



General Description



Wisycom **MRK980** is a true diversity, ultra-wideband dual channel receiver. With its 1090MHz of band switching, it ensures the users an exceptional band flexibility, combined with a superb selectivity and inter-modulation immunity, for best operating performances of the wireless microphone systems. **MRK980** also features an internal DSP processor, Wisycom famous Multicompanying system, new Dante compatibility and a completely and renewed user interface, which make this system easy and quick to setup.

Main Features

- Two channels **true diversity receiver** (full **DSP** processing)
- Up to **1090 MHz bandwidth** in 170/1260 MHz range
- Push to talk (**PTT**) enabled with dedicated outputs (optional)
- **Analogue, AES/EBU & Dante** outputs (with redundancy)
- **Dante** machine Synchronized mode → **no sample rate delay!**
- Next Gen Multiband front-end filtering, 4 bands:
 1. High Q moving filter in 170-230 MHz
 2. High Q moving filter in 470-800 MHz
 3. Multiple options:
 - High Q moving filter in 960-1160 MHz DME (UK) or
 - Saw filter 806-810 MHz (Japan)
 4. Multiple options:
 - Saw filter 940-960 MHz (USA) or
 - Saw filter 1240-1260 MHz (Japan)
 - Saw filter 823-832 MHz (UK)
- **Wideband** and **Narrowband** DSP-FM operation (SW selectable):
 - Narrowband allows 50% more band efficiency (**200/250 kHz channel density**)
 - Narrowband allows about 3dB **extra sensitivity** and noise immunity
- Extreme low noise VCO with ultrafast spectrum scan for optimal quick & easy setup
- High contrast OLED display
- Monitor & control through USB and Wisycom Manager 2.0 (computer SW)
- Expansion slot for GPIO/Fiber input or future additional features

TECHNICAL SPECIFICATIONS

Frequency ranges	170 ÷ 230MHz (VHF) and 470 ÷ 800MHz and 960 ÷ 1160 MHz (DME) or 806 ÷ 810 MHz (JP) or 940 ÷ 960 MHz (USA) or 1240 ÷ 1260 MHz (JP)			
Switchable channels	2400 managed in 40 groups of 60 frequencies completely user customizable			
Switching-window	up to 1090 MHz			
Frequencies	"microprocessor controlled PLL frequency synthesizer circuit, with 5 KHz minimum step; frequencies are easily PC reprogrammed with Wisycom Manager thru Ethernet"			
Frequency error	< ± 2.5 ppm, within the rated temperature range			
Diversity technique	true-diversity (Twin receiver circuits)			
Modulation	FM mono, wideband or narrowband (SW selectable)			
Peak deviation	±40 kHz (narrowband), ±56 kHz (wideband), ±80 kHz MAX			
"A" / "B" antenna inputs	2 x BNC type female connectors for inputs, 2 x BNC type female connectors for loop			
Antenna input impedance	50 ohm (SWR < 1:2)			
Antenna booster pwr	+12Vcc / 300mA MAX			
Sensitivity	Operating Mode: Normal		Operating Mode: High Sensitivity	
	Wideband	Narrowband	Wideband	Narrowband
	2 dBµV	-0,3 dBµV	1 dBµV	-1,3 dBµV
[22Hz-22kHz A weighted, THD+N=-30dB/SINAD] ETSI EN-300-422-1				
Amplitude response	< 0.2 dB (for RF input signal: +4 dBµV ÷ +120 dBµV)			
Co-channel rejection	> -3.5 dB @ 2 µV RF; > -1.5 dB @ 100 µV RF			
Adjacent chan. selectivity	> 90 dB @ ± 300 KHz (wideband), > 90 dB @ ± 150 KHz (narrowband),			
Spurious rec. rejection	> 90 dB			
IF image rejection	> 110 dB			
IIP3	≥ +20 dBm (typical)			
Spurious emissions	< 1pW (typical. = 0.1 pW)			
Noise Reduction system	compander circuit, can be pre-set (or switched off) to the following modes: - ENR (Wisycom Extended-NR) noise optimized - ENC (Wisycom Extended-NC) voice optimized & with reduced pre-emphasys - CUSTOM (to be compatible with other brands transmitters)"			
AF bandwidth	20 Hz ÷ 20 kHz (wideband), 20 Hz ÷ 15 kHz (narrowband)			
Frequency response	± 0.5 dB in the 20 Hz ÷ 19 kHz range (wideband), ± 0.5 dB in the 20 Hz ÷ 13 kHz (narrowband)			
Distortion	0,08% typ. (nominal deviation @1kHz)			
SND/D ratio (Analogue)	115 dBA typ.(analog),			
SND/D ratio (Digital)	>130 dBA (AES3/Dante)			
Audio output	2 XLR-3M connectors + 2 TRS for audio line-outputs trafo balanced (MAIN OUTs with transformer) 2 XLR-3M connectors for audio outputs balanced transformer-like floating (AUX OUTs used for PTT)			
Audio output level	+24 dBu @ peak deviation for MAIN and AUX outputs +14dBu @ peak deviation for TRS outputs			
Calibrating AF tone	tone/sweep, up to +24 dBu (on MAIN and/or AUX outputs)			
Digital output	AES3: XLR-3M with word clock in/out Dante: 2 x Ethernet 10/100/1000 Base TX RJ45			
Digital sample rate	AES3 @ 48 kHz 24 bit, word clock input from 32KHz to 108KHz			
Monitor output	1/4" (6.3 mm) stereo jack connector			
Monitor output level	max 6 Vrms / 150 ohm			
Monitor out impedance	100 ohm for auricle			
Managing interface	2 x 10/100/1000 Base TX RJ45 Ethernet, Infrared, Bluetooth			
Bar-graph meters	RF Level Bars: RF field strengths (both "A" and "B" inputs) from 10 to 70 dBµV or LQ (link quality) AF Bars: deviation (5% ÷ 150%), with peak-hold mode.			
Display	64 x 256 OLED (yellow)			
Powering	99 ÷ 138 Vac and 187 ÷ 264 Vac, with automatic switching / 100 VA max.			
DC options	6A max @ 10÷28VDC (optional)			
Temperature range	-10 ÷ + 55 °C			
Dimensions	19"/1U			
Weight	4 Kg approx.			

VARIANTS

MRK980-<Country>-<PowerSupply>-<Expansion Board>

Country

_: (void) Standard range: 170-230 / 470-800 / 960-1160MHz / 940-960MHz
 JP: Japanese range: 470-800 / 806-810 / 1240-1260 MHz

Power supply:

DC: 10÷28 Vdc 6A MAX on XLR-4M

Expansion board:

EX0: upgradable expansion board
EX1: expansion 1 (GPIO + Monitor + 3 x AES3 + Zoning)
EX2: expansion board version 2 (Monitor + Zoning + Fiber)

EXPANSION BOARDS

EXP1 is an optional accessory which can be mounted on MRK980 dual channel receiver.
 This expansion board enables three different features:

- ✓ Zoning signal distribution
- ✓ External monitoring cascade
- ✓ Two GP OUT



EXP2 is an optional accessory which can be mounted on MRK980 dual channel receiver.
 This expansion board enables three different features:

- ✓ RF over Fiber receiver modules
- ✓ External monitoring cascade
- ✓ Zoning I/O

This new board transform the MRK980 into a customizable and incredibly versatile receiver, with several unique options.

