

CatchAll-M2



Dual-channel multi-band receiver



Description

The CatchAll-M2 is a dual-receiver, multi-band radio frequency front-end device (FED) designed for operation in the commonly used mobile radio frequency bands between 160 MHz and 4 GHz.

It is based on MAC Ltd's MON4000 software-defined receiver card and in addition to the six frequency bands supported by the MON4000 the CatchAll-M2 adds support for 160-180 MHz VHF and 300-480 MHz UHF bands. The six bands provided by the MON4000 can be chosen at time of manufacture from a wide range of available bands. Please see the MON4000 data sheet for a list of available options and contact MAC Ltd if your requirements cannot be met by these.

Digitised samples from each receiver are passed to the host processing unit as VITA-49 streams carried by gigabit Ethernet connections. The unit can be powered from a DC voltage in the range 10 V to 57 V or from a power-over-Ethernet (PoE+) IEEE 802.3at-compliant power sourcing equipment (PSE) device.

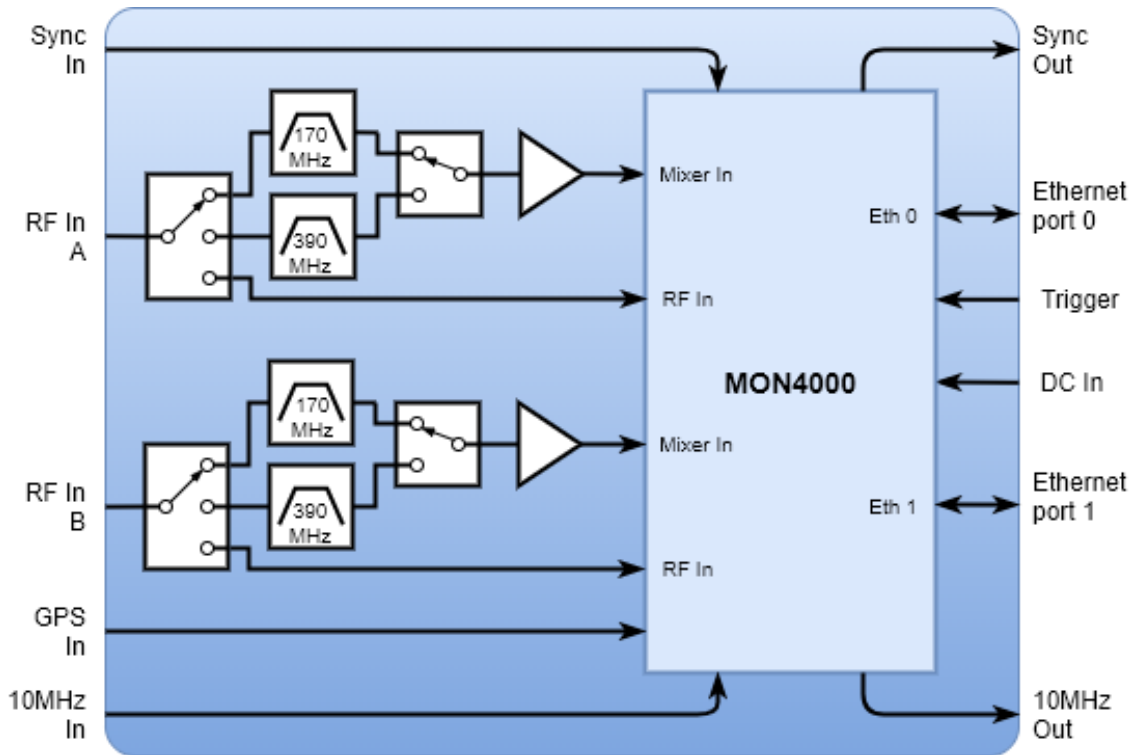
A high stability 10 MHz oscillator is provided to improve the frequency accuracy when operating without GPS. When GPS is available the 10 MHz oscillator is itself conditioned by the GPS receiver. The 10 MHz reference and GPS data signals are made available on the CatchAll-M2's front panel to allow a second, slave unit to be synchronised to the first.

Features

- Two independent receivers
- VITA-49 output over GbE streams
- Covers all common cellular bands in the frequency range 160 to 4000 MHz
- Multi-unit synchronisation including the sharing of GPS data
- Excellent dynamic range
- Power over Ethernet or separate DC supply
- Simple ASCII-based control interface
- Many features are software defined for ease of field upgrade



CatchAll-M2 Block Diagram



Specification Table

| Parameter | Value | Parameter | Value |
|--|--|------------------------------|---|
| Power supply | PoE+ or auxiliary DC in | Power consumption (typ) | |
| Aux. DC in voltage range | 10 to 57 V DC | 12 V DC, Idle | 6 W |
| Frequency range (see also MON4000 datasheet) | 160 to 180 MHz 300 to 480 MHz Plus 6 bands from MON4000 range | 12 V DC, Both Rx active | 15 W |
| | | PoE+ 53 V, Idle | 8 W |
| Typical noise figure | < 6 dB up to 3 GHz < 8 dB above 3 GHz | PoE+ 53 V, Both Rx active | 18 W |
| | | Internal reference stability | 0.25 ppm free running <0.1 ppm locked to GPS |
| Temperature range | -10°C to +40°C | 10 MHz reference input | > -6 dBm sinewave or 5 V square wave |
| Weight | 1.1 kg | 10 MHz reference output | > -2 dBm sinewave |
| Safety certification | | Dimensions (w x d x h) | 210 × 115 × 45 mm |
| | | EMC certification | |



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