
PprzLink Documentation

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Contents:

Python Messages

Paparazzi message representation

```
class pprzlink.message.PprzMessage (class_name, msg)
    base Paparazzi message class

    fieldbintypes (t)
        Get type and length for binary format

    fieldcoefs
        Get list of field coefs.

    fieldnames
        Get list of field names.

    fieldtypes
        Get list of field types.

    fieldvalues
        Get list of field values.

    get_field (idx)
        Get field value by index.

    msg_class
        Get the message class.

    msg_id
        Get the message id.

    name
        Get the message name.

    to_csv (payload_only=False)
        return message as CSV string for use with RAW_DATA LINK msg_name;field1;field2;
```

Transport

Paparazzi transport encoding utilities

class `pprzlink.pprz_transport.PprzTransport` (*msg_class='telemetry'*)
parser for binary Paparazzi messages

parse_byte (*c*)
parse new byte, return True when a new full message is available

unpack ()
Unpack the last received message

unpack_pprz_msg (*msg_class, data*)
Unpack a raw PPRZ message

Ivy Interface

```
class pprzlink.ivy.IvyMessagesInterface (agent_name=None, start_ivy=True, verbose=False,
                                         ivy_bus='')

```

```
    bind_raw (callback, regex='(.*)')
```

Bind callback to Ivy messages matching regex (without any extra parsing)

Parameters

- **callback** – function called on new message with agent, message, from as params
- **regex** – regular expression for matching message

```
    static parse_pprz_msg (callback, ivy_msg)
```

Parse an Ivy message into a PprzMessage. Basically parts/args in string are separated by space, but char array can also contain a space: | f, o, o, , b, a, r | in old format or "foo bar" in new format

Parameters

- **callback** – function to call with ac_id and parsed PprzMessage as params
- **ivy_msg** – Ivy message string to parse into PprzMessage

```
    send (msg, ac_id=None)
```

Send a message

Parameters

- **msg** – PprzMessage or simple string
- **ac_id** – Needed if sending a PprzMessage of telemetry msg_class

Returns Number of clients the message sent to, None if msg was invalid

```
    send_raw_datalink (msg)
```

Send a PprzMessage of datalink msg_class embedded in RAW_DATALINK message

Parameters **msg** – PprzMessage

Returns Number of clients the message sent to, None if msg was invalid

```
    subscribe (callback, regex='(.*)')
```

Subscribe to Ivy message matching regex and call callback with ac_id and PprzMessage TODO: possibility to directly specify PprzMessage instead of regex

Parameters

- **callback** – function called on new message with ac_id and PprzMessage as params
- **regex** – regular expression for matching message

Serial Interface

```
class pprzlink.serial.SerialMessagesInterface (callback,           verbose=False,           de-  
                                              vice='/dev/ttyUSB0',       baudrate=115200,  
                                              msg_class='telemetry')
```

```
    run ()  
        Thread running function
```

```
    send (msg, sender_id)  
        Send a message over a serial link
```

PprzLink is a message toolkit (message definition, code generators, libraries) to be used with [Paparazzi UAV](#) and compatible systems.

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