TFN

10G TRANSMISSION ANALYZER

OTDR network comprehensive tester

G30A

BUILDING DREAMS IN MULTIPLE FIELDS

Building an information bridge

1 Informatized railways

2 Urban information construction

3 Cable laying by operators

4 Urban comprehensive office area

5 Fiber optic entry into households

6 Global 5G communication construction

OTDR FUNCTION

ACCURATE TESTING OF OPTICAL TIME DOMAIN

Support
online testing

VFL

OPM/OLS

HIGHLY INTEGRATED SDH/SONET

TESTED MODULES

The G30A series SDH/SONET testing module can provide comprehensive metropolitan area network testing functions with highly integrated functions, making it a testing tool for service providers to quickly and efficiently deploy, operate, and maintain transmission networks.
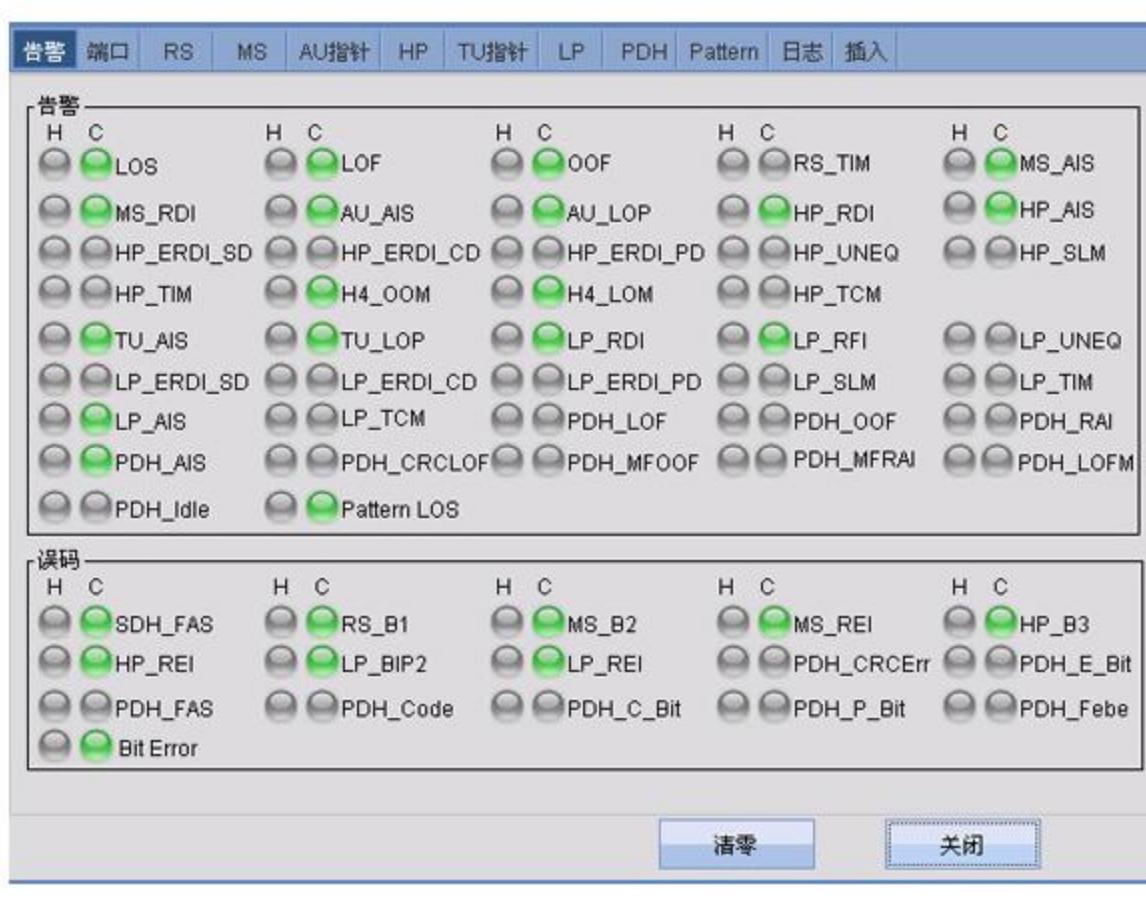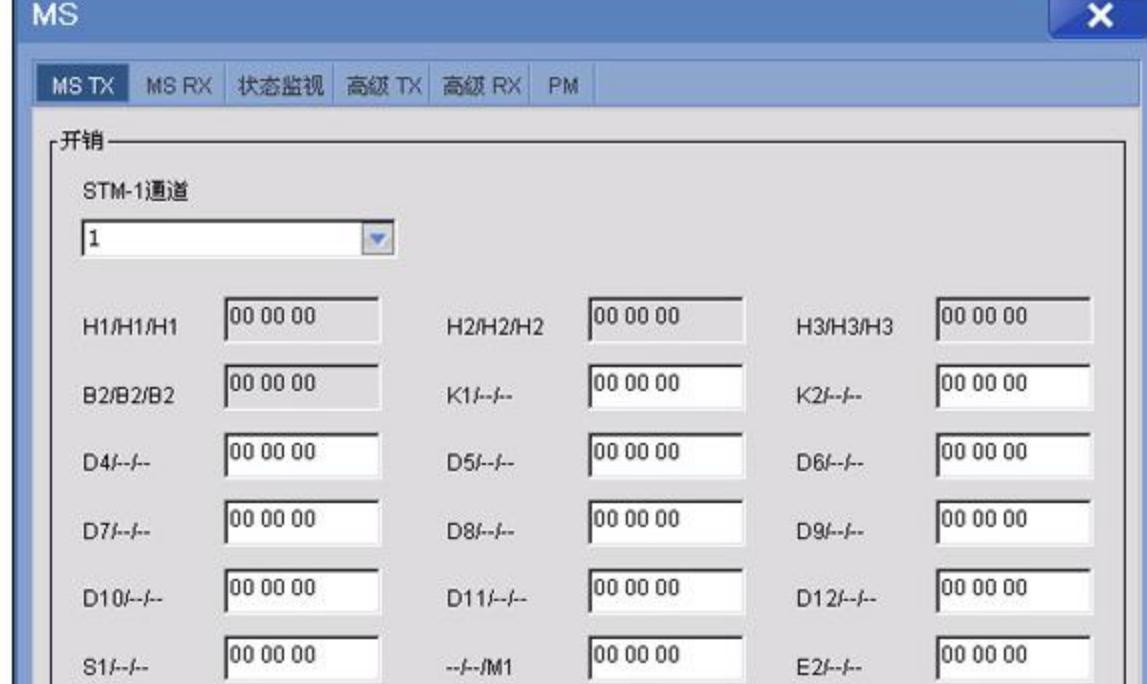

SDH TEXT

RX

TX

SDH (NUT)

LOOPBACK

PDH / SDH /SONET Test functional characteristics

- Supports multiple PDHISDH/SONET testing interfaces, 1.5M/2M/34M/45M/140M/155M electrical interfaces, 155M/622M/2.5G/10G optical interfaces

- Hybrid and high-capacity payload generation and analysis from 1.5Mbit/s to 10 Gbit/s

- Supports high-order and low order mappings

- Loop delay measurement

- Independent transmitter and receiver testing

- Supports end-to-end or loopback mode error testing on all PDH/SDH/SONET interfaces

- Support the generation and monitoring of high-order and low order pointers

- Support operation and monitoring of segment/regeneration segment, line/multiplexing segment, high-order and low-order channel overhead, as well as alarm/error generation and monitoring

- tandem connection monitoring

- Performance monitoring: G.821, G.826, G.828, G.829, M.2100, M.2101

- Frequency analysis and power measurement

- Frequency offset generation

- Automatic protection switching and service interruption time measurement

- E1 multi-channel testing with optional support for STM-1/4/16 interfaces

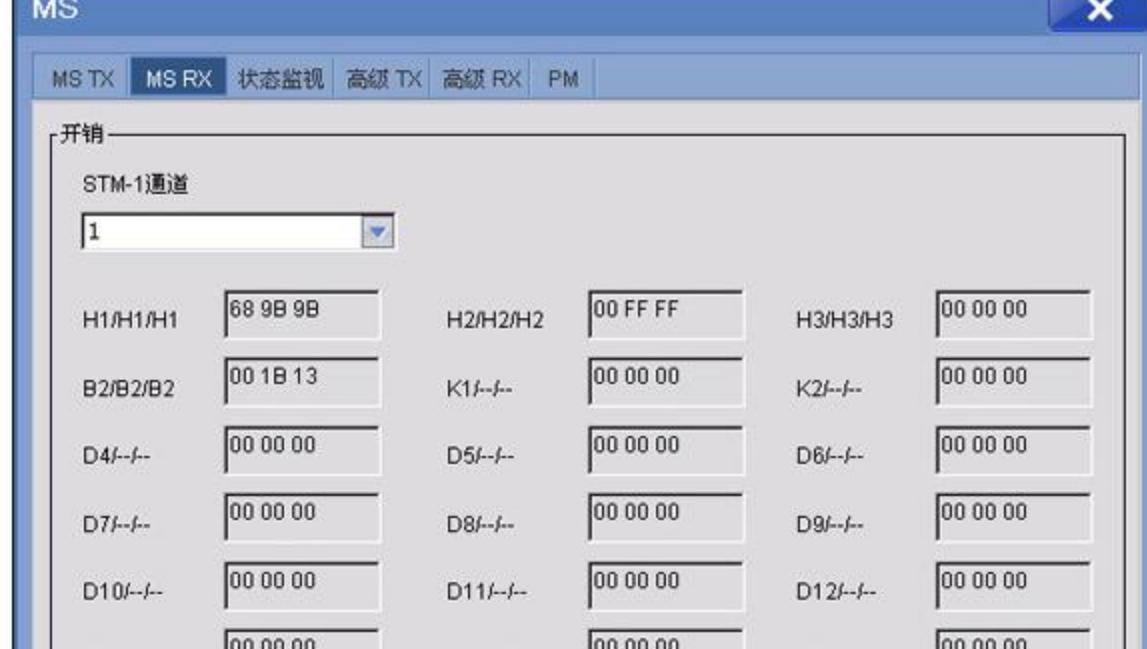- Automatic protection switching and service interruption time measurement

Schematic diagram of status monitoring

告警 | 端口 | RS | MS | AU指针 | HP | TU指针 | LP | PDH | Pattern | 日志 | 插入

告警
H C
○ ○ LOS　　○ ○ LOF　　○ ○ OOF　　○ ○ RS_TIM　　○ ○ MS_AIS
○ ○ MS_RDI　○ ○ AU_AIS　○ ○ AU_LOP　○ ○ HP_RDI　○ ○ HP_AIS
○ ○ HP_ERDI_SD ○ ○ HP_ERDI_CD ○ ○ HP_ERDI_PD ○ ○ HP_UNEQ ○ ○ HP_SLM
○ ○ HP_TIM　○ ○ H4_OOM　○ ○ H4_LOM　○ ○ HP_TCM
○ ○ TU_AIS　○ ○ TU_LOP　○ ○ LP_RDI　○ ○ LP_RFI　○ ○ LP_UNEQ
○ ○ LP_ERDI_SD ○ ○ LP_ERDI_CD ○ ○ LP_ERDI_PD ○ ○ LP_SLM ○ ○ LP_TIM
○ ○ LP_AIS　○ ○ LP_TCM　○ ○ PDH_LOF　○ ○ PDH_OOF　○ ○ PDH_RAI
○ ○ PDH_AIS　○ ○ PDH_CRCLOF ○ ○ PDH_MFOOF ○ ○ PDH_MFRAI ○ ○ PDH_LOFM
○ ○ PDH_Idle　○ ○ Pattern LOS

误码
H C
○ ○ SDH_FAS　○ ○ RS_B1　　○ ○ MS_B2　　○ ○ MS_REI　○ ○ HP_B3
○ ○ HP_REI　○ ○ LP_BIP2　○ ○ LP_REI　　○ ○ PDH_CRCErr ○ ○ PDH_E_Bit
○ ○ PDH_FAS　○ ○ PDH_Code ○ ○ PDH_C_Bit ○ ○ PDH_P_Bit ○ ○ PDH_Febe
○ ○ Bit Error

清零 | 关闭

MS TX schematic diagram

MS

MS TX | MS RX | 状态监视 | 高级 TX | 高级 RX | PM

开销
STM-1通道
[1 ▼]

H1/H1/H1 [00 00 00]　H2/H2/H2 [00 00 00]　H3/H3/H3 [00 00 00]
B2/B2/B2 [00 00 00]　K1/--/-- [00 00 00]　K2/--/-- [00 00 00]
D4/--/-- [00 00 00]　D5/--/-- [00 00 00]　D6/--/-- [00 00 00]
D7/--/-- [00 00 00]　D8/--/-- [00 00 00]　D9/--/-- [00 00 00]
D10/--/-- [00 00 00]　D11/--/-- [00 00 00]　D12/--/-- [00 00 00]
S1/--/-- [00 00 00]　--/--/M1 [00 00 00]　E2/--/-- [00 00 00]

更新硬件

MS RX schematic diagram

MS

MS TX | MS RX | 状态监视 | 高级 TX | 高级 RX | PM

开销
STM-1通道
[1 ▼]

H1/H1/H1 [68 9B 9B]　H2/H2/H2 [00 FF FF]　H3/H3/H3 [00 00 00]
B2/B2/B2 [00 1B 13]　K1/--/-- [00 00 00]　K2/--/-- [00 00 00]
D4/--/-- [00 00 00]　D5/--/-- [00 00 00]　D6/--/-- [00 00 00]
D7/--/-- [00 00 00]　D8/--/-- [00 00 00]　D9/--/-- [00 00 00]
D10/--/-- [00 00 00]　D11/--/-- [00 00 00]　D12/--/-- [00 00 00]
S1/--/-- [00 00 00]　--/--/M1 [00 00 00]　E2/--/-- [00 00 00]

PRODUCTS AND THEIR ACCESSORIES

INVENTORY

1 Main engine **2** Instrument package **3** LC/PC fiber optic testing jumper

4 2M75 Ohm Test Cable **5** Manual CD **6** Optical module

7 Battery **8** Source

TECHNICAL PARAMETER

Physical property		
Temperature	Working temperature: -10 ° C to 50 ° C: Storage temperature: -40 ° C to 70 ° C
Relative humidity	0% to 95% (non condensing)
Size	50 mm x 97 mm x 259 mm (OTM2502) 25mm x 97 mm x 259 mm (OTM2515/2516/2517)
Weight	0.7kg (OTM2502): 0.5kg (OTM2515/2516/2517)

Test interface specifications

- XFP 10G optical interface (STM-64)
- SFP 155M/622M2.5G optical interface (STM-1/4/16)
- BNC 155M electrical interface (STM-1e)
- BNC 1.5M/2M34M45M/140M PDH electrical interface (DS1/E1/E3/DS3/E4)
- RJ45 1.5M/2M electrical interface

OTDR testing

Supports 1310/1550nm wavelength and dynamic range up to 47dB

Short enough blind spots (event blind spot 0.5m, attenuation blind spot 2.5m) and up to 256000 sampling points,

Ensure precise testing of OTDR throughout the entire fiber optic link

Supports online testing with a wavelength of 1490/1625/1650nm and a dynamic range of up to 42dB,

Capable of passing through a 1:128 splitter at most;

Support SR-4731. sor file format

Quick testing mode with automatic trace diagnosis, one click setup, and event detection

The dual marking line function is used for distance, attenuation, and fusion loss measurement

Support PC offline analysis software for offline data analysis and printing

Support VFL visual fault locator function

Optional optical power meter and light source testing function

Optional iNET intelligent network testing tool features

Optional fiber optic end face microscope testing function

SDH/SONET testing features		
load	VC4-64c Bulk VC4-16c Bulk, VC4-4c Buk. VC4 Buk.VC3 Bulk. VC12 Bulk.2M, VC11 Bulk	
Test pattern	PBBS	XFP10G optical interface (STM-64)
	User	XFP 10G optical interface (STM-64)
Error code insertion	B1, B2.B3,MSRELHP/LP-REL, HP/LPTC-IEC. HP/LP-TCREL HP/LPTCOEL LP-BIF Sudden: 1 to 100 Ratio: 1E-9 to 2E-3	
Alarm generation	**RS**: LOS. LOF. RS IM **AU**: AU-LOP AU-AIS **MS**: MS-AIS.MS-RDI **HP**: HP-AIS,HPUNEQ, HP-TIM, HP-RDL, HP-ERDI, HP-TCAIS,HP-TC-RDI. HP-TC-ODI.HP-TC-LOM.HP-TCTIMHP-TC-UNEO **TU**: TU-LOP TU-AIS. TU-LOM **LP**: LP-UNEQ.LP-TIM LP-RDI LP-ERDI.LP-TCAIS.LP-TCRDI. LP-TC-ODILPTC-OMLPTC-TIMLPTCUNEO	

Test result	Error code	Bit,B1,B2,B3,BIP-2,MS REL,HP/LP REL HP/LP-TC-IEC HP/LPTC-REL,HP/LP-TC-OEI
	User	LOS. LOF.OOFRS-TIM.MSAIS.MS-RDIAU-ASAU-LOP HP-AIS. HPPLM.HP-ERDIHPTIM HP-UNEQ. HP-TC-AIS HPTC-RDL HP-TCODI, HP-TC-LOM HP-TC-TIM HP-TCUNEQ.TU-LOM, TU AIS,TU-LOP.LPPLM,LP-ERDI LP.TIM. LP-UNEQ.LP-TCAIS.LPTCRDILP-TC-ODI LPTC-LOM.LPTCTIM,LPTCUNEQ
	Performance	ITU-T G821,G.826,G.828,G829,M.2101,M2110,M2120

Cost characteristics	Cost monitoring	Display all bytes in hexadecimal (RS.MS.HP and LP) Text decoding of all applicable bytes (K1/K2, S1, C2, etc.)
	Cost Editing	Hexadecimal input, excluding checksum bytes (B1/B2/B3), pointers (H1-H3, V1-V3), and undefined byte text decoding all applicable bytes (K1/K2.S1, C2, etc.)

Track generation	J0 section trace	1 byte, 16 bytes E.164ASCII sequence+CRC-7 or 64 bytes E. 164 ASCII columns
	J1/J2 Channel trace	16 byte E.164 ASCI sequence+CRC-7 or 64 byte E.164 ASCII sequence

PDH testing characteristics		
Test pattern	PBBS	2E23.2E20.2E15.2E11
	User	User can define a test pattern with a length of 8 bits
PDH/T carrier error code insertion		1.5M: Code. Fas.CRC Bit 2M: Code. Fas,CRC, Bit 34M: Fas, Bit 45M: F-bit (Fas) , C-bit, P-bit, FEBE, Bit 140M: Fas, Bit Insertion method: continuous, alternating, burst: ratio: 1x10-9 to 2x10-3 (depending on setting)
Alarm generation		1.5M: LOS.LOF.AIS,RAI.PATTERN LOS 2M: LOS.LOF. LOFM,AIS,RAIMFRAL, CRCLOFM. PATTERN LOS 34M: LOF. RAI.AIS, PATTERN LOS 45M: LOF RAI,AIS Idle, PATTERN LOS 140M: LOF RAI,AIS, PATTERN LOS Insertion method: continuous, alternating, sudden
Measure	1.5M	LOS, LOF,AIS,RAI, PATTERN LOS, Code, Fas, CRC. Bit Error
	2M	LOS, LOF, LOFM,AIS,RAI.MFRAI, CRCLOFM, PATTERN LOS, Code, Fas, CRC, Bit Error
	34M	LOF RAI, AIS, PATTERN LOS, Fas, Bit Error
	45M	LOF RAI. AIS.Idle. PATTERN LOS, F-bit(Fas). C-bit, P-bit FEBE Bit Error
	140M	LOF. RAI, AIS, PATTERN LOS, Fas. Bit Error
	Error code and alarm data	Total error count or alarm seconds All bit error rates Current bit error rate (first 1 second)
	ITU-T G.821 Analysis	Current bit error, current BER, total bit error, all BER, ES,% ES, SES.% SES EFS.% EFS AS.% AS UAS% UAS
	ITU-T G.826 Analysis	Based on RAI. For the far and near end analysis of BE, BBE, BBE rate, ES,%ES,SES,%SES,AS,%AS,UAS.%UAS