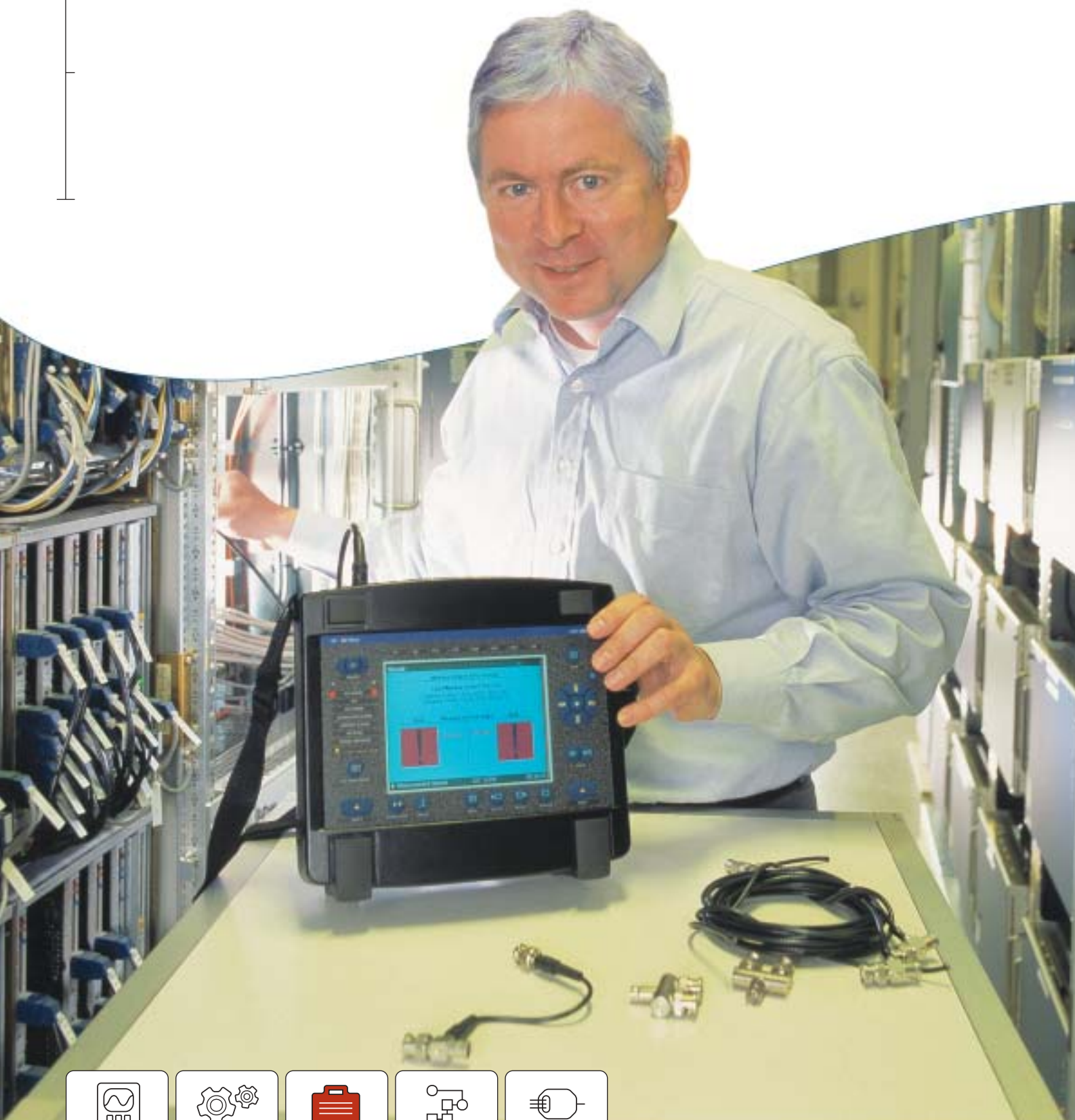


# LITE 3000/3000E

Cost-effective Testing and Troubleshooting for  
GSM/GPRS, Transmission, Switching and Access



research  
& design



manufacturing



installation  
& maintenance



network  
monitoring



optical  
components

Solutions



## Benefits and Applications

### The LITE 3000 family is designed to be:

- A complete and cost-effective test solution
- A compact and easy-to-use test instrument in the field
- A fast and reliable solution to cut downtime and boost earnings

### Testing and trouble- shooting of:

- GSM/GPRS access links
- Transmission systems
- Switching systems
- Access networks

# Designed for More Than Just Good Looks

**Customer satisfaction, cost levels and efficiency are all vital factors in a competitive market where user perception of quality requires not only bandwidth but optimization of the way it is used.**

The explosive growth in mobile voice, SMS, and data traffic driven by new demands and new services to meet them is placing increasing pressure on existing mobile networks. Mobile operators are facing the challenge of maintaining Quality of Service as they attempt to optimize revenues from growing traffic volume. They are also highly aware of the need to secure end-to-end visibility as traffic extends across different generations of network.

Efficient field maintenance is a key factor in maintaining Quality of Service, reducing churn and maximizing revenue flows. An advanced Abis, SS7 and ISDN signaling analyzer for fixed and mobile networks, the LITE 3000 family helps networks operators reduce the time of test and repair in the field, resulting in increased earnings and more efficient operations. The LITE 3000 family covers a unique and comprehensive range of testing needs in a single, easily transportable test instrument, empowering field technicians to test and troubleshoot GSM/GPRS access links, transmission systems, switching systems and access networks in the most reliable and efficient manner.

### One Tool Is All You Need

The LITE 3000 family packs the power of a complete testing and troubleshooting solution that you can sling over one shoulder.

- All-in-one solution with less to carry and less to forget
- Unique and comprehensive array of network test applications
- Customizable functionality with modular software options
- Platform for future needs while protecting existing investments

### Designed to Meet the Needs of Field Technicians

The LITE 3000 family increases productivity and reliability in the field by providing technicians with the easy-to-use functionality they need.

- Automatic configuration and rapid start-up
- Large color display with intuitive graphical symbols
- Rapid problem resolution

### Designed to Optimize Your Revenues

The advanced and innovative features of the LITE 3000 family mean lower cost of measurement and rapid Return on Investment.

- Minimum deployment resources and training investment
- Reduced downtime and increased earnings by cutting meantime to repair
- Increased customer Quality of Service leading to reduced churn

# One Tool Is All You Need

**Efficient and reliable testing and troubleshooting in the field requires a solution that is compact, complete and easy to use.**

Efficient field maintenance is a key factor in maintaining Quality of Service, reducing churn and maximizing revenue flows. Field technicians often work under pressure in difficult or cramped conditions. To deliver rapid, reliable and accurate results they need a test and measurement instrument that contains everything they need in one single unit.

## **Differences that Count in the Field...**

The LITE 3000 family comprises the LITE 3000 and LITE 3000E instruments. Both instruments cover a unique and comprehensive set of powerful productivity tools with everything field technicians need for testing and troubleshooting of GSM/GPRS networks, 2 Mbps transmission systems, switching systems and access networks.

Extra features of the LITE 3000E include testing of GPRS Gb access links, frame relay testing, data interface measurements, and ISDN PRI and BRI call emulation.

In addition to a complete array of applications, field technicians need a test instrument that boosts productivity and efficiency with:

- Automatic configuration and easy-to-use design
- All-in-one functionality for convenience in the field

The LITE 3000 family delivers on these counts with:

- A large color display and user-friendly operation under all conditions
- A unique and comprehensive array of network test applications, all in one single instrument

## **...and Differences that Count at Home**

The LITE 3000 family is a powerful network-testing tool with everything field technicians need to deliver fast, efficient and reliable results. And a tool with benefits that ensure a price-performance ratio second to none:

- All-in-one solution with less to carry and less to forget
- Minimum deployment and training requirements
- Reduced downtime and increased earnings by cutting meantime to repair
- Platform for future needs while protecting existing investments

The LITE 3000 family is a future-secure investment that provides the critical end-to-end visibility needed to document Quality of Service and to maintain a test and troubleshooting capacity across different networks.

There are plenty of reasons why hundreds of organizations all over the world prefer the LITE 3000 family. Ease of use, a future-proof platform and exceptional performance are just some of the reasons.

But perhaps the biggest reason – shared by field technicians and network managers alike – is the fact that all of these benefits are easily accessible in one single, easily transportable test and troubleshooting instrument.

## **Benefits**

- Less to carry, less to forget
- Comprehensive range of applications
- User-friendly interface
- Future-secured





# Designed to Meet the Needs of Field Technicians

## Applications

- **GSM/GPRS:**  
Field testing and troubleshooting of GSM/GPRS access links
- **Transmission:**  
Advanced testing and troubleshooting of 2 Mbps transmission systems
- **Switching and access:**  
Full-featured, 2 Mbps transmission test set with advanced, all-layer protocol analysis

**Ease of use even under difficult conditions, versatility, and mobility are the hallmarks of the LITE 3000 family.**

### GSM/GPRS

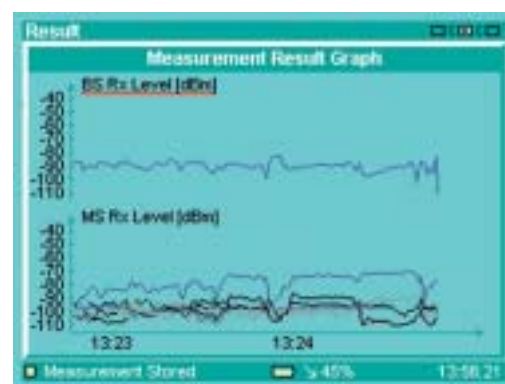
The LITE 3000 family is designed to provide all the signaling and transmission functions necessary for field testing and troubleshooting of GSM/GPRS access links – all in one single instrument.

The instrument features 2 Mbps transmission together with dedicated Abis testing and advanced all-layer protocol analysis for the Abis protocol.

You can use the LITE 3000 family to analyze live traffic on the link, display signaling in real time, and store information for later examination. You can access information in real time on the large, easy-to-read color display, and monitor speech quality using the built-in loudspeaker or a headset.

#### Features Include:

- 64 Kbps, 16 Kbps and 8 Kbps traffic channel access with PCM and all GSM/GPRS voice decodings
- Full traffic channel overview, also of GSM/GPRS sub-rates
- Frame relay testing
- GPRS Gb interface testing
- GPRS Abis interface testing



- All-layer signaling test options for GSM (Abis interface, A-interface and MAP protocols)

### Transmission

With its many user-friendly and timesaving functions, the LITE 3000 family is designed to make advanced testing and troubleshooting of 2 Mbps transmission systems easy.

Two receivers and one transmitter with 2 Mbps output in a single instrument means that you can monitor both sides of a line simultaneously, with reception of input signals from both balanced and unbalanced connectors.

#### Features Include:

- Identification of synchronization problems
- Framed Nx64 Kbps and unframed BERT testing

- Data interface measurements and frame relay testing
- In-service and out-of-service error performance measurements (G.821/G.826/M.2100)
- Traffic channel overview and access
- Propagation time measurements
- Nx64 Kbps drop-and-insert testing



### Switching

Within its compact and handy design the LITE 3000 family conceals a full-featured, 2 Mbps transmission test set with advanced, all-layer protocol analysis for field technicians working with installation, operation, maintenance and troubleshooting of switching systems.

Timesaving features and a rugged design combine to give you a comprehensive and versatile field testing solution for telecommunication switches.

Live traffic analysis and crisp and clear display of signaling on the large color screen make real-time testing and troubleshooting easier than ever before.

#### Features Include:

- Decoders for more than 150 national and international SS7, ISDN and other protocols
- Comprehensive CAS analysis
- Real-time signaling analysis
- Traffic channel overview and access
- ISDN call emulation

Time	Rx/A	Description
13:20:58.039		MSU ISUP OC 008 RLC
13:20:58.044		MSU ISUP OC 00F RCL
13:20:58.065		MSU ISUP OC 00F RLC
13:20:59.052		MSU ISUP OC 002 IAM
13:21:00.310		MSU ISUP OC 002 CFM
13:21:00.361		MSU ISUP OC 002 SAM
13:21:02.846		MSU ISUP OC 002 SAM
13:21:04.139		MSU ISUP OC 013 IAM
13:21:05.536		MSU ISUP OC 002 SAM
13:21:05.547		MSU ISUP OC 013 SAM
13:21:06.911		MSU ISUP OC 002 SAM
13:21:06.947		MSU ISUP OC 013 SAM
13:21:08.334		MSU ISUP OC 002 SAM
13:21:10.617		MSU ISUP OC 013 SAM
13:21:14.201		MSU ISUP OC 002 SAM
13:21:14.232		MSU ISUP OC 013 SAM

### Access

Access field technicians will quickly appreciate the LITE 3000 family as a powerful and versatile hand-held instrument containing a full-featured 2 Mbps test set with advanced all-layer protocol analysis.

Featuring decoders for ISDN, Q.931, V5.1/5.2 DASS-2, DPNSS and other access protocols, the LITE 3000 family gives you everything you need in a specially designed package roughly the size of a laptop computer.

Easy-to-learn and easy-to-use software and operation mean that access network testing and troubleshooting in the field have never been easier or more reliable.

#### Features Include:

- ISDN PRI and BRI call emulation
- Data interface measurements
- Frame relay testing
- Comprehensive CAS analysis
- Real-time signaling analysis
- Traffic channel overview and access

Channel	POM frame	Test 1	Test 2	Test 3
0-3	GO	GO	GO	GO
4-7	GO	GO	GO	GO
8-11	GO	GO	GO	GO
12-15	GO	GO	GO	GO
16-19	GO	GO	GO	GO
20-23	GO	GO	GO	GO
24-27	GO	GO	GO	GO
28-31	GO	GO	GO	GO



## Benefits

- Rapid response for fast action
- Compact, versatile and future-proof
- Easy to learn, easy to use
- Reduced cost of operations

# Designed to Optimize Your Revenues

**One of the core strengths of the LITE 3000 family is that it is exceptionally cost-effective, powerful and versatile, yet with a wide range of integrated and easy-to-use applications. That means: lower than ever total cost of measurement and higher than ever customer satisfaction.**

## Optimize Quality of Service Faster Than Ever

The LITE 3000 family is at your service just seconds after you switch it on. This means you can start optimizing Quality of Service immediately by detecting and locating any potential problems.

Control panel LEDs alert you immediately to trouble. You can examine details in real time on the large, easy-to-read color display and record them for later analysis.

The LITE 3000 family is probably the easiest to use and fastest troubleshooter on the market. It has simply set a new standard for operators and field technicians all over the world.

## Invest in Compact Versatility and Future Generations

Powerful electronics combine with sophisticated and easy-to-use software to provide exceptionally comprehensive functionality in a compact, hand-held instrument.

The basic configuration is a full-featured, 2 Mbps transmission test instrument with multiple signaling. You can build on this configuration with add-on applications and protocol options to match your own particular network needs.

The LITE 3000 family also includes application options for testing of GPRS access links.

The modular design means that the LITE 3000 family is an adaptable, versatile and future-proof platform that spans the generations.

## Boost Reliability and Slash Training Costs

The LITE 3000 family is designed for fast, intuitive operation at the GSM/GPRS interface, and in the 2 Mbps access network, with a minimum of user training.

The man-machine interface has been specially designed for use in the field under difficult conditions, ensuring straightforward operation and unambiguous results.

The functions of the pushbutton controls on the front panel are easy to understand and their positioning is designed to facilitate fast and efficient operation.

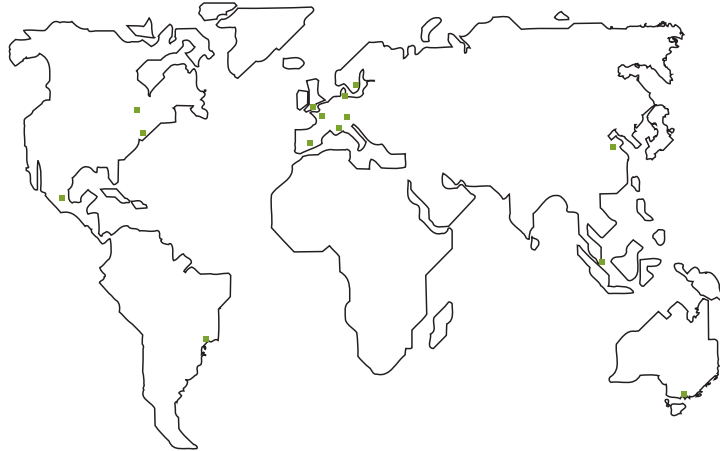


Ease of use is also about being robust, hand-held and battery-powered with more than 10 hours of service between charges to ensure optimum performance in all conditions and at all times.

### **Optimize Your Revenues**

The LITE 3000 family shortens time to cash by making sure that nothing stands in the way of traffic volume from growing SMS and data services. By increasing efficiency and productivity in the field, the LITE 3000 family promises increased revenues by helping to clear the way towards increased network utilization, greater customer satisfaction, and reduced cost of operations – all in one compact, complete, and future-secured instrument.





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NetTest is a leading worldwide provider of testing, monitoring and management systems across both the optical and network layers of communications networks. NetTest provides network operators, network equipment manufacturers, component manufacturers and enterprise service providers with the network testing solutions they need.