



QUANTUN ELECTRONICS LLC

QUANTUN QR-5000

Cost Effective DMR Repeater

This easy to use repeater is designed to save cost and provide you with a basic and reliable repeater

Digital-Analog Switch Automatically

This repeater supports digital and analog modes. It can recognize the inbound signal and repeat the signal automatically.

Advance TDMA Technology

The time Division Multiple Access (TDMA) technology allows (2 Time Slot Capability) doubles the user channels, compared with that of traditional FDMA.

Transparent for Vocoder & Data

This repeater will pass any voice based on any kind of vocoders or any data, if it is compatible with ETSI TS 102 361-1, -2, -3.

50-Watt High Power Output

The repeater supports 50W maximum power output. It can be programmed 10 / 25 / 50 Watts Power Output.

Inside Duplexer and Power Supply

Duplexer is optional. Power supply is included.

Cross-Band Repeater

The repeater is able to do a cross-band, if it is specified at ordering time. VHF-UHF or reverse.

Channels

1 Channel. Frequency Ranges: 136-174 MHZ, 400-470 MHZ, 450-520 MHZ.



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Analog/Digital DMR Repeater



| General Specifications | |
|--|--|
| Power Supply | 13.6V DC \pm 20% |
| Frequency Range | 400-470MHz; 136-174MHz; 450-520MHz; 350-400MHz |
| Number of Channels | 1 Channel |
| Channel Spacing | 12.5/25kHz |
| Operating Temperature | -30°C~ +60°C |
| Antenna Impedance | 50 Ω |
| Duty Cycle | 100% |
| Dimensions: H x W x D(mm) | 136.6 x 440 x 322 |
| Weight: (Kg) | 9.0(w/o duplexer)/10.0(with duplexer) |
| | |
| Transmitter Specifications | |
| Frequency Stability(-30°C to 60°C, 25°C Ref) | 1.0 ppm |
| Power Output | 5W(L), 50W (H) |
| Modulation Limiting | \pm 2.5kHz@12.5kHz/ \pm 5kHz@25kHz |
| FM Hum & Noise | -40dB@12.5kHz /-45dB @25kHz |
| Conducted/Radiated Emission | -36dBm < 1GHz, -30dBm > 1GHz |
| Adjacent Channel Power | -60dB@12.5kHz; -70dB@25kHz; |
| FM Modulation Mode | 11K0F3E@12.5kHz;16K0F3E@25kHz |
| 4FSK Digital Mode | 12.5kHz (data only) : 7K60FXD 12.5kHz (data+voice) : 7K60FXE |
| 4FSK Modulation Accuracy | 5% @25°C, 10% @extreme temperature |
| Audio Response (300-3000Hz) | +1 ~ -3 dB |
| Digital Protocol | ETSI TS 102 361-1,-2,-3 |
| Audio Distortion | < 3% |
| Vocoder | Transparent (AMBE++, SELP, etc.) |
| Data | Transparent |
| Receiver Specifications | |
| Analog Sensitivity | .35 μ V/-116dBm(20 dB SINAD) .22 μ V/-120dBm(12 dB SINAD) |
| Digital Sensitivity | .3 μ V /-117.4dBm (BER 5%) .7 μ V /-110dBm (BER 1%) |
| Intermodulation | TIA603 70dB; ETSI 65dB |
| Adjacent Channel Selectivity | TIA603 70dB; ETSI:65dB@25kHz TIA603 60dB; ETSI:60dB@12.5kHz |
| Spurious Rejection | TIA603:75dB; ETSI:70dB |
| Blocking | 84 dB |
| Audio Distortion @ Rated Audio | 5% |
| Audio Response (300-3000Hz) | +1 ~ -3 dB |
| Conducted Spurious Emission | -57 dBm<1 GHz, -47 dBm>1GHz ETS 300 086 |

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