ORCHIDÉE SEMICONDUCTOR

S11

Orchidée Semiconductor S11 8-bit Microcontroller Family

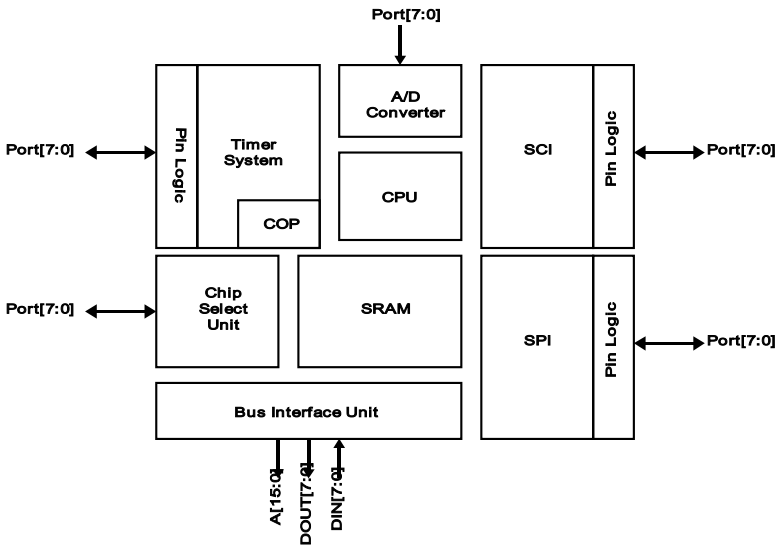
Features

- Pin-for-Pin replacement for industry-standard MC68HC11™ products
- Several versions available including A0, A1, D0, E0, E1. Other versions available upon request
- On-chip RAM, ROM and EEPROM options
- 30µsec Non-volatile programming time
- Multiplexed and Non-Multiplexed external data bus
- Custom versions with Orchidée S11 core technology
- Lower Power than industry standard components
- 5V operation
- Wide range of packaging options

Description

The Orchidée Semiconductor S11 family of 8-bit microcontrollers are pin-for-pin compatible with the industry-standard MC68HC11™ products. Several versions of the product family are currently available including obsolescent products and legacy products. The S11 runs at a higher clock frequency than the standard components as it is fabricated in state-of-the-art semiconductor manufacturing processes and thus also has lower power than the standard parts. All features of the standard components are available including the 8-bit, multi-channel A/D and EEPROM.

Block Diagram



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ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings (V_{SS} = 0V, T_J = 25^{0}C)

Parameter	Symbol	Rated Values	Unit
Power Supply Voltage	V_{DD} (5.0V)	-0.3 to +7.0	V
	V_{DD} (3.3V)	-0.3 to +4.6	
Input Voltage	V_I	-0.3 to +7.0	
Output Voltage	V_O	-0.3 to VDD	
Input Current	I_I	-10 to +10	mA
Output Current per I/O	I_O	-10 to +10	
Storage Temperature	T_{STG}	-65 to +150	^{0}C

Recommended Operating Conditions (V_{SS} = 0V)

Parameter	Symbol	Rated Values	Unit
Power Supply Voltage	V_{DD} (5.0V)	+4.75 to +5.25	V
	V_{DD} (3.3V)	+3.0 to +3.6	
Junction Temperature	T_J	-40 to +100	^{0}C

DC Characteristics (Over Operating Range)

Parameter	Symbol	Conditions	Rated Values			Unit
			Min.	Typ.	Max.	
High Level Input Voltage	V_{IH}		2.0	-	V_{DD}	V
Low Level Input Voltage	V_{IL}		0.0	-	0.8	
High Level Output Voltage	V_{OH}	I_{OH} = TBD	2.4	-	-	
Low Level Output Voltage	V_{OL}	I_{OL} = TBD	-	-	0.4	
High Level Input Current	I_I	$V_{IH} = V_{DD}$	-	-	10	uA
Low Level Input Current	I_O	$V_{IL} = V_{SS}$	-10	-	-	
3-State Output Leakage Current	I_{OZH}		-10	-	10	
	I_{OZL}		-10	-	10	
Stand-by Current	I_{DDQ}	$V_{IH} = V_{DD}$, $V_{IL} = V_{SS}$		TBD		

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