TESTUPS IRELAND LIMITED
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EMSCOPE

THE STRAIGHT PATH TO COMPLIANCE

EMSCOPE is a new CISPR-16-1-1 accordance **double EMI-Test Receiver,** which can be optionally integrated with a 16-A LISN, that fully embodies the measurement of **common and differential** mode conducted emissions.

EMSCOPE is the new EMZER's instrument for EMI measurements that combines:

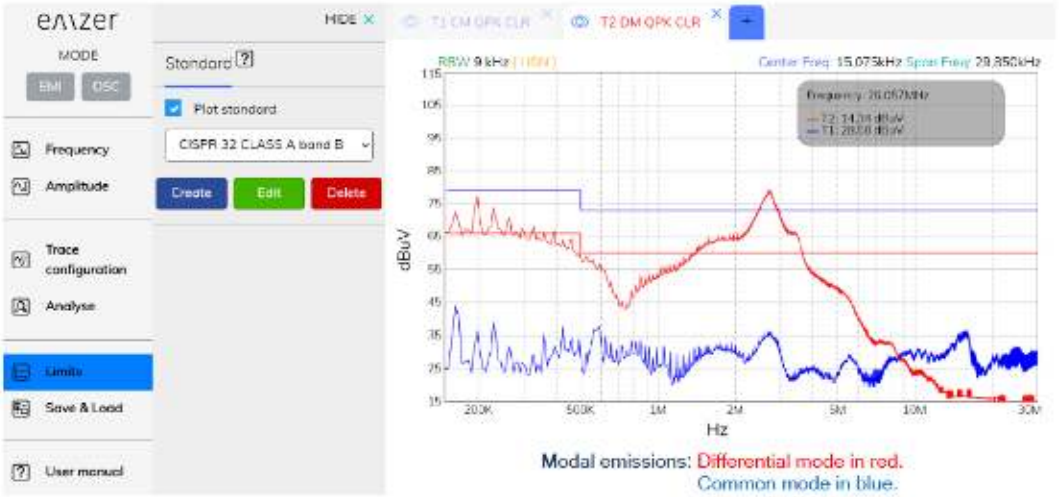
- **Two simultaneous EMI Receivers** with PK, QPK and AVG detectors for both channels according to CISPR 16-1-1.
- An optional 16-A single-phase dual-port V-network Line Impedance Stabilization Network (LISN).
- Two Transient Limiters.
- Integrated test software (**no additional installation is required**).

Both channels **can be run in parallel and real time**, showing an important reduction of the measurement time when compared to any other option.

Additionally, thanks to this feature, EMSCOPE can show the measurement of the L-G and N-G conducted emissions (as defined in CISPR 16), or the **common-mode and differential-mode (modal) emissions** with any of the three detectors.

Modal-emission measurements are fundamental to know the dominant mode and to implement the suitable power-line filter accordingly, **using fewer components and getting a more cost-effective design**.

EMSCOPE is remotely controlled using a friendly web-based application, free of charge and with no cost of ownership. The communication is made through the supplied fiber-optic cable, to avoid the coupling of external interferences, and a multi-mode fiber to Ethernet converter, that allows the instrument access from anywhere on your LAN.



Modal emissions: Differential mode in red.
Common mode in blue.

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Technical Specifications

Standard for EMI test receiver / LISN	According to CISPR 16-1-1 / 16-1-2 standards
Detectors	Peak, quasi-peak and average
Type of measurements	EMI (line and neutral) and Modal (common and differential mode) conducted emissions
Full spectrum measurement time	Equal to the measurement dwell time, which is totally configurable from 10 ms to 15 s
Resolution bandwidth filters	200 Hz, 9 kHz, 120 kHz (CISPR); 1 kHz, 10 kHz (MIL)
Integrated circuits	Pre-amplifiers and pulse limiters
Internal LISN	Single Phase 16A, 50 Ω || (50 µH + 5 Ω) / 250 µH
Maximum continuous current/voltage	16 A @230 V_{AC} / 300V_{AC}- 325 V_{DC} (socket dependent)
Power-supply operating frequency	DC to 60 Hz. Universal range.
Artificial hand / connector type	510 Ω + 220 pF / 4 mm banana
Mains socket	IEC C20
EUT Socket (Connector for EUT)	Schuko socket (Type F) *see options

Models and Options

MODEL	Freq. range	Receiver channels	Transient Limiters	Internal 1P LISN	110-MHz Upgrade	Fiber/ETH conver.	Software
EMSCOPE	9 KHz – 30 MHz	2	2	Yes	Available	Included	Included
EMSCOPE RX2	9 KHz – 30 MHz	2	2	No	Available	Included	Included
EMSCOPE RX4	9 KHz – 30 MHz	4	4	No	Available	Included	Included
EMSCOPE RX4 LZ2	9 KHz – 30 MHz	4	4	Yes	Available	Included	Included

Options

UPGR-110	Enhance frequency range from 9 KHz-30 MHz to 9 KHz-110 MHz
UPGR-OSC	Additional software license for Time Domain Analysis (Oscilloscope mode)
Fiber/USB Converter	Fiber optic converter to plug EMSCOPE directly to USB port
EUT SOCKET	Standard socket is EU. Specify other: US, UK, ...