AB5200

Interfacing the VP310/SNIM3 to MPEG Decoders

Application Brief

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Introduction

MPEG decoders from various manufactures have different implementations of the tuner interface with dissimilar pin names for a given function, or in some cases, no pin at all for a particular function. This application brief is intended to assist designers using the Zarlink Semiconductor VP310/VP311 Satellite Channel Decoder and/or the SNIM3 reference decoder design, when connecting to various MPEG decoders.

The Tuner Interface

Signal Name	Pin Nos		Dir	Notes	MPEG			
	VP310	SNIM3			ST	LSI	NEC	OAK 8211
$\overline{\text{RESET}}$	49	7	⇐	Reset at power-up				
STATUS	52	9	⇒	Software Programmable				
$\overline{\text{IRQ}}$	57	10	⇒	Open-drain output				
MOCLK	58	11	⇒	Rising edge centre data	CK_IN	CCLK	STPCLK	PSTB1‡
MDO0	59	13	⇒		D0	CDATA0	STPDAT0	HOST_DATA8
MDO1	61	15	⇒		D1	CDATA1	STPDAT1	HOST_DATA9
MDO2	63	17	⇒		D2	CDATA2	STPDAT2	HOST_DATA10
MDO3	64	19	⇒		D3	CDATA3	STPDAT3	HOST_DATA11
MDO4	65	21	⇒		D4	CDATA4	STPDAT4	HOST_DATA12
MDO5	66	23	⇒		D5	CDATA5	STPDAT5	HOST_DATA13
MDO6	68	25	⇒		D6	CDATA6	STPDAT6	HOST_DATA14
MDO7	69	27	⇒		D7	CDATA7	STPDAT7	HOST_DATA15
MOVAL	72	32	⇒		D/P	CVALID	STPEN	PSTB1‡
$\overline{\text{BKERR}}$	75	31	⇒	Invert via software if necessary	ERROR†	$\overline{\text{CERR}}$	STPERRB	
MOSTRT	76	29	⇒		STR_IN		STPSTRT	
$\overline{\text{MDOEN}}$	71	33	⇐	Use as required with other devices (if any) on the tuner interface				

Notes † $\overline{\text{BKERR}}$ inverted to BKERR (for ST) by setting bit -6 of register 96d (from 51d default to 115d)

‡ MOCLK and MOVAL are ANDed togethet to provide the qualified clock for PSTB1.

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