

EMSCOPE

THE STRAIGHT PATH TO COMPLIANCE



EMSCOPE is a new **double EMI Receiver** designed according to CISPR-16-1-1 that fully embodies measurement of conducted emissions as well as **common and differential** mode noise.

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

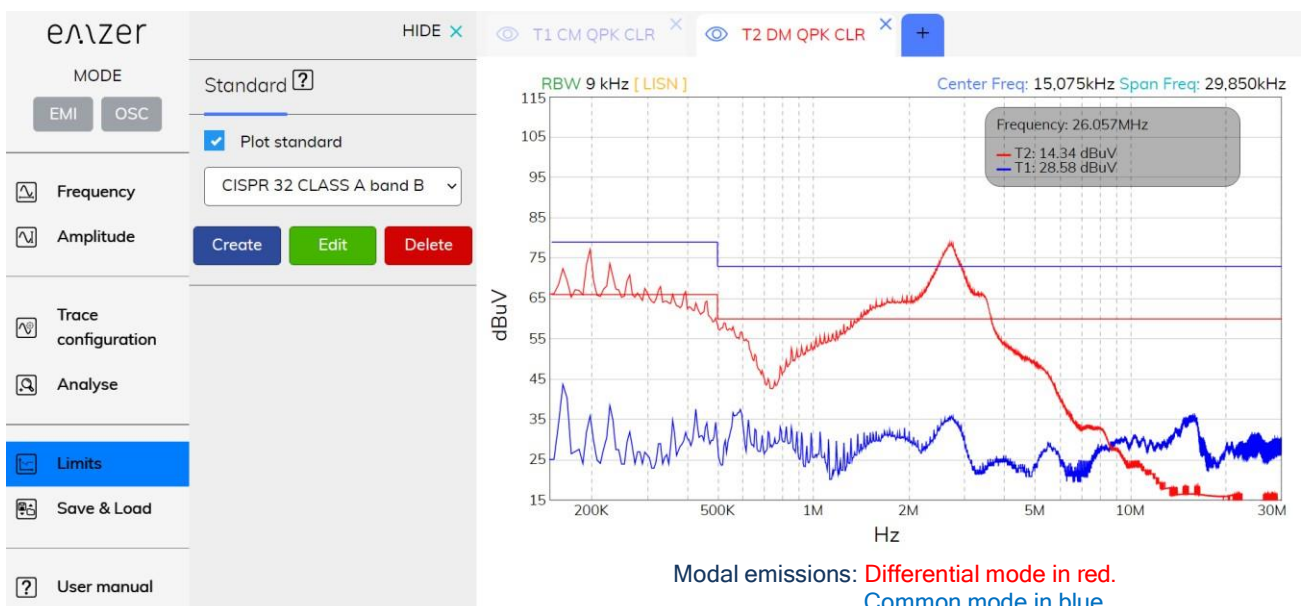
- **Two simultaneous EMI Receivers** with PK, QPK and AVG detectors for both channels according to CISPR 16-1-1.
- An optional 16 A single-phase dual-port V-network Line Impedance Stabilization Network (LISN).
- Two Transient Limiters.
- Integrated test software (no additional installation is required).

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 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.



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 1 s 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 16 A, 50 Ω (50 μ H + 5 Ω) / 250 μ H
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). Available: EU, USA, UK, CN-AUS.

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	150 kHz – 30 MHz	4	4	No	Available	Included	Included
EMSCOPE-RX4-LZ2	150 kHz – 30 MHz	4	4	Yes	Available	Included	Included

Options

UPGR-110	Enhance frequency range from 30 MHz to 110 MHz (all models)
UPGR-09	Enhance frequency range from 9 kHz to 150 kHz (only for models EMSCOPE-RX4 or EMSCOPE-RX4-LZ2)
UPGR-OSC	Additional software license for Time Domain Analysis, oscilloscope mode. (all models)
Fiber/USB Converter	Fiber optic converter to plug EMSCOPE directly to USB port (all models)