

### PRODUCT BLOCK DIAGRAM

Video Lock	Data Slicer
H Lock	Sync Slicer
Frequency Synthesizer	Line & Field Control
I <sup>2</sup> C* Serial Interface	Violence Blocking
Command Processor	
RAM	ROM

### FEATURES

- Complete stand-alone Line 21 decoder for Extended Data Services (XDS); fully compliant to EIA-608A and EIA-744A for XDS data recovery and violence blocking
- Serves as a complete solution for violence blocking applications in TV sets and VCRs by processing the Content Advisory Program Rating of an incoming video program and outputting the PB (Program Blocking) signal as programmed
- Provides 2-byte Content Advisory Data Packets, the blocking status of a program, and the validity of a program rating in Content Advisory Registers 1 & 2 for access control of program blocking operations and display processing of the current program rating
- Supports blocking of 4 existing Content Advisory Program Ratings:
  - MPA/TV Parental Guidelines
  - Canadian English Language

- Canadian French Language
- *No Rating* or *Invalid Rating* programs and *None*-rated programs in MPAA
- Supports a programmable matrix table in the control registers to regulate program blocking utilizing a flexible method of implementation for age- or content-based ratings
- Programmable extension time of program blocking upon channel change when in blocking mode
- Single-bit control to enable and disable program blocking and easily implement the program blocking feature
- Special read-access modes for reading internal control registers, Content Advisory 1 and 2, Content Advisory Rating Select 1 through 6, and Channel/Program information
- Supports up to 32 bytes of writing without checking the internal RDY bit to improve the system performance
- XDS filter parameters user-selectable from a list of preprogrammed values for automatic real-time set-up, channel, and program information
- Supports a dedicated INTRO output to provide hardware interrupt output for selected XDS data
- I<sup>2</sup>C serial communication port outputs recovered XDS data
- Two different slave addresses selectable within I<sup>2</sup>C serial communication
- NTSC or PAL options

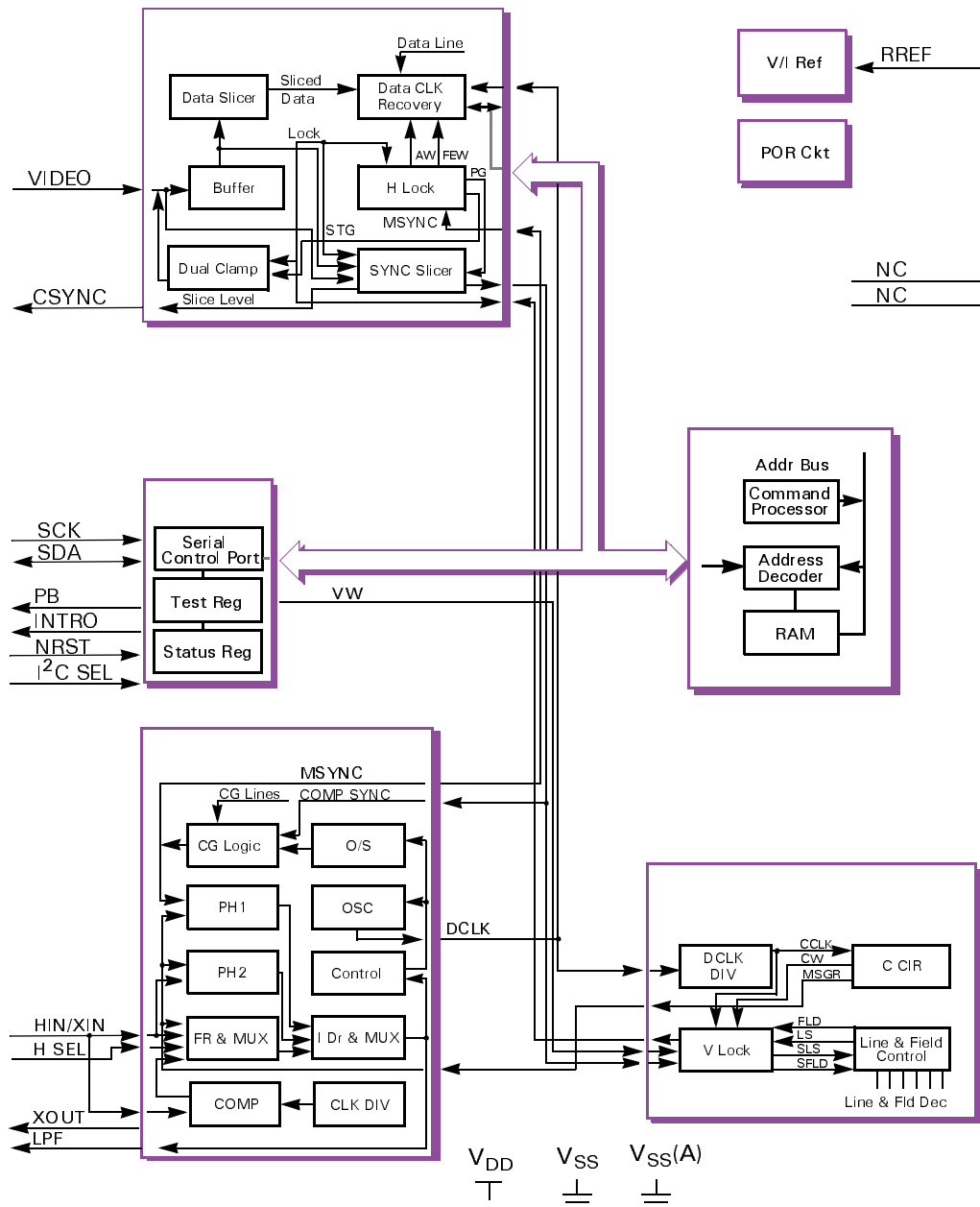
\*Philips standard serial interface.

## GENERAL DESCRIPTION

The Z86230 is designed to process XDS data contained in the television Violence Blocking Interval (VBI). The device requires composite video and a horizontal timing signal (HIN or XTAL input). Several passive components are required for proper operation. Commands are input to enable the decoder to process and control the V-Chip response

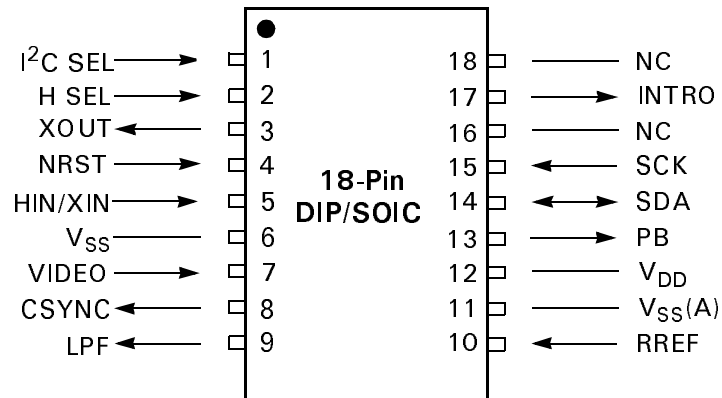
to the XDS content advisory packet. The Z86230 can also be configured to operate with PAL video signals. In PAL mode, the device will decode information encoded into VBI Line 22. The encoded data must conform to the waveform and command structure defined for NTSC Line 21 operation.

## BLOCK DIAGRAM



## PIN-OUTS AND PIN DIRECTION

### Z86230 FAMILY PIN DIAGRAM



Symbol	Pin #	Function	Direction
I <sup>2</sup> C SEL	1	I <sup>2</sup> C Address Select	Input
H SEL	2	HIN/XIN Select	Input
XOUT	3	XTAL Output	Output
NRST	4	Reset	Input
HIN/XIN	5	Horizontal In/XTAL In	Input
V <sub>SS</sub>	6	Power Supply (digital) GND	N/A
VIDEO	7	Composite Video	Input
CSYNC	8	Composite Sync	Output
LPF	9	Loop Filter	Output
RREF	10	Resistor Reference	Input
V <sub>SS(A)</sub>	11	Power Supply (Analog) GND	N/A
V <sub>DD</sub>	12	Power Supply +5V	N/A
PB	13	Program Blocking	Output
SDA	14	Serial Data	In/Output
SCK	15	Serial Clock	Input
NC	16	No Connect	N/A
INTRO	17	Interrupt Output	Output
NC	18	No Connect	N/A



## APPLICATIONS AND SUPPORT TOOLS

The following support tools are available for the Z86230:

- Z86230 Evaluation Board
- Z86230 Evaluation Software

## RELATED PRODUCTS

NTSC Line 21 Decoders:

Z86129	Line 21 Decoder (CCD)
Z86229	Line 21 Decoder (CCD) with 2nd I <sup>2</sup> C Address
Z86130	Smart V-Chip
Z86131	Auto Time Set

## ELECTRICAL FEATURES SUMMARY

- 30mA Maximum Supply Current
- 4.75V to 5.25V Operating Range

### Z86129/229/130/230/131 DEVICE SELECTION

Device	Application	Display	XDS Data Recovery	Smart Violence Blocking	I <sup>2</sup> C Address
Z86129	OSD/CCD/XDS Display	OSD/CCD/XDS	Yes		1 Slave
Z86229	OSD/CCD/XDS Display	OSD/CCD/XDS	Yes		2 Slaves
Z86130	Violence Blocking		Yes	Yes	1 Slave
Z86230	Violence Blocking		Yes	Yes	2 Slaves
Z86131	Auto Clock Set		Yes		1 Slave

### ORDERING INFORMATION

Part	PSI	Description
Z86230	Z8623012PSC	18-pin DIP Package
Z86230	Z8623012SSC	18-pin SOIC Package

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