# 1- StartPreOs Sequence:

| StartPreOS Sequence | | |
|---|---|---|
| **Initialization Activity** | **Comment** | **Opt.** |
| Callout `EcuM_AL_SetProgrammableInterrupts` | On ECUs with programmable interrupt priorities, these priorities must be set before the OS is started. | yes |
| Callout `EcuM_AL_DriverInitZero` | Init block 0<br>This callout may only initialize BSW modules that do not use post-build configuration parameters. The callout may not only contain driver initialization but also any kind of pre-OS, low level initialization code. See 7.3.5 Driver Initialization | yes |
| Callout `EcuM_DeterminePbConfiguration` | This callout is expected to return a pointer to a fully initialized `EcuM_ConfigType` structure containing the post-build configuration data for the ECU Manager module and all other BSW modules. | no |
| Check consistency of configuration data | If check fails the `EcuM_ErrorHook` is called. See 7.3.4 Checking Configuration Consistency for details on the consistency check. | no |
| Callout `EcuM_AL_DriverInitOne` | Init block I<br>The callout may not only contain driver initialization but any kind of pre-OS, low level initialization code. See 7.3.5 Driver Initialization | yes |
| Get reset reason | The reset reason is derived from a call to Mcu_GetResetReason and the mapping defined via the EcuMWakeupSource configuration containers. See 8.4.1.2 `EcuM_SetWakeupEvent` and 8.3.5.3 `EcuM_GetValidatedWakeupEvents` (see [SWS_EcuM_02830]) | no |
| Select default shutdown target | See [SWS_EcuM_02181] | no |
| Callout `EcuM_LoopDetection` | If Loop Detection is enabled, this callout is called on every startup. | yes |
| Start OS | Start the AUTOSAR OS, see [SWS_EcuM_02603] | no |

Table 7.1: StartPreOS Sequence

# 2- OffPreOs Sequance:

| OffPreOS Sequence | | |
|---|---|---|
| **Shutdown Activity** | **Comment** | **Opt.** |
| De-init BSW Mode Manager | | no |
| De-init BSW Scheduler | | no |
| Check for pending wakeup events | Purpose is to detect wakeup events that occurred during shutdown | no |
| Set RESET as shutdown target, if wakeup events are pending (default reset mode of `EcuMDefaultReset-ModeRef` will be used) | This action shall only be carried out when pending wakeup events were detected to allow an immediate startup | no |
| ShutdownOS | Last operation in this OS task | no |

**Table 7.4: OffPreOs Sequence**