# DUT INTERFACE

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**属性**：

byte MoudleChannel;//模块通道数

int deviceIndex;//USB地址，一般为0

byte tempselect;//选择温度（QSFP ER4）

byte vccselect;//选择电压（QSFP ER4）

方法：

**//DMI**

double ReadDmiTemp()//读取温度 DMI

double ReadDmiVcc()//读取电压 DMI

double ReadDmiBias()//读取Bias DMI

double ReadDmiTxp()//读取TxPowerDMI

double ReadDmiRxp()//读取RxPower DMI

**//a/w**

double ReadTempHA() //温度high alarm值

double ReadTempLA() //温度low alarm值

double ReadTempLW() //温度 low warning值

double ReadTempHW()//温度 high warning值

double ReadVccLA()//VCC low alarm值

double ReadVccHA()//VCC high alarm值

double ReadVccLW()//VCC low warning值

double ReadVccHW()//VCC high warning值

double ReadBiasLA()//BIAS low alarm值

double ReadBiasHA()//BIAS high alarm值

double ReadBiasLW()//BIAS low warning 值

double ReadBiasHW()//BIAS high warning值

double ReadTxpLA()//TxPower low alarm值

double ReadTxpLW()//TxPower low warning值

double ReadTxpHA()//TxPower high alarm值

double ReadTxpHW()//TxPower high warning值

double ReadRxpLA()//RxPower low alarm值

double ReadRxpLW()//RxPower low warning值

double ReadRxpHA()//RxPower high alarm值

double ReadRxpHW()//RxPower high warning值

**//check a/w**

bool ChkTempHA() //检测是否产生温度high alarm，返回true

bool ChkTempLA()//检测是否产生温度low alarm，返回true

bool ChkVccHA()//检测是否产生VCC high alarm，返回true

bool ChkVccLA()//检测是否产生VCC low alarm，返回true

bool ChkBiasHA()//检测是否产生BIAS high alarm，返回true

bool ChkBiasLA()//检测是否产生BIAS low alarm，返回true

bool ChkTxpHA()//检测是否产生TxPower high alarm，返回true

bool ChkTxpLA()//检测是否产生TxPower low alarm，返回true

bool ChkRxpHA()//检测是否产生RxPower high alarm，返回true

bool ChkRxpLA()//检测是否产生RxPower low alarm，返回true

bool ChkTempHW()//检测是否产生温度 high warning，返回true

bool ChkTempLW()//检测是否产生温度low warning，返回true

bool ChkVccHW()//检测是否产生VCC high warning，返回true

bool ChkVccLW()//检测是否产生VCC low warning，返回true

bool ChkBiasHW()//检测是否产生BIAS high warning，返回true

bool ChkBiasLW()//检测是否产生BIAS low warning，返回true

bool ChkTxpHW()//检测是否产生TxPower high warning，返回true

bool ChkTxpLW()//检测是否产生TxPower low warning，返回true

bool ChkRxpHW()//检测是否产生RxPower high warning，返回true

bool ChkRxpLW()//检测是否产生RxPower low warning，返回true

**//read optional status /control bit**

bool ChkTxDis()//检测是否产生TX Disable

bool ChkTxFault()//检测是否产生TX Fault

bool ChkRxLos() //检测是否产生RxLos

**//set a/w**

SetTempLA(decimal templa) //设定温度low alarm值

SetTempHA(decimal tempha) //设定温度high alarm值

SetTempLW(decimal templw) //设定温度low warning值

SetTempHW(decimal temphw) //设定温度high warning值

SetVccHW(decimal vcchw) //设定Vcc high warning值

SetVccLW(decimal vcclw) //设定Vcc low warning值

SetVccLA(decimal vccla) //设定Vcc low alarm值

SetVccHA(decimal vccha) //设定Vcc high alarm值

SetBiasLA(decimal biasla) //设定Bias low alarm值

SetBiasHA(decimal biasha) //设定Bias high alarm值

SetBiasHW(decimal biashw) //设定Bias high warning值

SetBiasLW(decimal biaslw) //设定Bias low warning值

SetTxpLW(decimal txplw) //设定TxPower low warning值

SetTxpHW(decimal txphw) //设定TxPower high warning值

SetTxpLA(decimal txpla) //设定TxPower low alarm值

SetTxpHA(decimal txpha) //设定TxPower high alarm值

SetRxpHA(decimal rxpha) //设定RxPower high alarm值

SetRxpLA(decimal rxpla) //设定RxPower low alarm值

SetRxpHW(decimal rxphw) //设定RxPower high warning值

SetRxpLW(decimal rxplw) //设定RxPower low warning值

SetSoftTxDis() //软件产生TX Disable

**//w/r sn/pn**

string ReadSn()//读取SN

string ReadPn() //读取PN

void SetSn(string sn) //写SN

void SetPn(string pn)//写PN

**//read manufacture data**

string ReadFWRev()//读取FW版本号

bool ReadTempADC(out UInt16 tempadc)//读取温度ADC

bool ReadVccADC(out UInt16 vccadc) //读取VCC ADC

bool ReadBiasADC(out UInt16 biasadc) //读取BIAS ADC

bool ReadTxpADC(out UInt16 txpadc) //读取TxPower ADC

bool ReadRxpADC(out UInt16 rxpadc) //读取RxPower ADC

**//通用方法**

Engmod(byte engpage)//工程模式，参数为所选页数

bool WritePort(int id, int deviceIndex, int Port, int DDR)//写Port口

参数deviceIndex为USB口地址索引，一般为0；

Port 端口号

DDR 方向

byte[] ReadPort(int id, int deviceIndex, int Port, int DDR) //读Port口

byte[] ReadReg(int deviceIndex, int deviceAddress, int regAddress, int readLength)

//读寄存器信息，

参数deviceIndex为USB口地址索引，一般为0；

deviceAddress为从地址；

regAddress寄存器地址；

readLength读取字节长度

byte[] WrtieReg(int deviceIndex, int deviceAddress, int regAddress, byte[] dataToWrite)

**//操作DRIVER**

bool WriteBiasDac(byte[] biasdac) //写DRIVER bias

bool WriteModDac(byte[] moddac) //写DRIVER mod

bool WriteLOSDac(byte[] losdac) //写DRIVER los

bool WriteAPDDac(byte[] apddac) //写DRIVER apd

bool StoreBiasDac(byte[] biasdac) //存储DRIVER bias

bool StoreModDac(byte[] moddac) //存储DRIVER mod

bool StoreLOSDac(byte[] losdac) //存储DRIVER los

bool StoreAPDDac(byte[] apddac) //存储DRIVER apd

bool ReadBiasDac(int length, out byte[] BiasDac) //读DRIVER bias

bool ReadModDac(int length, out byte[] ModDac) //读DRIVER mod

bool ReadLOSDac(int length, out byte[] LOSDac) //读DRIVER los

bool ReadAPDDac(int length, out byte[] APDDac) //读DRIVER apd

**//set coef**

bool SetTempcoefb(string tempcoefb) //写系数Tempcoefb

bool SetTempcoefc(string tempcoefc) //写系数Tempcoefc

bool SetVcccoefb(string vcccoefb) //写系数Tempcoefb

bool SetVcccoefc(string vcccoefc) //写系数Tempcoefb

bool SetRxpcoefa(string rxcoefa) //写系数Tempcoefb

bool SetRxpcoefb(string rxcoefb) //写系数Tempcoefb

bool SetRxpcoefc(string rxcoefc) //写系数Tempcoefb

bool SetTxSlopcoefa(string txslopcoefa) //写系数Tempcoefb

bool SetTxSlopcoefb(string txslopcoefb) //写系数Tempcoefb

bool SetTxSlopcoefc(string txslopcoefc) //写系数Tempcoefb

bool SetTxOffsetcoefa(string txoffsetcoefa) //写系数Tempcoefb

bool SetTxOffsetcoefb(string txoffsetcoefb) //写系数Tempcoefb

bool SetTxOffsetcoefc(string txoffsetcoefc) //写系数Tempcoefb

bool SetBiasdaccoefa(string biasdaccoefa) //写系数Tempcoefb

bool SetBiasdaccoefb(string biasdaccoefb) //写系数Tempcoefb

bool SetBiasdaccoefc(string biasdaccoefc) //写系数Tempcoefb

bool SetModdaccoefa(string moddaccoefa) //写系数Tempcoefb

bool SetModdaccoefb(string moddaccoefb) //写系数Tempcoefb

bool SetModdaccoefc(string moddaccoefc) //写系数Tempcoefb

bool SetTargetLopcoefa(string targetlopcoefa) //写系数Tempcoefb

bool SetTargetLopcoefb(string targetlopcoefb) //写系数Tempcoefb

bool SetTargetLopcoefc(string targetlopcoefc) //写系数Tempcoefb

**//APC**

bool APCON() //开APC

bool APCOFF()//关APC

bool APCStatus(out string flag)//检测APC状态，flag为ON或OFF