

FINTEK

CANBus Series

Windows Software Programming Guide

V1.03

March 10, 2020

3/10/2020

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1. Fintek CANBus DLL Control APIs

1.1 Support Fintek CANBus IC

- F81601/F81602/F81604

1.2 Function List

This section provides the specifications of all Fintek CANBus functions and structures. All APIs use the naming convention FintekCanbus_xxx specific to below table:

<i>ID</i>	<i>Function Name</i>
1.2.1	FintekCanbus_Open
1.2.2	FintekCanbus_Close
1.2.3	FintekCanbus_SetBaudRate
1.2.4	FintekCanbus_GetBaudRate
1.2.5	FintekCanbus_SetId
1.2.6	FintekCanbus_SetFilter
1.2.7	FintekCanbus_ClearFilter
1.2.8	FintekCanbus_Send
1.2.9	FintekCanbus_Receive
1.2.10	FintekCanbus_GetIdVal

1.2.1 FintekCanbus_Open

long FintekCanbus_Open(IN char* sComPortNumber);

Function: Open Canbus virtual COM Port.

Parameters:

sComPortNumber: COM port number.

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.2.2 FintekCanbus_Close

long FintekCanbus_Close(IN char* sComPortNumber);

Function: Close Canbus virtual COM Port.

Parameters:

sComPortNumber: COM port number.

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.2.3 FintekCanbus_SetBaudRate

long FintekCanbus_SetBaudRate(IN char* sComPortNumber, IN DWORD BaudRate);

Function: Set Canbus port Baud Rate.

Parameters:

sComPortNumber: COM port number.

BaudRate:

1M:1000

800K:800

500K:500

250K:250

100K:100

50K:50

20K:20

10K:10

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.2.4 FintekCanbus_GetBaudRate

long FintekCanbus_GetBaudRate(IN char* sComPortNumber, OUT DWORD* BaudRate);

Function: Get Canbus port Baud Rate.

Parameters:

sComPortNumber: COM port number.

*BaudRate:

1M:1000

800K:800

500K:500

250K:250

100K:100

50K:50

20K:20

10K:10

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.2.5 FintekCanbus_SetId

long FintekCanbus_SetId(IN char* sComPortNumber, IN CanFrameFormat type, IN DWORD id);

Function: Set Canbus id.

Parameters:

sComPortNumber: COM port number.

type: An CanFrameFormat enumerated type specifying the CAN protocol with 11bit or 29bit.

```
enum class CanFrameFormat {  
    CP_29Bit,  
    CP_11Bit  
};
```

id: Specified the id.

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.2.6 FintekCanbus_SetFilter

long FintekCanbus_SetFilter(IN char* sComPortNumber, IN DWORD pattern, IN DWORD mask);

Function: Set Canbus port Filter.

Parameters:

sComPortNumber: COM port number.

pattern: Specified CAN ID pattern to filter.

mask: Specified the mask for filter.

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.2.7 FintekCanbus_ClearFilter

long FintekCanbus_ClearFilter(IN char* sComPortNumber);

Function: Clear Canbus port Filter.

Parameters:

sComPortNumber: COM port number.

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.2.8 FintekCanbus_Send

long FintekCanbus_Send(IN char* sComPortNumber, CanFrameInfor* msg);

Function: Send Canbus frame to virtual COM Port.

Parameters:

sComPortNumber: COM port number.

msg: The send frame, include frame format, frame id, frame length and frame data.

```
struct CanFrameInfor {  
    CanFrameFormat type;  
    BYTE    rtr;  
    DWORD   id;
```

```

        BYTE    data_len;
        BYTE    data[CANBUS_MAX_DATA_SIZE];
    };

    enum class CanFrameFormat {
        CP_29Bit,
        CP_11Bit
    };

```

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.2.9 FintekCanbus_Receive

long FintekCanbus_Receive(IN char* sComPortNumber, IN CanFrameInforProc callback);

Function: Receive Canbus frame to virtual COM Port.

Parameters:

sComPortNumber: COM port number.

callback:

```
typedef void(CALLBACK *CanFrameInforProc)(long error, CanFrameInfor* msg);
```

```

    struct CanFrameInfor {
        CanFrameFormat type;
        BYTE    rtr;
        DWORD   id;
        BYTE    data_len;
        BYTE    data[CANBUS_MAX_DATA_SIZE];
    };

    enum class CanFrameFormat {
        CP_29Bit,
        CP_11Bit
    };

```

Return Value:

If the function succeeds, the return value is zero. If the function fails, the callback parameter "error" is nonzero and the error code generated by it. You can find more information about error codes at the section 1.3 of the document.

1.2.10 FintekCanbus_GetIdVal (F81601 only)

long FintekCanbus_GetIdVal(IN char* sComPortNumber, OUT UCHAR* IdVal);

Function: Get F81601 id value from ID pins, this API is only support for F81601.

Parameters:

sComPortNumber: COM port number.

* IdVal: 0~7.

Return Value:

If the function succeeds, the return value is zero. If the function fails, the return value is nonzero and the error code generated by the API. You can find more information about error codes at the section 1.3 of the document.

1.3 Error Codes

The below table lists errors that Fintek CANBus functions API returns in response to calls.

Error Code	Description
0x80000007	Thread ERROR
0x8005FFFF	F8160X FATAL ERROR(bus off)
0x80050FFF	CAN BUFFER FULL
0x800500XX	CAN ERROR bit[2]: EW bit[3]: DO bit[5]: EP bit[6]: AL
0x80060002	INVALID HANDLE VALUE
0x80060003	No response from device
0x80060008	CAN function called fail
0x80060101	CAN communication fail
0x80060201	Write fail
0x80060202	Read fail