

## CAN controller

### Starting

```
can_setup_controller(controller,
                    bitrate,
                    all_filters,
                    mode,
                    options)

can_controller_get_options(controller)
```

### Status

```
can_get_status(controller)
can_status_is_bus_off(status)
can_status_is_error_passive(status)
can_status_is_error_warn(status)
can_status_get_tec(status)
can_status_get_rec(status)
can_status_request_recover(controller)
can_get_time(controller)
```

### Bit rates

```
CAN_BITRATE_500K_75
CAN_BITRATE_250K_75
CAN_BITRATE_125K_75
CAN_BITRATE_1M_75
CAN_BITRATE_500K_50
CAN_BITRATE_250K_50
CAN_BITRATE_125K_50
CAN_BITRATE_1M_50
CAN_BITRATE_2M_50
CAN_BITRATE_4M_90
CAN_BITRATE_2_5M_75
CAN_BITRATE_2M_80
CAN_BITRATE_500K_875
CAN_BITRATE_250K_875
CAN_BITRATE_125K_875
CAN_BITRATE_1M_875
CAN_BITRATE_CUSTOM
```

### Filters

```
CAN_NO_FILTERS

Options
CAN_OPTION_REJECT_REMOTE
CAN_OPTION_HARD_RESET
CAN_OPTION_RECV_ERRORS
CAN_OPTION_OPEN_DRAIN
CAN_OPTION_RECORD_TX_EVENTS
CAN_OPTION_REJECT_OVERFLOW
```

### Modes

```
CAN_MODE_NORMAL
CAN_MODE_LISTEN_ONLY
CAN_MODE_ACK_ONLY
CAN_MODE_OFFLINE
```

### Stopping

```
can_stop_controller(controller)
```

## CAN ID filters

### Making

```
can_make_id_filter(filter, canid)
can_make_id_filter_all()
can_make_id_filter_masked(filter,
                          ide,
                          arbitration_id_match,
                          arbitration_id_mask)
```

### Reading

```
can_id_filter_is_all(filter)
can_id_filter_is_extended(filter)
can_id_filter_get_mask(filter)
can_id_filter_get_match(filter)
```

## CAN errors

### Receiving

```
can_event_is_error(event)
can_event_get_error(event)
```

### Reading

```
can_error_is_crc(error)
can_error_is_stuff(error)
can_error_is_form(error)
can_error_is_ack(error)
can_error_is_bit1(error)
can_error_is_bit0(error)
```

## Receive overflow

```
can_rx_overflow_get_frame_cnt
can_rx_overflow_get_error_cnt
```

## CAN frames

### Making

```
can_make_frame(frame,
              ide,
              arbitration_id,
              dlc,
              data,
              remote)

can_frame_set_uref(frame, ref)
can_make_frame_from_bytes(frame, src)
```

### Sending

```
can_send_frame(controller, frame, fifo)
can_is_space(controller, n_frames, fifo)
can_get_send_space(controller)
```

### Receiving

```
can_event_is_frame(event)
can_event_get_frame(event)
```

### Reading

```
can_frame_is_extended(frame)
can_frame_get_arbitration_id(frame)
can_frame_is_remote(frame)
can_frame_get_data(frame)
can_frame_get_data_len(frame)
can_frame_get_dlc(frame)
can_frame_get_id_filter(frame)
can_frame_get_uref(frame)
can_frame_get_data_words(frame)
```

## CAN IDs

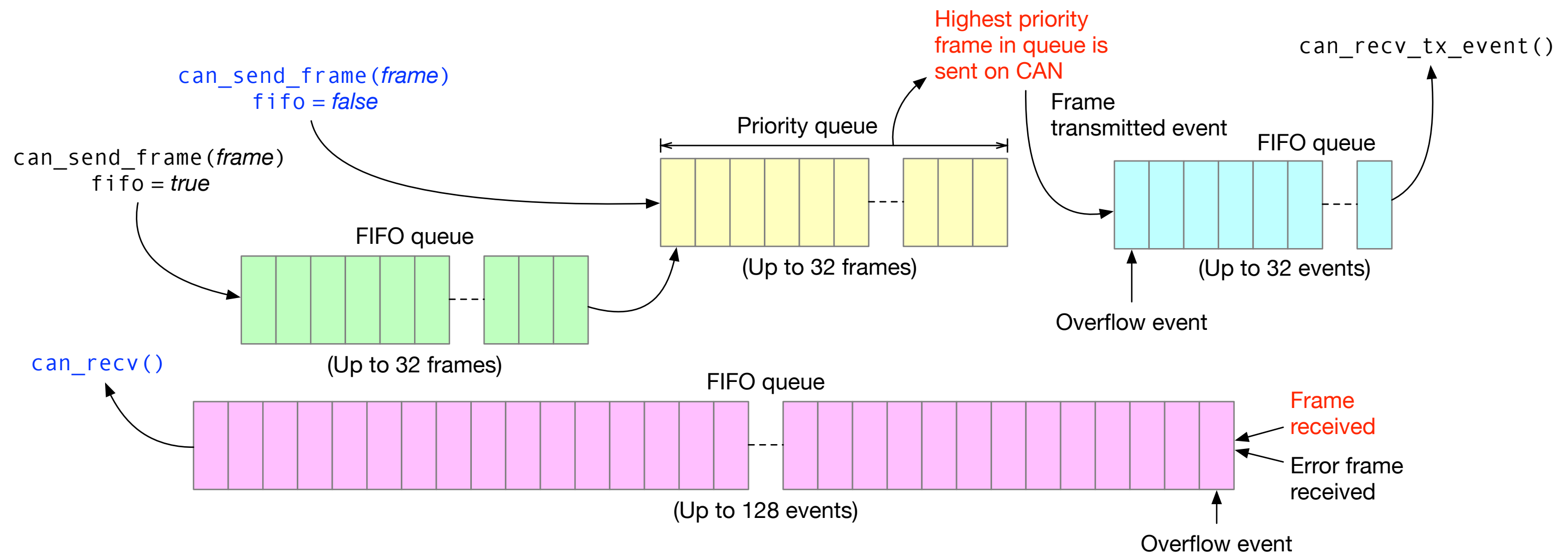
### Making

```
can_make_id(extended,
            arbitration_id)
```

### Reading

```
can_id_is_extended(canid)
can_id_get_arbitration_id(canid)
```

## Queues



## Receive events

### Getting

```
can_recv(controller, event)
can_recv_as_bytes(controller, dest, n_bytes)
can_recv_pending(controller)
```

### Reading

```
can_event_get_timestamp(event)
can_event_is_frame(event)
can_event_is_error(event)
can_event_is_overflow(event)
can_event_get_frame(event)
can_event_get_error(event)
can_event_get_overflow(event)
```

## Transmit events

### Getting

```
can_recv_tx_event(controller, event)
can_recv_tx_event_as_bytes(controller,
                          dest, n_bytes)
can_recv_tx_events_pending(controller)
```

### Reading

```
can_tx_event_get_timestamp(event)
can_tx_event_is_frame(event)
can_tx_event_get_uref(event)
can_tx_event_is_overflow(event)
can_tx_event_get_overflow_cnt(event)
```

## ISR call-backs

### Receive

```
can_isr_callback_frame_rx(frame,
                          timestamp)
can_isr_callback_error_rx(error,
                          timestamp)
```

### Transmit

```
can_isr_callback_uref
can_isr_callback_frame_tx(uref,
                          timestamp)
```