SK1200-SPI（V1.1）Video Receiver Module

(1G ~ 2.3G SPI Mode)

The SK1200- SPI is a module which supports CVBS signal output, with low latency and strong anti-interference capabilities. It is widely used in fields such as FPV drone flight, outdoor entertainment, racing competitions, and professional aerial photography, allow developers to carry out functional expansion and customized development based on the existing SPI protocol.

1)、General Specifications

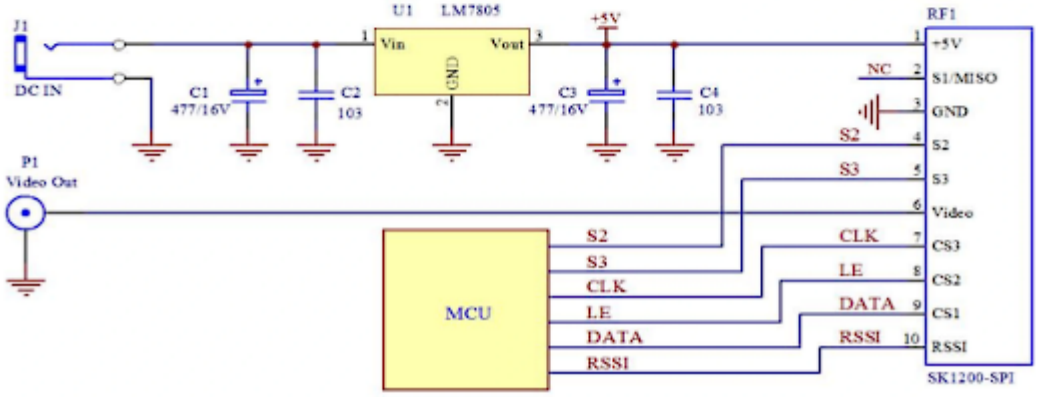
DC Characteristics	
POWER SUPPLY	DC 5.0V
Current Consumption	420mA ±30mA @5V
Environmental Specification	
Operating Temperature	-10~+65 ºC
Storing Temperature	-30~+85 ºC
Operating humidity	85%RH
RF	
Receiving frequency range	1080~2360MHz
Demodulation system	FM/PLL
IF	480MHz
ANT. input impedance	50Ω, Typ.
LO Frequency stabilization	±200kHz
LO Frequency Precision	±200kHz
LO Control	PLL
Input LO Leak	-65dBm
Receiving Sensitivity	-95dBm±3dBm
Video Characteristics	
Video Output impedance	75Ω, Typ.
Video Output Level	1±0.2Vp-p, Typ.

Video Polarity	Negative
Video Frequency Response	±5 dB, Max. 50Hz ~ 6MHz
Differential Gain	±5 %, Max
Differential Phase	±5 Deg., Max
3dB IF WIDEBAND）	16.5MHz
S/N	38dB, Min
RSSI	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	S1: NC	
3	GND	
4	S2 Frequency	1) S2=H, S3=L, frequency range1080~1700MHz； 2) S2=L, S3=H, frequency range1720~2360MHz；
5	S3 Frequency	
6	Video Out	
7	SPI Mode Frequency Control CLK	
8	SPI Mode Frequency Control LE	
9	SPI Mode Frequency Control DATA	
10	RF signal strength indicator（RSSI）	
11	GND	
12	GND	
13	GND	
14	天线输入（1080~2360MHz ANT）	
15	GND	

3)、Application Circuit



4) RSSI Output Voltage ref Value

The RSSI Output Voltage at the 1080MHz Frequency point using the E4421B signal generator as the signal input source of the module is for reference only.

Frequency	Signal	RSSI Input Voltage	Frequency	Signal	RSSI Input Voltage	Frequency	Signal	RSSI Input Voltage
1080	-100dBm	0.180V	1200	-100dBm	0.287V	1320	-100dBm	0.135V
	-95dBm	0.172V		-95dBm	0.436V		-95dBm	0.255V
	-90dBm	0.538V		-90dBm	0.675V		-90dBm	0.462V
	-85dBm	0.802V		-85dBm	0.945V		-85dBm	0.725V
	-80dBm	1.076V		-80dBm	1.228V		-80dBm	0.999V
	-75dBm	1.355V		-75dBm	1.505V		-75dBm	1.281V
	-70dBm	1.633V		-70dBm	1.786V		-70dBm	1.557V
	-65dBm	1.916V		-65dBm	2.065V		-65dBm	1.841V
	-60dBm	2.197V		-60dBm	2.345V		-60dBm	2.115V
	-55dBm	2.473V		-55dBm	2.617V		-55dBm	2.394V
	-50dBm	2.708V		-50dBm	2.671V		-50dBm	2.657V
	-45dBm	2.629V		-45dBm	2.710V		-45dBm	2.609V
	-40dBm	2.721V		-40dBm	2.705V		-40dBm	2.720V
Frequency	Signal	RSSI Input Voltage	Frequency	Signal	RSSI Input Voltage	Frequency	Signal	RSSI Input Voltage
1800	-100dBm	0.059V	1920	-100dBm	0.103V	2200	-100dBm	0.063V
	-95dBm	0.160V		-95dBm	0.172V		-95dBm	0.142V
	-90dBm	0.353V		-90dBm	0.362V		-90dBm	0.312V
	-85dBm	0.604V		-85dBm	0.614V		-85dBm	0.552V
	-80dBm	0.877V		-80dBm	0.887V		-80dBm	0.862V
	-75dBm	1.158V		-75dBm	1.163V		-75dBm	1.103V
	-70dBm	1.435V		-70dBm	1.445V		-70dBm	1.385V
	-65dBm	1.718V		-65dBm	1.727V		-65dBm	1.664V
	-60dBm	1.993V		-60dBm	2.110V		-60dBm	1.943V
	-55dBm	2.280V		-55dBm	2.286V		-55dBm	2.223V
	-50dBm	2.558V		-50dBm	2.563V		-50dBm	2.504V
	-45dBm	2.777V		-45dBm	2.777V		-45dBm	2.763V
	-40dBm	2.534V		-40dBm	2.614V		-40dBm	2.634V

5)、Dimension