Peripheral security attributes are defined in the *Peripheral Instantiation* table as one of the following:

Always Secure (HF S)
Access to the peripheral is always restricted to secure code.

Always Non-secure (HF NS)
Access to the peripheral is always allowed from both secure and non-secure code.

User selectable (US)
The security attribute can be configured for secure or non-secure access.

The full list of peripherals and their corresponding security attributes can be found in the *Instantiation* table in *Memory* section. For each peripheral with ID *n*, the register PERIPH[*n*].PERM.SECUREMAPPING will show whether the security attribute for this peripheral is user selectable or not.

The security attribute can be configured using the register PERIPH[*n*].PERM.SECATTR, if user selectable.

The DMA security attribute is determined as follows:

- If PERIPH[n].PERM.DMA is set to NoSeparateAttribute, then PERIPH[n].PERM.DMASEC cannot be configured, it has the same value as PERIPH[n].PERM.SECATTR.
- If PERIPH[n].PERM.DMA is set to SeparateAttribute and PERIPH[n].PERM.SECATTR is set to secure, then PERIPH[n].PERM.DMASEC is configurable. It is by default set to secure.

Secure code can access both secure peripherals and non-secure peripherals.

The DMA Privilege attribute is determined as follows:

- If PERIPH[n].PERM.DMA is set to NoSeparateAttribute, then PERIPH[n].PERM.DMAPRIVL cannot be configured, it has the same value as PERIPH[n].PERM.PRIVLATTR.
- If PERIPH[n].PERM.DMA is set to SeparateAttribute and PERIPH[n].PERM.PRIVLATTR is set to Privileged, then PERIPH[n].PERM.DMAPRIVL is configurable. It is by default set to Privileged.

7.8.5.2.1 Peripherals with split security

Peripherals with split security allow more detailed configuration.

When peripherals have split security, then the security of each feature in the peripheral can be configured individually using register FEATURE.

Each SPU instance can have different numbers of features. See the instantiation table for an overview of features supported by the split security peripherals.

7.8.5.2.2 Peripheral address mapping

Peripherals that have non-secure security mapping have their address starting with 0x4XXX_XXXX.
Peripherals that have secure security mapping have their address starting with 0x5XXX_XXXX.

Peripherals with a user-selectable security mapping are available at an address starting with:

- 0x4XXX_XXXX, if the peripheral security attribute is set to non-secure
- 0x5XXX_XXXX, if the peripheral security attribute is set to secure

> **Note:** Accesses to the 0x4XXX_XXXX address range from secure or non-secure code for a peripheral marked as secure will result in a bus-error.
>
> Secure code accessing the 0x5XXX_XXXX address range of a peripheral marked as non-secure will also result in a bus-error.

Peripherals with a split security mapping are available at an address starting with:

- 0x4XXX_XXXX for non-secure access and 0x5XXX_XXXX for secure access, if the peripheral security attribute is set to non-secure