

ALL in ONE DATA LINK SOLUTION



MREC

S-Band Modular Receiver



IN-SNEC



This S-band receiver is designed to process FM signals modulated either by analog or digital baseband signals, also accept other demodulation such as BPSK or DPSK.

Its compactness, its lightweight and its robustness make it ideal for integration as well in fixed systems as in vehicles with little available space and harsh environment like target drone, unmanned vehicle, light aircraft, terrestrial vehicles,...

It will fit installation in medium size antennas such our COMTRACK or in small size fixed antennas including omnidirectional.

Applications

- Analog or digital FM signal processing in S-band
- Low or high data rate transmission (up to 16Mbps)
- Reception of wide band analog video signal with telemetry or audio sub-carriers
- Surveillance solutions using aircraft, UAV, vehicles
- Flight test

Main benefits

- High ruggedness
- Low dimensions
- Low weight
- Low cost

Main features

- Modularity (Configurable on request)
Standard configuration based on these 4 modules :
 - ◆ 1 RF conversion head (2180-2700MHz to 70MHz)
 - ◆ 1 FM demodulator
 - ◆ 1 Synthesizer & Local Oscillator module
 - ◆ 1 Power Supply & Control module
- PC remote-controlled
- Synthesizer programming and parameter interrogation realized via a PC software
- Wide temperature range

Modular Receiver - S-Band

Electrical specifications

RF input

◆ Bandwidth	2180 to 2700 MHz
◆ Frequency step	500 kHz
◆ Frequency stability	±10 ppm
◆ Impedance	50Ω
◆ VSWR	≤ 1.5
◆ Image rejection	≥ -60dB
◆ Spurious rejection	≤ -60dBc
◆ Selectivity	≥ -60dB outside ±2x(IF bandwidth)
◆ Noise figure	1dB typ; 13 dB max
◆ Dynamic range	-10 dBm to -80 dBm
◆ AGC time constant	0.1 to 100ms (setting in factory)
◆ Non destructive input signal	+20dBm

Second IF input

◆ Bandwidth	600 kHz to 25 MHz
◆ Frequency	70 MHz
◆ Impedance	50Ω
◆ Level	0 dBm ±3 dB

Mechanical characteristics

◆ Dimensions	3.54"x3.34"x5.9" (90 x85 x150 mm)
◆ Weight	3.30lb (1.5kg)
◆ Vibrations	20Hz to 2000Hz 5g eff

Interfaces

◆ RF input	SMA-female
◆ Baseband output	SMC-female
◆ Power supply	Souriau 3 pins

Baseband input

◆ Video version	
● Demodulation type	FM
● Impedance	75Ω
● Overall frequency response	10 Hz to 10 MHz
● Video frequency response	10 Hz to 5 MHz min in accordance with
● Post-emphasis CCIR notice 405.1	
● S/N	≥ 55dB
● Level (adjustable)	1 Vpp
◆ Telemetry version	
● Demodulation type	PCM / FM
● Impedance	50Ω
● Level (adjustable)	1 Vrms

AGC output

◆ Impedance	1 kΩ
◆ Level	0 to 5V

Remote control

◆ 2RS 232 wires /9600 Bauds	1 for remote control 1 for option feature
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Environmental conditions

Operating conditions

◆ Temperature range	-20°C to +65 °C
◆ Relative humidity	35% to 95% non condensing

Non operating conditions

◆ Temperature range	-45°C to +80 °C
◆ Relative humidity	95% @30°C non condensing

Primary power

◆ Voltage	+10VDC to +32VDC
◆ Power consumption	15W

Ordering information

■ Model reference

MREC

SM514099



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