"Results You Can Count On"

Model 458-LM-E1-30-04+

Multi-Standard Local Loop Simulator with Optional AWGN Generator

- **Simulates one loop of:**
  - **0.4mm PE as specified in ETSI TS 101 388; OR**
  - **PE04 as specified in G.991.2 Annex B (G.shdsl) or ETSI TS 101 524**
- **Bandwidth DC to 30 MHz**
- **Solution for ADSL, ADSL2, ADSL2+, G.shdsl & VDSL2 chip/modem/DSLAM testing**
- **Plugs into our Model 458-CC (16-slot) or 458-3SLB (3-Slot) chassis**
- **Loop Lengths and AWGN levels controlled manually via front panel of chassis, or remotely via RS-232, Ethernet, IEEE-488 (GPIB), or 458 Universal GUI**

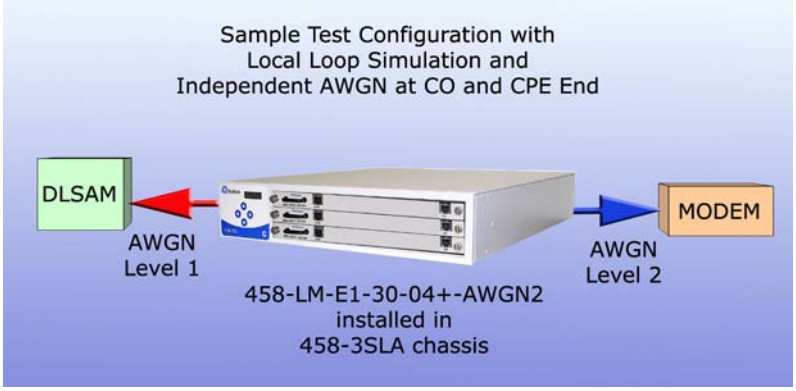
	Wire Type	Standard	Ideal For	Length/Increments	BW
OR	0.4 mm PE	ETSI TS 101 388	ADSL, ADSL2, ADSL2+, VDSL2	0 – 9,000 m/10-m steps	DC - 30 MHz
	PE04	G.991.2 Annex B or ETSI TS 101 524	G.shdsl	0- 8,000/50-m steps	5 KHz – 2 MHz

The Model 458-LM-E1-30-04+ Multi-Standard Local Loop Simulator is the ideal solution for ADSL, ADSL2, ADSL2+, G.shdsl and VDSL2 chip/modem/DSLAM testing. This single-pair loop simulator can simulate either 0.4mm PE for ADSL, ADSL2, ADSL2+ and VDSL2 ***or*** PE04 for G.shdsl. Optional noise sources may be ordered that add in AWGN on the CO and CPE side that may be independently controlled.

This versatile local loop simulator is plugged into our Model 458-3SLB (3-Slot) or 458-CC-16 (16-Slot) chassis where settings are controlled by a convenient keypad located on the front, RS-232, Ethernet or IEEE-488(GPIB). In addition, the user-friendly 458 Universal GUI may be used for remote control. The modular design of Telebyte's products allows the 458-LM-E1-30-04+ to be combined with other line modules for a wide variety of test configurations.

"Results You Can Count On"

Model 458-LM-E1-30-04+
Multi-Standard Local Loop Simulator
with Optional AWGN Generator (continued)



Ordering Options		
458-LM-E1-30-04+	Multi-Standard Local Loop Simulator	Local Loop without noise
458-LM-E1-30-04+-AWGN2	Multi-Standard Local Loop Simulator with (2) AWGN Generator Modules	Local Loop with independent noise sources at the CO and CPE end

Product Specifications	
Simulation	• Accurately simulates attenuation and impedance • Full bidirectional operation at all specified frequencies • 0.4mm PE as specified in ETSI TS 101 388 **or** PE04 as specified in G.991.2 Annex B (G.shdsl) and ETSI TS 101 524 • Optional White Noise (AWGN) Generator
Bandwidth	0.4mm PE: DC to 30 MHz | PE04: 5 KHz to 2 MHz
Attenuation Accuracy	0.4mm PE: MAE < 1 dB 20 kHz to 30 MHz (when source and load impedances are 100 ohms) PE04: MAE < 1 dB 5 KHz to 2 MHz (when source and load impedances are 135 ohms)
Maximum Attenuation	> 90 dB
Impedance Accuracy	Typically +/- 10%
Maximum Voltage Tip – Ring	200 V
Maximum Current	130 mA
Connectors	2 RJ-45's on front
Optional White Noise (AWGN) Generator (factory-installed sub-module)	-90 dBm/Hz to -145 dBm/Hz in 0.25 dBm increments

Specifications are subject to change without notice. Made in USA.