



**"Results You Can Count On"**

**Model 458-LM-E1-30-04+  
Single-Channel Multi-Standard  
Local Loop Simulator  
with Optional AWGN Generator**

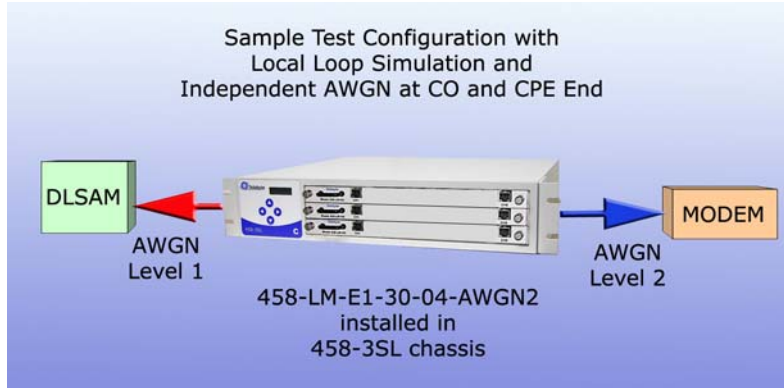
- **Simulates 0.4mm PE as specified in ETSI TS 101 388 or PE04\* as specified in G.991.2 Annex B (G.shdsl) and ETSI TS 101 524**
- **Bandwidth DC to 30 MHz**
- **Solution for ADSL, ADSL2, ADSL2+, G.shdsl & VDSL2 chip/modem/DSLAM testing**
- **ADSL, ADSL2+, VDSL2: 0.4mm PE/Loop lengths programmable from 0 to 9,000 m in 10-m increments**
- **G.shdsl: PE04/Loop lengths programmable from 0 to 8,000 m in 50-m increments**
- **Plugs into our Model 458-CC (16-slot) or 458-3SLA (3-Slot) chassis**
- **Loop Lengths and AWGN levels can be controlled manually via front panel of chassis, or remotely via RS-232, Ethernet or IEEE-488 (GPIB)**
- **Optional White Noise (AWGN) Generator (-90 dBm/Hz to -145 dBm/Hz)**

The Model 458-LM-E1-30-04+ Single-Channel Multi-Standard Local Loop Simulator is the ideal solution for ADSL, ADSL2, ADSL2+, G.shdsl and VDSL2 chip/modem/DSLAM testing. This single-channel loop simulator can simulate either 0.4mm PE for ADSL, ADSL2, ADSL2+ and VDSL2 or PE04 for G.shdsl. Optional noise modules may be ordered that add in AWGN on the CO and/or CPE side, depending on the configuration purchased. The ultimate configuration allows for common or independent noise levels on both sides.

This powerful local loop simulator is plugged into our Model 458-3SLA (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). 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.

*\*PE04 is the G.shdsl version of 0.4mm PE*

## Model 458-LM-E1-30-04+ Single-Channel 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-AWGN1+	Multi-Standard Local Loop Simulator with (1) AWGN Generator Module	Local Loop with one noise source at the CO <b>and/or</b> CPE end
458-LM-E1-30-04-AWGN2+	Multi-Standard Local Loop Simulator with (2) AWGN Generator Modules	Local Loop with two independent noise sources at the CO <b>and/or</b> CPE end

Product Specifications	
<b>Simulation</b>	<ul style="list-style-type: none"> <li>Accurately simulates attenuation and impedance</li> <li>Full bidirectional operation at all specified frequencies</li> <li>0.4mm PE as specified in ETSI TS 101 388 <b>or</b> PE04 as specified in G.991.2 Annex B (G.shdsl) and ETSI TS 101 524</li> <li>Optional White Noise (AWGN) Generator</li> </ul>
<b>Bandwidth</b>	0.4mm PE: DC to 30 MHz   PE04: 5 KHz to 2 MHz
<b>Attenuation Accuracy</b>	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)
<b>Maximum Attenuation</b>	> 90 dB
<b>Impedance Accuracy</b>	Typically +/- 10%
<b>Maximum Voltage Tip – Ring</b>	200 V
<b>Maximum Current</b>	130 mA
<b>Connectors</b>	2 RJ-45's on front
<b>Optional White Noise (AWGN) Generator (factory-installed sub-module)</b>	-90 dBm/Hz to -145 dBm/Hz in 0.25 dBm increments

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