

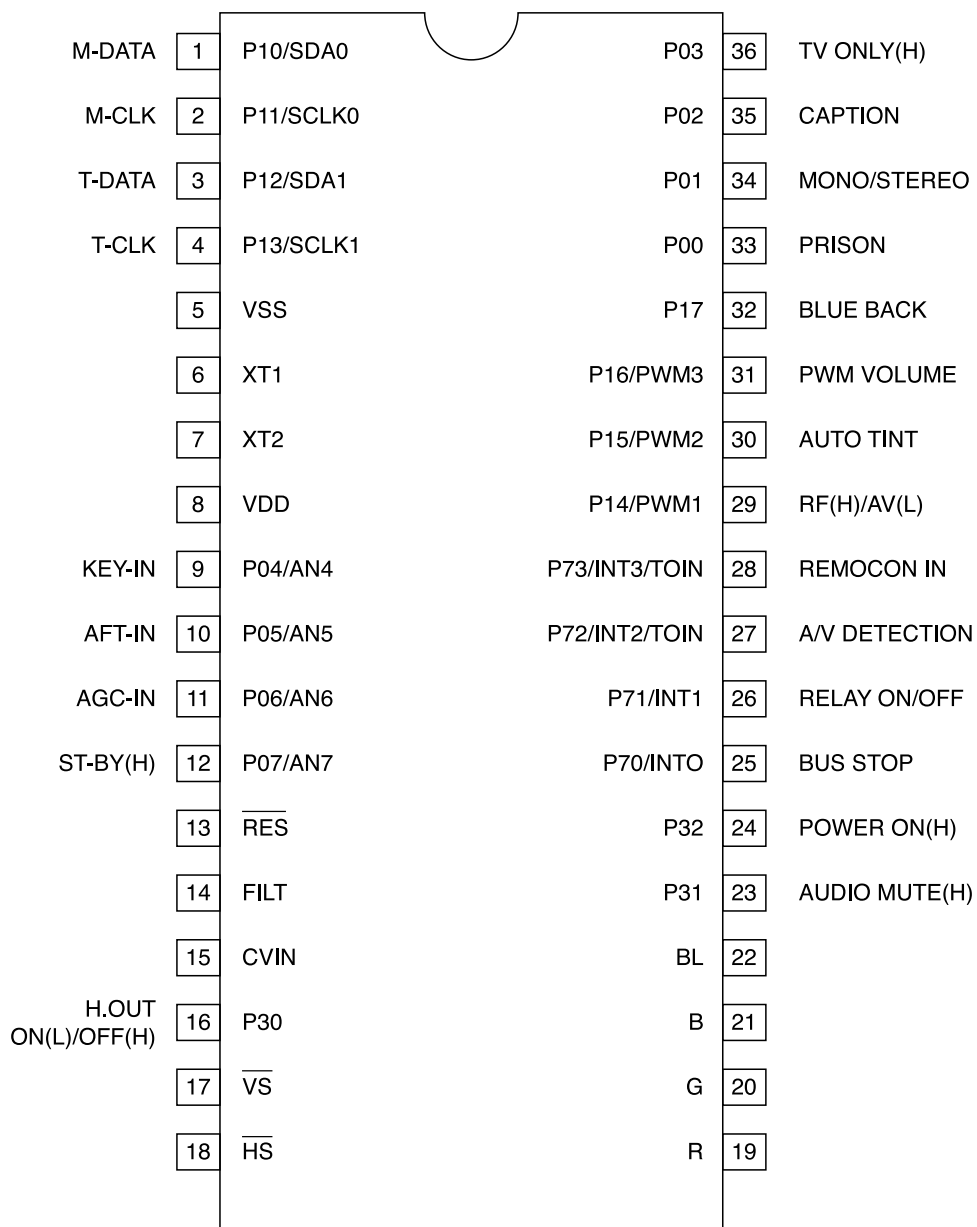
IC DESCRIPTION

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IC DESCRIPTION

U-COM(I701)

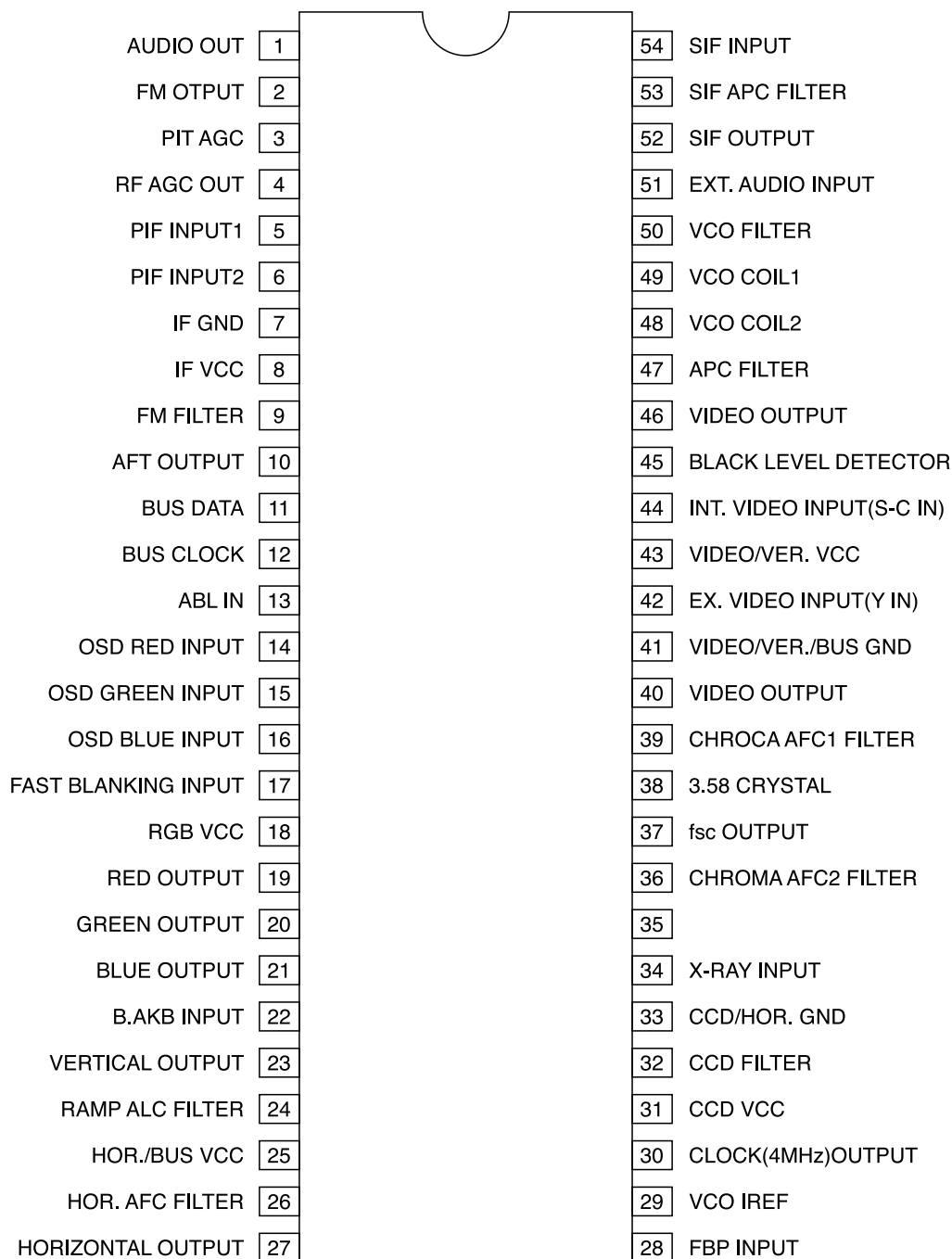


X*TAL:32.768 KHz

IC DESCRIPTION (Continued)

I101

DCT814(LA76814): IC VIDEO PROCESSOR



IC DESCRIPTION (Continued)

1. Abstract.

This specification is 1-Tuner Mono Model for North/South America, CCD 1-Chip MICOM LC863228A.
It is developing software specification for tuning only NTSC

2. H/W Outline.

- 1) ROM : 28,672 x 8bits. tsc
 : 15,872 x 8bits for CGROM.
- 2) RAM: 512 x 8bits.
 : 352 x 9bits. (for CRT Display)
- 3) OSD Function.
 - Screen Display. : 36 characters x 16 lines.(by software)
 - RAM : 352 words. (9 bits per word)
 - Display area. : 36 words. x 8 lines.
 - 1st control area. : 8 words. x 8 lines.
 - Characters.
 - 244 patterns programmable.
 - Up to 244 kinds of 16 x 17 dot characters.
 - Up to 244 kinds of 8 x 9 dot characters.
 - or
 - Up to 244 kinds of 16 x 32 dot characters used 16K bytes.
 - Various characters attributes.
 - Character colors. : 16 colors
 - Character background colors. : 16 colors
 - Fringe / shadow colors. : 16 colors
 - Full screen colors. : 16 colors
 - Rounding.
 - Underline.
 - Italic character.(slanting)
 - Attribute can be changed without spacing.
 - Vertical display start line number can be set for each row independently. (Row can be overlapped.)
 - Horizontal display start position can be set for each row independently.
 - Different display modes can be set for each row independently.
 - Caption and Text mode/OSD mode 1/OSD mode 2 (Quarter size)/ Simplified graphic mode.
 - Ten character sizes.
 - Horiz. x Vert. = (1x1), (1x2), (2x2), (2x4), (0.5x0.5)
 - (1.5x1), (1.5x2), (3x2) (3x4), (0.75x0.5)
 - Shuttering and scrolling on each row.

3. System Feature.

- 1) The system for TV tuning is Frequency Synthesis type.
- 2) Closed Captions function is interior designed.

IC DESCRIPTION (Continued)

- 3) On Screen displays function is interior designed.
- 4) Package. : 36 PIN SDIP.
- 5) Tuner (Pre-scaler.) : I^2C Bus.
/PLL IC : TAU 6014-S(SIEMENS).
- 6) Remocon. : The IC of Transmission (MITSUBISHI M50560)
- 7) E²PROM. : 24C08(I^2C Bus) Apply one byte Read/Write mode.
- 8) 6-Local Key. : A/D Input Control. (Power, Ch Up/Down, Vol Up/Down, Menu)
- 9) Option S/W : Port Input Option Check.
- 10) IF/V/C/D IC : DTC814 (LA76814)

4. Function.

- 1) C. C. D. function.
 - A section of C. C. D. operates FCC based specification.
- 2) C. C. D. controlled function.
 - Closed Caption Mode. (Off \longleftrightarrow C1 \longleftrightarrow C2 \longleftrightarrow T1 \longleftrightarrow T2 \longleftrightarrow Off)
 - CC On Mute. (Off \longleftrightarrow C1 \longleftrightarrow C2 \longleftrightarrow Off)
 - closed Caption is prior to CC On Mute.
- 3) Tuning Function.
 - I^2C Bus.
 - PLL IC Interface.
 - FS 181 Channel (AIR 2-69CH, CABLE 1-125CH)
 - AFT Operation(Fine Tuning) -2.5Fn +2.5MHz
 - AIR/CABLE (STD, HRC, IRC). Only Cable 5,6Ch is that AFT range is cover over broad-band. -2.5MHzFn+3.5MHz..
 - Memorize Channels. (If a channel is broadcasting, the channel is memorized.)
 - Direct Tuning (09KEY)
 - Channel Up/Down. (Memorized Channels) \longrightarrow The Ch Up/Down buttons on the Remocon and on the front panel are same function.
 - Search Channel Up/Down. (If No-Memory or only 1CH is Memory)
 - Channel Memory. (ADD/DELETE)
 - Channel Review Function.
 - Last Channel Memory Function.
- 4) OSD Function.
 - In Line (Video) Mode, Things(Items) that is concerned with Air and Cable disappear in the Menu.
 - Channel, AV display.
 - Small & Graphic ICON Menu.
 - Volume / Picture control \longrightarrow I^2C Bus Control
- 5) The Others Function.
 - Video/Audio Mute function.
 - If a Channel is no signal, after 15 minutes is Auto-Power Off function.

IC DESCRIPTION (Continued)

- Auto Power On Function. (Power Restore function in the Special Menu)
- Heat Run Function. --- OSD White Back-Ground
- Sleep Timer.
- Wake Up Time Function.
- Off Time Function.
- Remote Reception & Control.
- Auto Tint. ----- (Option)
- Power Restore
- Input(TV/Line) Controlled function. ----- (Option)
- Reception. (Air/Cable : Factory Initial Condition)
- Blue Background. ----- (Option)
- 3-Language (North America : ENG/SPA/FRA, South America : ENG/SPA/POR).
- E²PROM Interface (I²C Bus Control)
- CH 6 TRAP Function. (IS-31)
- PLL IC Band Data. (Control Byte 2 → P3~P0)
 - VHF L : 1
 - VHF H : 2
 - CH6 TRAP : 5 (IS-31) AIR (Cable) CH 6 Only
 - UHF : 8

5. The Table of Opteon and Schedule.

Model Name	PIN	OPTION	Application	Reference
CN-0001N	#30	Auto Tint	O	– Low (DC-0V) : On (Auto Tint)
				– High (DC-5V) : Off
	#32	Blue Back	O	– Low (DC-0V) : Blue Back
				– High (DC-5V) : No Blue Back
	#33	Prison	O	– Low (DC-0V) : Normal
				– High (DC-5V) : Prison
	#34	Mono/Stereo	O	– Low (DC-0V) : Mono
				– High (DC-5V) : Stereo
	#35	Caption	X	– No Use
				– No Use
	#36	TV Only	O	– Low (DC-0V) : TV/Video
				– High (DC-5V) : TV/Only
Total Sum			6	– Use. (No Use.

IC DESCRIPTION (Continued)

6. Pin description

PIN	Terminal	Name	Explanation	Remarks								
1	P10/SDA0	ROM Data Main IC Data	<div>– 6 – bit input/output port</div> <div>– Input/output can be Specified for each bit</div> <div>– Other function.</div> <table><tr><td>P10</td><td>IIC0 data I/O</td></tr><tr><td>P11</td><td>IIC0 clock output.</td></tr><tr><td>P12</td><td>IIC1 data I/O</td></tr><tr><td>P13</td><td>IIC1 clock output.</td></tr></table>	P10	IIC0 data I/O	P11	IIC0 clock output.	P12	IIC1 data I/O	P13	IIC1 clock output.	
P10	IIC0 data I/O											
P11	IIC0 clock output.											
P12	IIC1 data I/O											
P13	IIC1 clock output.											
2	P11/SCLK0	ROM CLK Main IC CLK										
3	P12/SDA1	Tuner Data										
4	P13/SCLK1	Tuner CLK										
5	VSS	GND	<div>– GND</div> <div>– Negative power supply.</div>									
6	XT1	XT1	<div>– It uses 32.768KHz X-TAL.</div> <div>– 10 pin is input terminal for crystal oscillator.</div> <div>– 11 pin is output terminal for crystal oscillator.</div>									
7	XT2	XT2										
8	VDD	VDD	<div>– +5V (±0.5V)</div> <div>– Positive power supply.</div>									
9	P04/AN4	KEY-IN	– Power, Ch up/down, Vol up/down, Menu									
10	P05/AN5	AFT-IN	– Dc value that comes from the 10 pin of LA76810/14									
11	P06/AN6	AGC-IN	<div>– Connect this port to AGC of Tuner</div> <div>– Default Voltage : 3.75V</div> <div>– Variable Voltage : 3.25V, 3.5V, 4.0V</div>									
12	P07/AN7	ST-BY(H)	<div>– Use only japan Model.</div> <div>– This port uses when is Stand - By status</div> <div>– Condition : Input AC Power On</div> <div>– Power off : ‘High (DC 5V)’ Output. (Red)</div> <div>– Power on : ‘Low (DC 0V)’ Output.</div>									
13	/FES	/RES	<div>– Reset terminal.</div> <div>– Active Low</div>									
14	FILT	Filter	<div>– Filter terminal for PLL</div> <div>– Output terminal</div>									
15	CVIN	CVSB IN	– Video signal input terminal									
16	P01	TV/VID	– TV Mode : ‘High’ Line(Video) Mode : ‘Low’									
17	/VS	/VS	– Vertical synchronization signal input terminal									
18	/HS	/HS	– Horizontal synchronization signal input terminal									
19	R	R	– Red output terminal of RGB image									
20	G	G	– Green output terminal of RGB image									