

Customer training workshop

TRAVEO™ T2G trigger multiplexer

Q4 2021



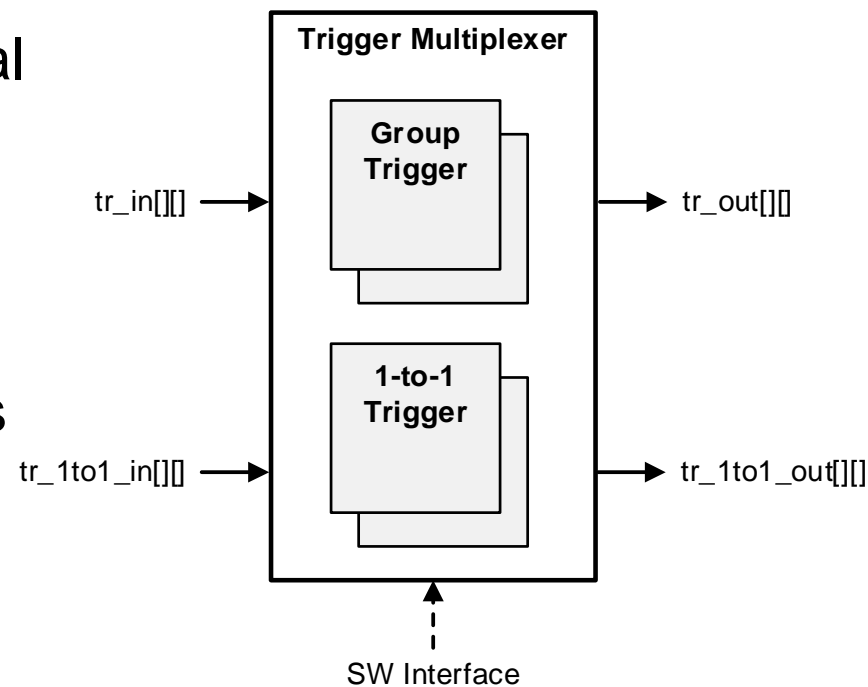
Target products

› Target product list for this training material:

Family category	Series	Code flash memory size
TRAVEO™ T2G Automotive Body Controller Entry	CYT2B6	Up to 576 KB
TRAVEO™ T2G Automotive Body Controller Entry	CYT2B7	Up to 1088 KB
TRAVEO™ T2G Automotive Body Controller Entry	CYT2B9	Up to 2112 KB
TRAVEO™ T2G Automotive Body Controller Entry	CYT2BL	Up to 4160 KB
TRAVEO™ T2G Automotive Body Controller High	CYT3BB/4BB	Up to 4160 KB
TRAVEO™ T2G Automotive Body Controller High	CYT4BF	Up to 8384 KB
TRAVEO™ T2G Automotive Cluster	CYT2CL	Up to 4160 KB
TRAVEO™ T2G Automotive Cluster	CYT3DL	Up to 4160 KB
TRAVEO™ T2G Automotive Cluster	CYT4DN	Up to 6336 KB

Trigger multiplexer overview

- > The trigger multiplexer helps the user route triggers from a source peripheral block to a destination
- > Features
 - Up to 16 multiplexer-based trigger groups
 - Up to 16 one-to-one trigger groups
 - Software (SW) trigger support to trigger any signal in the block

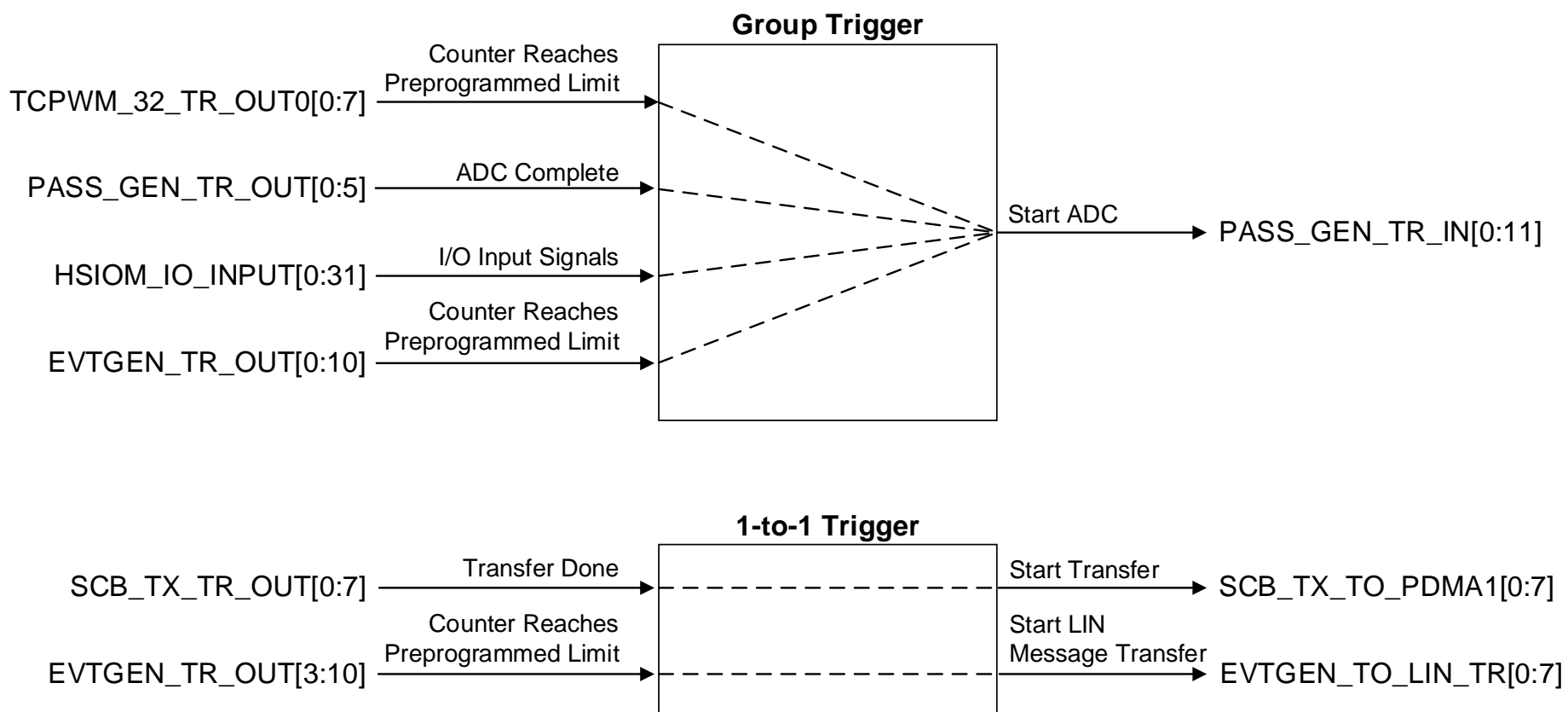


Hint Bar

Review TRM section 29.1 for additional details

Trigger multiplexing

- > A trigger input signal indicates the completion of a peripheral action or a peripheral event
- > A trigger output signal initiates a peripheral action



Hint Bar

Review TRM section 29.3 for additional details

Refer to the datasheet for the trigger list for each device

Trigger input:

- Level sensitive: FIFO empty

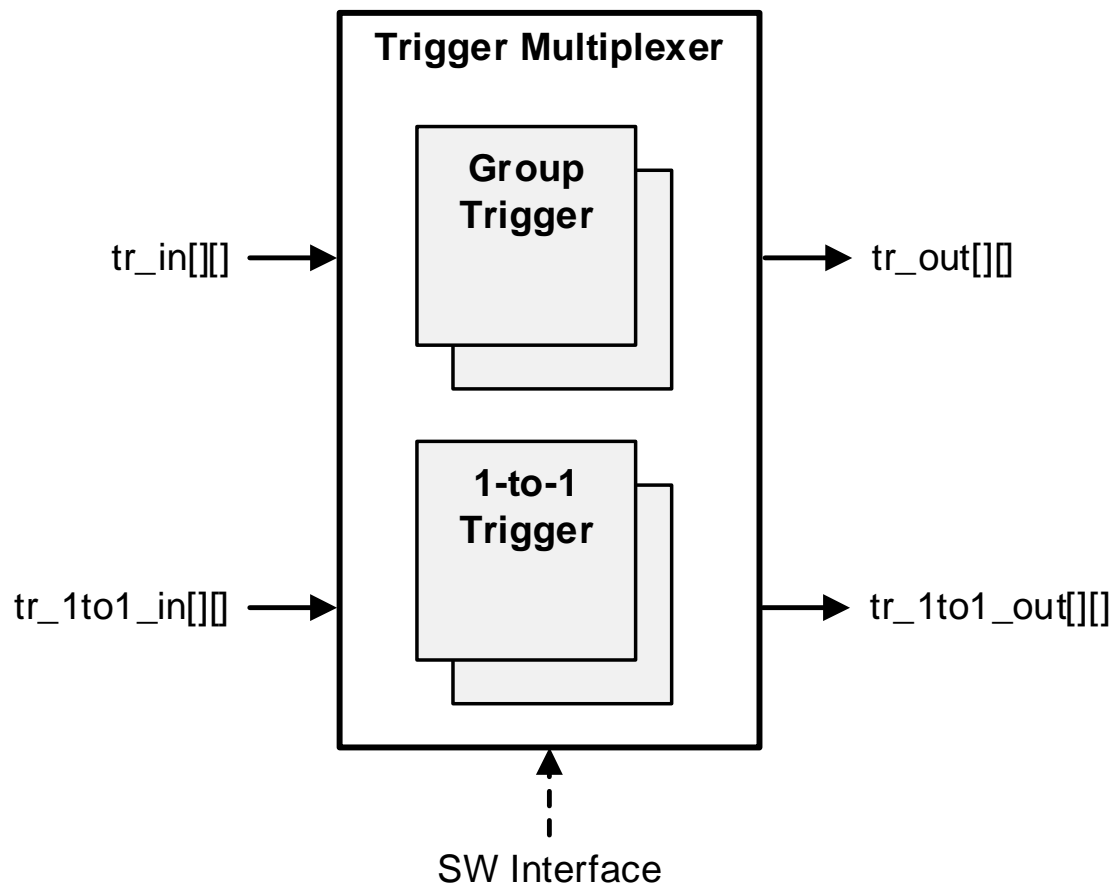
- Edge sensitive: ADC channel done

Trigger output:

- Invert

Trigger multiplexer block diagram

- › A trigger multiplexer consists of multiple trigger groups, which are of two types
 - Group trigger
 - 1-to-1 trigger

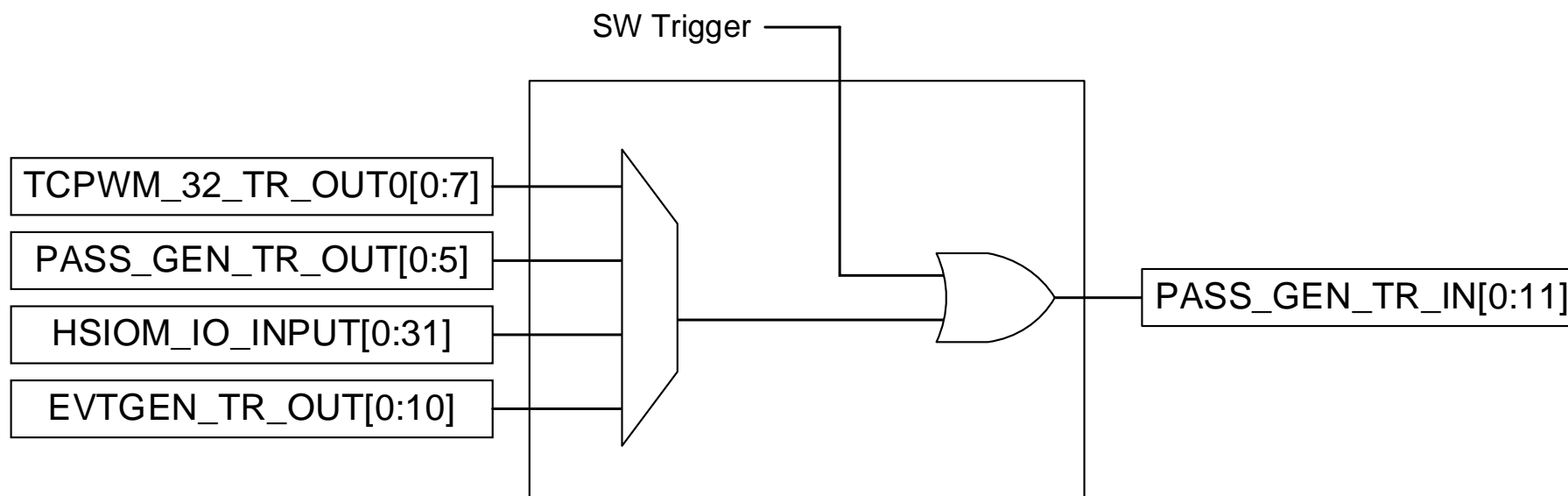


Hint Bar

Review TRM section 29.3 for additional details

Group trigger

- › Functionalities
 - Connects a peripheral input trigger to multiple peripheral output triggers
 - Generates a SW trigger



Hint Bar

Review TRM section 29.3 for additional details

Multiple peripheral output triggers are selected by the software

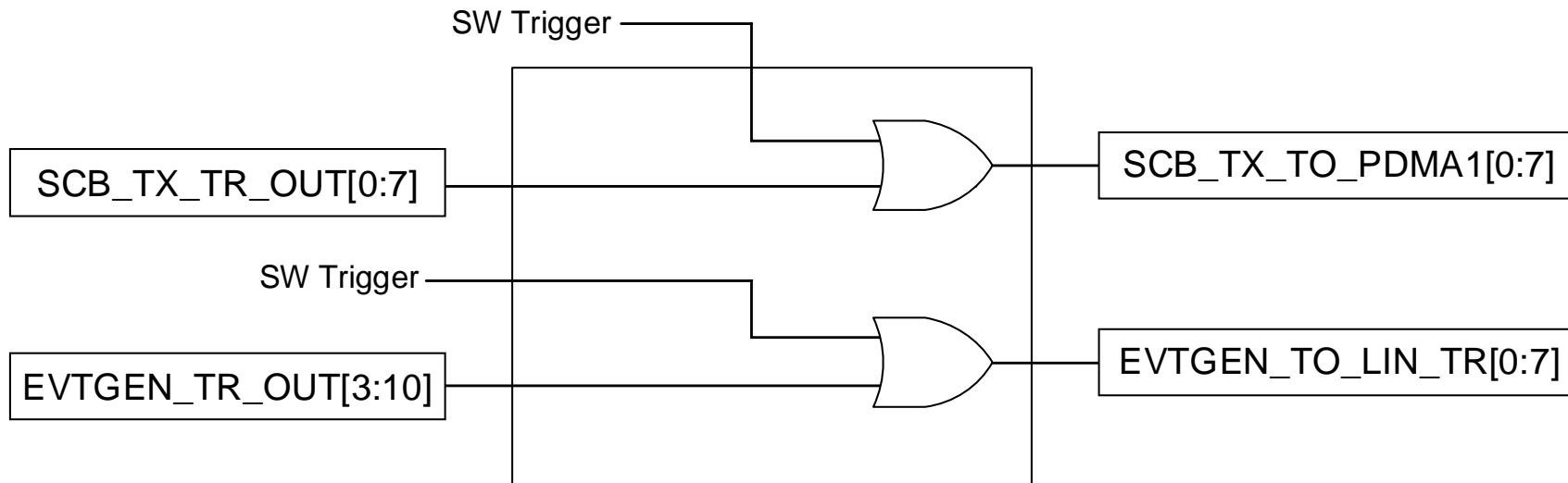
1-to-1 trigger

> Functionalities

- Connects a peripheral input trigger to one specific peripheral output trigger
- Generates a SW trigger

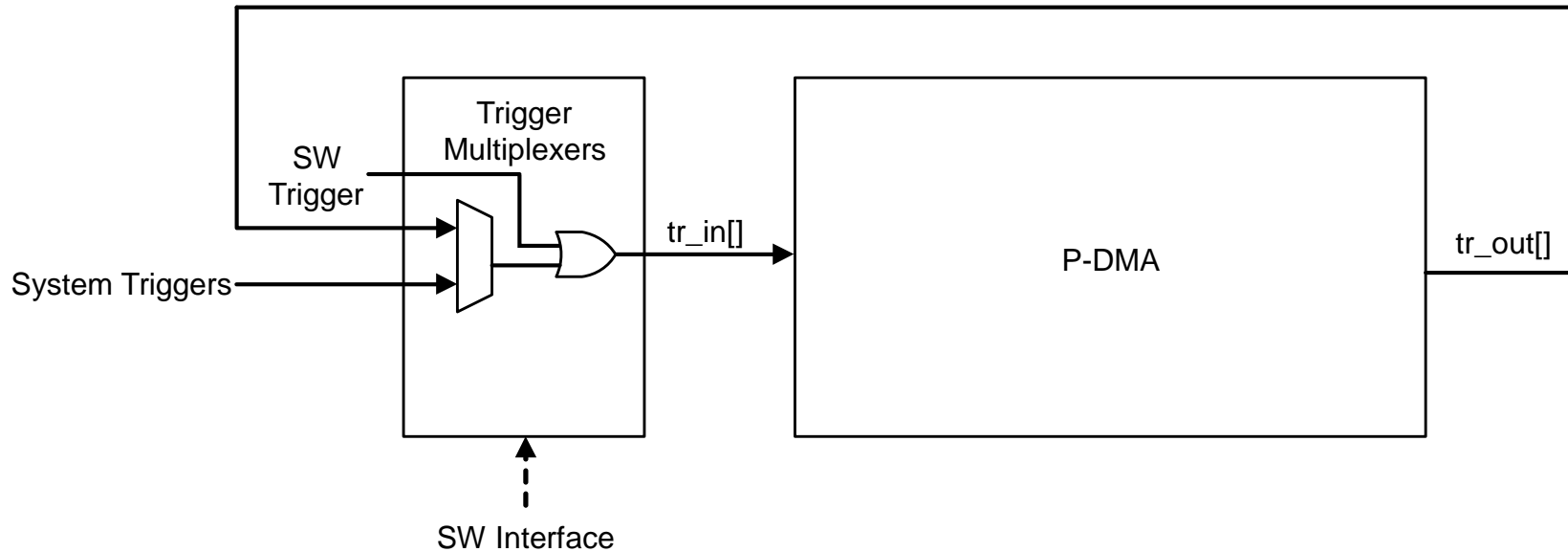
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Review TRM section 29.3 for additional details



Use case: SW trigger

- › SW trigger is written as one of the system triggers of a bit-encoded interrupt in P-DMA
 - P-DMA activation made through the SW trigger can enable the initial CRC on program data



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Review TRM section 29.4 for additional details

Refer to the Direct Memory Access Training section for additional details on P-DMA



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Revision history

Revision	ECN	Submission Date	Description of Change
**	6086858	03/12/2018	Initial release
*A	6385302	11/19/2018	Added page 2 and the note descriptions for all pages Updated pages 4, 6, and 7 Deleted the Appendix section and TVII-B-E-1M Trigger pages
*B	6649424	08/07/2019	Added note description to page 9 Updated page 2
*C	7048497	12/18/2020	Updated page 2.
*D	7400477	10/15/2021	Updated page 1, 2.