HEADUNIT IDENTIFICATION 2023 - PRESENT

HEADUNIT LOOK-UP TABLES

Head Unit Look-up Table - 1 Series, 2 Series, 3 Series, 4 Series

Model Year	1 Series			2 Series			3 Series / M3			4 Series / M4		
	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional
2023				G42 / G87		HU-H4	G20		HU-H4	G22/23 / G82/83		HU-H4
2024				G42 / G87		HU-H4	G20		HU-H4	G22/23 / G82/83		HU-H4

HU-H3	Head Unit - High Version 3
HU-H4	Head Unit - High Version 4
HU-H5	Head Unit - High Version 5
HU-H6	Head Unit - High Version 6
HU-B2	Head Unit - Basic Version 2

Head Unit Look-up Table - 5 Series, 6 Series, 7 Series, 8 Series

Model Year	5 Series / M5			6 Series / M6			7 Series			8 Series / M8		
	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional
2023	G30		HU-H3				G70		HU-H5	G14/15 / F91/92		HU-H3
2024	G60		HU-H5				G70		HU-H5	G14/15 / F91/92		HU-H3

HU-H3	Head Unit - High Version 3
HU-H4	Head Unit - High Version 4
HU-H5	Head Unit - High Version 5
HU-H6	Head Unit - High Version 6
HU-B2	Head Unit - Basic Version 2

Head Unit Look-up Table - i3, i4, i8, iX

Model Year	i3			i4			i8			iX		
	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional
2023				G26		HU-H4				I20		HU-H4
2024				G26		HU-H5*				I20		HU-H5**

HU-H3	Head Unit - High Version 3
HU-H4	Head Unit - High Version 4
HU-H5	Head Unit - High Version 5
HU-H6	Head Unit - High Version 6
HU-B2	Head Unit - Basic Version 2

*G26 BEV received the HU-H5 as of July 2023 Production
**The I20 received the HU-H5 as of March 2023 Production

Head Unit Look-up Table - X1, X2, X3, X4

Model Year	X1			X2			X3 / X3 M			X4 / X4 M		
	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional
2023	U11		HU-H4	F39	HU-B2		G01 F97	HU-B2	HU-H3	G02 F98	HU-B2	HU-H3
2024	U11		HU-H6	F39			G01 F97	HU-B2	HU-H3	G02 F98	HU-B2	HU-H3

HU-H3	Head Unit - High Version 3
HU-H4	Head Unit - High Version 4
HU-H5	Head Unit - High Version 5
HU-H6	Head Unit - High Version 6
HU-B2	Head Unit - Basic Version 2

Head Unit Look-up Table - X5, X6, X7, XM

Model Year	X5 / X5 M			X6 / X6 M			X7			XM		
	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional	Version	Basic	Professional
2023	G05 F95		HU-H3*	G06 F96		HU-H3*	G07		HU-H4	G09		HU-H4
2024	G05 F95		HU-H5*	G06 F96		HU-H5*	G07		HU-H5*	G09		HU-H5**

HU-H3	Head Unit - High Version 3
HU-H4	Head Unit - High Version 4
HU-H5	Head Unit - High Version 5
HU-H6	Head Unit - High Version 6
HU-B2	Head Unit - Basic Version 2

*Listed Head Unit was installed starting April 2023 production.

**Listed Head Unit was installed starting August 2023 production.

Head Unit Look-up Table - Z4 and Z8

Model Year	Z4			Z8		
	Version	Basic	Professional	Version	Basic	Professional
2023	G29		HU-H3			
2024	G29		HU-H3			

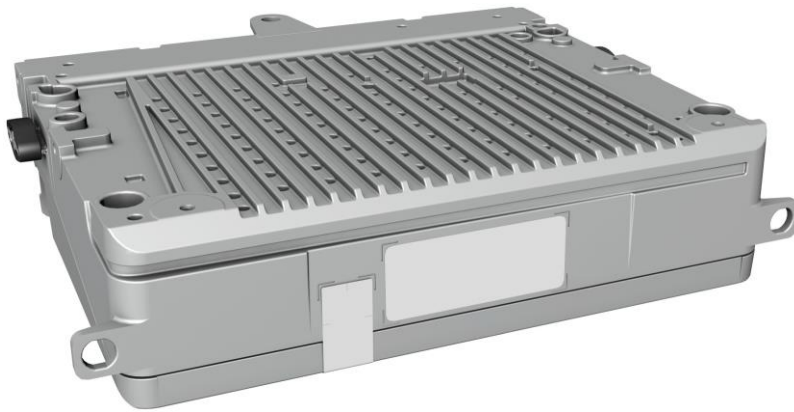|	
HU-H3	Head Unit - High Version 3
HU-H4	Head Unit - High Version 4
HU-H5	Head Unit - High Version 5
HU-H6	Head Unit - High Version 6
HU-B2	Head Unit - Basic Version 2

GENERAL INFORMATION ON THE HU-H5

The Head Unit High 5 had its series introduction in the G70 in 2022 and is necessary for the implementation of BMW OS 8.5. The engineering designation is the MGU 22.

The heart of the Head Unit High 5 is the **Land Grid Array module** (LGA). The LGA module is a matrix housing with shaped surface that can be used in a base or attached to the printed circuit board with soldering paste. It contains the System on a Chip (SoC) and the working memory. The **SoC** is a high integration of CPU (processor) and GPU (graphics card) in a single component.

A 12 Gigabyte to 16 Gigabyte RAM working memory is possible in the Head Unit High 5, instead of the usual 8 Gigabyte RAM.

The HU-H5 is near identical to the HU-H4 except for larger processing power and memory. In addition, the HU-H5 is the first head unit to move to the Secure Feature Activation Token architecture instead of FSC Enabling codes. With this new activation architecture, feature activation (including navigation) must be done automatically with ISTA or Over-the-air. No manual process exists.

Map data is still stored in the head unit as previous versions. The HU-H5 utilized Nav Maps under the **JOY** classification. These maps can be updated in the vehicle in the similar process of download through a USB drive.
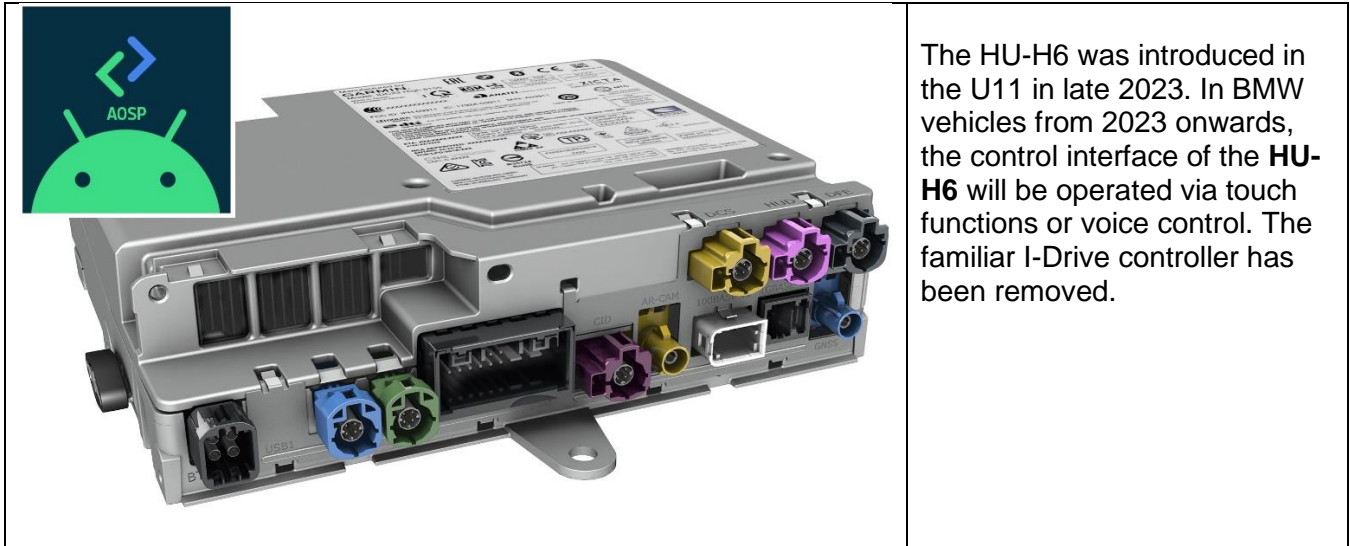

The HU-H5 is included as a Service Pack 21 module but cannot be exchanged for a HU-H4 due to the vast software changes between FSC enabling and SFA token activation strategies.

Equipment	Head Unit High 4	Head Unit High 5
System-on-a-Chip (SoC)	Intel Apollo Lake Premium	Qualcomm Snapdragon SA8155P
CPU Cores	4 x Atom x 7, 2.4 GHz	8 x Kryo™ CPUs 64 bit
DMIPS sustained/max. (max. instructions per second)	40 k/48.4 k	40 k/48.4 k
GPU (graphics card)	Gen 9, 18 cores, 750 MHz	Qualcomm Adreno™ 640 GPU
RAM (working memory)	8 GByte LP-DDR4	12 GByte LPDDR4x (up to 16 GByte possible)
NAND (flash memory)	128 GByte	256 GByte/128 GByte
IOC Core	No data	Cortex M4
IOC Flash	No data	2 MByte
IOC RAM	No data	256 KB
USB 2.0	1x + 2x (optional)	1x + 2x (optional)
CAN	2x luK	2x luK
100BaseT1	4x	4x
1000BaseT1	1 x	1x (optional)
Ethernet WUP	x	x
APIX2/3 central information display	x	x
APIX3 driver's display	Via instrument cluster control unit KOMBI	Via instrument cluster control unit KOMBI
APIX2 BMW Head-up display	Via instrument cluster control unit KOMBI	Via instrument cluster control unit KOMBI
GMSL2 Driver Camera System	Via instrument cluster control unit KOMBI	Via instrument cluster control unit KOMBI
FPD-LinkIII (AR-CAM)	No data	1x (optional)
GNSS	1x (optional)	1x (optional)
Bluetooth	x	Bluetooth 5.0
WLAN	x	Dual band 802. 11ac Wi-Fi

Please reference the image on the left to view the changes from HU-H4 hardware to HU-H5 hardware.

GENERAL INFORMATION ON THE HU-H6

The HU-H6 was introduced in the U11 in late 2023. In BMW vehicles from 2023 onwards, the control interface of the **HU-H6** will be operated via touch functions or voice control. The familiar I-Drive controller has been removed.
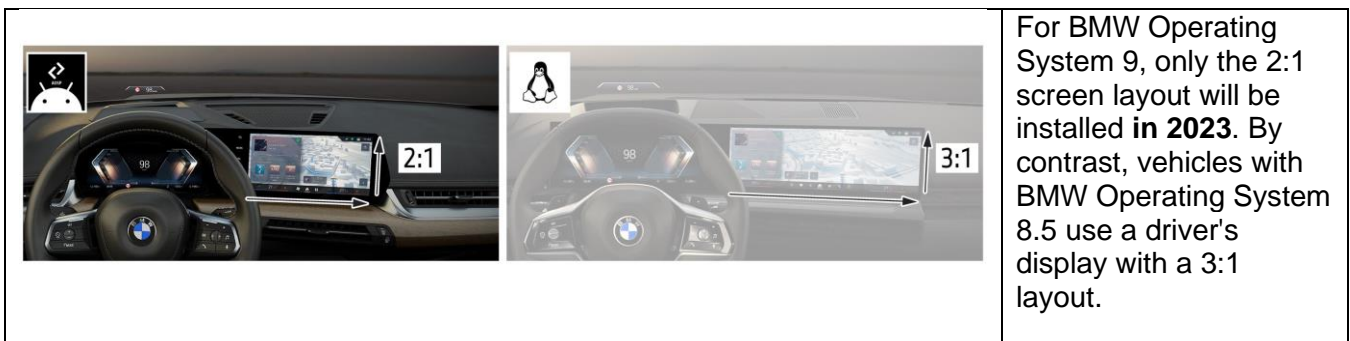
The **HU-H6** has the BMW iDrive operating concept with BMW Operating System 9 (OS 9). By contrast, vehicles with Head Unit High 5 (HU-H5) have the BMW iDrive operating concept with BMW Operating System 8.5 (from 07/2023).

OS 9 is not an upgrade to OS 8.5. In fact, many features available in OS 8.5 are reduced in OS 9. Instead, the large change is in the programming language. Previous head units used a Linux based system. HU-H6 uses Android Open Source.

Visually, the two BMW iDrive systems are very similar. In terms of function, however, they differ significantly.

- Navigation system differences
- Differences in digital aftersales and in BMW ConnectedDrive Upgrades/BMW ConnectedDrive Store/BMW Digital Premium
- Differences in the apps.

Also the systems can be identified quickly at first glance from the different driver displays.

For BMW Operating System 9, only the 2:1 screen layout will be installed **in 2023**. By contrast, vehicles with BMW Operating System 8.5 use a driver's display with a 3:1 layout.

Navigation data is now no longer stored in the head unit. Instead, the data is downloaded via the telematics module much like cell phone map data. This allows for map data to stay current and constantly updated.

An "App Store" is now also included, which allows many 3rd party apps to be downloaded into the head unit directly instead of streaming data from a connected mobile device. Various music, news, sports, podcast providers and games are available directly in the vehicle.