NAVI Communication Protocol

# 1. Received message

## Command messages

CMD\_DISCOVER

CAN ID:

Class: 0x09

Device: 0x01

Type: 0x00 (CAN\_MESSAGETYPE\_COMMAND)

DLC: 2

Data:

|  |  |  |  |
| --- | --- | --- | --- |
| Byte offset | Format | Name | Code |
| 0 | U8 | CMD\_DISCOVER | 0x90 |

CMD\_MODE

CAN ID:

Class: 0x09

Device: 0x01

Type: 0x00 (CAN\_MESSAGETYPE\_COMMAND)

DLC: 2

Data:

|  |  |  |  |
| --- | --- | --- | --- |
| Byte offset | Format | Name | Code |
| 0 | U8 | CMD\_MODE | 0xBB |
| 1 | U8 | MODE\_IDLE | 0xB0 |
| MODE\_START | 0x0B |

# 2. Sent message

## 2.1 Data message

MEASURED DATA1

CAN ID:

Class: 0x09

Device: 0x01

Type: 0x03 (CAN\_MESSAGETYPE\_MEASUREMENT)

DLC: 8

Data:

|  |  |  |  |
| --- | --- | --- | --- |
| Byte offset | Format | Name | Code |
| 0 | U8 | NAVI\_HEADER1 | 0xCA |
| 1 | F32 | NAVI\_ACC\_X | value |
| 5 | F24 | NAVI\_ACC\_Y[0:23] | value |

MEASURED DATA2

CAN ID:

Class: 0x09

Device: 0x01

Type: 0x03 (CAN\_MESSAGETYPE\_MEASUREMENT)

DLC: 8

Data:

|  |  |  |  |
| --- | --- | --- | --- |
| Byte offset | Format | Name | Code |
| 0 | U8 | NAVI\_HEADER2 | 0xFE |
| 1 | F8 | NAVI\_ACC\_Y[24:31] | value |
| 2 | F32 | NAVI\_GYR\_Z | value |
| 6 | F16 | NAVI\_COMP\_X[0:15] | value |

MEASURED DATA3

CAN ID:

Class: 0x09

Device: 0x01

Type: 0x03 (CAN\_MESSAGETYPE\_MEASUREMENT)

DLC: 8

Data:

|  |  |  |  |
| --- | --- | --- | --- |
| Byte offset | Format | Name | Code |
| 0 | U8 | NAVI\_HEADER3 | 0xBA |
| 1 | F16 | NAVI\_COMP\_X[16:31] | value |
| 3 | F32 | NAVI\_COMP\_Y | value |
| 7 | U8 | RESERVED | 0 |

MEASURED DATA4

CAN ID:

Class: 0x09

Device: 0x01

Type: 0x03 (CAN\_MESSAGETYPE\_MEASUREMENT)

DLC: 8

Data:

|  |  |  |  |
| --- | --- | --- | --- |
| Byte offset | Format | Name | Code |
| 0 | U8 | NAVI\_HEADER4 | 0xBE |
| 1 | F32 | NAVI\_ACC\_Z | value |
| 5 | U16 | RESERVED | 0 |
| 7 | U8 | CHECKSUM | value |

## 2.2Response messages

RESPONSE\_PING

CAN ID:

Class: 0x09

Device: 0x01

Type: 0x01 (CAN\_MESSAGETYPE\_RESPONSE)

DLC: 1

Data:

|  |  |  |  |
| --- | --- | --- | --- |
| Byte offset | Format | Name | Code |
| 0 | U8 | RESPONSE\_PING | 0xE6 |