

# Overview

The Platform Environment Control Interface (PECI) is a communication interface between Intel processor and management controllers (e.g. Baseboard Management Controller, BMC). PECI provides services that allow the management controller to configure, monitor and debug platform by accessing various registers. It defines a dedicated command protocol, where the management controller is acting as a PECI originator and the processor - as a PECI responder. PECI can be used in both single processor and multiple-processor based systems.

NOTE: Intel PECI specification is not released as a dedicated document, instead it is a part of External Design Specification (EDS) for given Intel CPU. External Design Specifications are usually not publicly available.

## PECI Wire

PECI Wire interface uses a single wire for self-clocking and data transfer. It does not require any additional control lines - the physical layer is a self-clocked one-wire bus signal that begins each bit with a driven, rising edge from an idle near zero volts. The duration of the signal driven high allows to determine whether the bit value is logic '0' or logic '1'. PECI Wire also includes variable data rate established with every message.

For PECI Wire, each processor package will utilize unique, fixed addresses within a defined range and that address should have a fixed relationship with the processor socket ID - if one of the processors is removed, it does not affect addresses of remaining processors.

## PECI subsystem internals

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\peci\ (linux-master) (Documentation) (peci)peci.rst, line 44)**

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```
.. kernel-doc:: include/linux/peci.h
```

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\peci\ (linux-master) (Documentation) (peci)peci.rst, line 45)**

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```
.. kernel-doc:: drivers/peci/internal.h
```

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\peci\ (linux-master) (Documentation) (peci)peci.rst, line 46)**

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```
.. kernel-doc:: drivers/peci/core.c
```

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\peci\ (linux-master) (Documentation) (peci)peci.rst, line 47)**

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```
.. kernel-doc:: drivers/peci/request.c
```

## PECI CPU Driver API

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```
.. kernel-doc:: drivers/peci/cpu.c
```