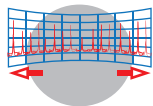


The Wisycom MRK980 is a **true diversity**, ultra-wideband dual channel receiver. With its 1090MHz of band switching, it ensures the users an exceptional band flexibility, combined with a superb selectivity and inter-modulation immunity, for best operating performances of wireless microphone systems.

The MRK980 also features an internal DSP processor, Wisycom famous Multicompanying system, new Dante compatibility and a completely and renewed user interface. which makes this system easy and quick to setup.



Wideband RF Technology

Provides the widest switching bandwidth available, up 1090 MHz range to find the best frequency, anywhere in the world.



NB/WB SW selectable

Double audio filter allows switching in "wideband" and "narrowband" mode.



DIGICOM Multi-Brand Compatibility - This software enables the use of third-party transmitters with Wisycom receivers - utilize an existing arsenal of belt packs, handheld or plug-on transmitters.



MRK980 supports EMBER+ protocol and manages 4 talk back modes with the RPU 500, allowing remote audio routing to be managed on the mixer.

OTHER 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
- Analog, AES/EBU & Dante outputs (with redundancy)
- Dante machine Synchronized mode: no sample rate delay!
- Next Gen Multiband front-end filtering, 4 bands:
 - VHF filter in 170-230 MHz
 - UHF in 470-800 MHz
 - Multiple options: 960 ÷ 1160 MHz (DME) or 806 ÷ 810 MHz (JP) or 940 ÷ 960 MHz (USA) or 1240 ÷ 1260 MHz (JP)
- Wideband and Narrowband DSP-FM operation (software 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
- Monitor & control through USB and Wisycom Manager software
- Expansion slot for GPIO/Fiber input or future additional features



CONFIGURATIONS

FREQUENCY RANGE

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

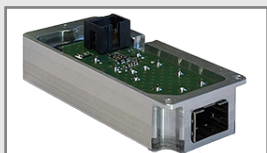
POWER SUPPLY OPTION

- DC** 10±28 Vdc 6A MAX on XLR-4M

EXPANSION BOARD OPTION

- EX0** upgradable expansion board
- EX1** expansion version 1
(GPIO + Monitor + 3 x AES3 + Zoning)
- EX3** expansion board version 3
(RF over Fiber)

ACCESSORIES & RELATED



Item: MRK-SFP
it expands the internal switch with SFP slot (1Gigabit speed)



Item: BFLT1/BFLR1
Single Laser RF over Fiber transmitter/receiver with selectable filter and remote control (App)



Item: CAL-xx
Power supply cable with country based plugs 10A 250V 1,8mt



Item: CABB03
Antenna Cable: 30cm with BNC-M/ BNC-M connectors 50Ω



Item: CNDT20
RF bulkhead adapter, BNC-F/BNC-F



Item: CABB03-75
Coaxial Cable: 30cm with BNC-M/ BNC-M connectors 75Ω



Item: CAM25-980MON
Audio cable MRK980 ext monitor mini XLR-5F - mini XLR-5F - 25CM



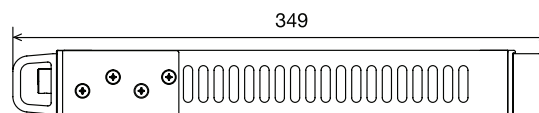
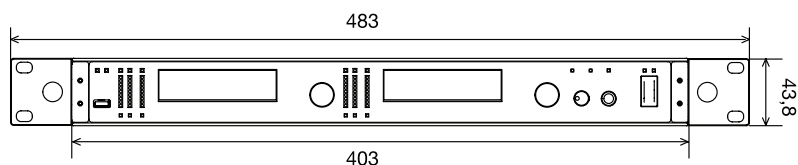
Item: CAM200-980MON
Audio cable MRK980 ext monitor mini XLR-5F - XLR-3M - 200CM



Item: LFA
Directive Wide-band Active antenna with integrated filters remote controlled 410-1300 MHz

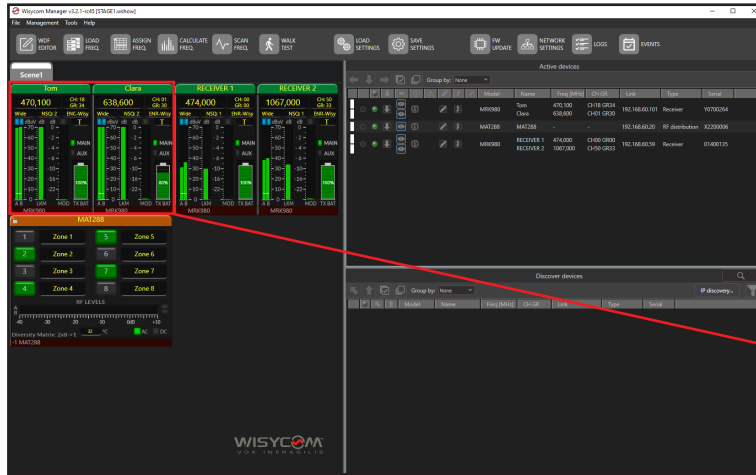


Item: LNNA2/LBNA2
Directive Wide-band Active antenna 470-960 MHz

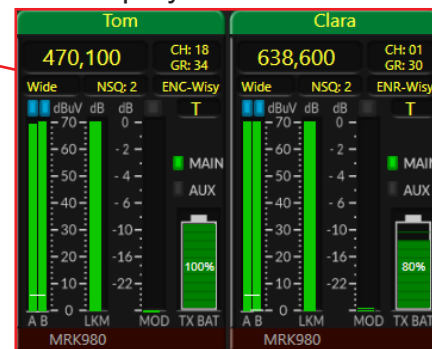


WISYCOM MANAGER

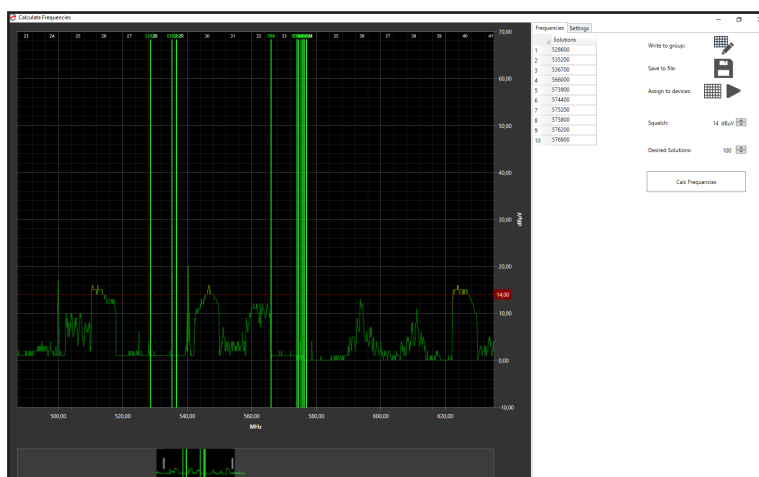
Wisycom Manager is a software that allows monitoring, control and management of multiple MKR980s receivers through the Ethernet connection. This software also allows to generate presets to quickly save and recall configurations.



In the Monitor area, you can visualize all the basic unit information such as RF levels, transmitter battery status, frequencies and channel names. You can also organize your devices by creating scenes to virtually recreate your hardware deployment.



The Scan function allows you to transform the MRK980 receiver into a spectrum analyzer to scan and determine the spectrum availability in real time. With this function you can add markers and log data scans with timestamps to assist in troubleshooting interference.



Wisycom Manager offers an integrated Frequency Management and Intermodulation Calculator. It can import saved scans or use your current scan for determining the best frequencies and apply them to all the MRK980 receivers connected for a quick and easy settings of channels.



EXPANSION BOARD

EX1 expansion version 1
(GPIO + Monitor + 3 x AES3 + Zoning)

EX1 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

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



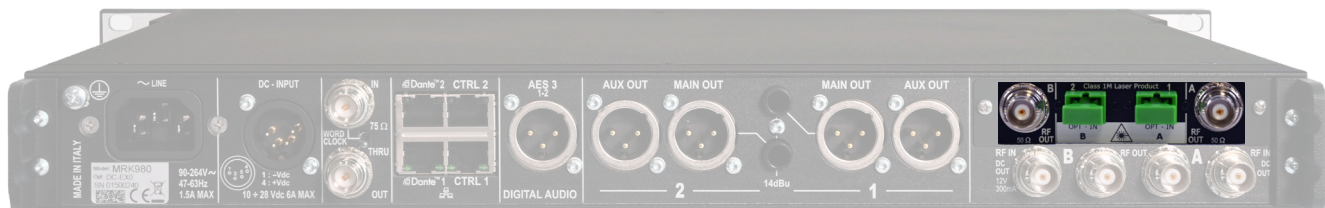
EX3 expansion version 3
(RF over Fiber)

EX3 is an optional accessory which can be mounted on MRK980 dual channel receiver.

This expansion board enables:

- RF over fiber receiver modules
- RF cascade

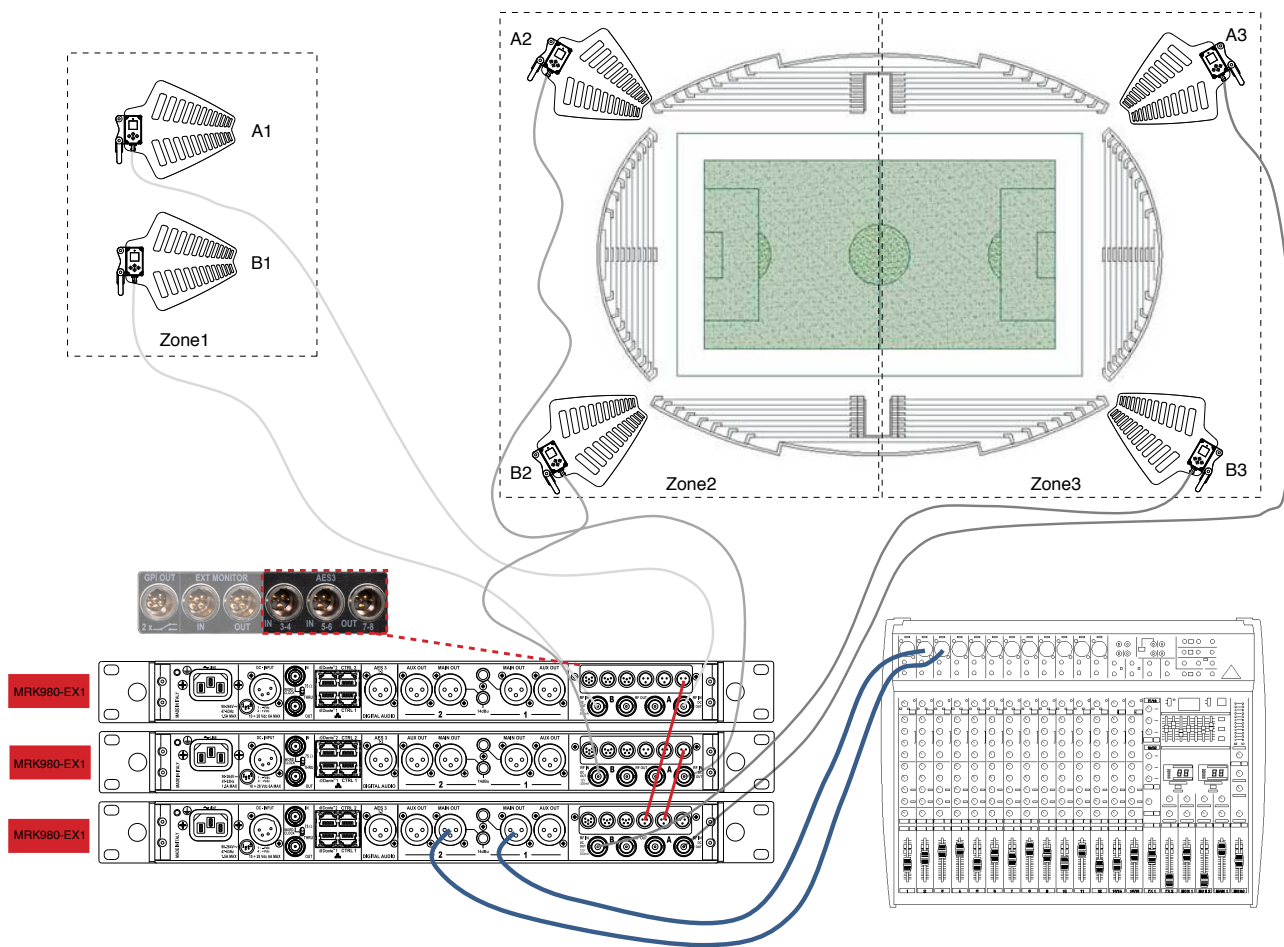
This new board transforms the MRK980 into a customizable and incredibly versatile receiver, with several unique options.



Zoning Signal Distribution

The Zoning (or N Diversity) signal distribution function consists of connecting different MRK980 receiver audio outputs in cascade. These receivers are all tuned to the same frequencies and connected through 3 pin XLR connectors. This type of configuration results in having the audio signal shared between the MRKs, so it's analyzed by the receivers and the one with the best quality signal will be picked to send the audio out. In the example below we have three different zones (3x A / B antennas) connected to three distinct MRK980s. The receivers, in turn, are connected to each other through the expansion board auxiliary audio outputs.

In the “master” receiver Main audio output (Unit 3) we will have the best audio signal resulting from the comparison of the three MRK980s in relation to the areas of use.



GP out ports

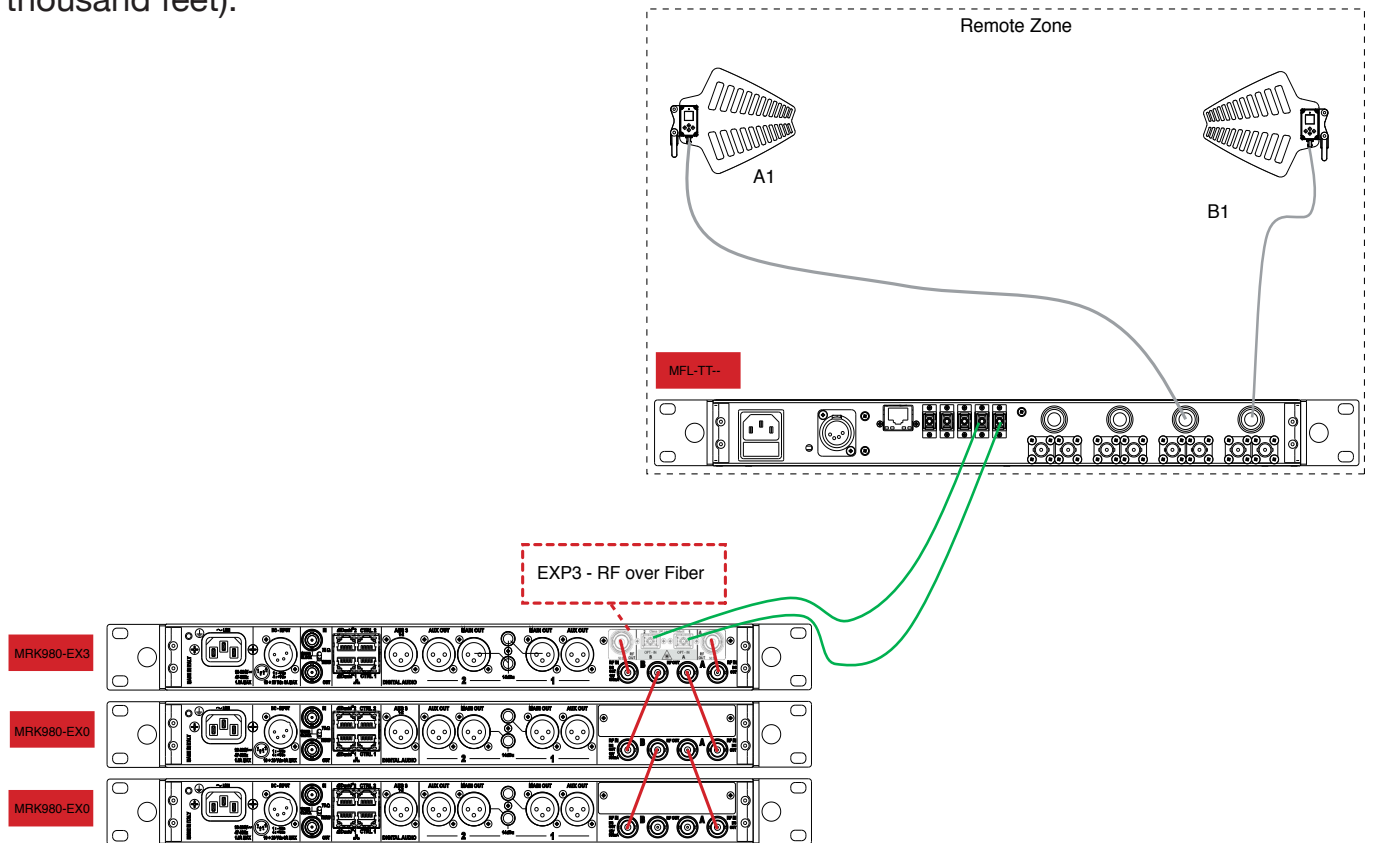
GPI ports add 2 general purpose universal outputs completely programmable with both Rx1 and Rx2 of the same device.

This port can be, for instance, used to interface a mixer to extend the existing PTT capability to different directions or audio groups.



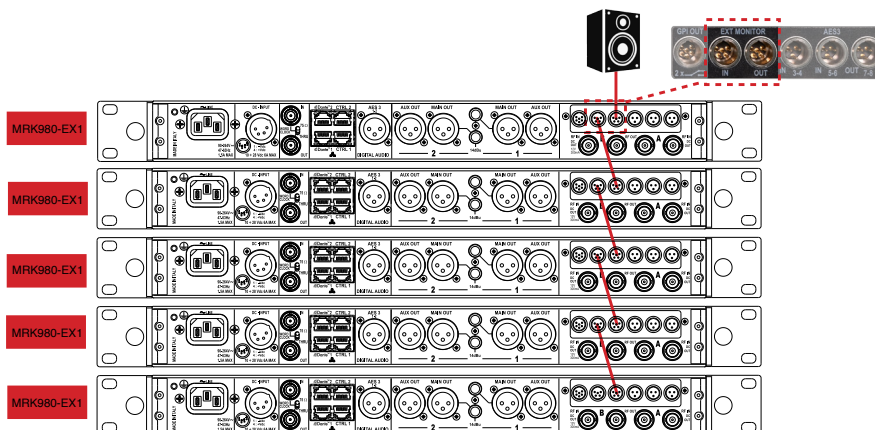
RF Over Fiber Module

This wideband receiving optical module allows the MRK980 to receive RF over fiber signals from a source like Wisycom MFL and open the door to a completely new way of receiving antennas signals from further areas. This implementation massively enlarge the MRK980 reception possibilities by allowing to replace the regular coax cable with optical patches which have an average loss of only 0.4dB per Kilometer (0.12dB per thousand feet).



External Monitoring Cascade

The external audio monitoring function allows several MRK980 to be connected in cascade through the “Monitor I/O”, in order to enable an additional auxiliary audio output common to all receivers. Activated by a front panel button, it allows an additional audio monitoring interface to be obtained, in addition to the standard headphones output: this auxiliary slot consists of two mini XLR 5 pins: 1 IN, 1 OUT.



TECHNICAL SPECIFICATIONS
RF 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; |
| 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 powering | +12Vcc / 300mA MAX |
| Sensitivity | Normal Mode: Wideband 2 dBµV / Narrowband -0,3 dBµV High Sensitivity Mode: Wideband 1 dBµV / Narrowband -1,3 dBµV |
| 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) |

AUDIO SPECIFICATIONS

| | |
|-------------------------------|--|
| Noise Reduction system | comparator 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 | 115 dBA typ.(analog), >130 dBA (AES3/Dante) |
| Audio output | 2 XLR-3M connectors + 2 TRS for audio line-output trafo balanced (MAIN OUTs with transformer) 2 XLR-3M connectors for audio output 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, max 6 Vrms / 150 ohm, 100 ohm for auricle |
| Managing interface | 2 x 10/100/1000 Base TX RJ45 Ethernet, Infrared, Remote Control |
| 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 | AC 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. |

OTHERS
