

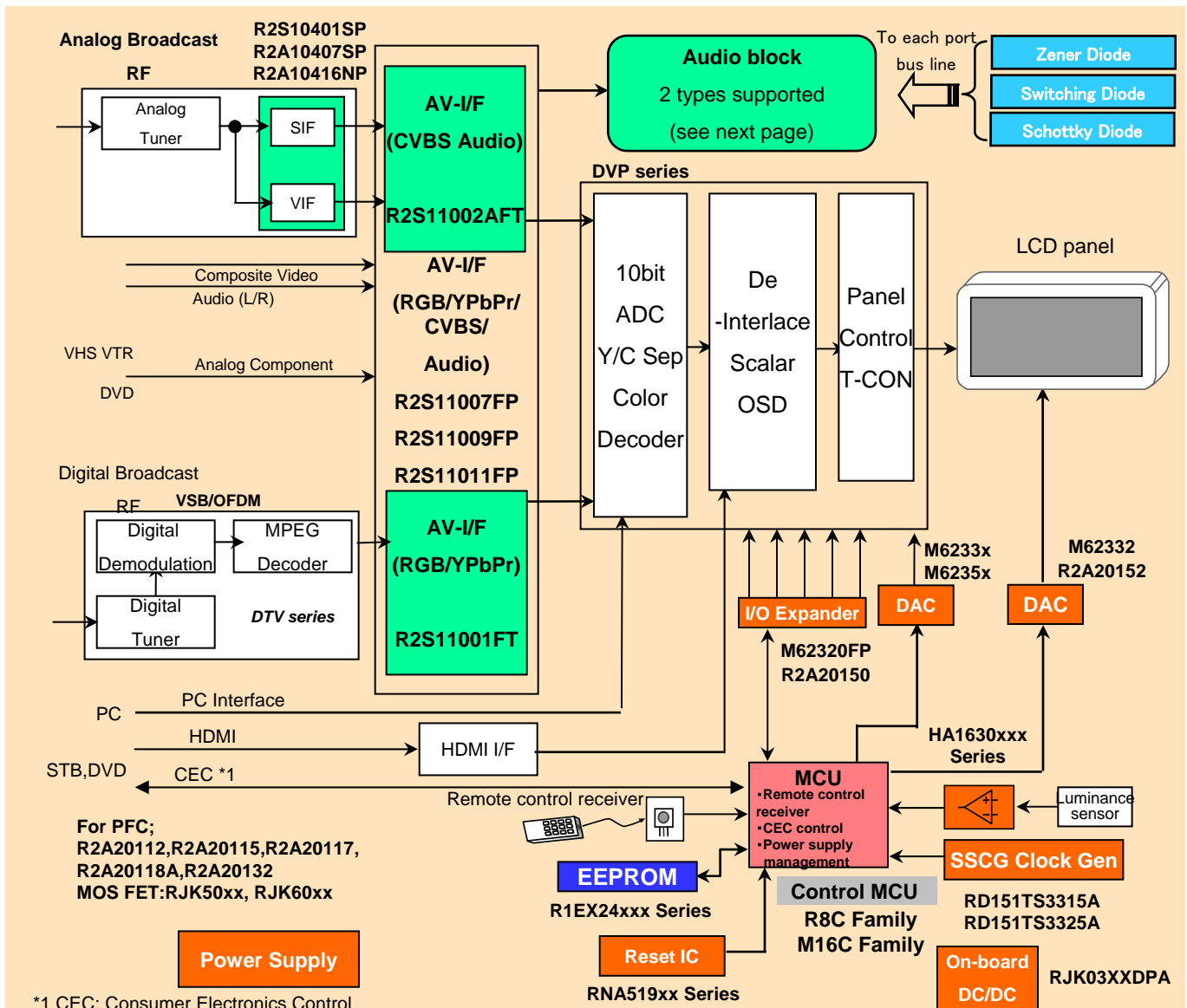


Overview

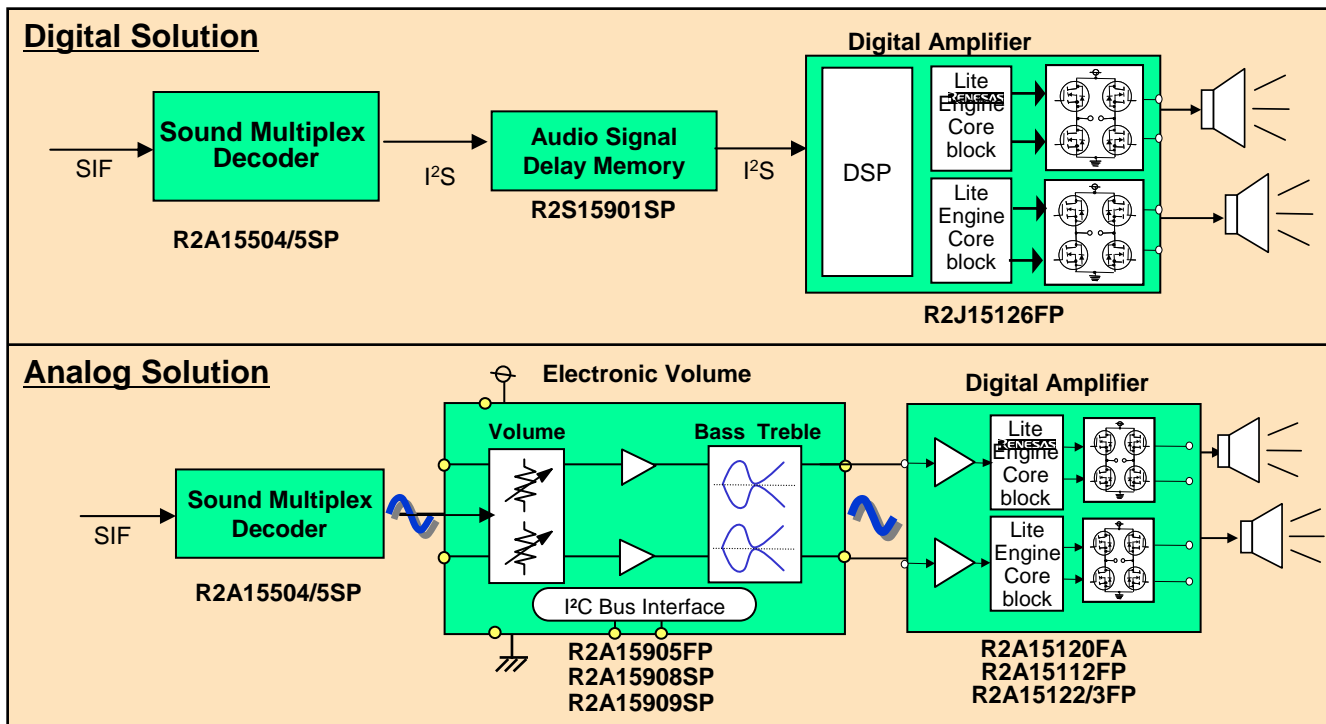
LCD TVs have grown rapidly in popularity due to increasing availability of digital services and high definition digital media content. Since the TV in the home is a product that is typically in use for several hours every day, it is required to be increasing more energy efficient and eco-friendly. Advanced functionality, such as a CEC link functionality using a HDMI (High-Definition Multimedia Interface) connection is now a common requirement for LCD TVs.

Renesas supplies effective solutions for customers developing eco-friendly home electronic products, such as the R8C Family and M16C Family of energy-efficient MCUs. These MCUs deliver functionality, such as support for CEC which receives commands from a remote control while in system standby mode, while also maintaining a low level of power consumption. Renesas also offers a wide lineup of devices, such as audio and video processors, that are essential in the development of multimedia AV products.

System Block Diagram



■Audio Block



Recommended Products

As of March 2010

Block	Semiconductor device	Recommended products	Features, etc.
Power supply section	PFC power supply control IC	R2A20115, R2A20111 R2A20112, R2A20117, R2A20118A, R2A20132	Continuous conduction mode single Critical conduction mode interleaving
	Power MOSFET	RJK60xx, RJK50xx	500 V, 600 V tolerance
	LCD panel	D/A converter for image adjustment	M6233x Series, M6235x Series
Image adjustment (dimmer) D/A converter		R2A20152, M62332	PC supported, 2 channels *1
Audio	Sound multiplex decoder	R2A15504/5SP	
	Digital delay	R2S15901SP	
	Audio signal processor	R2A15905FP	Built-in HP (headphone) amplifier
		R2A15908SP	
	Digital amp	R2J15126FP	
		R2A15120FA	15 W x 2 ch: BTL (built-in limiter)
R2A15112FP		15 W x 2 ch: Single End	
R2A15122/3FP		10 W x 2 ch (4 W x 2 ch): Single End	

*1 I²C : Inter-Integrated Circuit

Recommended Products

As of March 2010

Block	Semiconductor device	Recommended products	Features, etc.	
Main controller	CPU	R8C Family, M16C Family	Low power consumption, CEC function	
	I/O expander	M62320	PC supported, 8-bit I/O *1	
	Reset IC	RNA519xx Series	Variable detection voltage and delay time	
	CMOS op-amp.	HA1630xxx Series	Low power consumption	
	Analog switch	R2S11001FT		
		R2S11002AFT		
		R2S11007FP		
		R2S11009FP		
		R2S11011FP		
	VIF/SIF signal processor	R2S10401SP		
		R2S10407SP		
		R2S10416NP		
	MOS FET for On-board DC/DC	RJK03XXDPA	30 V tolerance, WPAK	
Clock generator	RD151TS3315A			
	RD151TS3325A			
EEPROM	R1EX24xxx Series	PC bus Interface *1		
EEPROM	R1EX25xxx Series	SPI bus Interface *2		
General use, surge absorption, circuit protection, etc.	Zener Diodes	RKZ6.8Z4MFAKT	5 terminals (4 devices) low capacitance (4 pF) Low capacitance (4 pF) optimal for use in surge absorption for USB ports	
		HZM6.2ZMWA, other	3 terminals (2 devices) High ESD tolerance optimal for use in surge absorption	
		RKZxxKG/KJ Series	2 terminals SMD High ESD tolerance optimal for use in surge absorption	
	Switching Diodes	RKH0145/0160KU Series	2 terminals SMD High voltage tolerance optimal for use in surge absorption and high-voltage rectification	
		HSC/D119, HSB2836/8	2-3 terminals SMD	
	Schottky Diodes	RKR, HRW Series	2-3 terminals SMD Small package, low capacitance, large current type	

*1 IC: Inter-Integrated Circuit

*2 SPI: Serial Peripheral Interface

Related Application Notes/Sample Code

Title	Document No.
Power MOS FET Application Note	REJ05G0001-0200

Latest application information here.

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