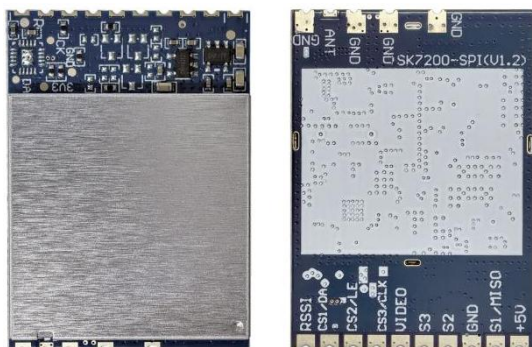


# SK7200-SPI Video Transmission Receiver Module

## (6.1G ~ 8.2G SPI Mode)

The SK7200-SPI is a module that supports CVBS signal output, featuring low latency and strong anti-interference capability. It is widely used in FPV drone flight, outdoor recreation, racing competitions, professional aerial photography and other fields. This module allows developers to conduct functional expansion and customized development based on the existing SPI protocol.



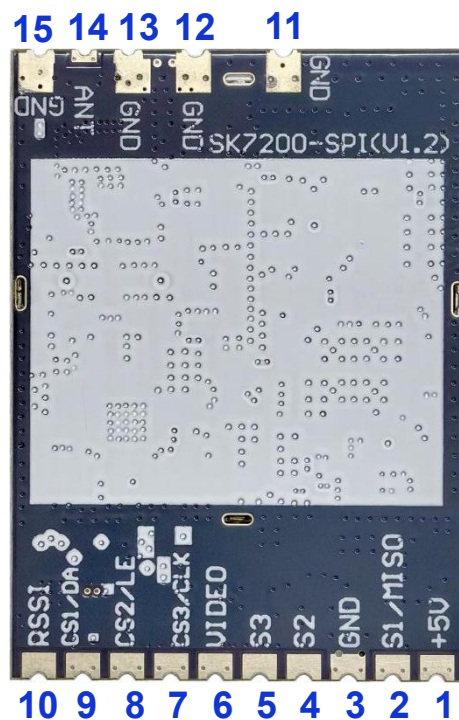
### 1)、General Specifications

DC Characteristics	
POWER SUPPLY	DC 5.0V±0.2V
Power Consumption	540mA ±20mA @5V
Environmental Specification	
Operating Temperature	-10~+65 °C
Storing Temperature	-30~+85 °C
Operating humidity	85%RH
Radio Frequency (RF)	
Receiving frequency range	6000~8260MHz
Demodulation system	FM/PLL
Intermediate Frequency (IF)	480MHz
ANT. input impedance	50Ω, Typ.
LO Frequency stabilization	±200kHz
LO Frequency Precision	±200kHz
LO Control	PLL
Input LO Leak	-65dBm
Receiving Sensitivity	-96dBm±2dBm
Video Characteristics	
Video Output impedance	75Ω, Typ.
Video Output Level	1±0.3Vp-p, Typ.
Video Polarity	负极性 (Negative)

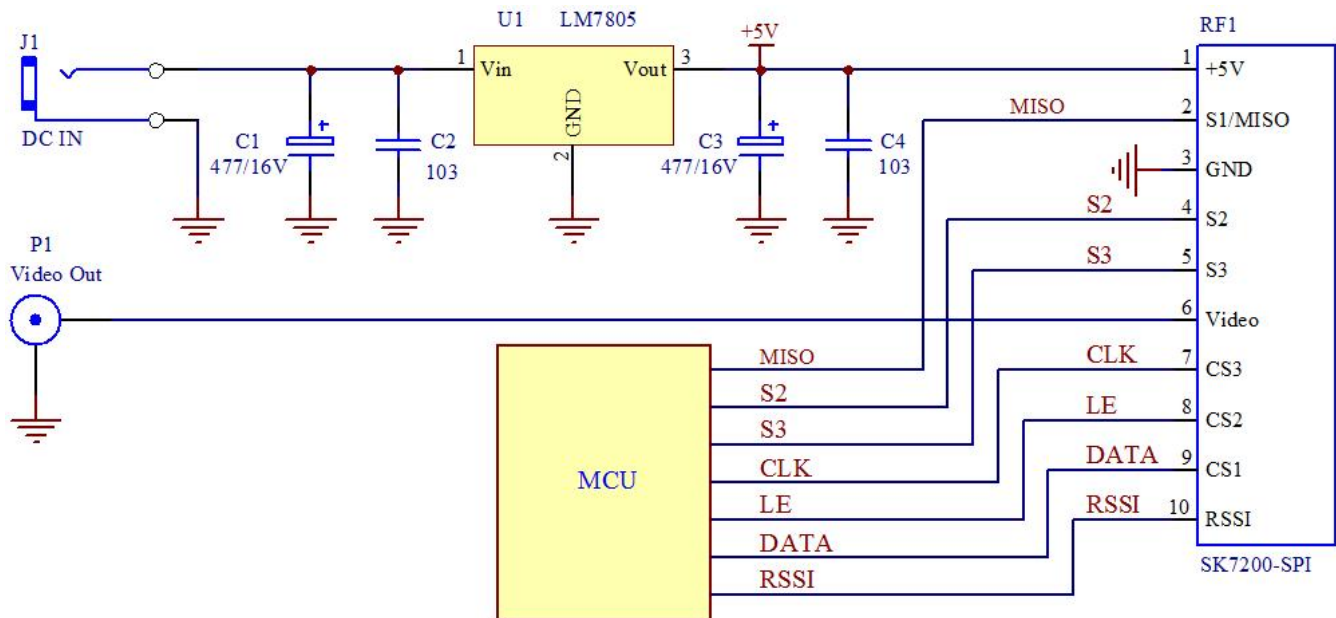
Video Frequency Response	±5 dB, Max. 50Hz ~ 6MHz
3dB IF WIDEBAND	16.5MHz
Signal-to-Noise Ratio (S/N)	38dB, Min
RSSI voltage conversion coefficient	22mv/dBm
Dimension	37mm(L)*26.3mm(W)*4.5mm(H)
Weight	Approx.: 5.7g

## 2)、Pin function

Pin NO.	Function Description
1	DCIN: +5V
2	MISO
3	GND
4	NC
5	NC
6	Video Output
7	SPI CLK
8	SPI LE
9	SPI DATA
10	RSSI
11	GND
12	GND
13	GND
14	6.1G~8.26G ANT IN
15	GND



## 3)、Application Circuit



#### 4)、RSSI Output Voltage Ref.

The **E4421B Signal Generator** is used as the signal input source of the module for testing the RSSI output voltage. The data is for **reference only**.

Frequency	Signal	RSSI Output Voltage	Frequency	Signal	RSSI Output Voltage	Frequency	Signal	RSSI Output Voltage
6110	No signal	0.599V	6190	No signal	0.559V	6290	No signal	0.543V
	-100dB	0.661V		-100dB	0.624V		-100dB	0.615V
	-95dB	0.774V		-95dB	0.737V		-95dB	0.739V
	-90dB	0.984V		-90dB	0.947V		-90dB	0.951V
	-85dB	1.243V		-85dB	1.210V		-85dB	1.216V
	-80dB	1.505V		-80dB	1.475V		-80dB	1.421V
	-75dB	1.778V		-75dB	1.749V		-75dB	1.756V
	-70dB	2.043V		-70dB	2.021		-70dB	2.029V
	-65dB	2.323V		-65dB	2.302V		-65dB	2.316V
	-60dB	2.605V		-60dB	2.584V		-60dB	2.601V
	-55dB	2.901V		-55dB	2.897V		-55dB	2.911V
	-50dB	2.908V		-50dB	2.912V		-50dB	2.921V
	-45dB	3.194V		-45dB	3.181V		-45dB	2.319V
	-40dB	3.336V		-40dB	3.336V		-40dB	2.328V
Frequency	Signal	RSSI Output Voltage	Frequency	Signal	RSSI Output Voltage	Frequency	Signal	RSSI Output Voltage
6390	No signal	0.562V	6490	No signal	0.583V	6590	No signal	0.584V
	-100dB	0.648V		-100dB	0.674V		-100dB	0.659V
	-95dB	0.779V		-95dB	0.808V		-95dB	0.801V
	-90dB	0.999V		-90dB	1.043V		-90dB	1.032V
	-85dB	1.269V		-85dB	1.310V		-85dB	1.308V
	-80dB	1.533V		-80dB	1.579V		-80dB	1.577V
	-75dB	1.817V		-75dB	1.857V		-75dB	1.856V
	-70dB	2.087V		-70dB	2.130V		-70dB	2.134V
	-65dB	2.378V		-65dB	2.416V		-65dB	2.421V
	-60dB	2.670V		-60dB	2.714V		-60dB	2.715V
	-55dB	2.913V		-55dB	2.914V		-55dB	2.915V

	-50dB	2.945V		-50dB	2.970V		-50dB	2.977V
	-45dB	2.357V		-45dB	3.279V		-45dB	3.281V
	-40dB	3.325V		-40dB	3.295V		-40dB	3.288V
Frequency	Signal	RSSI Output Voltage	Frequency	Signal	RSSI Output Voltage	Frequency	Signal	RSSI Output Voltage
6690	No signal	0.584V	6790	No signal	0.609V	6890	No signal	0.620V
	-100dB	0.664V		-100dB	0.674V		-100dB	0.679V
	-95dB	0.796V		-95dB	0.785V		-95dB	0.788V
	-90dB	1.026V		-90dB	0.995V		-90dB	0.993V
	-85dB	1.298V		-85dB	1.266V		-85dB	1.259V
	-80dB	1.566V		-80dB	1.535V		-80dB	1.529V
	-75dB	1.844V		-75dB	1.817V		-75dB	1.815V
	-70dB	2.118V		-70dB	2.090V		-70dB	2.087V
	-65dB	2.401V		-65dB	2.375V		-65dB	2.373V
	-60dB	2.701V		-60dB	2.671V		-60dB	2.667V
	-55dB	2.915V		-55dB	2.915V		-55dB	2.914V
	-50dB	2.965V		-50dB	2.949V		-50dB	2.945V
	-45dB	3.276V		-45dB	3.265V		-45dB	3.260V
	-40dB	3.298V		-40dB	3.317V		-40dB	3.320V
Frequency	Signal	RSSI Output Voltage	Frequency	Signal	RSSI Output Voltage	Frequency	Signal	RSSI Output Voltage
6990	No signal	0.622V	7185	No signal	0.632V	7210	No signal	0.628V
	-100dB	0.682V		-100dB	0.692V		-100dB	0.692V
	-95dB	0.789V		-95dB	0.812V		-95dB	0.804V
	-90dB	0.994V		-90dB	1.015V		-90dB	1.012V
	-85dB	1.264V		-85dB	1.285V		-85dB	1.282V
	-80dB	1.534V		-80dB	1.356V		-80dB	1.551V
	-75dB	1.813V		-75dB	1.835V		-75dB	1.829V
	-70dB	2.087V		-70dB	2.107V		-70dB	2.103V
	-65dB	2.376V		-65dB	2.394V		-65dB	2.392V
	-60dB	2.674V		-60dB	2.687V		-60dB	2.686V
	-55dB	2.913V		-55dB	2.913V		-55dB	2.915V
	-50dB	2.984V		-50dB	2.954V		-50dB	2.956V
	-45dB	3.263V		-45dB	3.268V		-45dB	3.270V
	-40dB	3.312V		-40dB	3.304V		-40dB	3.306V

## 5)、 Dimension

