

## Introduction

DS5200

ISSUE 1.1

July 1999

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	$\leftarrow$	Reset at power-up				
STATUS	52	9	$\Rightarrow$	Software Programmable				
$\overline{\text{IRQ}}$	57	10	$\Rightarrow$	Open-drain output				
MOCLK	58	11	$\Rightarrow$	Rising edge centre data	CK_IN	CCLK	STPCLK	PSTB1‡
MDO0	59	13	$\Rightarrow$		D0	CDATA0	STPDAT0	HOST_DATA8
MDO1	61	15	$\Rightarrow$		D1	CDATA1	STPDAT1	HOST_DATA9
MDO2	63	17	$\Rightarrow$		D2	CDATA2	STPDAT2	HOST_DATA10
MDO3	64	19	$\Rightarrow$		D3	CDATA3	STPDAT3	HOST_DATA11
MDO4	65	21	$\Rightarrow$		D4	CDATA4	STPDAT4	HOST_DATA12
MDO5	66	23	$\Rightarrow$		D5	CDATA5	STPDAT5	HOST_DATA13
MDO6	68	25	$\Rightarrow$		D6	CDATA6	STPDAT6	HOST_DATA14
MDO7	69	27	$\Rightarrow$		D7	CDATA7	STPDAT7	HOST_DATA15
MOVAL	72	32	$\Rightarrow$		D/P	CVALID	STPEN	PSTB1‡
$\overline{\text{BKERR}}$	75	31	$\Rightarrow$	Invert via software if necessary	ERROR†	$\overline{\text{CERR}}$	STPERRB	
MOSTRT	76	29	$\Rightarrow$		STR_IN		STPSTRT	
$\overline{\text{MDOEN}}$	71	33	$\leftarrow$	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 together to provide the qualified clock for PSTB1.



**For more information about all Zarlink products  
visit our Web Site at  
[www.zarlink.com](http://www.zarlink.com)**

Information relating to products and services furnished herein by Zarlink Semiconductor Inc. trading as Zarlink Semiconductor or its subsidiaries (collectively "Zarlink") is believed to be reliable. However, Zarlink assumes no liability for errors that may appear in this publication, or for liability otherwise arising from the application or use of any such information, product or service or for any infringement of patents or other intellectual property rights owned by third parties which may result from such application or use. Neither the supply of such information or purchase of product or service conveys any license, either express or implied, under patents or other intellectual property rights owned by Zarlink or licensed from third parties by Zarlink, whatsoever. Purchasers of products are also hereby notified that the use of product in certain ways or in combination with Zarlink, or non-Zarlink furnished goods or services may infringe patents or other intellectual property rights owned by Zarlink.

This publication is issued to provide information only and (unless agreed by Zarlink in writing) may not be used, applied or reproduced for any purpose nor form part of any order or contract nor to be regarded as a representation relating to the products or services concerned. The products, their specifications, services and other information appearing in this publication are subject to change by Zarlink without notice. No warranty or guarantee express or implied is made regarding the capability, performance or suitability of any product or service. Information concerning possible methods of use is provided as a guide only and does not constitute any guarantee that such methods of use will be satisfactory in a specific piece of equipment. It is the user's responsibility to fully determine the performance and suitability of any equipment using such information and to ensure that any publication or data used is up to date and has not been superseded. Manufacturing does not necessarily include testing of all functions or parameters. These products are not suitable for use in any medical products whose failure to perform may result in significant injury or death to the user. All products and materials are sold and services provided subject to Zarlink's conditions of sale which are available on request.

Purchase of Zarlink's I<sup>2</sup>C components conveys a licence under the Philips I<sup>2</sup>C Patent rights to use these components in an I<sup>2</sup>C System, provided that the system conforms to the I<sup>2</sup>C Standard Specification as defined by Philips.

Zarlink and the Zarlink Semiconductor logo are trademarks of Zarlink Semiconductor Inc.

Copyright 2001, Zarlink Semiconductor Inc. All Rights Reserved.

**TECHNICAL DOCUMENTATION - NOT FOR RESALE**

---