

FTE-E1D

Telecom and Datacom Analyzer

FTE-E1D is a complete and compact solution for E1 & Datacom analysis. It is the ultimate field portable analyzer, a multi-functional and full-featured digital transmission system test device, designed for the installation test, engineering check-up, acceptance test, daily maintenance of digital networks, mainly performing channel test, alarm analysis, fault finding and signaling analysis, etc. In addition, FTE-E1D also provides various protocols converting with one-way and bidirectional bit error test function. As an option, the 10/100M Ethernet interface is available for PING testing and verifying network connectivity.



Key Features

- Handheld design and easy-to-use
- Full-featured measurements of 2Mbps E1 & Datacom
- High resolution large LCD screen with backlit and adjustable contrast
- User-friendly GUI with smart navigation mode and support multi-languages
- Extensive error and alarm generation, detection and indication
- Histograms analysis of alarm and error events
- Up to 99 days continuous test performance
- Save up to 7 user-defined setups and 70 sets of results
- Up to 6 hours continuous operation with built-in Li rechargeable battery
- Able to charge battery with vehicle power adapter
- Software upgradable via an integrated RS232C interface
- Test results can be uploaded, saved and printed via PC Management software

Key Measurement

2Mbps testing

- Out-of-service 2Mbps, N×64kb/s BER testing
- In-service framed and unframed double-channel testing
- “PCM simulator” mode testing
- Frame data control and monitoring
- Timeslot activity monitoring, FAS, N-FAS, TS16MFO analysis
- Built-in 64kb/s tone channel listen capability
- CAS and CCS signaling generation and monitoring
- Round trip delay measurement
- APS delay measurement
- Extensive error and alarm generation
- VF tone generation and measurement
- Level measurement
- Pulse mask measurement
- Jitter measurement to ITU-T standard O.172 (Optional)
- Frequency and offset measurement
- Clock slip measurement
- Real-time transmit circuit open/short indication

Ethernet testing (Optional)

- Ethernet PING and connectivity test

G.703 CO testing (Optional)

- G.703 CO 64kb/s BER testing
- Octet timing control and monitoring
- Frequency and offset measurement

Datacom testing

- Datacom (V.24, V.35, V.36, X.21, RS-449, RS-485, EIA-530 and EIA-530A) BER Testing
- ASYNC BER testing with baud rate 300b/s ~ 38.4Kb/s
- SYNC BER testing with data rate 300b/s ~ 8Mb/s
- DTE or DCE emulation
- Frequency measurement
- Handshaking signals control and monitoring

Protocol converter testing

- 2Mbps Datacom SYNC 64k or N×64kb/s BER testing
- 2Mbps G.703 CO SYNC 64kb/s BER testing
- Frequency and offset measurement
- Handshaking signals monitoring
- 2Mbps frame data and alarm monitoring

Others

- Manual and auto-timer measurement
- ITU-T G.821, G.826, and M.2100 performance analysis

Technical Specifications

Item	Description	
2Mb/s Telecom	Internal Clock	2048kb/s ±10ppm
	Frequency Deviation	±999ppm
	Interfaces	75Ohms (unbalanced), 120ohms (balanced); High Input Impedance > 2kOhms
	Line code	HDB3, AMI
	Framing	Unframed, PCM30, PCM30CRC, PCM31, PCM31CRC
	Receiver Sensitivity	> -43dB
	Tx Clock Source	Internal, Recovered and External 2MHz clock or signal
	Pulse Mask Measurement	Complies with G.703
	Jitter Measurement	Complies with O.172
	Frequency Measurement	Accuracy: ±1Hz
	Offset Measurement	Accuracy: ±1ppm; Range: -999ppm ~ 999ppm
	VF Injection	Frequency: 200Hz ~ 3400Hz; step: 10Hz Level: -60dBm ~ +3dBm
	VF Measurement	Frequency: 200Hz ~ 3400Hz; Accuracy: ±1Hz Level range: -60dBm ~ +3.14dBm; Accuracy: ±2.87dBm @ -60.0dBm ~ 21.0dBm Accuracy: ±0.21dBm @ -20dBm ~ +3.14dBm
G.703 CO	Delay Measurement	Accuracy: ±1µs
	Line Rate	64kb/s ± 100ppm
	Interface	120Ohms, Balanced
Datacom	Line Code	AMI
	Interfaces	V.24, V.35., V.36, V.21, RS-449, RS485, EIA-530 and EIA-530A
	Data Rate	Async: 300, 600bit/s, 1.2, 2.4, 4.8, 7.2, 9.6, 19.2, 38.4kb/s Sync: 300, 600bit/s, 1.2, 2.4, 4.8, 7.2, 9.6, 19.2, 38.4kb/s N x 64kb/s (N=1 ~ 32), 4M, 8Mb/s
Ethernet	Interface	10/100Mbase
	IP PING	Network Layer
Test Patterns	PRBS	2 ²³ -1, 2 ²⁰ -1, 2 ¹⁵ -1, 2 ¹¹ -1, 2 ⁹ -1, 2 ⁶ -1
	Fixed Code	1111, 0000, 1010
	16-Bit	User Programmable word
LED Alarm Indicators	Signal Loss, AIS, Frame Loss, MFrame Loss, Pattern Loss, Remote Alarm, Error, Clock Slip	
Error Injection	Type: BIT, FAS, CRC4, CODE, E-BIT	
	Signal, Fixed Rate: 10 ⁻² , 10 ⁻³ , 10 ⁻⁴ , 10 ⁻⁵ , 10 ⁻⁶ , 10 ⁻⁷	
Performance Analysis	ITU-T G.821, G.826 and M.2100	

General Specifications

Display	320 x 240 pixel color TFT LCD
Serial Port	RS-232C
Rechargeable Batteries	4000Amh, 7.2V Li batteries, continuous working for 6 hours
Recharging time	Approx. 3hours
AC Power Adapter	Input: 100 ~ 240VAC, 50/60Hz, Output: 12.6VDC/1A
Test Manager Pro	Win98/ME/NT/2000/XP
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 70°C
Humidity	5% ~ 95% non-condensing
Dimension (mm)	180(L) x 150 (W) x 42 (H)
Weight (g)	980

Optional

FTE-Jitter	Jitter measurement (O.172)
FTE-G703-CO	G.703 CO 64kb/s BER testing
FTE-Frame	Frame Relay measurement
FTE-10/100	10/100M Ethernet testing
FTE-120-cable	120ohms testing Cable

Standard Items

Main Unit	1
75-ohm (BNC) to BNC cable	1
75-ohm (BNC)/L9 E1 test cable	2
RS232 serial upgrading cable	1
Data converting cable (36Pin to 44Pin)	1
X.21 test cable	1
V2.4 test cable	1
V35 test cable	1
V.11 Test cable	1
Simulation software	1
Warranty card	1
Certificate of conformity	1
Li Battery Pack	1
DC adaptor & charger	1
Carrying case	1
User's manual	1

Related Products

FTE-E10
FTE-E20

Ordering Information

FTE-E1D