

# Ether.Genius hand-held test



Multitechnology tester GbE + SynE+ E1 + Datacom + Jitter/Wander



# About **ALBEDO** Telecom



**ALBEDO Telecom** offers a full range of telecommunication products and services that help your organization make the most of your investment in telecoms.

- ◆ Hand-held testers: E1, SDH, GbE, SyncE, IP, IPTV, VoIP, Datacom, Jitter, Wander
- ◆ Impairment Generator: Carrier Ethernet and IP
- ◆ Acceptance Labs: IPTV, VoIP, ISDN, POTS
- ◆ Distributed Test System: SLA, QoS, Bandwidth profile
- ◆ Professional Training: xDSL, PON, Carrier Ethernet, MPLS, SDH, Synchronization, IPTV, VoIP
- ◆ Consultancy / Integration: IPTV, VoIP

# Ether.Genius 3-in-1 tester

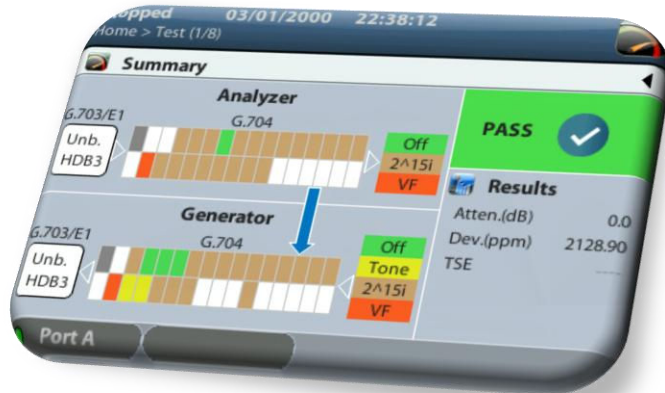


Ether.Genius includes the features of the ALBEDO testers:

- ◆ **Ether.Giga:** Ethernet tester
- ◆ **Ether.Sync:** Synchronous Ethernet tester
- ◆ **AT.2048:** E1 and Datacom tester

# Small, smart, nice, & **FULL** equipped

- 1.1 kg weight
- Battery
- Keyboard + Screen

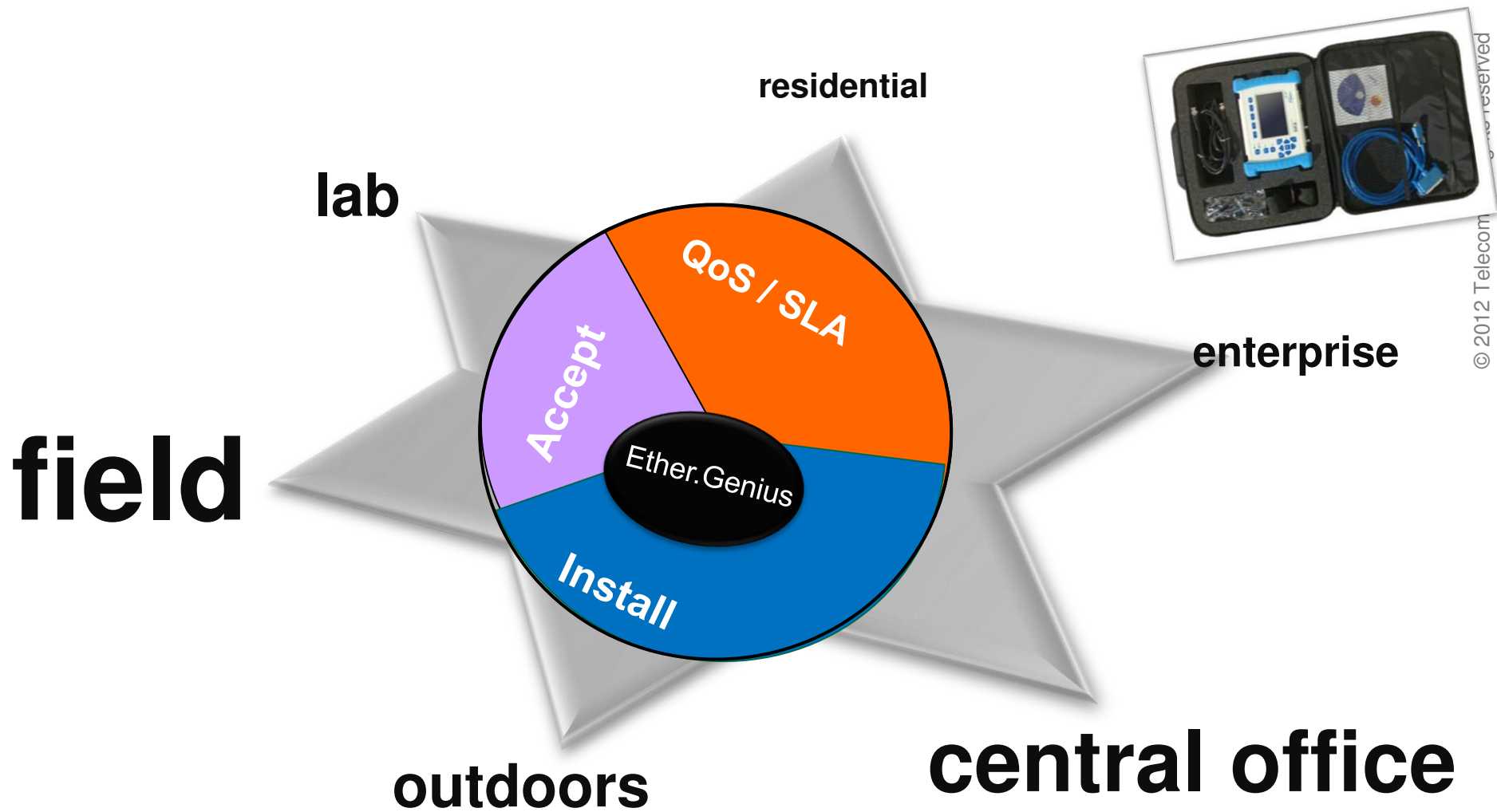


2xSFP  
2xRJ45 GbE  
2xBNC  
1xRJ45 E1  
SF card

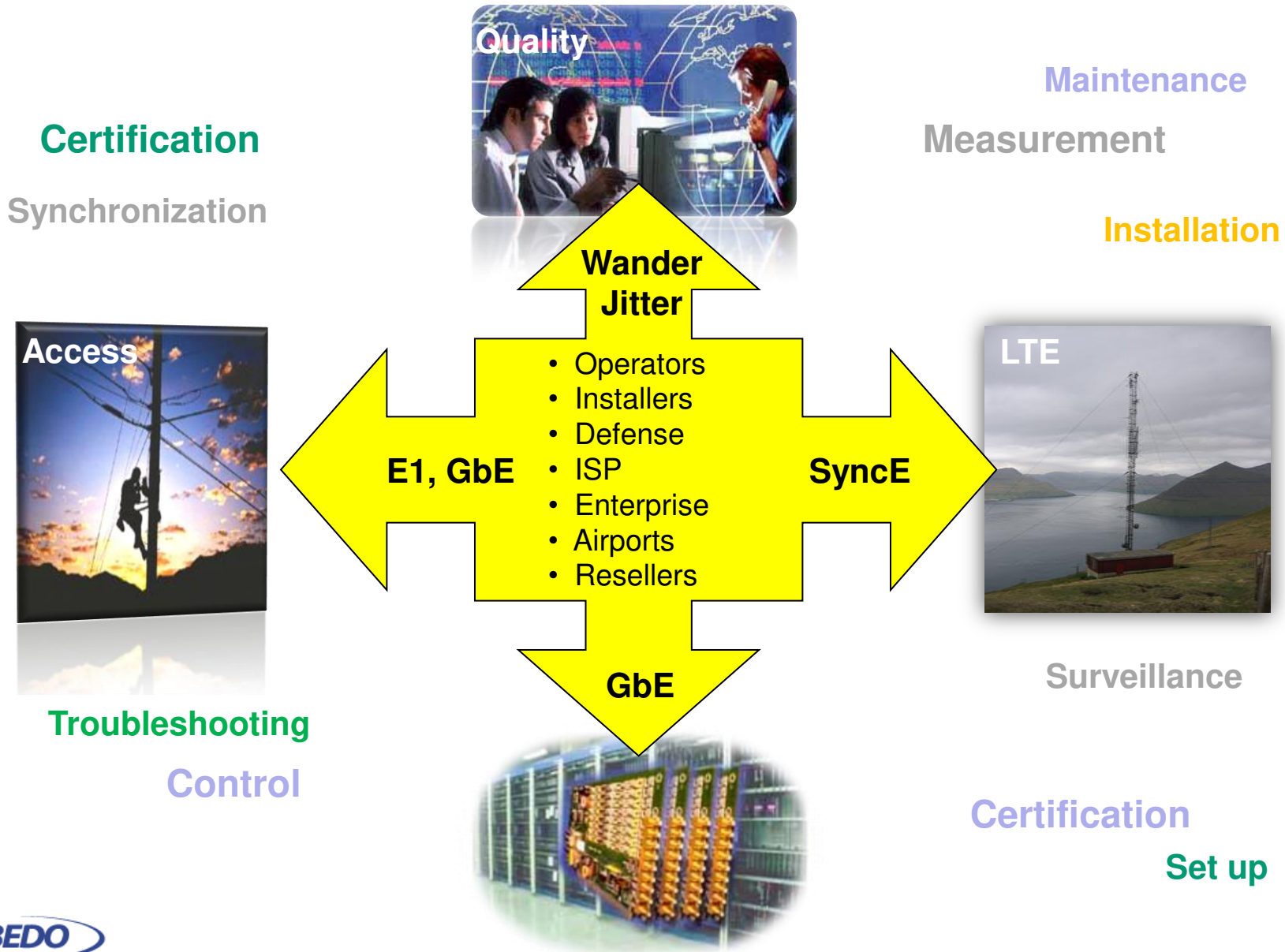


Remote Control Port  
2xUSB  
Printer  
Datacom  
Voice Port

# Heavy duty field **Multitechnology** tester



# Ether.Genius Markets



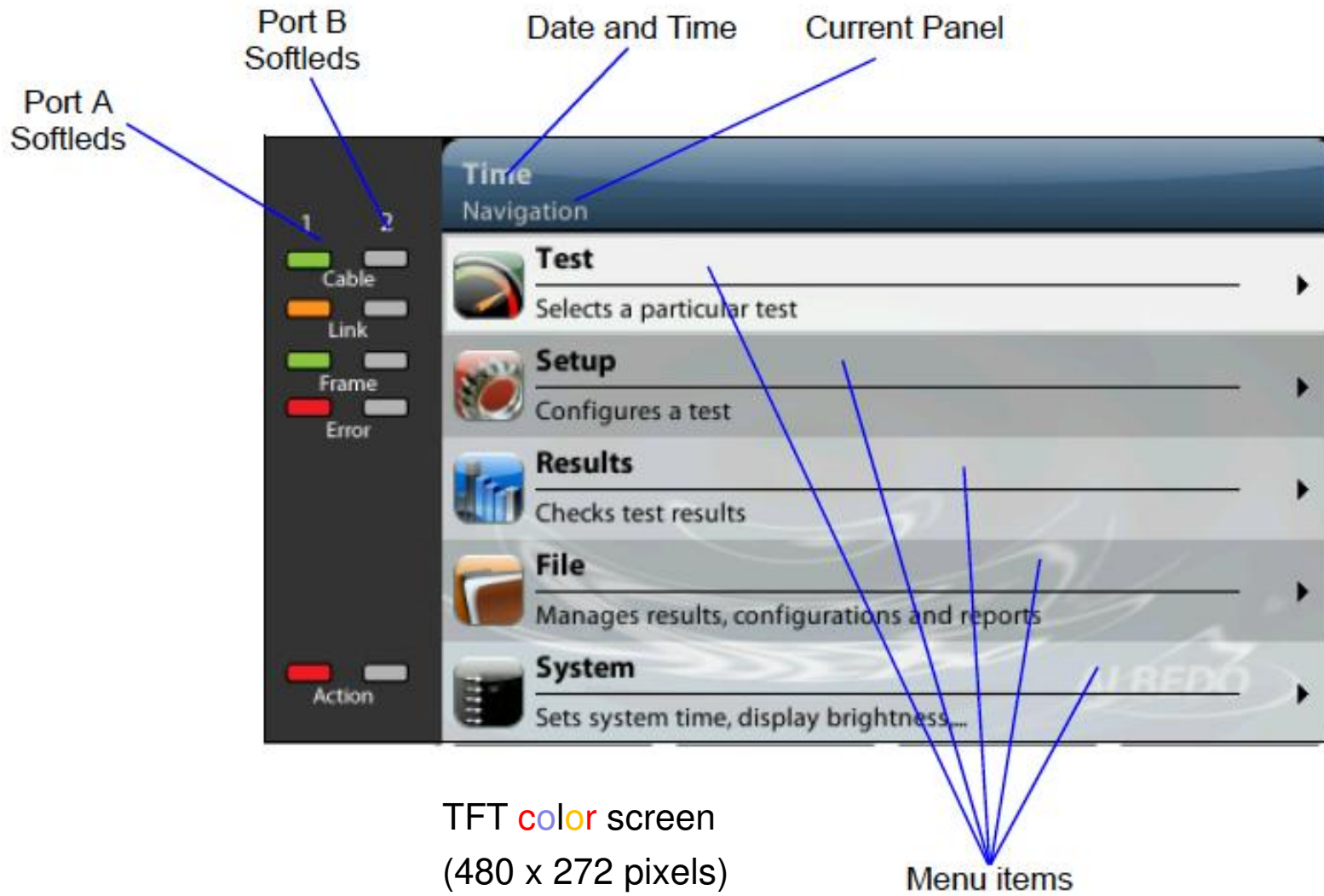


# Niche Professional Markets

- ◆ Installers and Telecom Operators
- ◆ Migration from E1 to Ethernet
- ◆ Migration from Ethernet to SyncE
- ◆ Synchronization Networks (Jitter & Wander)
- ◆ Commissioning / Maintenance E1, GbE, SyncE

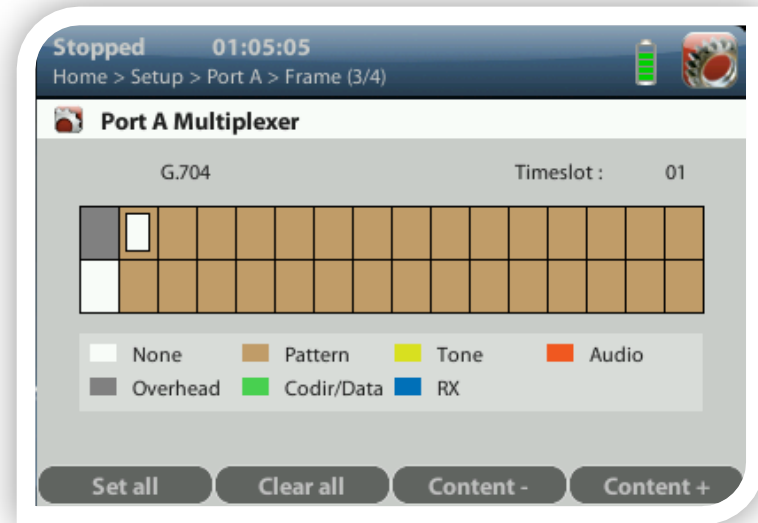
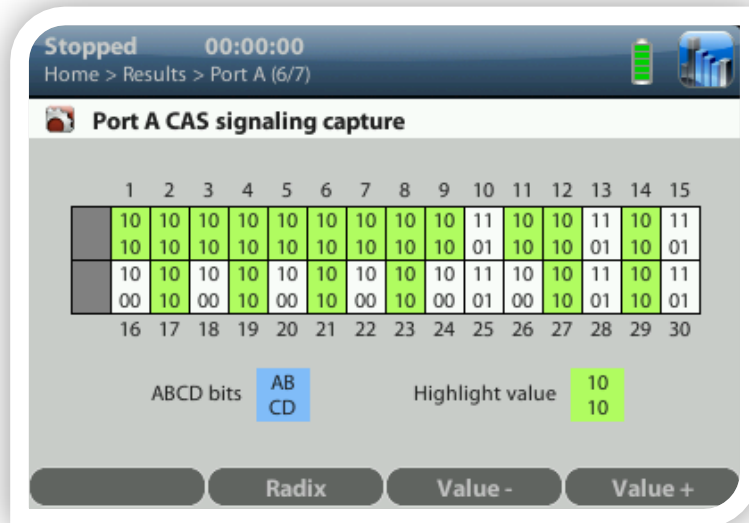


# Ether.Genius – **Easy GUI** for field engineers





# i-GUI (intuitive - Graphical User Interface)



- ◆ Based on true color
- ◆ Limited Navigation deep
- ◆ SoftLEDs © all events at a glance
- ◆ Functional navigation keys
- ◆ Landscape ergonomic
- ◆ PASS / FAIL
- ◆ Enhanced File System

# Ether.Genius **VNC** remote control

- ◆ Standard VNC support
- ◆ Centralized management
- ◆ Remote control
- ◆ Multiple standard clients available
  - PC and Laptops
  - Windows and Linux
  - iPhone / iPad
  - Android Mobiles
- ◆ Exactly the same GUI in tester / remote devices



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# The value of **Innovation**

## Spot the differences

- ◆ Real Multiport 2xE1 + 2xEthernet + DTE/DCE + Clock
- ◆ Pass / Fail results
- ◆ Long battery power
- ◆ Remote GUI by VNC
- ◆ Save in Memory Card
- ◆ No modules, no connectors, no problems



# Ethernet **BEST** testing features

- ◆ **Multistreams** for IPTV, VoIP, and Critical Data verification
- ◆ **e-SAM** FTD, 2-way FDV, FDV, 2-way FTD, FLR, SES, PEU and PEA
- ◆ **Y.1731 QoS** statistics
- ◆ Real 2 x SFP + 2 x RJ45 i/faces
- ◆ **Symmetrical & Asymmetrical** RFC2544 test
- ◆ **FCS error** insertion in pass mode
- ◆ L1/L2/L3/L4 **loopback**
- ◆ **Q-in-Q** for demarcation tests
- ◆ **MPLS** support
- ◆ **Scan** MAC/IP/VLAN/QinQ
- ◆ Arbitrary [mask + offset]
- ◆ **Advanced Counts**: Up to 8 MAC, IP, TCP/UDP filters



# GbE Automatic QoS test

Compliant with latest standards for advanced services such as IPTV, VoIP or VoD:

## ◆ Traffic Scan and Discovering

- Find selected flows
- Monitor or execute test
- No more difficult set up

## ◆ Improved RFC 2544

- throughput,
- frame-loss,
- latency,
- back-to-back
- recovery time tests

## ◆ ITU-T Y.1564

- Service Configuration
- Service Conformance





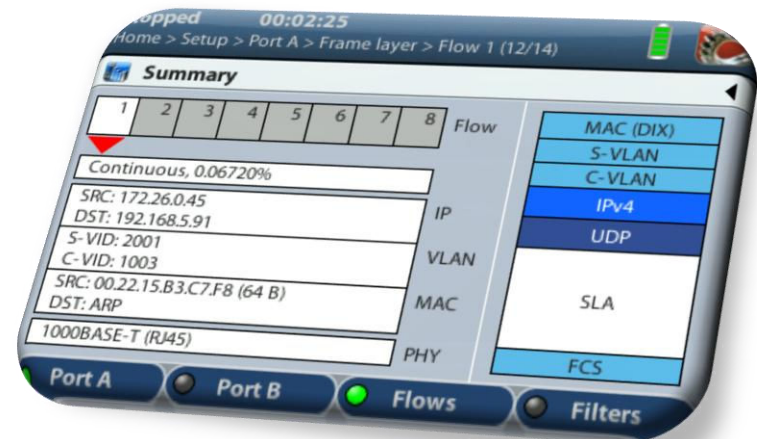
# Ethernet next generation test: eSAM & SLA

## ◆ eSAM

- 8 x non-colour services
- 4 x colour services
- CIR, EIR, Throughput
- FTD, FDV, FLR, availability

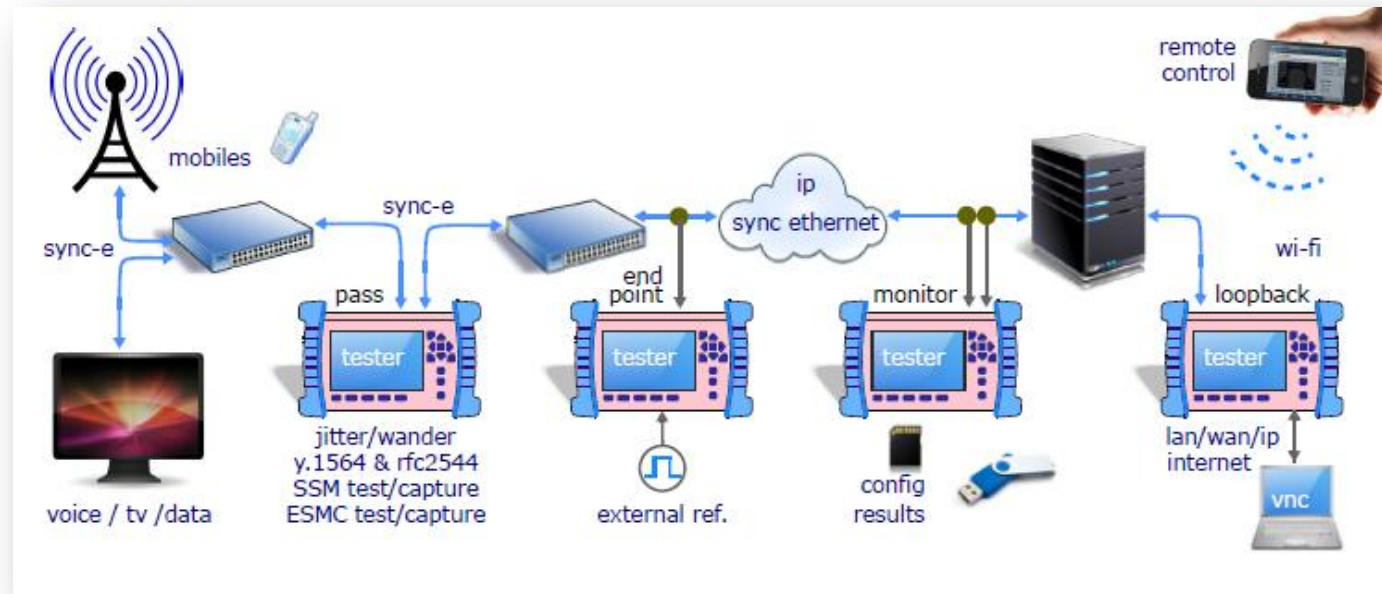
## ◆ SLA (Y.1563)

- Delay
- Delay variation / Jitter
- Frame loss
- Availability



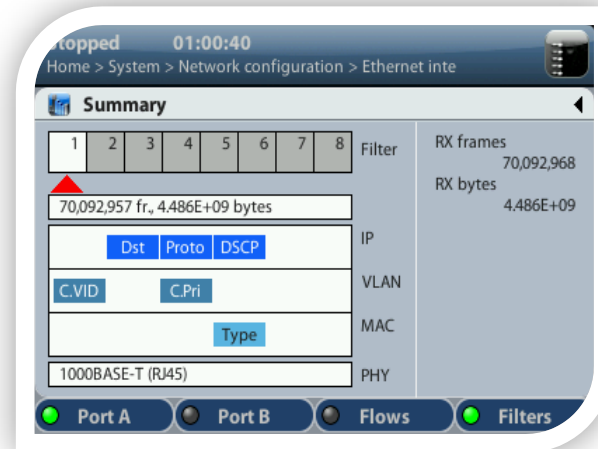
# Synchronous Ethernet functionalities

- ◆ Clock input
  - 2048 kb/s
  - 2048 Hz
  - SyncE



- ◆ Synchronization according G8261, G8262, G8264
- ◆ Ethernet Line frequency (MHz), offset (ppm), drift (ppm/s)
- ◆ Analysis / Generation ESMC messages
- ◆ SSM count and rate
- ◆ SyncE MTIE / TDEV measurement
- ◆ SyncE Wander analysis/generation

# PTP - 1588v2 support



Packet Time Protocol: PTP / IEEE 1588v2 support decoding PTP support / generation using Master or Slave clock Master Clock operation on each port using internal or external clock reference

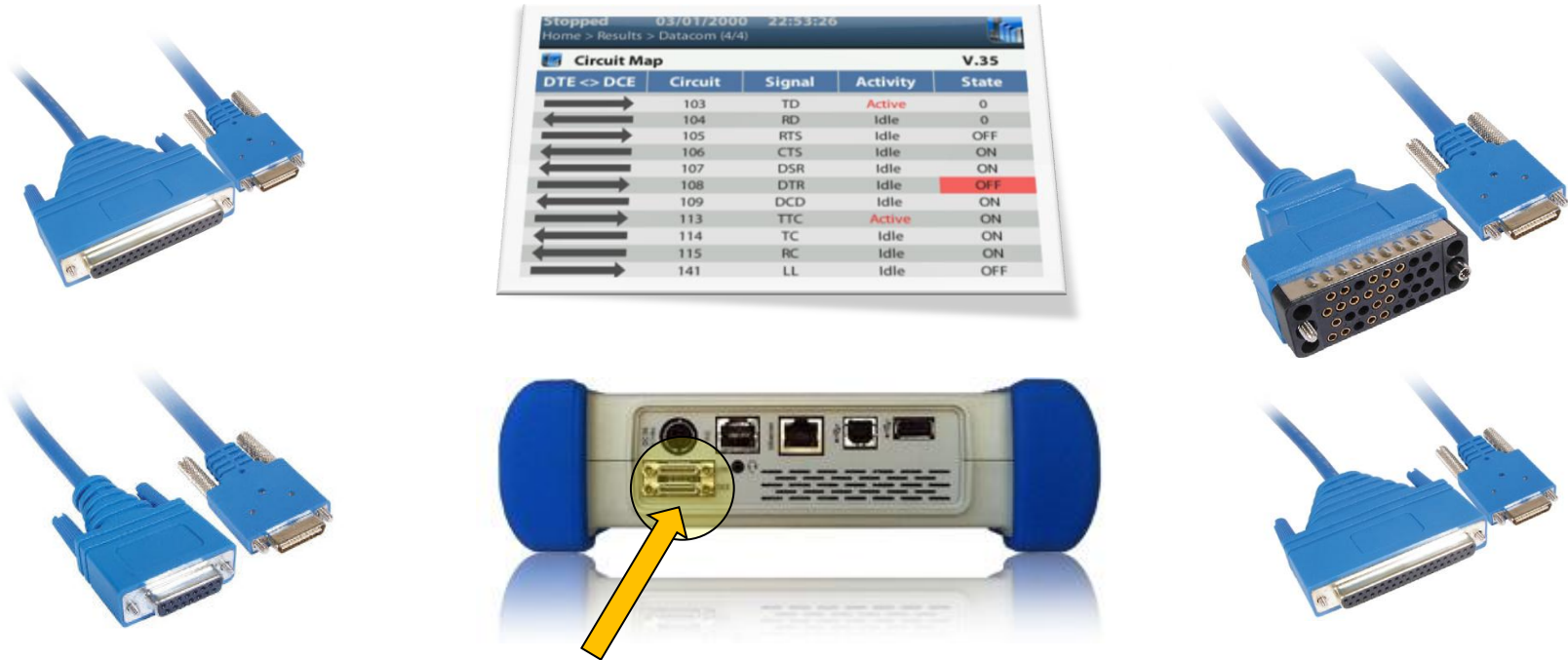
- PTP / IEEE 1588v2 support decoding
- PTP support / generation as master or slave

# ALL the features you may imagine in **E1 / Datacom**



- ◆ Full E1 testing
- ◆ Jitter and Wander measurements
- ◆ Pulse Mask
- ◆ Datacom
- ◆ Frame Relay
- ◆ Voice Frequency
- ◆ Codirectional
- ◆ Contradirectional

# Datacom: CISCO cables + ALBEDO technology



- ◆ Standard CISCO cables: easy replacement
- ◆ No extra hardware or adapters required
- ◆ DTE +DCE for all operation modes



# Unique: Jitter / Wander measurements



Overpass 0.172

## ◆ Jitter Generation and Measurements

- Jitter level, tolerance, transfer and event detection
- 100% digital based generation and analyzer

## ◆ Wander Generation and Measurements

- TIE, MTIE, and TDEV
- Wander results from 20 to 100 000s

# Why Ether.Genius ?



- ◆ MULTITECHNOLOGY: hand-held (4h. with batteries)
- ◆ LATEST ELECTRONICS: very fast, powerful, long operation
- ◆ LATEST STANDARDS
- ◆ MIGRABLE TO SYNC-e & E1: ready for the new LTE technology
- ◆ NO MODULES: no problems.
  - all the interfaces are always there.
  - no silly connectors, perfect connections.
  - you will never ever lost/forget/broke a module again

# Ether.Genius vs. **Competitor** (compare)



VS.



## VePAL TX130/e+

*An E1 tester with some GbE functions*

- ◆ Small screen
- ◆ Proprietary Data Cables
- ◆ ISDN support
- ◆ No SyncE
- ◆ Poor Ethernet
- ◆ No double Port
- ◆ No SD card
- ◆ No Wander



VS.



# That's all



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