



TFN T1000M E1/Data Transmission Analyzer

— A handheld professional bit error rate tester supporting E1/G.703 lines and multiple protocol data interfaces, facilitating precise operation and maintenance of transmission networks.



Product Introduction

The T1000M is a portable E1 and data communication comprehensive analyzer, equipped with a TFT true-color screen and a full Chinese graphical interface. It supports framed/unframed bit error rate testing of E1 lines, G.821/G.826/M.2100 standard analysis, timeslot setting and monitoring, and bit error rate testing for multiple data interfaces such as V.35/V.24/RS232/RS449/RS530/X.21. Suitable for transmission line maintenance, data service activation, and fault location in industries such as telecommunications, private networks, and broadcasting, it is an efficient and reliable testing partner for field engineers.

Key Selling Points (Solving Customer Pain Points)

1. Multi-functional: One device covers E1 and multiple data interface testing, eliminating the need to carry multiple instruments and improving field efficiency.
2. Professional E1 Analysis: Supports framed/unframed operations, time slot extraction and insertion, CAS/CCS signaling settings, and Sa-bit operations, meeting in-depth operation and maintenance needs.
3. Comprehensive Standards: Strictly adheres to international standards such as G.821, G.826, and M.2100, providing reliable bit error rate performance assessment.
4. Portable and Durable: Built-in lithium battery supports 4 hours of continuous operation, weighing only 0.8kg, suitable for long-term field work.
5. User-Friendly: Fully Chinese graphical interface, histogram display, audible and visual alarms, one-click result storage/printing, lowering the barrier to entry for users.

Main Functions

- E1 Testing: 75 Ω /120 Ω interface, AMI/HDB3 coding scheme, framed/unframed bit error rate testing, time slot configuration (PCM30/31, etc.)
- Data Interface Testing: V.35/V.24/RS232/RS449/RS530/X.21, supports DTE/DCE simulation, synchronous/asynchronous bit error rate testing
- Advanced Analysis: G.821/G.826/M.2100 bit error rate analysis, frequency offset testing, line delay measurement, alarm insertion and detection



- PCM Simulation (T1000M/T): Voice channel monitoring, DTMF/single-tone insertion, CAS/CCS signaling simulation, idle code programming
- Jitter and Level Testing (T1000M/T): Pulse template testing, dual-channel E1 online monitoring, G.70364K co-directional interface testing
- Practical Tools: IP PING test, automatic frame format recognition, headphone monitoring (T model), USB data export, parallel print output.

Product Parameters

| Model | T1000M/C E1 Data Error Rate Tester | T1000M/E 2M Bit Error Rate Tester | T1000M/T E1 Transmission Analyzer |
|----------------------------------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|
| Description | E1+Data | E1 | E1+Jitter+G.703-64K |
| Basic Functions | | | |
| E1 Interface Testing | ● | ● | ● |
| Data Interface Testing | ● | - | - |
| G.703 Same-Direction Testing | - | - | ● |
| Jitter Testing | - | - | ● |
| Level Testing | - | - | ● |
| Pulse Template Testing | - | - | ● |
| Dual-Channel E1 Online Error Monitoring and Time Slot Analysis | - | - | ● |
| PCM Simulation Testing | - | - | ● |
| E1 Interface Testing | T1000M /C | T1000M /E | T1000M /T |
| 75Ω and 120Ω interfaces | ● | ● | ● |
| AMI, HDB3 line patterns | ● | ● | ● |
| Line error rate testing in termination mode | ● | ● | ● |
| Online "bridging" mode testing | ● | ● | ● |
| Online "pass" mode testing | - | - | ● |
| Nx64K E1 error rate testing | ● | ● | ● |
| Multiple error rate insertion methods | ● | ● | ● |
| Multiple alarm insertion methods | - | - | ● |
| Slot busy/idle status display | - | - | ● |
| Selectable and programmable test patterns | ● (32 Bit) | ● (32 Bit) | ● (32 Bit) |
| Internal/interface clock source extraction | ● | ● | ● |
| Selectable external transmit clock source | ● | ● | ● |
| Transmission loop delay | ● | ● | ● |

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|-------------------------------------------------------------------------------------|------------------|------------------|------------------|
| testing | | | |
| Data Testing | T1000M /C | T1000M /E | T1000M /T |
| DTE, DCE device emulation modes | • | - | - |
| Supports V/X/RS/EIA series protocol data interfaces | • | - | - |
| Asynchronous data bit error rate testing | • | - | - |
| Synchronous data bit error rate testing | • | - | - |
| Data clock trigger edge optional | • | - | - |
| Data interface receive bit rate test | • | - | - |
| G.703-64K Testing | T1000M /C | T1000M /E | T1000M /T |
| G.703 64K In-direction Interface Bit Error Test Function | - | • | - |
| Receive Bit Rate Test | - | • | - |
| Alarm Detection | - | • | - |
| PCM Simulation Testing | T1000M /C | T1000M /E | T1000M /T |
| Analog PCM terminal alarm insertion | - | - | • |
| Insert idle code (programmable content) | - | - | • |
| Send CAS, CCS (programmable content) | - | - | • |
| Monitoring of any 64k voice channel | - | - | • |
| Single audio signal insertion | - | - | • |
| DTMF insertion | - | - | • |
| Other Features and Metrics | T1000M /C | T1000M /E | T1000M /T |
| IP PING Test | • | - | • |
| Error analysis according to G.821, G.826, M.2100 standards | • | • | • |
| Automatic frame format recognition | • | • | • |
| Real-time open/short circuit indication for transmitting circuit, test result reset | • | • | • |

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|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---|---|
| function | | | |
| Instrument self-test, keyboard and LED detection functions | • | • | • |
| Buzzer, LED audible and visual alarms and status indicators/timed test | • | • | • |
| Headphone jack | - | - | • |
| TFT true color screen (320×240)/printing function | • | • | • |
| Power supply | Lithium rechargeable battery (2200mAh, supports 4 hours of continuous operation) / Power adapter (9V/2A) | | |
| Weight/Dimensions | 0.8Kg, 180×135×70 mm (L×W×H) | | |

Note: "•": Yes, "-": No

* The above parameters are subject to change without notice.

Applicable Scenarios

1. Maintenance and activation of E1 access networks for telecom operators
2. Inspection of private network (power, railway, broadcasting) transmission lines
3. DDF rack wiring testing and fault location in data centers
4. E1 interface consistency verification for equipment manufacturers
5. Line acceptance and delivery testing for telecommunications engineering companies

Why choose the T1000M?

The T1000M is designed with "professionalism, portability, and ease of use" as its core design philosophy. It deeply integrates traditional E1 testing and data communication verification capabilities, helping users maintain an efficient operation and maintenance pace in the context of increasingly complex transmission networks. Whether it's basic line quality assessment or complex signaling and voice channel analysis, the T1000M series provides accurate, stable, and intuitive testing support.