

EMSCOPE

THE STRAIGHT PATH TO COMPLIANCE



EMSCOPE is a new **double EMI-Test Receiver** according to CISPR-16-1-1, 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:

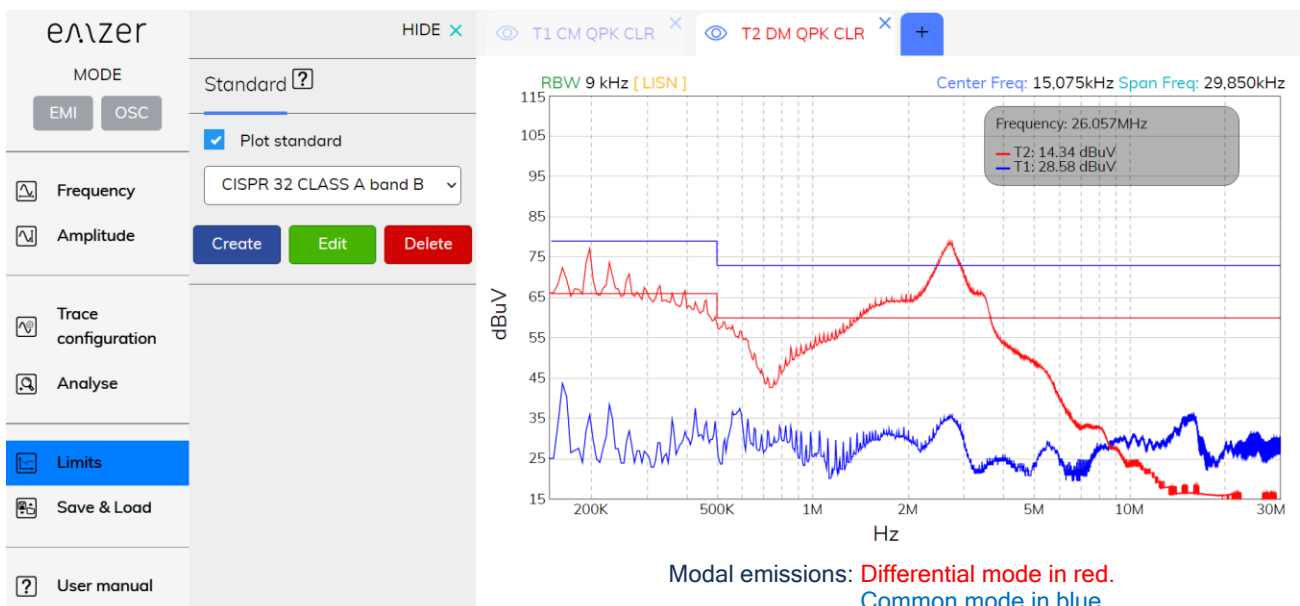
- **Two simultaneous EMI Receivers** with PK, QPK and AVG detectors for both channels according to CISPR 16-1-1.
- An optional 16-A single-phase dual-port V-network Line Impedance Stabilization Network (LISN).
- Two Transient Limiters.
- Integrated test software (**no additional installation is required**).

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.



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 16A, 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) *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, ... |