THine® Design Guide

MIPI CSI-2 Products
Example of Sub-Link Usage

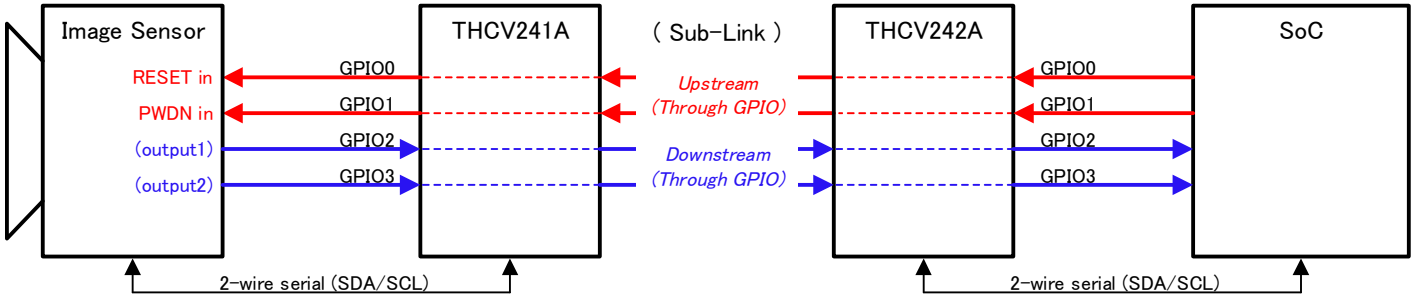
THine Electronics, Inc.

SC:E

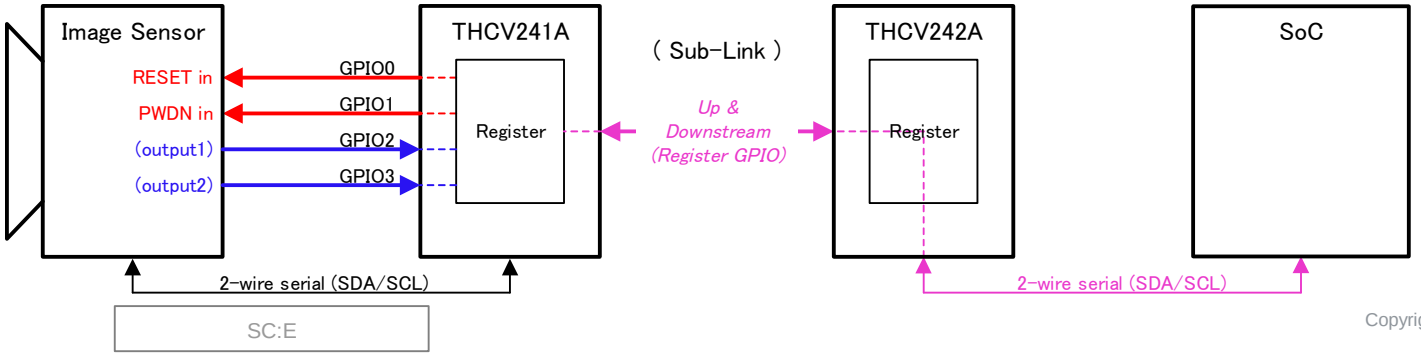
Through GPIO / Register GPIO

- Controlling and monitoring remote image sensors from a local SoC are actualized under THCV24xA's GPIO and/or 2-wire serial interface control.

- Through GPIO
  - Local GPIO input is continuously reflected to remote GPIO output.



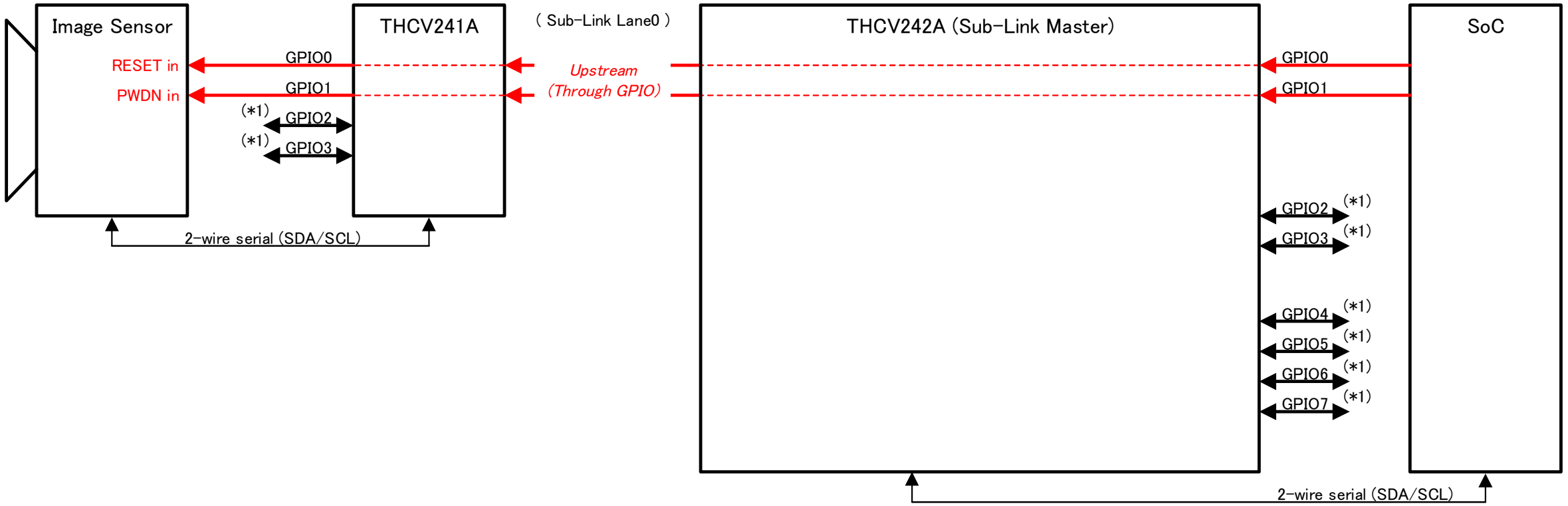
- Register GPIO
  - Remote GPIO input monitoring and output control are available under register control.



SC:E

1-Camera Upstream

Case.1 Through GPIO from GPIO0-1 of THCV242A to GPIO0-1 of THCV241A

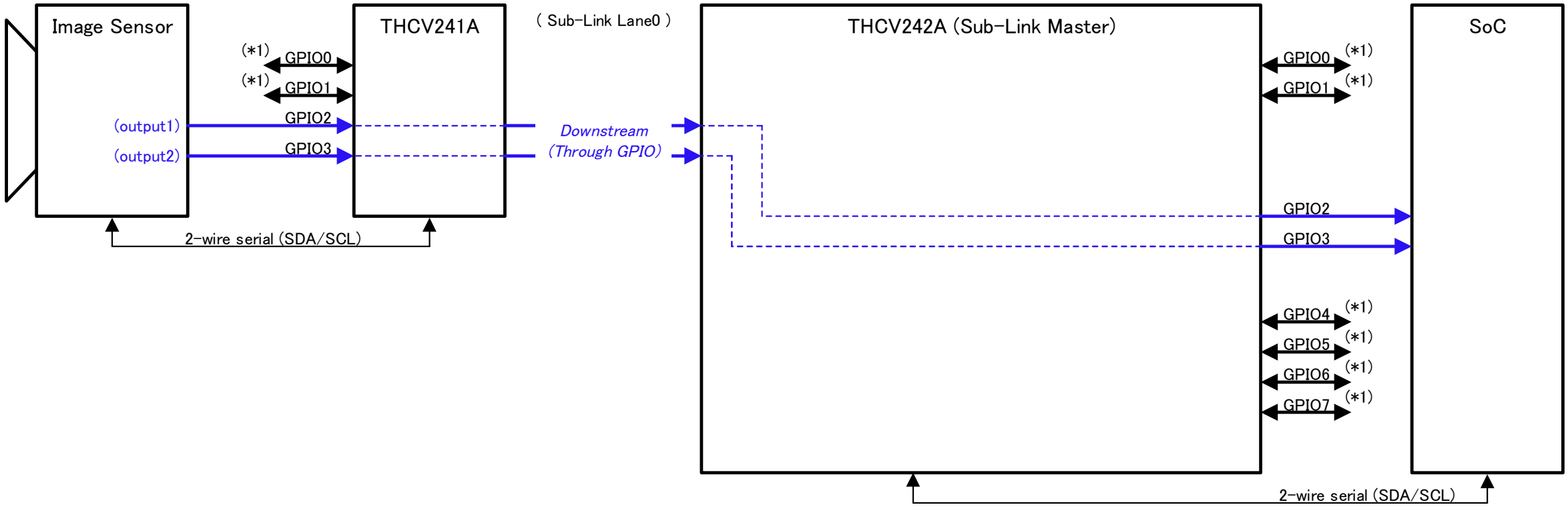


(*1) GPIO2-3 of THCV241A and GPIO2-7 of THCV242A can be used as Register GPIO

1-Camera Downstream

THine® Interface to the Future - Solution by Smart Connectivity -

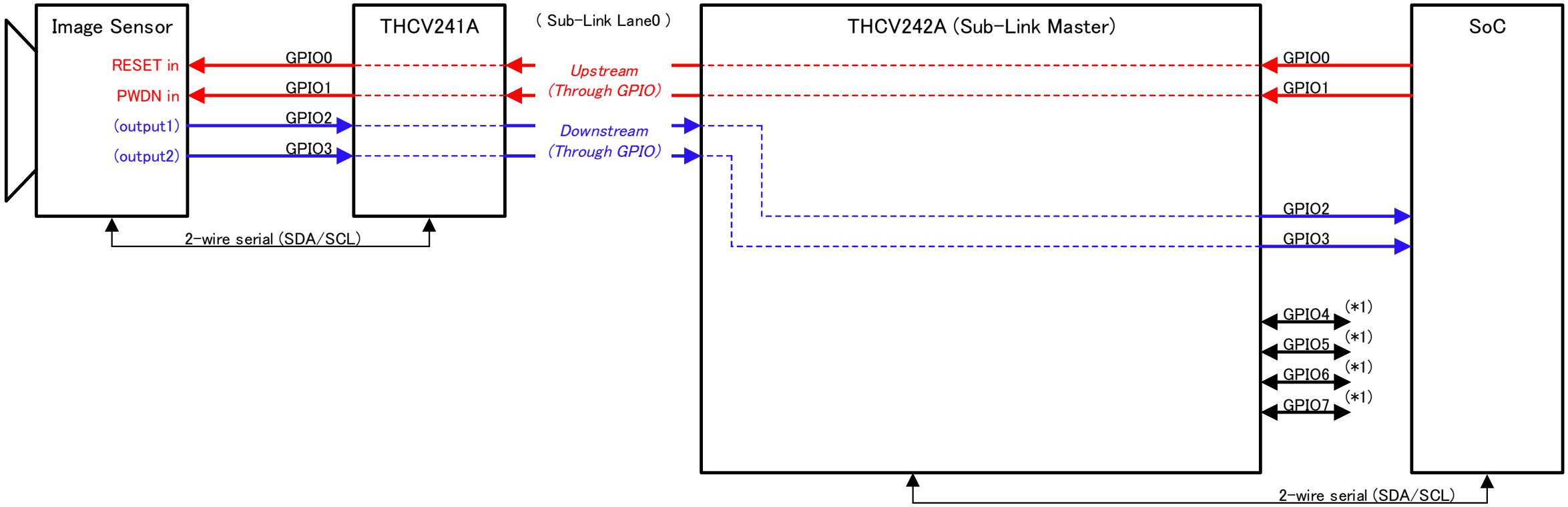
Case.2 Through GPIO from GPIO2-3 of THCV241A to GPIO2-3 of THCV242A



(*1) GPIO2-3 of THCV241A and GPIO0-1,4-7 of THCV242A can be used as Register GPIO

1-Camera Bidirectional Signal

Case.3 Combination of Case.1 and Case.2

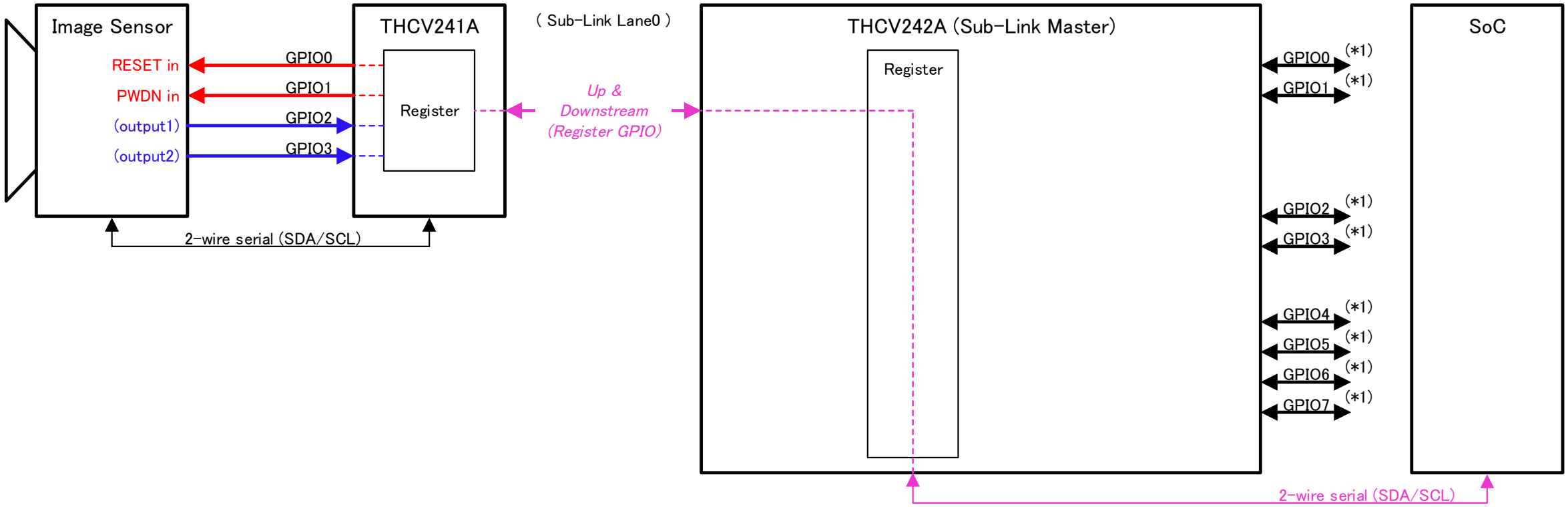


(*1) GPIO4-7 of THCV242A can be used as Register GPIO

1-Camera Bidirectional Signal

THine® Interface to the Future - Solution by Smart Connectivity -

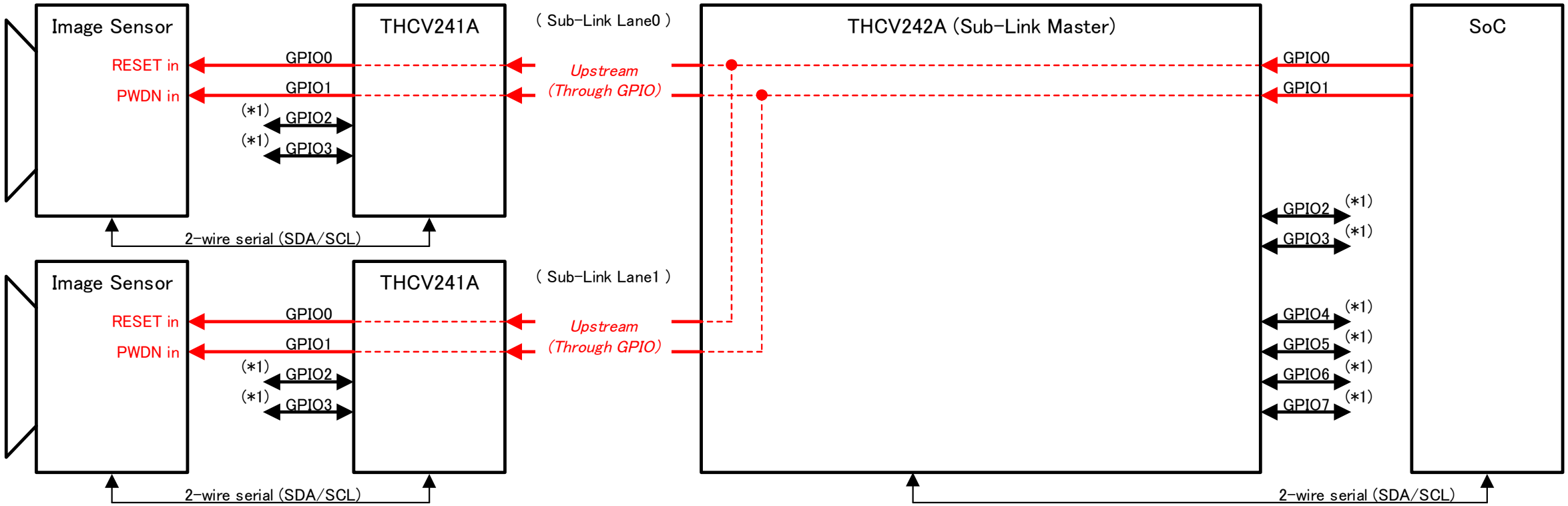
Case.4 Register GPIO (All GPIOs could be both Input and Output)



(*1) GPIO0-7 of THCV242A can be used as Register GPIO

2-Camera Upstream

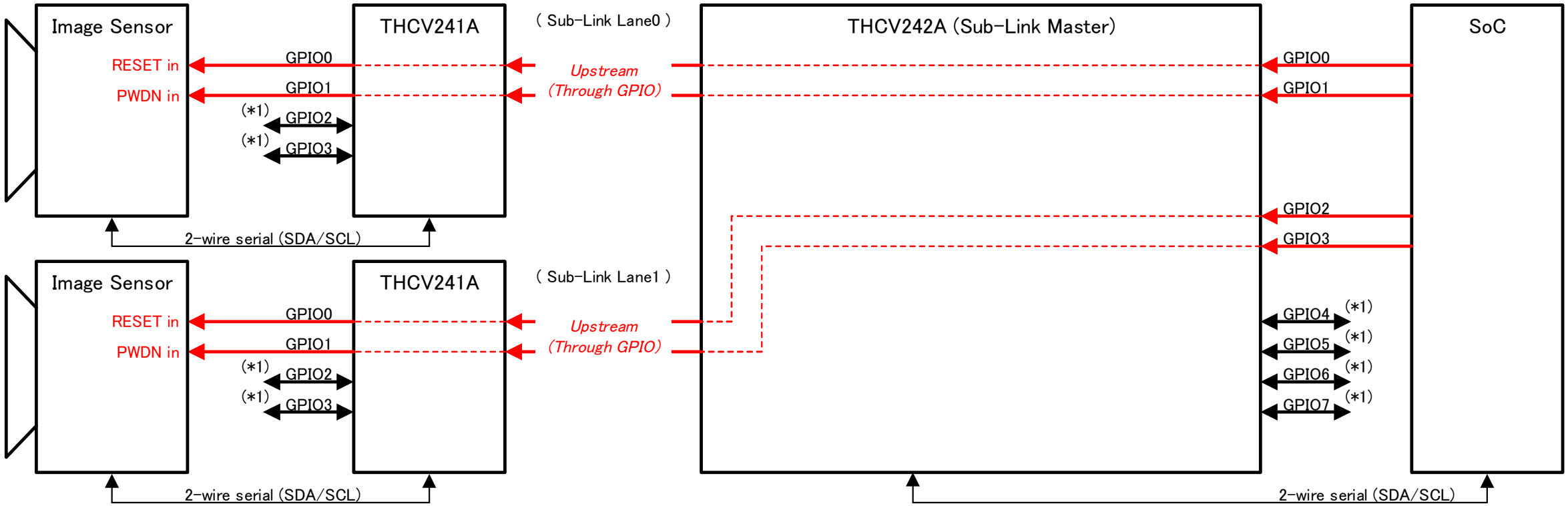
Case.5 Through GPIO from GPIO0-1 of THCV242A to GPIO0-1 of THCV241A (Collective Control)



(*1) GPIO2-3 of THCV241As and GPIO2-7 of THCV242A can be used as Register GPIO

2-Camera Upstream

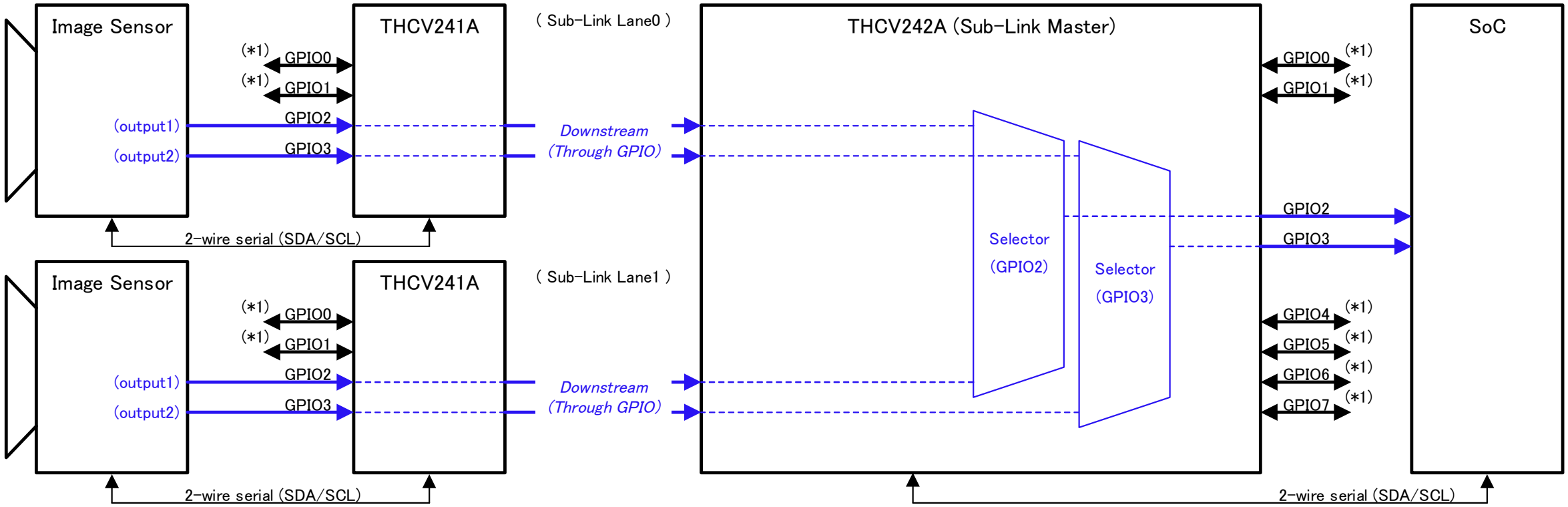
Case.6 Through GPIO from GPIO0-1 of THCV242A to GPIO0-1 of THCV241A (Individual Control)



(*1) GPIO2-3 of THCV241As and GPIO2-7 of THCV242A can be used as Register GPIO

2-Camera Downstream

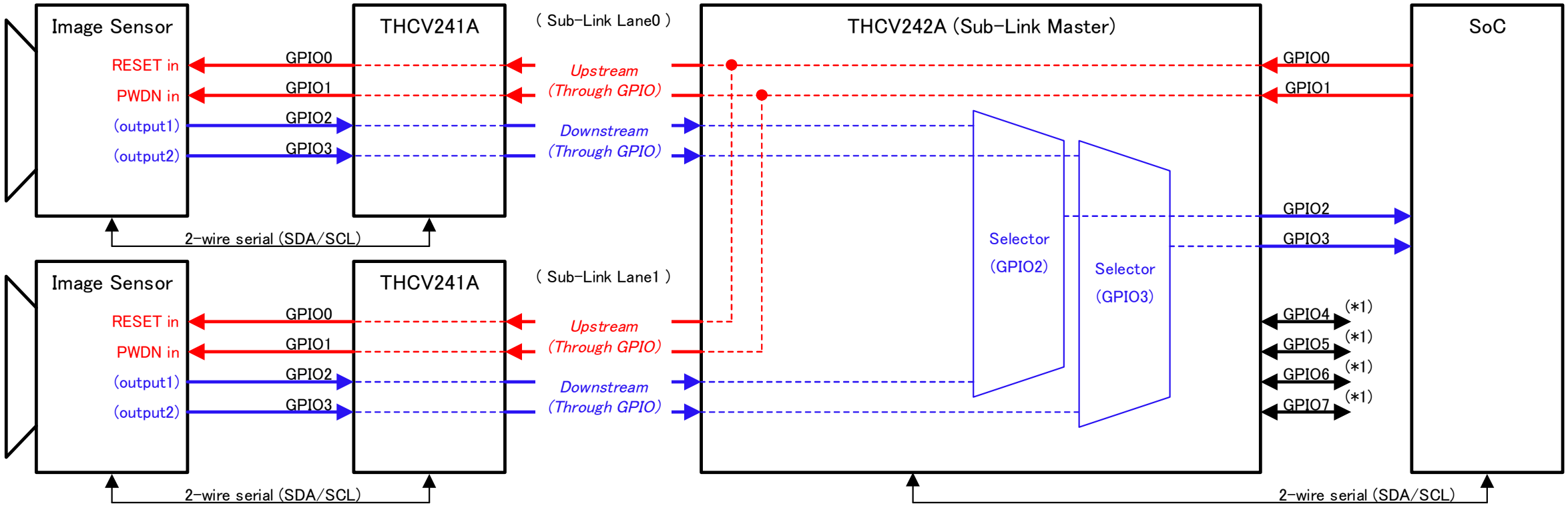
Case.7 Through GPIO from GPIO2-3 of THCV241A to GPIO2-3 of THCV242A (Outputting Selected Signal)



(*1) GPIO0-1 of THCV241As and GPIO0-1,4-7 of THCV242A can be used as Register GPIO

2-Camera Bidirectional Signal

Case.8 Combination of Case.5 and Case.7

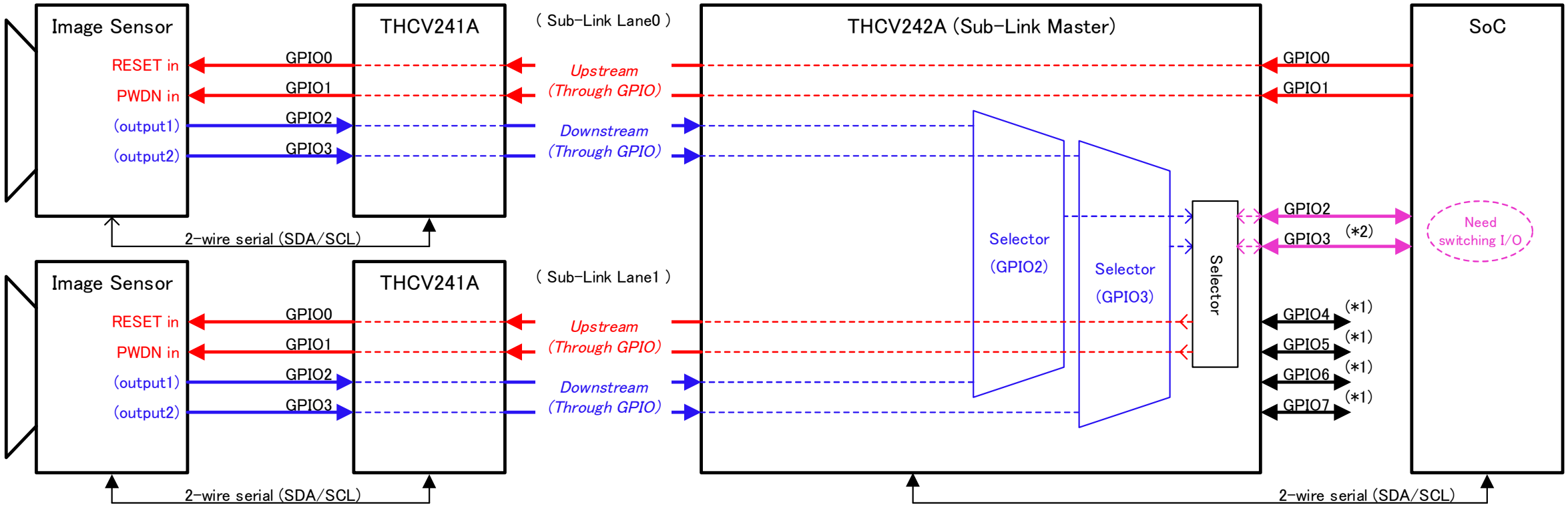


(*1) GPIO4-7 of THCV242A can be used as Register GPIO

2-Camera Bidirectional Signal

THine® Interface to the Future - Solution by Smart Connectivity -

Case.9 Combination of Case.6 and Case.7 (Need Switching I/O of SoC)

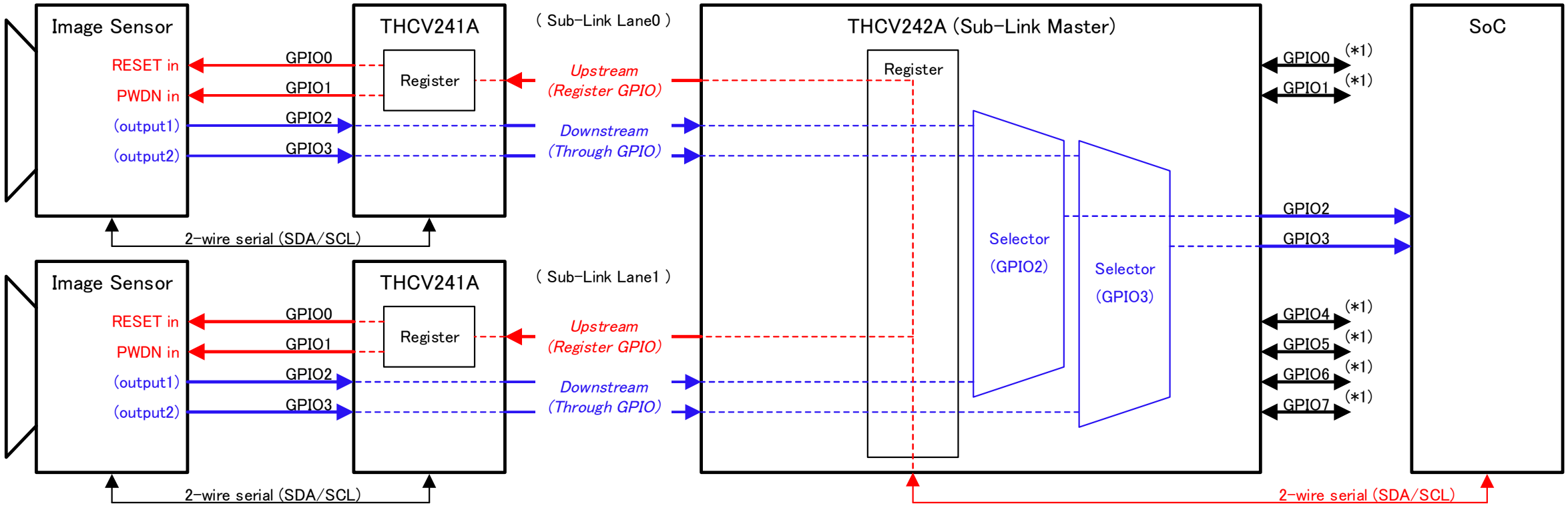


(*1) GPIO4-7 of THCV242A can be used as Register GPIO

(*2) Downstream signal is outputted only from GPIO2 and GPIO3 so I/O should be switched.

2-Camera Bidirectional Signal

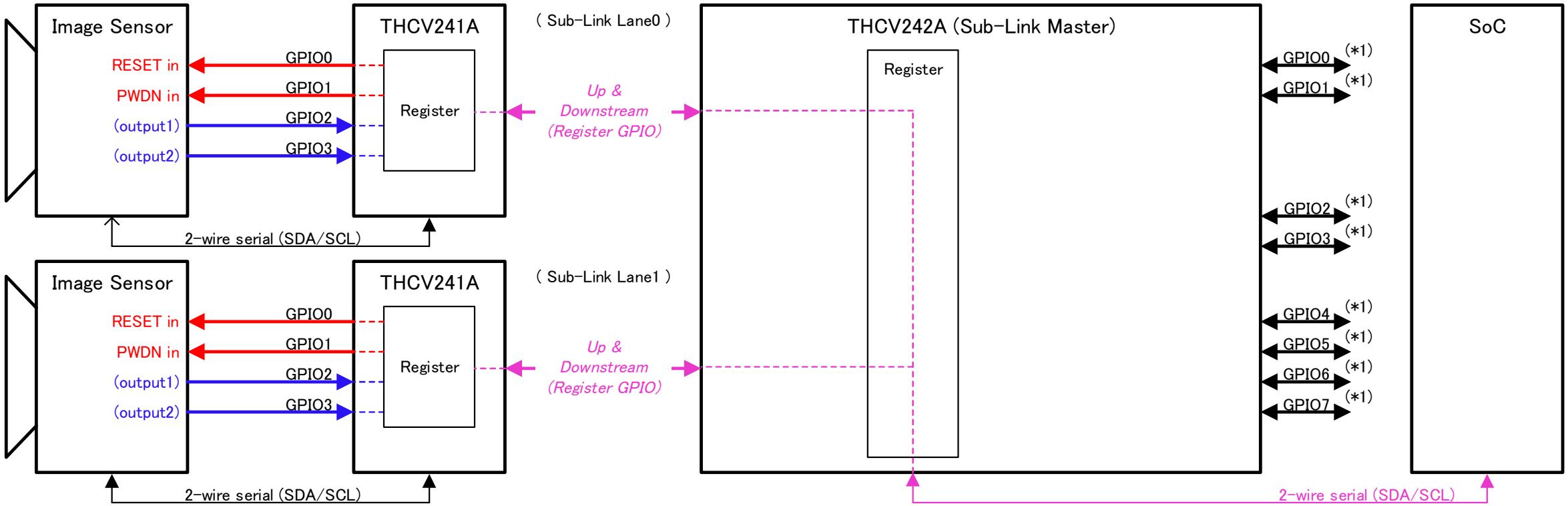
Case.10 Combination Register GPIO for Upstream Signal and Through GPIO for Downstream Signal



(*1) GPIO0-1,4-7 of THCV242A can be used as Register GPIO

2-Camera Bidirectional Signal

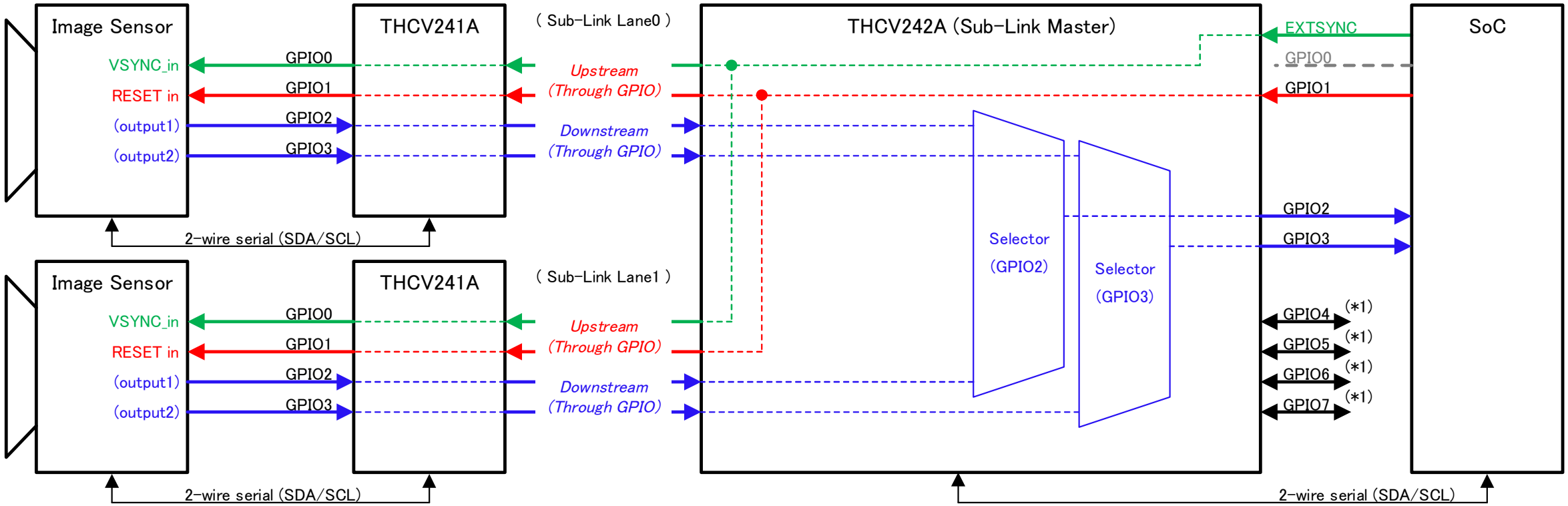
Case.11 Register GPIO (All GPIOs could be both Input and Output)



(*1) GPIO0-7 of THCV242A can be used as Register GPIO

2-Camera Bidirectional Signal

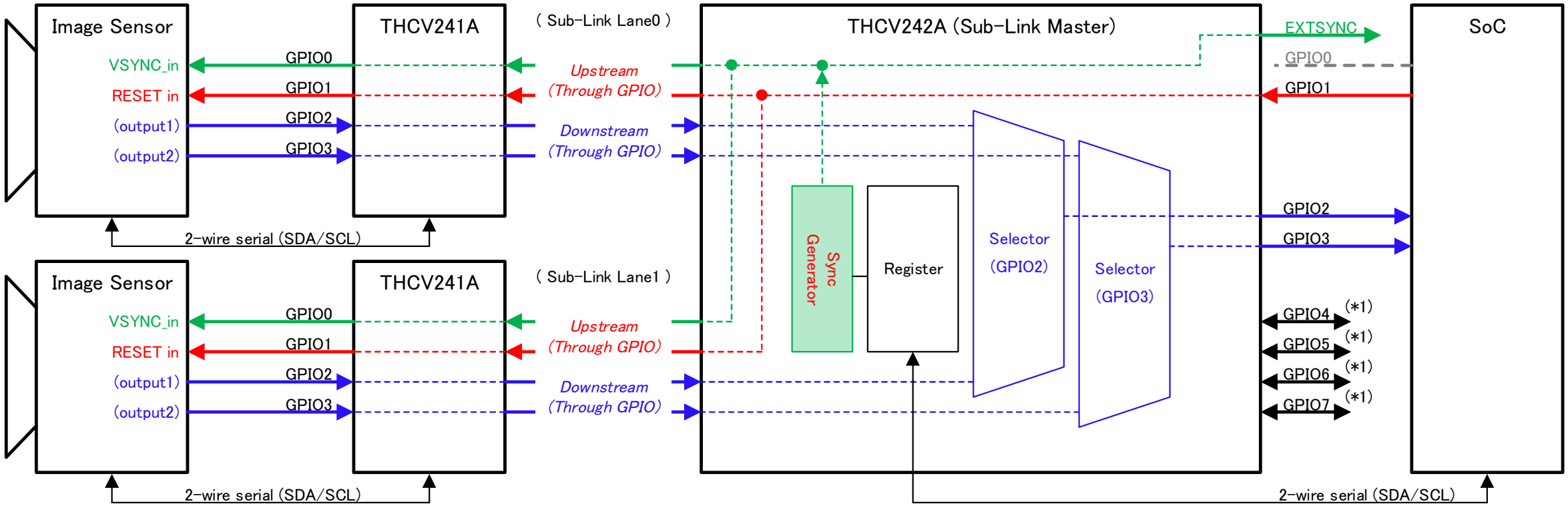
Case.12 Synchronizing 2 Cameras by using EXTSYNC signal from SoC



(*1) GPIO4-7 of THCV242A can be used as Register GPIO

2-Camera Bidirectional Signal

Case.13 Synchronizing 2 Cameras and SoC by Using EXTSYNC Signal Generated in THCV242A



(*1) GPIO4-7 of THCV242A can be used as Register GPIO

Disclaimer

- The product specifications described in this material are subject to change without prior notice.

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