

# ParaScope Lite

*Small. Simple. Sexy.*

This portable, powerful tool is *easy as pie* to use! It's compact architecture, large LCD, and unmatched reliability makes the perfect tool for installing and troubleshooting T1/E1 lines and data circuits.

Besides its light weight and transportable design, its modular construction ensures that you can add extra functionality for testing jitter, data circuits, 64 Kbps G.703 and more when needed. In addition, its on board memory guarantees sufficient storage of all your test results. You can access and control the **ParaScope Lite** remotely using any PC running Windows 98/2000/XP/and NT.



## Key Features Include:

- **T1**: ESF, SF, unframed
- **E1**: PCM30, PCM31, PCM30/CRC PCM31/CRC, G.703 2048kbit/s
- **Unframed E1**: G.703 2048 kbit/s, G.703 64 kbit/s
- THROUGH-mode testing (transparent and overwrite)
- Bit Error Testing
- ITU-T G.821, G.826 and M2100 Analysis
- Histogram Analysis
- Error Injection
- Jitter Analysis
- Round Trip Delay Measurements
- Frequency Offset Measurements
- CAS, ABCD Monitoring
- V.24/RS232, V.35, V.36/RS449, x.21, EIA 530/530A, RS485/RS422, DTE/DCE mode
- Alarm Monitoring and Generation
- Framing Bits and Timeslot Monitoring
- Nx64 kbit/s, Nx56 kbit/s
- Remote Operation

## Sell the ParaScope Lite to:

- PTTs
- Field Service Technicians
- Telcos



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# ParaScope Lite

## ParaScope Lite: General Specifications

Batteries, rechargeable: Li-battery (8.4V/1200mAh)  
Operating time (fully-charges batteries): About 4 hours  
Charging time: About 4 hours  
External supply: 12V AC adaptor  
Internal NVRAM: 2Mbit  
Records: 9  
Communication interface: RS232C  
Temperature range:  
    Operating: 0° to +40°  
    Storage: 5° to +40°  
Dimensions: HxDxW: 190x120x50(mm)  
Weight: 1.5kg approx.

## E1

Max bit rate: 2048kbit/s  
Internal clock: 2048KHz  $\pm$  10ppm  
Line code: HDB3 or AMI  
G.703 jitter, tolerance and transfer: ITU-T Rec. G.823  
Test pattern: PRBS (n) n=6,9,11,15,20,23  
Error injection: Single, Rate:  $1 \times 10^{-n}$  n=3,4,5,6,7  
Framed/Unframed, PCM30, PCM31, (PCM30 CRC) (PCM31 CRC)  
Connectors:  
    BMC nominal 75W unbalanced  
    RJ-45C nominal 120W balanced  
    Bridged input: Unbalanced 2kW (nominal)  
    Mark level:  
        75W unbalanced  $2.37V \pm 10\%$   
        120W balanced  $3.0V \pm 10\%$

Level measurement accuracy:  
    -39Bm to =6dBm  $\pm$  0.3dBm  
    -50dBm to -40dBm  $\pm$  1.5dBm

Clock source: Internal or Received from Rec Data  
Monitoring and Display of: FAS, NFAS, MFAS, CRC MFAS words

## T1

Max bit rate: 1544bit/s  
Internal clock: 1544kHz  $\pm$  10ppm  
Line clock: B8Zs or AMI  
Test pattern: PRBS(n) n=6,9,11,15,20,23  
Error injection: Single, Rate:  $1 \times 10^{-n}$  n=3,4,5,6,7  
Framed/Unframed, D4, EFS  
Connectors:  
    RJ-45C nominal 120W balanced  
    Bridged input: Unbalanced 2kW (nominal)  
    Mark Level: 120W balanced  $3.0V \pm 10\%$   
Clock source: Internal or Recovered from Rec Data

## G.703 64K

Rate: 64kbit/s  
Internal clock: 64 kHz  $\pm$  10ppm  
Line code: AMI  
Test pattern: PRBS (n) n=6,9,11,15,20,23  
Error injection:  
    Single, Rate:  $1 \times 10^{-n}$  n=3,4,5,6,7  
Connectors::  
    BMC nominal 75W unbalanced  
    RJ-45C nominal 120W balanced  
Mark level: The pulse mask at the output will comply with ITU-T G.703 section 1.2.1.2 (Reference 3)  
Clock source: Internal or Recovered from Rec data

## V SERIES

Rate: 50 Hz to 460.8 KHz  
Line code: NRZ  
Test pattern: PRBS (n) n=6,9,11,15,20,23  
Error injection:  
    Single, Rate:  $1 \times 10^{-n}$  n=3,4,5,6,7  
Interfaces: V.24/RS232, V.35, V.36/RS449, X.21, RS530/RS530A