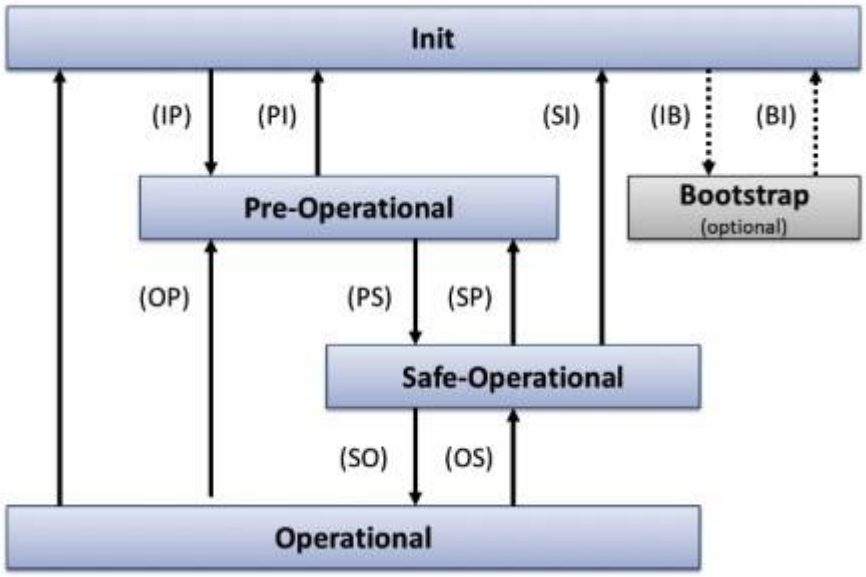
EtherCAT State Machine

This page shows the **EtherCAT state machine** of the gateway. The state machine describes the communication states of the EtherCAT slave.



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.

Notes

- The state machine defines the EtherCAT communication states (Init, Pre-Op, Sync, Op, etc.). - The transition from one state to the next is controlled by the master. - The state table shows the required actions and the status for each state. - Refer to the configuration page for the setup of the gateway in the EtherCAT network.

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