



## VHF AIRBAND RADIO - ICS-ABR-V01TR

### DESCRIPTION:

VHF Air band Transceiver (Model: **ICS-ABR-V01TR**), designed, developed and manufactured by Innovation Communications Systems Ltd, Hyderabad, operates in VHF band of 118 to 136.975 MHz for Airband Applications. This module transmits up to 32W pep output with AM modulation for voice and is capable of receiving signals with a sensitivity of  $-107$  dBm with 1 KHz modulating signal for 6dB SINAD. The module has RF frontend, modulation and demodulation circuits for AM, Power Amplifier, RF and IF filters along with VSWR and Thermal protection along with indication circuits. The transmitter section will operate at high power of 9W output with all protections. The receive section of this module has two stages of down conversions. First stage will convert received signal to 38.85 MHz and second conversion is to 450 KHz. This 450 KHz is fed to AM demodulator for Audio extraction and is fed to Speaker as well as Headset.



### FEATURES:

- High power Output of 9W carrier power
- 32W PEP maximum @ 90% AM depth
- 8.33 KHz channel spacing.
- 25 KHz models also available
- AM modulation
- Dual down conversion
- Crystal filters at 38.85 MHz
- Micro controller built-in
- LAN Interface with GUI
- Synthesized Frequency Generation
- Better spurious rejection
- Membrane / pushbutton Keypad
- OLED Display
- 200 memory channels on board. Can be enhanced

### SPECIFICATIONS:

- |                         |  |                           |                                     |
|-------------------------|--|---------------------------|-------------------------------------|
| • Frequency             | : 118 to 136.975 MHz                                       | • Antenna                 | : Omni Antenna                      |
| • Tx Power Output       | : 9W Carrier Typical (10W Max)<br>32W (PEP) at Typ 90% AM. | • Mic Interface           | : External Mic (600 ohms impedance) |
| • Modulations support   | : AM (6K00A3E) /A3E voice                                  | • Sensitivity             | : $-107$ dBm AM, for 6 dB SINAD     |
| • Frequency Stability   | : $\pm 5$ ppm OTR (Max 0.4 KHz)                            | • IF Output level         | : 450 KHz : 0 dBm                   |
| • IF Frequency          | : 38.85 MHz and 450 KHz                                    | • Remote Interface        | : TCP-IP LAN                        |
| • Operating Temperature | : $-20^{\circ}\text{C}$ to $+60^{\circ}\text{C}$           | • Spurious Rejection      | : $>70$ dB                          |
| • Frequency selection   | : Keypad and Display                                       | • Image Rejection         | : $>70$ dB                          |
| • AM Input signal level | : 1V PP at 1 KHz Typ                                       | • Power Supply (Nominal)  | : 12 V Nominal.                     |
| • Spurious & Harmonics  | : $-60$ dBc  | • Audio Output distortion | : $<10\%$ @ 60% AM                  |
| • Modulation depth      | : 90% Typ  | • Dimensions              | : 220 x 185 x 65 mm (L x D x H)     |
|                         |  | • Weight                  | : 1.5Kg max                         |

APPLICATIONS: Air Traffic Management

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