Hello, and welcome to this presentation of the STM32H7 System Configuration Controller.
STM32H7 microcontrollers feature a set of configuration registers. The main purposes of the system configuration controller are detailed in this presentation.

For further details, please refer to the reference manual of the STM32H7 microcontroller.
The system configuration controller manages the selection of the GPIO to the external interrupt or event signal, which is used as asynchronous external interrupt or event with Wakeup from Stop capability. It also contains the I2C I/Os Fast-mode Plus 20 mA drive enable control bits. 4 I/Os can be configured in high-drive mode even if they are not used as I2C alternate functions. They can be used to drive LEDs for instance.
The system configuration controller in STM32H7 devices gives access to the following features:

- Management of the I/O compensation cell,
- Getting readout protection and Flash memory bank swap information,
- Management of boot addresses,
- Management of BOR reset level,
- Management of Flash memory secured and protected sector status,
- Management of Flash memory write protections status,
- Management of DTCM secured section status,
- Management of independent watchdog status (hardware or software / freeze),
- Reset generation in Stop and Standby mode status,
- Secure mode enabled/disabled status
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- Secure mode enabled/disabled status.