

## RJ UTC Series

### RJ102 RX for Camera module // RJ201 TX for Remote Controller

#### General Description

The RJ UTC ( Up The Coax ) series support CCTV camera OSD control via Coaxial cable by using remote controller.

This coaxitron receiver and transmitter let our end-user enjoy more easy & simple way to install camera and control camera OSD.

#### RJ102 – UTC Receiver

RJ102 will decode the command and send the command to CCTV ISP with GPIO standard. It's perfect for all kind of ISP.

#### RJ201 – UTC Transmitter

RJ201 - UTC Transmitter

Once user presses key button on the remote controller and then RJ201 will send the command through video line to the RJ UTC Receiver which on the camera module.

#### Product Features

- Small packaged IC
- Low cost
- Simple external component

#### Application

- Analog CCTV On-Screen-Display Control
- Digital Video Recorder OSD control



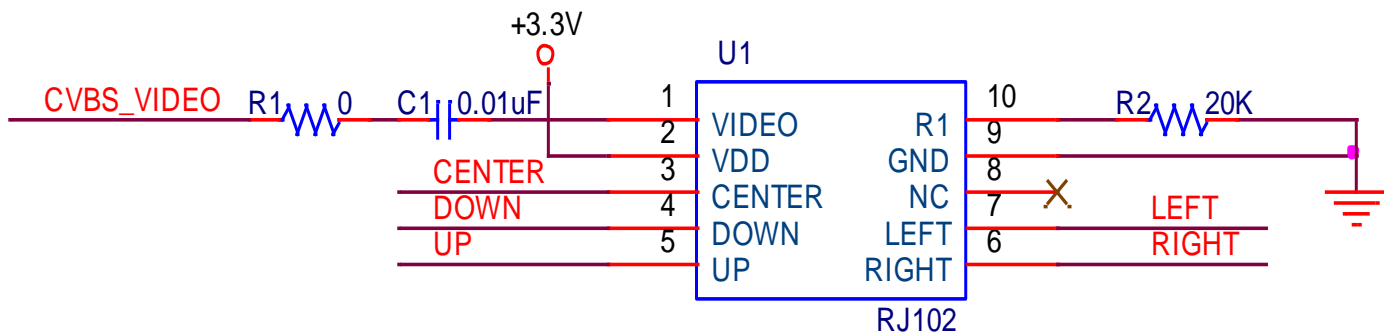
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### RJ102 Pin Description ( MSOP 10 )

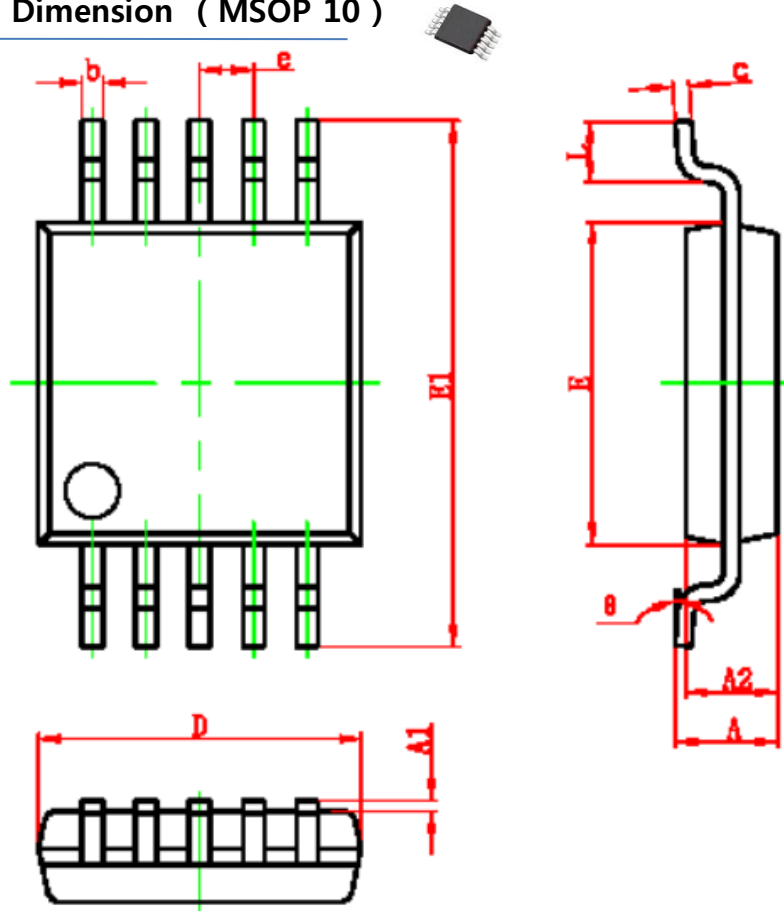


SYMBOL	PIN	PAD	DESCRIPTION
UTC_IN Video	1	I/O	Clamped Video Signal
VDD	2	-	VDD Supply Voltage
GPIO_CENTRE	3	O	Center Key Open Drain NMOS Output
GPIO_DOWN	4	O	Down Key Open Drain NMOS Output
GPIO_UP	5	O	Up Key Open Drain NMOS Output
GPIO_RIGHT	6	O	Right Key Open Drain NMOS Output
GPIO_LEFT	7	O	Left Key Open Drain NMOS Output
NC	8	-	No Connect, Remain Float
GND	9	-	Ground
RI	10	O	Connect a 20K resistor for adjusting frequency



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**RJ102 Package Dimension ( MSOP 10 )**


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.820	1.100	0.032	0.043
A1	0.020	0.150	0.001	0.006
A2	0.750	0.950	0.030	0.037
b	0.180	0.280	0.007	0.011
c	0.090	0.230	0.004	0.009
D	2.900	3.100	0.114	0.122
e	0.50(BSC)		0.020(BSC)	
E	2.900	3.100	0.114	0.122
E1	4.750	5.050	0.187	0.199
L	0.400	0.800	0.016	0.031
θ	0°	6°	0°	6°

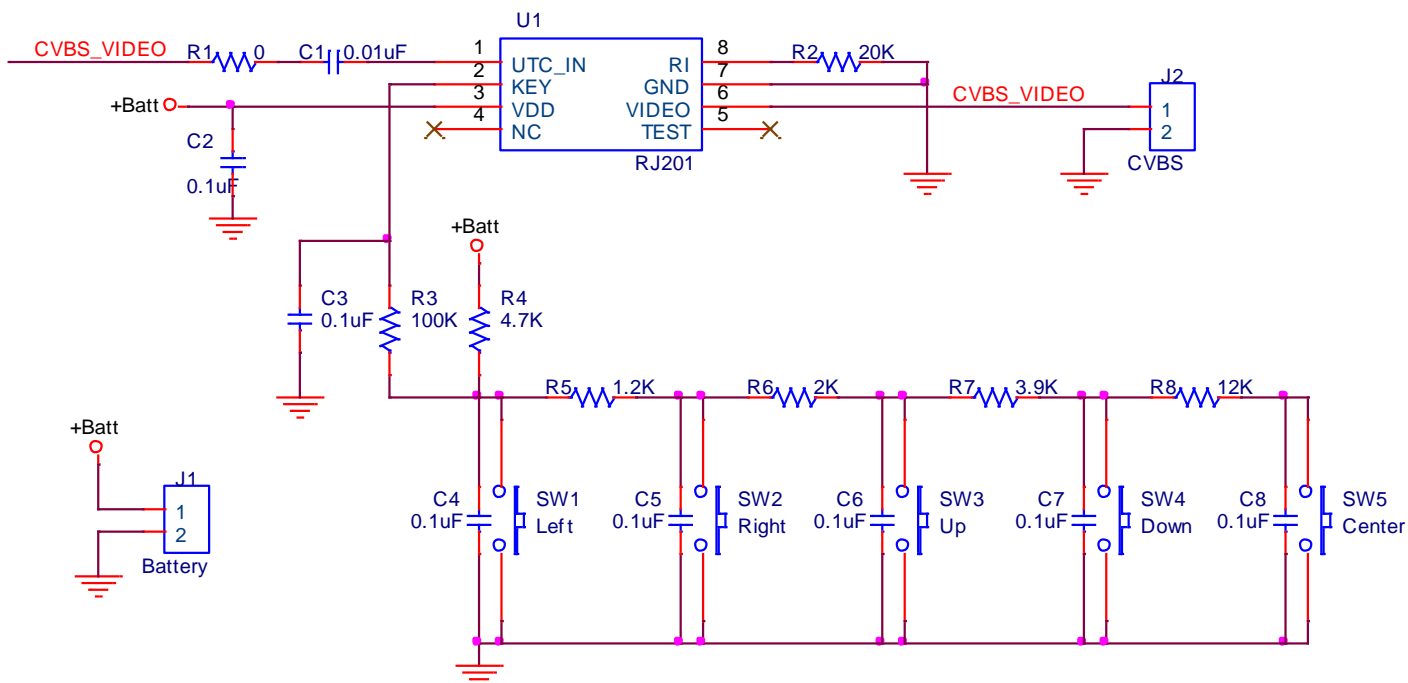
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### RJ201 Pin Description ( TSSOP 8 )



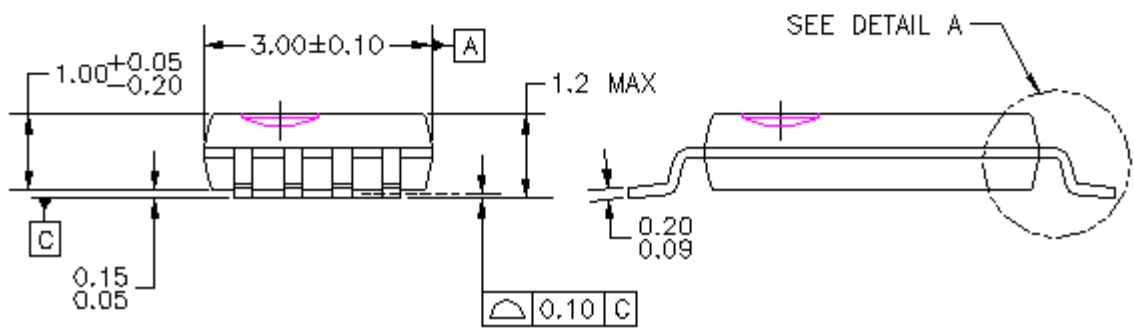
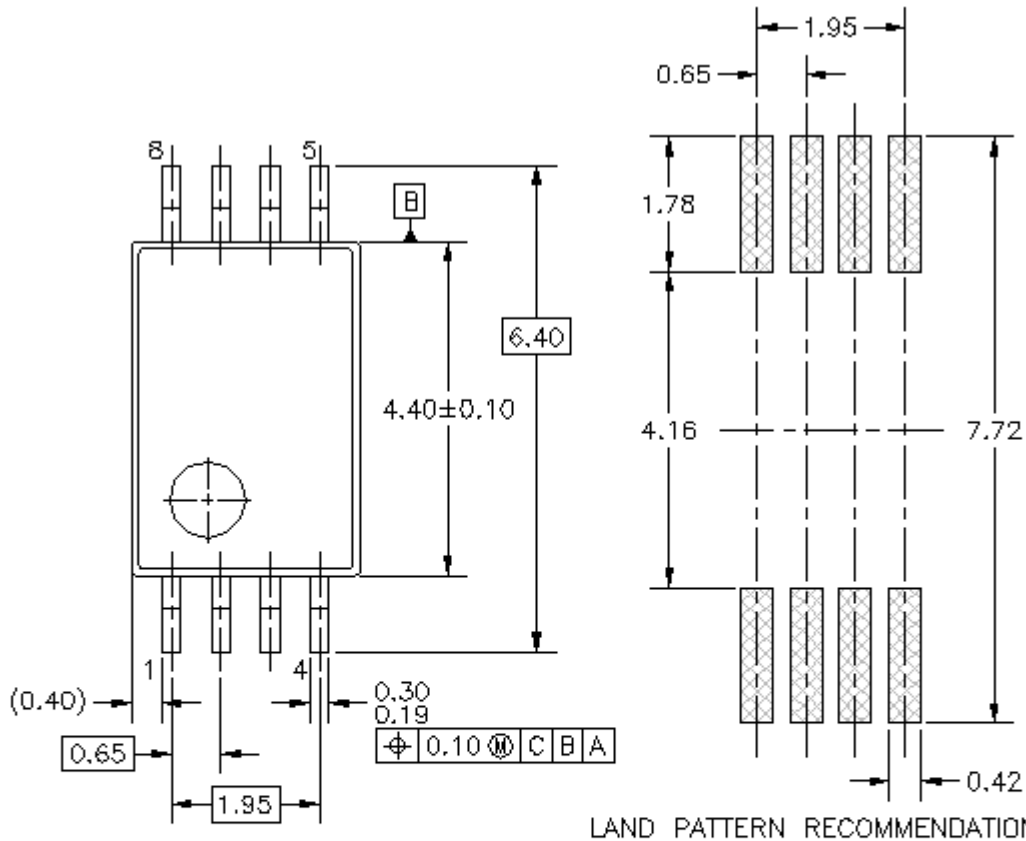
SYMBOL	PIN	PAD	DESCRIPTION
UTC-IN	1	I	Clamped Video Signal
Key	2	I	Key Input
VDD	3	-	VDD Supply Voltage
Video	6	O	Video Output
GND	7	-	GND
RI	8	O	Connect a 20K resistor to adjust the oscillator frequency



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**RJ201 Package Dimension ( TSSOP 8 )** 



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**Absolute Maximum Ratings**

Parameter	Symbol	Condition	MIN	MAX	Unit
Supply Voltage	$V_{DD}$		-0.5	6	V
Supply Current	$I_{DD}$	$V_{DD} = 3V$ , no Load	-50	50	mA
Input Voltage	$V_{IN}$		GND-0.3	$V_{DD} + 0.3$	V
Output Voltage	$V_{OUT}$		GND-0.3	$V_{DD} + 0.3$	V
DC input Current	$I_{IN}$		-10	10	mA
DC output Current	$I_{OUT}$		-10	10	mA
Storage Temperature	$T_{stg}$		-65	150	°C
Total Power Dissipation	$P_{tot}$		-	400	mW

**DC Characteristic**

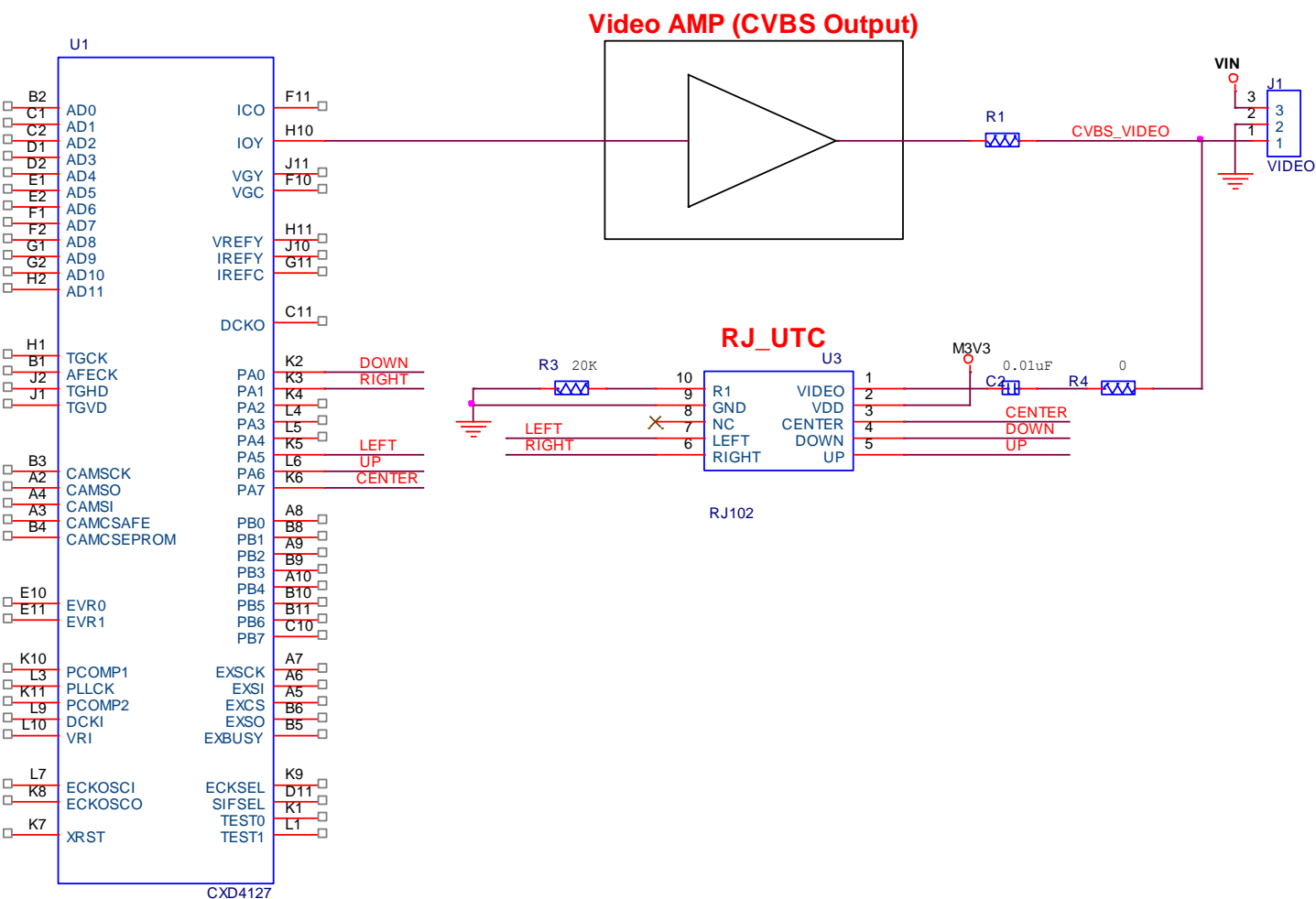
	Parameter	Symbol	Condition	MIN	TYP	MAX	Unit
Supplies	Supply Voltage	$V_{DD}$		2.7	-	3.6	V
	Standby Current	$I_{DD}$	Standby Mode	-	5		uA
	Operating Current	$I_{opt}$	Operating Mode		1.5		mA
Logic	LOW-level Input Voltage	$V_{IL}$		GND	-	$0.3 \cdot V_{DD}$	V
	HIGH-level Input Voltage	$V_{IH}$		$0.7 \cdot V_{DD}$	-	$V_{DD}$	V
	LOW-level Output Current	$I_{OL}$	$V_{OL} = 1.0V$	1	-	-	mA
	HIGH-level Output Current	$I_{OH}$	$V_{OH} = 2.0V$	-1	-	-	mA

$V_{DD} = 3.0V$ ;  $T_{amb} = 25^{\circ}C$  ; unless otherwise specified

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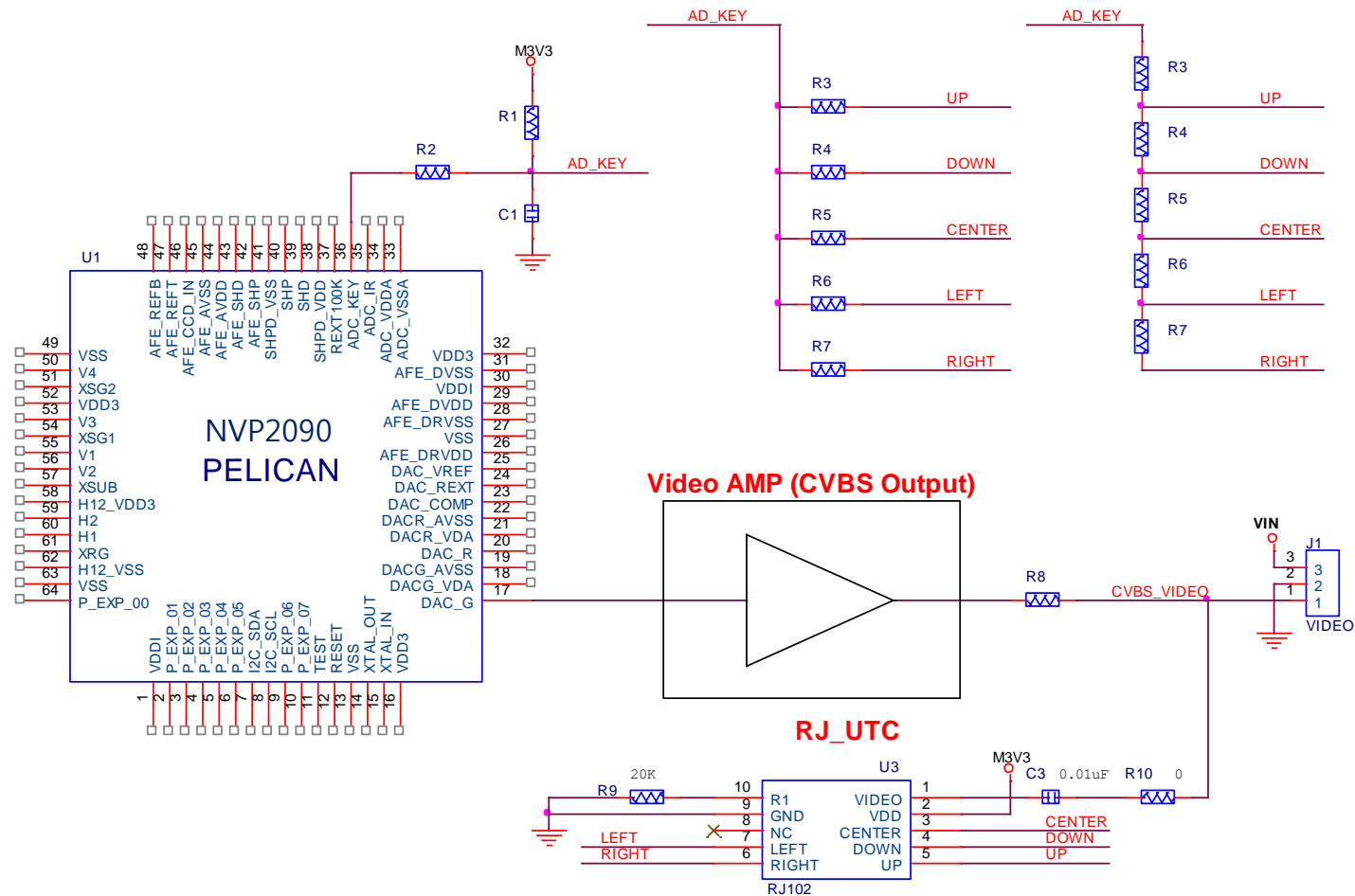
#### RX circuit for SONY EFFIO-E with RJ102



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#### RX circuit for NEXTCHIP NVP2090 with RJ102





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#### RX circuit for RJ9H / RJ10D with RJ102

