ECOS-D RGW4000 110W is a modular voice and data Gateway with embedded Radio Base Station (RBS) functionalities, designed to meet and exceed the requirements of professional and land mobile radio systems.

Its high quality, combined with state of the art reliability and outstanding modularity makes the ECOS-D RGW4000 110W a digital based equipment, able to support analogue FM, digital DMR conventional Tier II and digital DMR trunking Tier III with all the power given by a SIP interface to make available all voice and data communications over LAN.

The ECOS-D RGW4000 110W can be used in a real time dual mode Analog FM/Digital DMR conventional Tier II or in digital DMR trunking Tier III mode.

All the modes of operation of the ECOS-D RGW4000 110W support natively the flagship simulcast technology by the company without any external ancillary. The ECOS-D RGW4000 110W can be used from stand-alone repeater to conventional simulcast to digital multi-site trunking with a configuration change only.

ECOS-D RGW4000 110W can be connected to build a system natively with IP, E1, 4W+E/M links.
**MAIN FEATURES**

- 3 RU device designed to be hosted in 19-inch rack
- Available in UHF Frequency bands at 12.5kHz/20kHz/25kHz programmable channel spacing
- RBS and Stand alone repeater mode of operation:
  - Conventional Analog FM only
  - Digital DMR Conventional Tier II only
  - Real Time Automatic dual-mode conventional analog FM/ Digital DMR Conventional Tier II with priority mode setting
  - Digital DMR Trunking Tier III (embedded trunking controller)
- Designed to natively support Simulcast technology:
  - Multi-site simulcast support: available for both conventional and trunking operations
  - Simulcast Master, Sub-Master, Slave mode within the same device (virtually no limits in the number of RBS per simulcast channel)
  - Reliable fall-back mode: Slave in-cabinet repeating and Backup Master automatic reconfiguration
  - Synchronization: GPS and/or Precise Time Protocol IEEE 1588v2 with fall-back
  - Voting: analog FM and digital DMR best in class voting
  - Auto Adaptive Technology (A2T): each RBS “adapts” itself to the time and frequency response of the backbone and automatically compensates time-variant differences
  - Multiple-link support: IP (SoIP – Simulcast over IP – technology), E1, 4W+E&M link interfaces
  - Redundant link management between RBSs (E1, 4W+E&M and IP)
- Dispatching and third party API
  - SIP based interface: AISIP (voice) and UDP/IP (data) for DMR Tier II/Tier III and Conventional Analog FM
  - Designed for PSTN link support: PBX SIP Trunk 2.0 interface
  - 4W+E&M for Conventional Analog FM
- Provides high levels of protection from access by unauthorised radio users, via the Unauthorised Access Protection procedure
- Embedded AMBE+2 vocoder for DMR Tier II clear or encrypted (ARC4) voice communications from a local microphone (embedded loudspeaker)
- DMR Data transmission ports (RS232/RS485/LAN), digital I/O and analog inputs available.

**INTEROPERABILITY**

- Interoperability (IOP) certificates with DMR major terminals vendors in Tier II and Tier III modes of operations (for further details, please visit the DMR Association website at: www.dmrassociation.org).

**GENERAL SPECIFICATION**

<table>
<thead>
<tr>
<th>Mechanics</th>
<th>Dimensions 3 RU compatible with 19-inch rack mounts</th>
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<tbody>
<tr>
<td>Weight</td>
<td>From 13 Kg (28.6 lbs)</td>
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<tr>
<th>Supported Modulations</th>
<th>FM/PM for analogue mode</th>
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<tr>
<td></td>
<td>4FSK/C4FM for digital mode with 180 Mo/demodulator</td>
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<table>
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<tr>
<th>Frequency Generation</th>
<th>Synthesized</th>
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<tbody>
<tr>
<td>Channel Spacing</td>
<td>12.5 kHz / 20 kHz / 25 kHz</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Simplex / Half-Duplex / Duplex</td>
</tr>
<tr>
<td>Digital Data gross bit Rate</td>
<td>9600 bps with 4FSK/C4FM digital modulation in 12.5 kHz channel</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-30° - +60°C (-22°F - +140°F)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>48 Vdc (galvanically insulated)</td>
</tr>
<tr>
<td>Input Current (at 48 Vdc)</td>
<td>Transmission Standby</td>
</tr>
</tbody>
</table>

**MAINTENANCE**

- Display and keypad for easy local maintenance and fault handling
Specifications subject to change without notice.

1 According with the national regulations where RGW is used
2 Value is to be intended for a fully equipped RGW configuration
3 Depending on RGW equipment