UniPRO Gbis

G.SHDSL Tester

> **Physical tests of the copper pairs**

> **G.SHDSL Synchronisation tests**

> **Measurement of G.SHDSL performance**
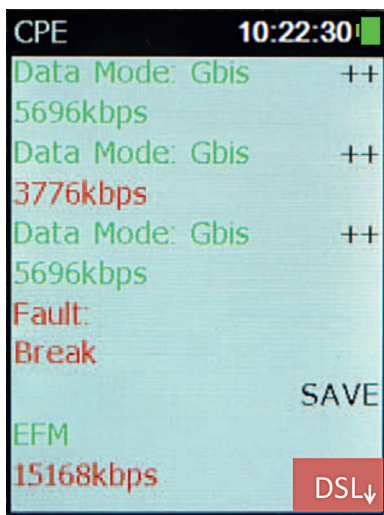
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> **Comparison with acceptance targets**

> **ATM/IMA/EFM Encapsulation/Bonding**

> **Up to 4 pairs G.SHDSL/ G.SHDSLbis**

> **Simulate both CO and CPE of G.SHDSL**

G.SHDSL Tester

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UniPRO Gbis is a revolutionary tool for testing all types of G.SHDSL service. It combines a state-of-the-art DSL engine with a range of useful copper layer fault checks into a compact, hand-held, battery-powered tester.

Designed with the field engineer in mind, UniPRO Gbis provides the ultimate in ease of use, pinpointing common network faults and checking service performance directly from switch on with minimal setup. It supports the latest G.SHDSL standard, G.SHDSL. bis, as well as legacy versions of the technology, which are widely deployed for the provision of multi-pair DSL access to business applications. Up to 4 copper pairs can be tested simultaneously and can be bonded together using ATM (Asynchronous Transfer Mode), IMA (Inverse Multiplexing over ATM) or EFM (Ethernet in First Mile) encapsulation to provide up to 22.784Mbps of symmetrical bandwidth.

The unit also allows to conduct Ethernet layer's connectivity check via multiple network's path by generating OAM CC frames on a specific VLAN to be able traced by network management system NoC (Network Operation Centre).

UniPRO Gbis can be programmed with acceptance targets for the main G.SHDSL performance parameters, providing a simple Red/Green, Pass/Fail test. Results can be stored in the tester and simply uploaded to a USB memory stick for analysis and reporting in a PC environment. The exchangeable RJ45 socket and power switch protection mask make the tester less OPEX and more reliable.

With its optional CO (STU-C) emulation and connectivity test (PRO), plus UniPRO Gbis is equally useful in the Distribution Frame, at the street cabinet or in the customer's premises.

Comprehensive Testing Capability

UniPRO Gbis is the only tester on the market that can test 4 pairs G.SHDSL. bis with connectivity test (OAM frame generation) under the IMA/EFM bonding.

HOME screen displays results for all pairs simultaneously

Features and Benefits

UniPRO Gbis is packed with useful features which provide real benefits to busy telecom engineers in their day-to-day practical field test applications.

Features	Benefits
Instant switch ON and test	Network faults can be found in seconds, saving valuable technician time
Copper fault finding	Gross cable faults can be eliminated without the need for high levels of operator skill
Simultaneous testing of up to 4 pairs	No need to test cables individually. Bonded aggregate performance of all pairs can easily be checked
Exchangeable RJ45 socket	Field user changeable RJ45 socket without returning the unit back to service center
Main results on one screen	All the important results are presented on the home screen, direct from switch-on, with no user intervention. Saves time and operator skill requirement
Connectivity test over EFM	No extra laptop and test box are required to conduct such kind of test
Detailed results for each pair	One button press reveals the detailed performance of each pair
Simple setup using Multifunction Softkeys	Very easy test and system setup. Negligible training needed
Performance threshold target setting and comparison.	Service level targets can be pre-set before deployment, maximising productivity of the user in the field
Battery status indication	Quick knowing the battery status of capacity assuring the enough operation time
Result memory and USB export, with timestamp and tester identification	One-button result saving allows the performance of multiple jobs to be uploaded for later analysis and reporting. Automatically records when the test was performed and on which tester
Robust construction and long battery life	Always ready for work
Highly visible user interface	Effective in all field situations
Integral hanging/carrying strap	Can be hooked on to plant or in frames where working space is limited

G.SHDSL Tester

PAIR and BONDING LEDs
For instant and highly visible Go/NoGo indication

Line Connector
Colour-coding of the 4 pairs throughout the cable, panel and screens for ease of identification with user exchangeable RJ45 Pin

USB Interface & Internal Memory
Internal memory for up to 100 tests in .csv format. Data exportable to PC via USB flash drive

Mains Charger Input
Tester can operate from mains supply or on-board rechargeable long runtime battery
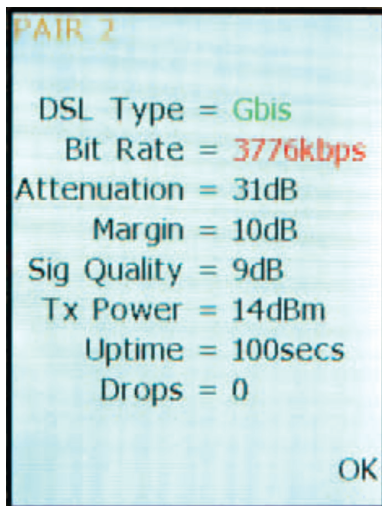
RJ11 RJ12 RJ45

12345678

CPE	10:22:30
Data Mode: Gbis	++
5696kbps	
Data Mode: Gbis	++
5696kbps	
Data Mode: Gbis	++
5696kbps	
Data Mode: Gbis	++
5696kbps	
EFM CCMTx	SAVE
EFM:	
22784 kbps	DSL↓

PAIR 1 PAIR 2 PAIR 3 PAIR 4 BONDING

F1 F2 F3 F4 F5 F6

UniPRO Gbis

Rubber End Caps
Field protection and secure hand-held grip

QVGA 3½" Colour Screen
Large colour display gives easy interpretation of Pass/Fail results

Multi-Function Softkeys
For easy menu navigation

Simplicity of Use

From the home screen, the full set of results and setup parameters are just a couple of key-clicks away. Intuitive navigation can be learned in seconds.

PAIR 2
DSL Type	= Gbis
Bit Rate	= 3776kbps
Attenuation	= 31dB
Margin	= 10dB
Sig Quality	= 9dB
Tx Power	= 14dBm
Uptime	= 100secs
Drops	= 0
OK

TEST SETUP
Emulation	= CPE
Pairs	= 4	+
Mode	= Gbis
Bonding	= EFM	−
Rate	⩾ 5696kbps
Attn	⩽ -----	↓
Margin	⩾ -----
SQ	⩾ -----
Tx Power	⩽ -----
OK

SYSTEM SETUP
Lang	= English
Year	= 2011	+
Month	= Jan
Day	= 12	−
Hour	= 16
Min	= 54	↓
Sec	= 19
Power Save	= OFF
OK

Full details of individual pair performance compared with user-settable acceptance targets.
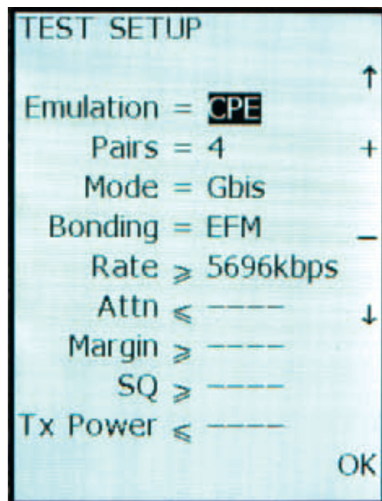
All of the test parameters are set up on one simple to navigate screen.
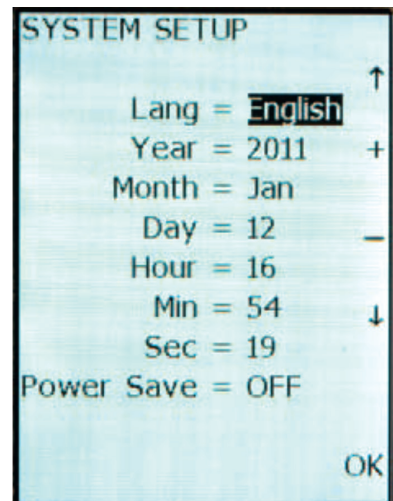
System screen provides language, clock and power save setup.

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G.SHDSL Tester

Ordering Information

Part No.	Description
RPBCP000	UniPRO Gbis CO Plus (CPE + CO)
RPBCPC00	UniPRO Gbis CO Pro (CPE + CO + Connectivity)
RPBCPCUP	Upgrade UniPro Gbis Co Plus to UniPRO Gbis Pro

Technical Details

Physical Layer Tests	Description
Line Voltage	Up to 50 volts DC wetting current is allowed. DC span powering is not supported
Automatic Fault Detection (for each pair separately)	Open circuit. Short circuit. Excessive Voltage (eg ISDN or DC span power). Alien xDSL service (eg ADSL or VDSL). Indication on display and LED

DSL Layer Tests	Description
Emulation	CPE (Customer Premise modem / router – STU-R). CO (Central Office DSLAM – STU-C)
DSL Support	G.SHDSL / G.SHDSL.bis / Auto. ATM / IMA / EFM Bonding. 1 / 2 / 3 / 4 pairs.
Automatic Synchronisation (for each pair separately)	Seeking / Training / Data Mode. Indication on display and LED.
Results (for each pair separately)	Data Rate. Attenuation. Noise Margin. Signal Quality (Noise Margin Stability). Transmit Power. Uptime. Drops count.
Pass / Fail (for each pair separately)	Comparison with user-settable targets. Indication on display and LED.
Results (for bonded aggregate)	Data Rate. Comparison with user-settable target. Indication on display and LED.

Ethernet Layer Test	Description
OAM CC frame generation over EFM in CPE mode	OAM CC frame generation over EFM	Destination MAC address, VLAN ID & Priority, MEG Level & MEP local & Remote

Note: This product is not suitable for testing SHDSL connections which are configured to transport TDM payloads with plesiochronous clocking.

Standard Accessories Included:
> Mains PSU / charger with UK and Euro mains leads
> Plugs / clips DSL cable
> Quick Reference Card (English / French)
> RJ-45 DSL cable
> User guide on CD
> Carry bag

General Specifications

Physical	
Dimensions	280 x 180 x 50 mm
Weight	1.8kg
Operating Temperature	0 to 45°C
Storage Temperature	-25 to +70°C
Environmental Protection	IP20

Battery	
Type	Nickel Metal Hydride
Autonomy	4 hours typical
Recharge time	3 hours

User Interface
3.5" Colour backlit LCD
Soft function keys
Bi-colour LEDs for each pair and Bonded Layer
Multi-language (English + French)

Reports
Internal storage up to 100 sets of complete reports
Automatic time/date and tester I/D recording
Export to USB memory stick
.csv format for spreadsheet / database compatibility

Approvals	
Interference	EN 55022:1998 / A1:2000 / A2:2003
Immunity	EN55024:1998 / A1:2000 / A2:2003
Safety	EN60950-1:2006, EN61010-1:2001
	RoHS Compliant

Relevant Standards
ITU G.991.1
ITU G.991.2
ITU G.802.3ah
ITU G.998.1