



OSFP API Documentation

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1. Introduction

This document describes the various Application Programming Interface (API) functions for the Multilane OSFP host board (ML4064). Each function is described with its parameters and return values.

1.1. Acronyms and abbreviations

API	Application Programming Interface
DLL	Dynamic Link Library (.dll file)
USB	Universal Serial Bus
I2C	Inter-Integrated Circuit

2. APIs

2.1. General Functions

2.1.1. USB Connection

▪ ConnectToHost

Description	Opens a USB connection to OSFP Host
Call	bool __stdcall ConnectToHost (UInt16 Instance)
Parameters	UInt16 Instance: USB instance of plugged host
Returns	True or False

▪ Disconnect

Description	Disconnects from OSFP Host and close USB connection
Call	bool __stdcall Disconnect(UInt16 Instance)
Parameters	UInt16 Instance: USB instance of plugged host
Returns	True or False

2.1.2. Monitoring

▪ P3V3_Current_Monitor

Description	Measures current value on the 3.3V line
Call	bool __stdcall P3V3_Current_Monitor(UInt16 Instance, UInt16* data)
Parameters	UInt16 Instance: USB instance UInt16* data: Current value in mA
Returns	True or False

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2.2. OSFP MSA functions

2.2.1. I2C access

▪ I2CRead

Description	Perform I2C read
Call	bool __stdcall I2CRead(int Instance, BYTE SlaveAddress, BYTE registerAddress, BYTE* ReadBuff, BYTE Length)
Parameters	int instance: USB instance BYTE SlaveAddress: Slave Address which is 0xA0 BYTE registerAddress: register address BYTE *ReadBuff: pointer to the received data BYTE Length: set buffer length (max 32)
Returns	True or False

▪ I2CWrite

Description	Perform I2C write
Call	bool __stdcall I2CWrite(int Instance, BYTE SlaveAddress, BYTE Register , BYTE Value)
Parameters	int instance: USB instance BYTE SlaveAddress: Slave Address which is 0xA0 BYTE Register: Register Address BYTE Value: Value to be written
Returns	True or False

2.2.2. Analog Monitor

▪ Get_VCC

Description	Get voltage sense for the VCC power rail
Call	bool __stdcall GetVCC(UInt16 Instance, double* Data)
Parameters	UInt16 Instance: USB instance double *data: pointer to voltage value returned in Volt
Returns	True or False

2.2.3. Alarms and controls signals

▪ MODPRSn

Description	Reads Module Present OSFP pin to check if the OSFP module is inserted in the Host
Call	bool __stdcall MODPRSn(UInt16 Instance, bool* status)
Parameters	UInt16 Instance: USB instance bool* status: True if module is absent False if module is present
Returns	True or False

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▪ LPMODEn

Description	Asserts/Deasserts LPMODEn
Call	bool __stdcall LPMODEn(UInt16 Instance,bool asserted)
Parameters	UInt16 Instance: USB instance bool status: True if assert False if deassert
Returns	True or False

▪ RESETn

Description	Asserts/Deasserts RESETn
Call	bool __stdcall RESETn(UInt16 Instance,bool asserted)
Parameters	UInt16 Instance: USB instance bool status: True if assert False if deassert
Returns	True or False

▪ IntL

Description	Reads the INT_L OSFP pin
Call	bool __stdcall IntL(int Instance, bool* status)
Parameters	int Instance: USB instance bool* status: True if HW pin is 1 False if HW pin is 0
Returns	True or False

3. Document information

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