

# Omc Classic User Manual

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## 1 Overview

This User Manual describes the basis functionality, API and the configuration and integration of the BMW System Function Omc.

### Purpose

The main objective of the Omc functionality is to maintain the current Operating Mode of an ECU.

This means:

- Allowing the change of the current Operating Mode via diagnostic request
- Saving the current Operating Mode to Non Volatile RAM (NVRAM)
- Enabling/disabling Dem (more concrete: Setting/Unsetting a enable condition)
- Providing the current Operating Mode to other software components.

The Omc module distinguishes the following vehicle operating modes:

- NORMAL
- ASSEMBLY
- TRANSPORT
- FLASH

Note that in different documents these modes are sometimes called "energy modes" sometimes called "operating modes". Although both terms are equivalent, we strictly use the term operating mode.

## **2 Related documentation**

### **References**

## 3 API

### Datatypes

#### Omc\_OperatingModeType

This type is used to represent the Operating Mode.

<b>Type name</b>	Omc_OperatingModeType		
<b>Type</b>	uint8		
<b>Values</b>	0x00	OMC_MODE_NORMAL	Normal Mode
	0x01	OMC_MODE_ASSEMBLY	Assembly Mode
	0x02	OMC_MODE_TRANSPORT	Transport Mode
	0x03	OMC_MODE_FLASH	Flash Mode
<b>Description</b>	Represents the operation mode.		

#### Omc\_ExtendedOperatingModeType

This type is used to represent the Extended Operating Mode.

<b>Type name</b>	Omc_ExtendedOperatingModeType		
<b>Type</b>	uint8		
<b>Values</b>	0x00	OMC_MODE_EXTENSION_NORMAL	Normal Extended Mode
	0x01	OMC_MODE_EXTENSION_1	Extended Mode 1
	0x02	OMC_MODE_EXTENSION_2	Extended Mode 2
	0x03	OMC_MODE_EXTENSION_3	Extended Mode 3
	0x04	OMC_MODE_EXTENSION_4	Extended Mode 4
	0x05	OMC_MODE_EXTENSION_5	Extended Mode 5
	0x06	OMC_MODE_EXTENSION_6	Extended Mode 6
	0x07	OMC_MODE_EXTENSION_7	Extended Mode 7
	0x08	OMC_MODE_EXTENSION_8	Extended Mode 8
	0x09	OMC_MODE_EXTENSION_9	Extended Mode 9
	0x0A	OMC_MODE_EXTENSION_10	Extended Mode 10
	0x0B	OMC_MODE_EXTENSION_11	Extended Mode 11
	0x0C	OMC_MODE_EXTENSION_12	Extended Mode 12
	0x0D	OMC_MODE_EXTENSION_13	Extended Mode 13
	0x0E	OMC_MODE_EXTENSION_14	Extended Mode 14
	0x0F	OMC_MODE_EXTENSION_15	Extended Mode 15
	0xFF	OMC_MODE_EXTENSION_INVALID	Invalid Extended Mode
<b>Description</b>	Represents the extended operation mode.		

## Interfaces

### Provided

Omc provides two Mode interfaces to the user to be able to detect the current Operating Mode and Extended Operating Mode. The interface Mode interface, so the user can also trigger able runnable on-entry, on-change or on-exit of a mode.

### OmcOperatingMode

```
ModeDeclarationGroup OmcOperatingMode {
    {
        OMC_MODE_ASSEMBLY,
        OMC_MODE_BMW_FLASH,
        OMC_MODE_NORMAL,
        OMC_MODE_TRANSPORT
    }
    initialMode = OMC_MODE_NORMAL
}
```

### OmcExtendedOperatingMode

```
ModeDeclarationGroup OmcExtendedOperatingMode {
    {
        OMC_MODE_EXTENSION_1,
        OMC_MODE_EXTENSION_10,
        OMC_MODE_EXTENSION_11,
        OMC_MODE_EXTENSION_12,
        OMC_MODE_EXTENSION_13,
        OMC_MODE_EXTENSION_14,
        OMC_MODE_EXTENSION_2,
        OMC_MODE_EXTENSION_3,
        OMC_MODE_EXTENSION_4,
        OMC_MODE_EXTENSION_5,
        OMC_MODE_EXTENSION_6,
        OMC_MODE_EXTENSION_7,
        OMC_MODE_EXTENSION_8,
        OMC_MODE_EXTENSION_9,
        OMC_MODE_EXTENSION_INVALID,
        OMC_MODE_EXTENSION_NORMAL,
        OMC_MODE_EXTENSION_SAVE_ENERGY
    }
    initialMode = OMC_MODE_EXTENSION_NORMAL
}
```