UltraGauge MX

The OBDII standard describes certain parameters which can be accessed via the OBDII interface. Many of the parameters are optional and it is left to the manufacturer's discretion to support them or not.   This is why the gauges available through UltraGauge are vehicle dependent. All Manufacturers have the ability to access additional vehicle parameters beyond those specified in the OBDII standard as well as those standardized OBDII parameters they chose not to make available. For example, there is no OBDII parameter for Transmission Temperature; however, some manufacturers provide this parameter. Likewise, there is a standardized parameter for Fuel Level %, but manufacturers commonly did not provide it via the OBDII on earlier vehicles.

Fundamentally there are two types of parameters:
1. Standardized OBDII parameters; roughly 135. Many are not very useful and of the 135 manufacturers typically support less than half. Ultragauge inherently offers around 60 of these parameters. Standardized OBDII parameters are typically related to emissions.
2. Manufacturer specific parameters (gauges). These are parameters that the manufacturer has inserted for their own purposes. Many are a duplicate of the Standardized gauges, while others are wholly separate and not included in the standardized OBDII parameters. These parameters are not focused on emissions and can be any useful parameter the manufacturer has seen fit to insert.

Many manufactures access these parameters through the same interface as the OBDII. Others access the parameters through proprietary, non-standard pins inserted into the OBDII connector. Only manufacturers which use the same interface as OBDII have parameters that can be accessed by UltraGauge MX.

Typically Ford, GM, and vehicles with CAN interfaces can be accessed.

Manufacturer parameters typically cannot be accessed on Vehicles with 9141 and KWP2000 protocols/interfaces.   In general foreign vehicles prior to 2008 will use the 9141 or KWP2000 protocol. Our vehicle gauge estimator can also be used to determine the protocol used by most vehicles. The UltraGauge MX can be used to access all of the ~135 standardized OBDII parameters, if supported, even on vehicles with 9141 or KWP2000 protocols.   It's important to understand that while the OBDII defines ~135 parameters, manufacturers only support a fraction of this; the older the vehicle, typically the fewer parameters supported.

Manufacturers could in the end not come to agreement on the standardization of accessing parameters beyond those specified in OBDII. As a result there is absolutely no standardization and each manufacturer has implemented a proprietary means to access manufacturer parameters. Furthermore, information regarding parameters and their access and interpretation is not made public. This information over time leaks out or is determined via reverse engineering. This is why so few manufacturer specific gauges are available publically.

The ability to access manufacturer specific parameters is very similar to the X-gauge feature found in ScanGauge™. ALL Codes which function in ScanGauge™ will function in UltraGauge with minor modifications.

The ability to access vehicle specific parameters has always been included in UltraGauge but has been disabled, as it requires programming of codes into the device and considered to complicated. While considerably easier than ScanGauge™, it is still complicated and only recommended for users which are very comfortable with technology and have the time to devote to it and are willing to work with support.

To simplify the use, the UltraGauge MX is provided pre-programmed with 8 common manufacturer parameters for Ford or GM. As the manufacturer's parameters are proprietary and non-standard, there is no guarantee that the pre-programmed parameters will work with your year, make and model vehicle. It is best to search vehicle specific forums to understand if such parameters are accessible in your specific vehicle. The UltraGauge MX is simply a tool that provides the potential to access these parameters and provides no assurance that such parameters are actually available or accessible. The pre-programmed parameters can be fully reprogrammed by the user.

The UG MX supports 8 manufacturer programmable parameters. The pre-programed parameters are:

Non-CAN FORD PreProgrammed Parameters	Description
Kilometers Per Hour	Much more accurate version of the OBDII standardized version
Fuel Level %	Fuel Tank Level percent of full. Allows Auto Fill function for vehicles which previously did not support it
Transmission Temperature	Degrees F
Barometric Pressure	Inches of Mercury
Converter Torque	ft.lbs
Fuel Rail Pressure	PSI
Transmission output shaft RPM	RPM

GM PreProgrammed Parameters	Description
Run Time	Elapsed seconds since engine start
Knock Retard	degrees
Barometric Pressure	Inches of Mercury
Air Fuel ratio	
Oil Life remaining	percent
Engine Coolant Temperature	Same as standardized OBDII coolant temperature
Engine Torque	ft,lbs
Transmission Temperature	Degrees F

The units for the above can be changed by reprogramming. For example, Degrees F can be set to Degrees C, or PSI to kPA, etc.

The UltraGauge MX can be used on vehicles other than Ford and GM vehicles, but there are no preprogrammed parameters available at this time.