

Sharp's CCD for Surveillance Camera System

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*Integrated Circuits Group
Sharp Corporation, Japan*

CCD Road Map for Color Surveillance Camera

* : Under Development
 ** : Under Study

Type	Optical Format	2 0 0 0	2 0 0 1	2 0 0 2	2 0 0 3
Interface scan	4 Power Supply	<div style="border: 1px solid black; padding: 5px; display: inline-block;">270K 320K</div> LZ2413H:550mV LZ2423H:500mV NOW	<div style="border: 1px solid black; padding: 5px; display: inline-block;">270K 320K</div> RJ2411ABX:800mV(MP:NOW) RJ2421ABX:720mV(MP:NOW)		<div style="border: 1px solid black; padding: 5px; display: inline-block;">410K 470K</div> **RJ2451AAX:460mV(TS:03/03, MP:03/06) **RJ2461AAX:450mV(TS:03/03, MP:03/06)
		<div style="border: 1px solid black; padding: 5px; display: inline-block;">410K 470K</div> LZ2453A:220mV LZ2463A:210mV NOW		<div style="border: 1px solid black; padding: 5px; display: inline-block;">270K 320K</div> *RJ2311AAX:1300mV (TS:Now, MP:02/11) *RJ2321AAX:1300mV (TS:Now, MP:02/11)	
	Color 1/4-inch				
	Color 1/3-inch	<div style="border: 1px solid black; padding: 5px; display: inline-block;">270K 320K</div> LZ2313H5:600mV LZ2323H5:550mV NOW		<div style="border: 1px solid black; padding: 5px; display: inline-block;">270K 320K</div>	
		<div style="border: 1px solid black; padding: 5px; display: inline-block;">410K 470K</div> LZ2453B:350mV LZ2463B:330mV NOW			<div style="border: 1px solid black; padding: 5px; display: inline-block;">410K 470K</div> *RJ2351AAX:800mV (TS:Now, MP:03/02) *RJ2361AAX:750mV (TS:Now, MP:03/02)

CCD Road Map for B/W Surveillance Camera

Type	Optical Format	2000	2001	2002
Interface scan	B/W 1/3 -inch	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 270K 320K </div> LZ2316AZ: 3300mV LZ2326AZ: 3000mV NOW		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 270K 320K </div> LZ2316BZ: 4500mV LZ2326BZ: 4500mV NOW

:Sensitivity(Without IR-Cut Filter)

4 CHIPS

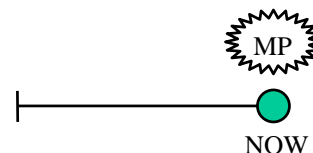
Color Camera System for Surveillance(1/2)

* : Under Development
 ** : Under Study

System Advantage

NTSC or PAL analog output
 Available for 270k/320k/410k/470k CCD
 High speed AWB

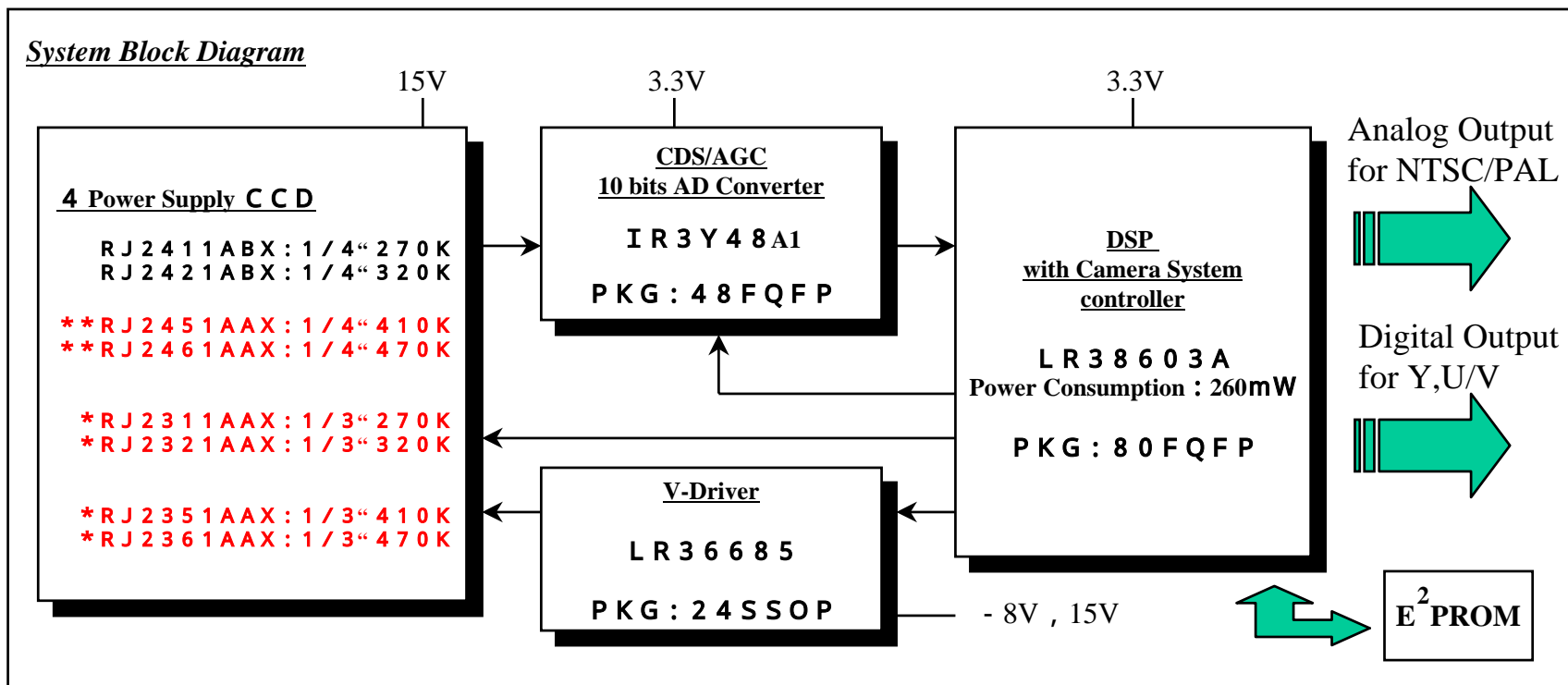
Development Schedule



Application



System Block Diagram



2CHIPS

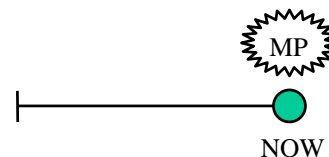
Color Camera System for Surveillance(2/2)

* : Under Development
 ** : Under Study

System Advantage

NTSC or PAL analog output
 Available for 270k/320k/410k/470k CCD
 High speed AWB

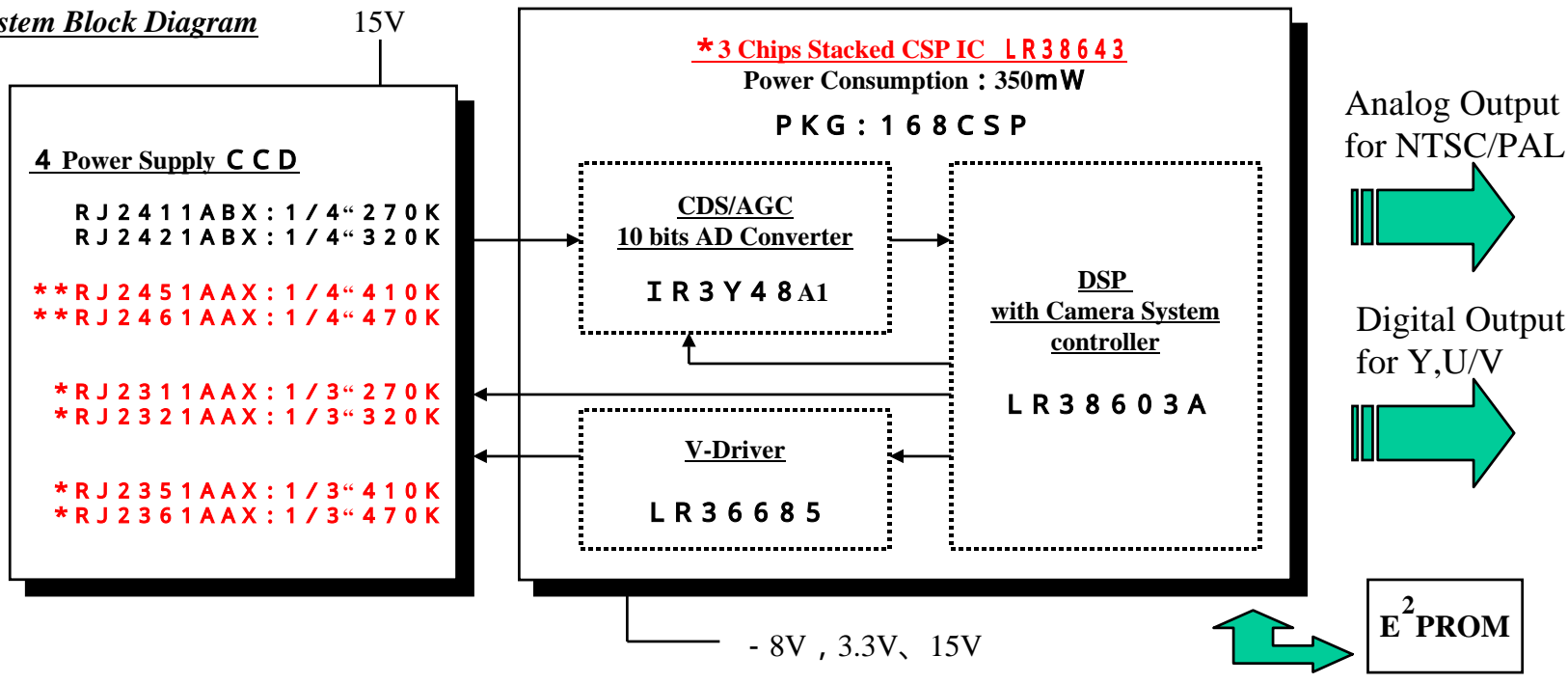
Development Schedule



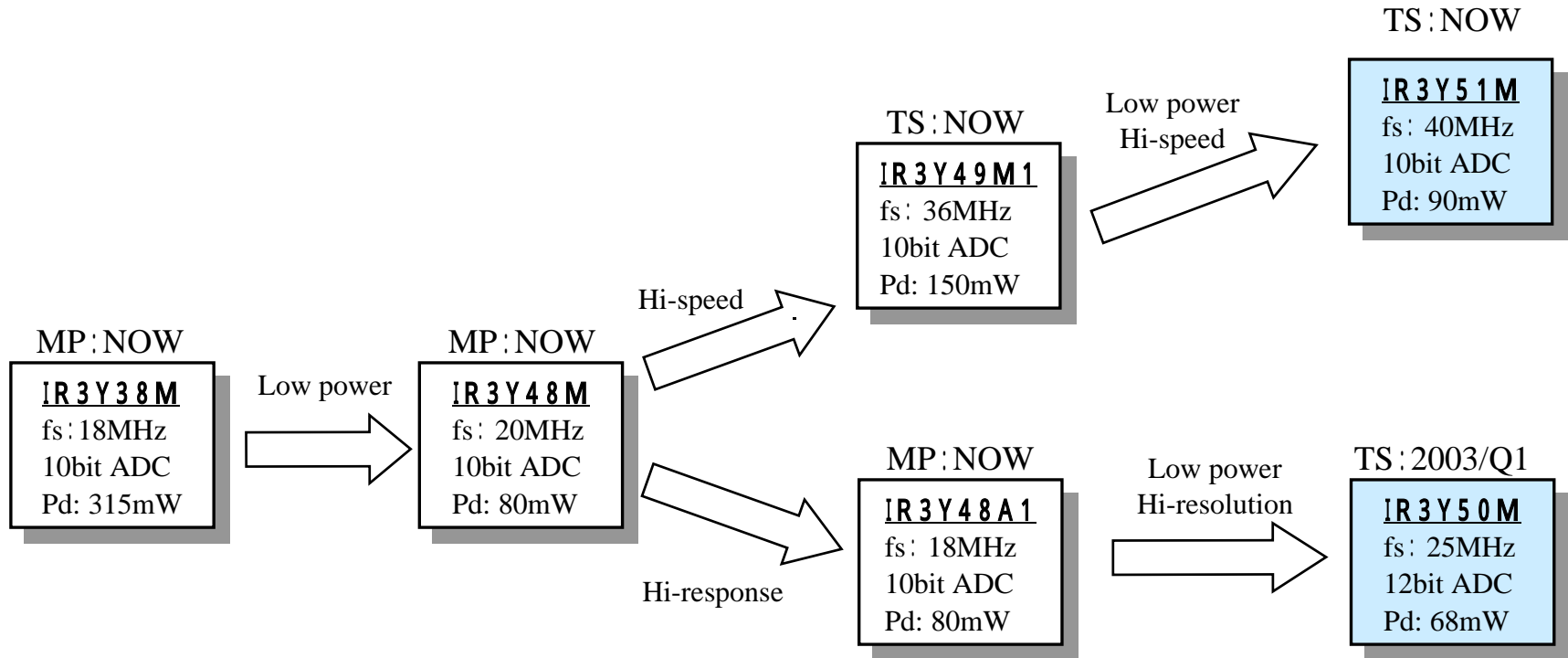
Application



System Block Diagram



Road Map of HEAD AMP for CCD



 : Under development or under planning

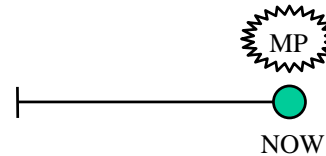
3 CHIPS

B/W Camera System for Surveillance

System Advantage

EIA or CCIR analog output
 Minimized camera components by 3 chips
 Higher-performance and Lower-power consumption
 smaller-size camera system by dual power supply CCD

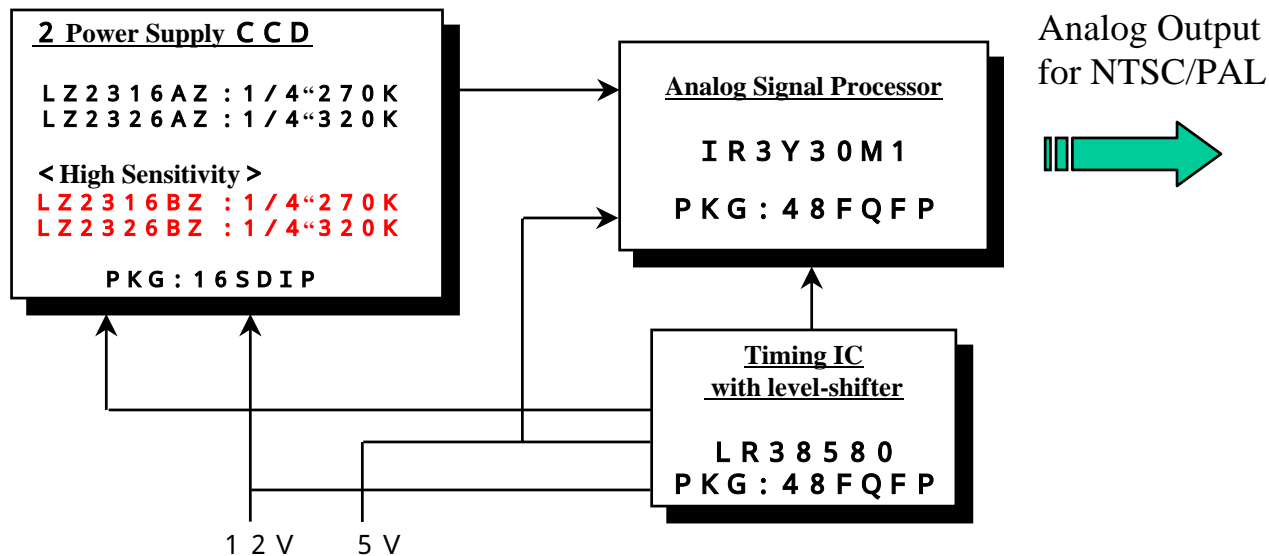
Development Schedule



Application





System Block Diagram



4 Power Supply Color CCD & CCD Peripheral


Line-up CCD kits for Surveillance Camera

* : Under Development
 ** : Under Study

Application	CCD	V-Driver	CDS / AGC / AD	Signal Processor	
 Surveillance	1/4"	LR36685	IR3Y48A1	LR38603A	
					RJ2411ABX:270k-pixel
					RJ2421ABX:320k-pixel
					**RJ2451AAX:410k-pixel
**RJ2461AAX:470k-pixel					
PC Camera 	1/3"				
					*RJ2311AAX:270k-pixel
					*RJ2321AAX:320k-pixel
		*RJ2351AAX:410k-pixel			
	*RJ2361AAX:470k-pixel				

Line-up CCD kits for Surveillance Camera

2 Power Supply B/W CCD & CCD Peripheral

Application	C C D		Timing IC	Signal Processor
Sur-veillance 	1/3"	LZ2316A Z : 270k-pixel	LR38580	IR3Y30M1
		LZ2316B Z : 270k-pixel		
		LZ2326A Z : 320k-pixel		
		LZ2326B Z : 320k-pixel		