

Configure FPGA Profile

- FPGA Profile, on page 1

FPGA Profile

The FPGA Profile feature turns certain software features assisted by field-programmable gate array (FPGA) on or off. Some switch features such as Parallel Redundancy Protocol (PRP), High-Availability Seamless Redundancy (HSR), and Device Level Ring (DLR) rely heavily on FPGA implementation. FPGA Profiles allow for efficient allocation of platform resources for the operation of multiple time sensitive, resilient industrial protocols without changes to hardware.

Note FPGA Profiles are supported only on Cisco IE3505 and IE3505H Series Switches. FPGA Profiles are applied globally to the base switch. If an expansion module is present, it uses the same FPGA Profile as configured for the base switch.

The switch supports three FPGA profiles with different combinations of features supported in each profile, as shown in the following table.

FPGA Profile Name	Description
default	Supports 1 instance of PRP or HSR and 3 instance of DLR.
redundancy	Supports 2 instance of PRP or HSR and 2 instance of DLR. **Note** The number of HSR rings supported on the system remains 1 and cannot be increased by the use of expansion module. The same profile that is configured for the switch must be used for the expansion module.

Prerequisites

- Before changing the FPGA Profile, we suggest that you remove the configurations related to the current active FPGA Profile, because those configurations are not valid for the new profile.

Guidelines and Limitations

- FPGA Profile is configured globally on the switch. All base system and expansion modules load the same FPGA Profile configured for the switch. If an expansion module is present, the FPGA Profile configured for the switch also applies to the expansion module.
- You must reload the switch after changing the configured FPGA Profile to activate the profile.
- FPGA Profile is supported in Cisco IOS XE Release 17.17.1.

  To keep the existing profile and feature configurations after an upgrade:

  1. After booting the switch, selected the required FPGA Profile as described in Configure the FPGA Profile, on page 2.

     Do not copy running-config to startup-config or write memory.
  2. Reload the switch.

     The required feature configurations will not be discarded because they are supported by the selected profile.

Default Settings

The default FPGA Profile name is "default".

Configure the FPGA Profile

Follow these steps to configure the FPGA Profile.

Procedure

Step 1 Use the **fpga-profile activate** command in EXEC mode to activate the required profile:

Example:

```
Switch# fpga-profile activate ?
  default     3 DLR rings and a PRP-channel/HSR-ring
  redundancy  2 DLR rings and 2 PRP-channels/1 HSR-ring
Switch#fpga-profile activate redundancy
```

Step 2 (Optional) Use the **fpga-profile deactivate** command in EXEC mode to deactivate the required profile:

Example:

```
Switch# fpga-profile deactivate
```

Step 3 (Optional) Displays the FPGA Profile that is currently active on the switch:

Example:

```
Switch# show platform fpga-profile ?
  active       current active application profile information
  all          all supported application profile information
  default      default application profile
```

Displays the active FPGA profile and FPGA profile after reload.

```
Switch# show platform fpga-profile active
Active FPGA profile       : default
Active feature set        : 3 DLR rings and a PRP-channel/HSR-ring

FPGA profile upon reload  : default
Feature set upon reload   : 3 DLR rings and a PRP-channel/HSR-ring
```

Displays default FPGA-profile

```
Switch# show platform fpga-profile default
FPGA profile  : default
Feature Set   : 3 DLR rings and a PRP-channel/HSR-ring
```

```
Switch# show platform fpga-profile default
FPGA profile  : default
Feature Set   : 2 DLR rings and 1 PRP-channel/1 HSR-ring
```

Step 4 Reload the switch:

Example:

```
Switch#reload
```