



# **XGSPON ONU STICK**

## **Product User Manual**



## Version Declaration

This manual is applicable to WT XGSPON ONU STICK optical module.

Product manual version modification record table

10					
9					
8					
7					
6					
5					
4					
3					
2					
1	V1.0	XGSPON ONU STICK Initial version of the manual.	2025/10/14	LI Meng	Garton
SN	Nstruction Manu	Revise Summary	modified date	compile	review

\*This manual may be modified, please check if the actual product matches the manual



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## Chapter 1. Product Introduction

### 1.1. Product Name

XGSPON ONU STICK, Commonly known as "cat stick"

### 1.2. Chip Solution

MaxLinear PRX126B3BI

### 1.3. Product Features

- 3.3V Power supply, maximum transmission distance 20KM
- Support IEEE 1588v2/PTP、Sync
- Comply with ITU-T G.9807
- Compatible SFP MSA Compatible RoHS
- Support fault alarm
- Support power outage alarm
- Uplink and downlink rates 9.953Gbps
- Working temperature range: 0°C-70°C
- Laser Class 1 Product which comply with the Requirements of IEC 60825-1 and IEC60825-2
- TX1270nm/RX1577nm
- Support SC / APC or SC/UPC interface

### 1.4. Application Scenarios

XGSpooon ONU STICK optical module, a PON ONU module packaged in SFP+, is mainly used to replace SFU optical modem and complete 10 Gigabit single port optoelectronic conversion in PON networks.

The XGSPON ONU STICK optical module can fully meet the requirements of telecom grade FTTB, FTTH, and FTTO devices. It can be hot plugged into the SFP+slot

of a layer 2 Ethernet switch to work as an ONT, allowing the entire device to be directly connected to the XGSPON optical network. The central OLT only needs to register the XGSPON ONU STICK optical module like configuring a regular optical modem, and the communication device can complete the access switch from the original P2P network to the PON network.

## **Chapter 2. Compatibility Explanation**

### **2.1. OLT End adaptation compatibility**

ZTE、Huawei、Mainstream brands such as Nokia.

### **2.2. Switch side adaptation compatibility**

Huawei, H3C, Ruijie, Cisco, WT and so on.

## **Chapter 3 Compatibility Coding**

XGSpooon ONU STICK has the same code as conventional SFP+modules and can write A0 and A2 through IIC; If it is necessary to modify the MAC (A0: 248~253) and SN (A0: 68~69), they should also be written together with the code (WT code board and upper computer are required, as shown in the figure).

Code writer connection module:



Coder software page:

Writecode-SN MAC(V1.0.0.6)

Code Info

Vendor Name: OEM SFP  PWD

Vendor PN: XGSPON ONU STICK Load A0 file

Vendor Rev: 1.0 AutoWrite

FileName/SN: 250306001 SetParameter

Date: 250306 Read A0

BR nominal: 103 x 100m Write A0

Wavelength: 1270.00 Read A2

Length(SM): 20 km Save code

载入文件成功

DDM

	1	2	3	4	
Temp					C
VCC					V
bias					mA
Txpow					dBm
Rxpow					dBm

Refresh

WriteOther  HighAuto  A0

WriteAddr: A2High

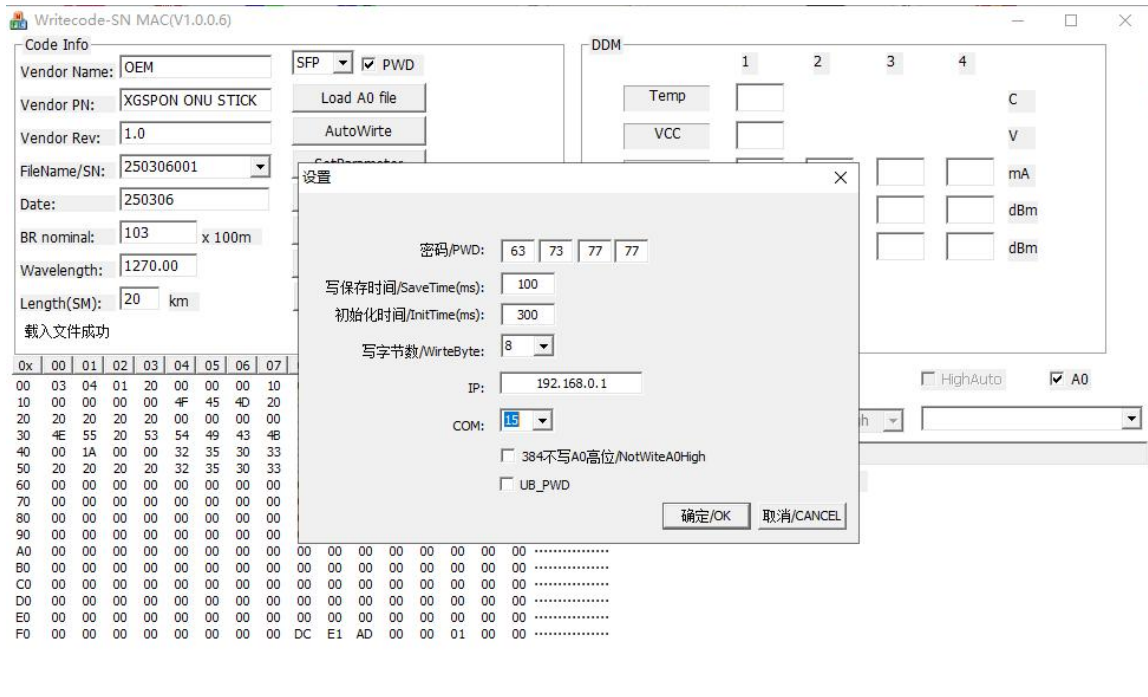
ImportFile

A2\_00  A0\_00

```

0x 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
00 03 04 01 20 00 00 00 10 00 01 00 06 67 00 14 C8 ... ..9...
10 00 00 00 00 4F 45 4D 20 20 20 20 20 20 20 20 20 ... ..OEM
20 20 20 20 20 00 00 00 00 00 58 47 53 50 4F 4E 20 4F ... ..XGSPON O
30 4E 55 20 53 54 49 43 4B 31 2E 30 20 04 F6 00 3B NU STICK1.0 ...;
40 00 1A 00 00 32 35 30 33 30 36 30 30 31 20 20 20 ... ..250306001
50 20 20 20 20 32 35 30 33 30 36 20 20 68 F0 03 86 250306 h...
60 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
70 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
90 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
A0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
B0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
C0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
D0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
E0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
F0 00 00 00 00 00 00 00 00 00 DC E1 AD 00 00 01 00 .....
  
```

Pay attention to setting the serial port number corresponding to the code board, as shown in the figure:



## Chapter 4. Management and Maintenance

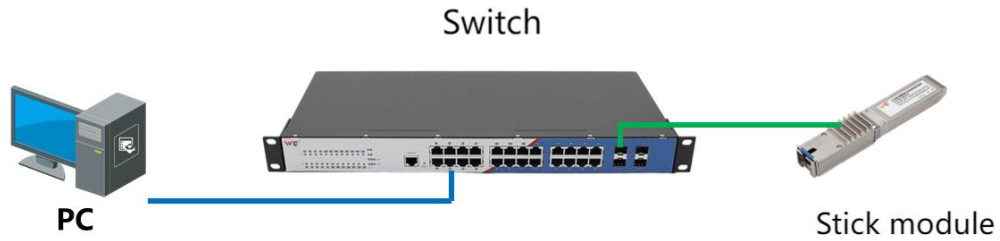
The CLI command line interface of the module provides a user management and maintenance interface. Users can access the CLI command-line interface of the module through SSH access.

### 4.1. User accesses CLI through SSH

Users can access the default IP address of the optical module through the port of the switch: 192.168.1.1.

The default IP address for the module is 192.168.1.1, mask 255.255.255.0, The operation steps for accessing the switch through the switch port are as follows:

Step 1: Connect the Ethernet port of the PC to the port of the switch through an Ethernet cable. As shown in the figure below:



Step 2: Set the IP address of the Ethernet port on the PC, which must be within the 192.168.1.1/24 range (e.g. IP address 192.168.1.100). Use ping 192.168.1.1 to determine the connectivity between the PC and the switch.

```
管理员: C:\WINDOWS\system32\cmd.exe
Microsoft Windows [版本 10.0.17763.1217]
(c) 2018 Microsoft Corporation。保留所有权利。

C:\Users\xxc>
C:\Users\xxc>
C:\Users\xxc>ping 192.168.1.1

正在 Ping 192.168.1.1 具有 32 字节的数据:
来自 192.168.1.1 的回复: 字节=32 时间<1ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间<1ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间<1ms TTL=64
来自 192.168.1.1 的回复: 字节=32 时间<1ms TTL=64

192.168.1.1 的 Ping 统计信息:
    数据包: 已发送 = 4, 已接收 = 4, 丢失 = 0 (0% 丢失),
    往返行程的估计时间(以毫秒为单位):
        最短 = 0ms, 最长 = 0ms, 平均 = 0ms

C:\Users\xxc>
```

Step 3: If the PC is connected to the switch, enter SSH 192.168.1.1 into the SSH terminal interface.

Step 4: The system defaults to the username root and password root.

## 4.2. Main operation commands

### 4.2.1. Querying MAC

Querying MAC can retrieve the MAC address of a module.

**Command:**

```
uci get network.lct.macaddr
```

**Example of operation:**

```
root@prx126-sfp-pon:/# uci get network.lct.macaddr
```

**Output result:**

```
00:00:92:F0:22:22
```

#### 4.2.2. Modifying MAC

**Command:**

```
uci set network.lct.macaddr="00:00:92:F0:A4:44"
```

```
uci commit
```

**Example of operation:**

```
root@prx126-sfp-pon:/# uci set network.lct.macaddr="00:00:92:F0:A4:44"
```

```
root@prx126-sfp-pon:/# uci commit
```

#### 4.2.3. Query SN command:

**Command:**

```
uci get gpon.ploam.nSerial
```

**Example of operation:**

```
root@prx126-sfp-pon:/# uci get gpon.ploam.nSerial
```

**Output result:**

```
202509290001
```



#### 4.2.4. Modify SN command:

**Command:**

```
uci set gpon.ploam.nSerial="202509280001"
```

```
uci commit
```

**Example of operation:**

```
root@prx126-sfp-pon:/# uci set gpon.ploam.nSerial="202509280001"
```

```
root@prx126-sfp-pon:/# uci commit
```

#### 4.2.5. Turn on the long light:

**Command:**

```
pon dtpd
```

```
pon dtpcs 1 1 0 0 0
```

```
pon dtpe 3 0 3 0
```

**Example of operation:**

```
root@prx126-sfp-pon:/# pon dtpd pon dtpcs 1 1 0 0 0
```

```
errorcode=0
```

```
root@prx126-sfp-pon:/# pon dtpcs 1 1 0 0 0 pon dtpe 3 0 3 0
```

```
errorcode=0
```

```
root@prx126-sfp-pon:/# pon dtpe 3 0 3 0
```

```
errorcode=0
```

#### 4.2.6. Turn off long light:

**Command:**

```
pon dtpd
```

**Example of operation:**

```
root@prx126-sfp-pon:/# pon dtpd
```

```
errorcode=0
```

#### 4.2.7. Querying Alarm Status:

**Command:**

```
pontop -b -g w
```

**Example of operation:**

```
root@prx126-sfp-pon:/# pontop -b -g w
```

Page: Active alarms

Alarm type	Alarm	Description
LEVEL	PON_ALARM_STATIC_LOS	Loss of signal
LEVEL	PON_ALARM_STATIC_LODS	Loss of downstream synchronization
LEVEL	PON_ALARM_STATIC_ERR_LOSS	Same signal as LOS just configured as level

sensitive

### 4.3. Maintenance

#### 4.3.1. Startup status

There is no indicator light on the module. To determine if the module is starting normally, the SFP+optical port of the switch needs to be used to check if the module is starting normally.

#### 4.3.2.Registration Status

The registration status of the module needs to be determined through the OLT end.