

PCE

WIDEBAND AND MULTI-CHANNEL PAYLOAD AND SATELLITE LINK EMULATOR

- 1,6 GHz wide band
- Channel and payload testing
- Station RF impairments emulation
- IMUX, OMUX and amplifier emulation
- Independent uplink and downlink emulation
- Interferers and jammers emulation



ISO9001/EN9100/AS9100/JISQ9100

SPACELINK SYSTEM

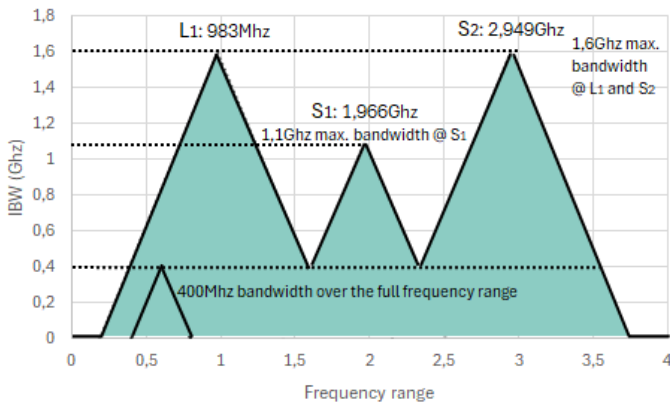
WIDEBAND AND MULTI-CHANNEL PAYLOAD AND SATELLITE LINK EMULATOR

FUNCTIONS

- Doppler effect
- Propagation delay
- Fading and scintillation
- Additive Gaussian White Noise
- Additive wide band QPSK jammers
- Phase noise (ground & payload)
- RF filters (sat. payload IMUX & OMUX)
- Amplifier Nonlinearity (sat. payload)
- Automatic Level Control (sat. payload)

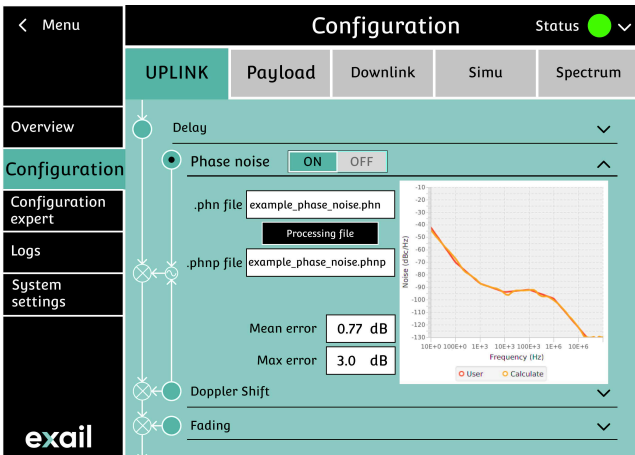
IF SIGNALS

- PCE Flex • Bandwidth: up to 1,6 GHz @ L1 and S2 band
up to 1,1 GHz @ S1 band
- Freq. Range: L1 or S1 or S2 Band
- PCE Pro • Bandwidth: up to 1,6 GHz and
400Mhz over the full freq. range
- Freq. Range: L, S Band - 0,2 to 3,8 GHz



REMOTE CONTROL

- Interface: Ethernet
- Protocol: TCP/IP
- Mnemonics: SCPI format
- Real-time data playback rate: 100 Hz
- Data interpolation rate: 10 kHz



HEAD OFFICE:

Exail Aerospace SAS

ZAC de Saint Martin du Touch
6 Impasse Alice Guy
31300 Toulouse - FRANCE
+33 5 62 11 17 17 | contact-aerospace@exail.com

www.exail.com

PROPAGATION EMULATOR

- Level fading
 - +5 to -40 dB
 - (0.1 dB step)
- Scintillation fading
 - 0 to -15 dB for each downlink & uplink
- Propagation Delay
 - 20 μs to 295 ms (1 ns step) continuously variable
- Delay slope
 - Up to ± 50 000 m/s (0.001 m/s step),
guaranteed phase continuity
- Freq. Doppler shift
 - Up to ±2 MHz (1 MHz step)

RF AND PAYLOAD EMULATOR

- ALC mode: 1st order loop/off
- Non linearity: AM/AM and AM/PM over more than 80dB dynamic
- Phase noise: custom up to 70 points from 10Hz to 10MHz
- Independant IMUX & OMUX filter emulation

INTERFERERS AND JAMMERS EMULATOR

- AWGN generator: Chaotic uniform generator with Gaussian transform (up to 5 Ω)
- AWGN bandwidth: more than 1,6 GHz
- AWGN flatness: <0.2 dB
- Modulated carrier type: QPSK / CW
- Modulated carrier number: 4

ENVIRONMENTAL CONDITIONS

OPERATING

- Temperature: 10 °C to 40 °C
- Humidity: Up to 95% at 30 °C

NON OPERATING

- Temperature: -20 °C to 55 °C
- Humidity: Up to 95% at 30 °C

POWER SUPPLY

- Voltage: 230 V ±10% / 47 to 63 Hz
- Power: ≤ 600 VA

PHYSICAL CHARACTERISTICS

- Drawer: 19 inches x 2 U x 465 mm (excl. connectors and handles)
- Weight: ≤ 10 kg

SPACELINK SYSTEM MODELS

	example:	PCE	Flex	L1	-	1
Product type						
Propagation Canal Emulator						
Model						
Origin		40 Mhz				
Flex		L1 or L2 or S1				
Pro		L/S Band				
Frequency range						
bande VHF		(later)				
bande L1		0,2-1,8 Ghz				
bande L2		1,3-2,7 Ghz				
bande S1		2,2-3,8 Ghz				
bande L-S		0,2 -3,8 Ghz				
Number of link						