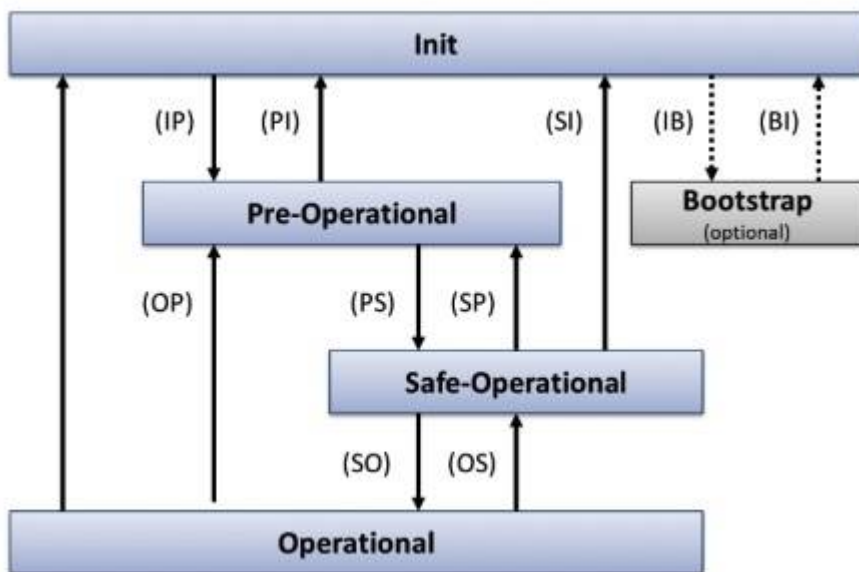


# EtherCAT State Machine



State	Available Functions
Init (INIT)	Init state. No communication on the application layer is available. The master has access only to the DL-information registers.
Pre-Operational (PREOP)	Pre-Operational state. Mailbox communication on the application layer available, but no process data communication available.
Safe-Operational (SAFEOP)	Safe-Operational state. Mailbox communication on the application layer, process (input) data communication available. In SafeOp only inputs are evaluated; outputs are kept in 'safe' state.
Operational (OP)	Operational state. Process data inputs and outputs are valid.
Bootstrap (BOOT)	Bootstrap state. Optional but recommended if firmware updates necessary. No process data communication. Communication only via mailbox on Application Layer available. Special mailbox configuration is possible, e.g. larger mailbox size. In this state usually the FoE protocol is used for firmware download.

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