The Inter-Platform Communication Framework (IPCF) is a subsystem that enables applications (running on multiple homogenous or heterogeneous processing cores) located on the same chip or different chips (running on other operating systems like AUTOSAR™, FreeRTOS™, or more) to communicate over various transport interfaces (such as Shared Memory and others).

IPCF exposes a zero-copy API that customers can directly use for maximum performance, minimum overhead, and low CPU load. The driver ensures freedom from interference between local and remote shared memory by executing all writing operations only in the local memory domain.

Customers can enforce memory protection for their software with IPCF.
IPCF Architecture Block Diagram

Customer Application

ipc-shm

ipc-os

ipc-hw

NXP hardware platform

Automotive General Block Diagram

SERVICES / APPLICATION SOFTWARE

MIDDLEWARE

OS / DRIVERS / SAFETY

HYPERVISOR (if available)

ARM CORTEX CORE(S)

FIRMWARE / HW ACCELERATORS

NXP TOOLS & IDE
View additional information for Inter-Platform Communication Framework (IPCF).

Note: The information on this document is subject to change without notice.