# EGATEL® Serie MRE8000

## Microtransposers / Gapfillers UHF

Multistandard:
DVB-T/H, DVB-T2, ISDB-T/TB, ATSC




Egatel

The MRE8000 series has been designed to provide best-in-class performance and a cost-effective solution for low-power broadcast stations where lack of space is a key factor. The MRE8000 microtransposers / gapfillers expand coverage in a simple and economical way in MFN / SFN networks. Each channel is made up of a single module, and 8 channels can be integrated into a 19" - 6U frame. It is fully programmable, allowing quick configuration to different channels.

Its high selectivity allows it to work without problems in the presence of adjacent channels. The digital echo canceller effectively limits the ripple produced by insufficient isolation between antennas, with an echo cancellation system for SFN that is dynamic and adaptive to the circumstances of the echo present, regardless of the type of echo existing. Each module individually allows monitoring MER, BER, PER, Shoulder measurement and Level.

Thanks to its intuitive Web GUI that allows complete management of the equipment in local or remote mode, supervision and maintenance tasks are extraordinarily simple. In addition, it allows centralized monitoring of the relay center through an optional Control Unit.

- Compact design in a single module.
- Up to 8 modules in a 19"- 6U frame.
- Output power, up 38 dBm before the filter.
- Input / Output frequency continuous tuning between 470Mhz and 700Mhz without readjustments.
- High sensitivity and selectivity.
- SFN / MFN modes.
- Adaptive digital precorrection allowing automatic readjustment at any channel and power change.
- Multistandard: DVB-T/T2, ATSC, ISDB-TB.
- Quality measurement of output signal (QoS) optional: MER , BER, PER.
- Direct and reflected power measurement.
- Web server displays the "Output to device channel" and "Channel impulse response" graphs.
- High-performance echo canceller (SFN) with echo level measurement.
- Echo cancellation system for dynamic and adaptive SFN
- Local operation via external display or friendly Web Server.
- Remote control and monitoring of each module through SNMP and Web Server, and/or centralized via Control Unit option.
- Remote software update
- DC voltage supply (+24V).
- N+1 redundancy ready.

# TECHNICAL SPECIFICATIONS

| RF Input | |
|---|---|
| Signal type | One DTV channel. |
| Frecuency band | 470-700 Mhz (continuous tuning). |
| Sensitivity | -80 dBm ... -10 dBm. |
| Selectivity (Pin = 40dBm) | > 70 dB (for adjacent channels) / > 90dB (for the rest of the channels) |
| Noise figure | < 7 dB. |
| Connector | BNC (F) 50 Ω. |
| Return losses | > 18 dB. |

| Echo Canceller | |
|---|---|
| Cancellation level | > 30 dB. |
| Maximun echo level | +15 dBc (main signal) |
| Monitoring | Echo level / Cancellation status / Impulse response. |

| Clock and Synchronization | |
|---|---|
| Internal reference | ± 0,5 ppm. |
| External 10Mhz reference | Level: 100 mV - 3 Vpp. Connector: SMA (F). |

| RF Output | |
|---|---|
| Frecuency range | 470 ... 700 Mhz (continuous tuning) |
| Resolution | 1 Hz |
| Output power (before filter) | |
| - MRE8010 (1W/2W) | 30 dBm + 4dB |
| - MRE8050 (5W) | 37 dBm + 1dB |
| Output power stability | < ± 0.2 dB. |
| Shoulders | ≥ 40 dB. |
| RF OUT sample | N (F) 50 Ω / SMA (F) for RF frontal Test |
| Return losses | > 18 dB. |
| RF out monitorning | Shoulders measurement / MER / BER / PER / Level. |

| Remote and Local control | |
|---|---|
| LCD display | Local operation via external LDC Display. |
| Front RJ-45 | Local operation throught Web GUI (Graphical User Interface). |
| Rear RJ-45 | Remote Network management interface (Web GUI and/or SNMP Agent). |

| Digital Precorrecction | |
|---|---|
| Non Linear | Adaptative. |
| Linear | Static. |
| Operation | Continuous / Automatic (activation: time/shoulder level). |
| Monitoring: | |
| - Shoulder level | Left and right shoulder level measurement. |
| - Precorrection status | Running / Stoped. |
| - Samples level (internal) | OK / Low. |

| General | |
|---|---|
| Temperature | 0 ... 45ºC. |
| Relative humidity | 95% max. (no-condensing). |
| Supply | 24 Vdc. |
| Cooling | Convection / Forced Air. |
| Dimensions (H x D x W) | 262 x 259 x 45 mm. |
| Weight | 3 Kg approx. |

## FRAME

| Power Supply (PS2410/2425/2442) | |
|---|---|
| P.S. Units | 1 (2 opt.). |
| Input / Output voltages | 90 - 264 VAC / 24 Vdc. |

| General | |
|---|---|
| Dimensions // Configuration | 19" - 6U / 10U. // Wall, outdoor box or 19" rack. |

**Remark:** To comply with the out-of-band emissions regulations and with the required shoulder attenuation, the RF output of the micro devices must be connected to and appropiate filter.

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