e689f4b92386d7d9/numpy-1.22.3-cp38-cp38-win_amd64.whl#sha256=07a8c89a04997625236c5ecb7afe35a02af3896c8aa0189
 0a849913a2309c676
 Best match: numpy 1.22.3
to
 Installing f2py.exe script to C:\Users\jhpar\AppData\Local\Programs\Python\Python38\Scripts
 c:\users\jhpar\appdata\local\programs\python\python38\lib\site-packages\numpy-1.22.3-py3.8-win-amd
 Finished processing dependencies for pyulog==0.9.0
 C:\Users\jhpar\Documents\MATLAB\pyulog-master\pyulog-master>cd ../..
 C:\Users\jhpar\Documents\MATLAB>cd C:\Users\jhpar\Desktop\PX4_ANALYSIS\[LOG]_ulog
3. 설치 완료 확인 및 테스트 (ulog_info 파일명.ulg)
 C:\Users\jhpar\Desktop\PX4_ANALYSIS\[LOG]_ulog>ulog_info 02_01_47.ulg
 Logging start time: 0:01:48, duration: 0:02:21
 No Dropouts
 Info Messages
   sys_mcu: STM32F76xxx, rev. Z
sys_name: PX4
   sys_os_name: NuttX
sys_os_ver: 423371c7d4012e725ac4ca51323a18df64e581b3
   sys_os_ver_release: 119275775
```

```
sys_toolchain: GNU GCC sys_toolchain_ver: 7.3.1 20180622 (release) [ARM/embedded-7-branch revision 261907] sys_uuid: 00020000000031313733333851100019002d
  sys_tand: 000200000031313733333831100019002d
time_ref_utc: 0
ver_hw: PX4_FMU_V5
ver_hw_subtype: V500
ver_sw: 106905871d374c125730fe675266d67c7f869469
ver_sw_branch: stable
ver_sw_release: 17367552
Info Multiple Messages: [perf_counter_postflight: 1], [perf_top_preflight: 1], [perf_top_preflight: 1],
Name (multi id, message size in bytes) actuator_controls_0 (0, 48) actuator_outputs (0, 76) actuator_outputs (1, 76) battery_status (0, 83) battery_status (1, 83) cpuload (0, 16) ekf2_innovations (0, 164) akf2_timostamps (0, 22)
                                                                                                                       number of data points, total bytes 1389 66672
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105564
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  eRf2_innovations (0, 164)
ekf2_timestamps (0, 22)
ekf_gps_drift (0, 21)
estimator_status (0, 268)
home_position (0, 47)
input_rc (0, 69)
manual_control_setpoint (0, 67)
mission_result (0, 32)
position_setpoint_triplet (0, 320)
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756
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 mission (v. 15)
mission_result (0, 32)
position_setpoint_triplet (0, 320)
rate_ctrl_status (0, 36)
sensor_combined (0, 44)
sensor_preflight (0, 20)
sensor_selection (0, 24)
system_power (0, 23)
telemetry_status (0, 47)
trajectory_setpoint (0, 76)
vehicle_air_data (0, 24)
vehicle_aittitude (0, 53)
vehicle_attitude_setpoint (0, 58)
vehicle_global_position (0, 68)
vehicle_gps_position (0, 101)
vehicle_land_detected (0, 17)
vehicle_local_position (0, 155)
vehicle_magnetometer (0, 20)
vehicle_rates_setpoint (0, 32)
vehicle_status (0, 52)
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4457
37455
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6486
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  vehicle_status (0, 52)
vehicle_status (0, 52)
vehicle_status_flags (0, 38)
ypd_ipt (0, 32)
ypd_nav (0, 154)
                                                                                                                             144
                                                                                                                                                          7488
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192096
2172478
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6003
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