

AEMnet

29 bit, 500 kBit/sec, 8 data bytes per message unless otherwise specified

Multi-byte data is packed big endian (Motorola format, most significant byte transmitted first)

Bits numbered MSB first, with the MSB = bit7, LSB = bit0

Both unit types (SI & US) should be made available to the customer whenever possible!

Message ID: 0x01FOA000

Sources: Infinity EMS (30-71XX)

AEM S2 & EMS-4 (30-6XXX)

20ms continuous (50hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			Engine Speed	16 bit unsigned
2-3			Engine Load (Deprecated in Infinity) Use "MAP" in 0x01FOA004 instead	16 bit unsigned
4-5			Throttle	16 bit unsigned
6			Intake Air Temp	8 bit signed, 2's comp
7			Coolant Temp	8 bit signed, 2's comp

Scaling		Offset	Range	DBC Unit Type
0.39063 rpm/bit	0	0	0 to 25,599.94 RPM	angular_speed:rpm
0.0015259 %/bit	0	0	0 to 99.998 %	fraction:%
0.0015259 %/bit	0	0	0 to 99.998 %	fraction:%
1 Deg C/bit	0	-128 to 127 C	temperature:C	temperature:C
1 Deg C/bit	0	-128 to 127 C	temperature:C	temperature:C

Scaling		Offset	Range	DBC Unit Type
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
1.8 Deg F/bit	32	-198.4 to 260.6 F	temperature:F	temperature:F
1.8 Deg F/bit	32	-198.4 to 260.6 F	temperature:F	temperature:F

Message ID: 0x01FOA001

Sources: AEM S2 & EMS-4 (30-6XXX)

20ms continuous (50hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			ADCR11	16 bit unsigned
2-3			ADCR13	16 bit unsigned
4-5			ADCR14	16 bit unsigned
6-7			ADCR17	16 bit unsigned

Scaling		Offset	Range	DBC Unit Type
0.00007782 V/bit	0	0	0 to 5.0999 V	voltage:V
0.00007782 V/bit	0	0	0 to 5.0999 V	voltage:V
0.00007782 V/bit	0	0	0 to 5.0999 V	voltage:V
0.00007782 V/bit	0	0	0 to 5.0999 V	voltage:V

Scaling		Offset	Range	DBC Unit Type
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==

Message ID: 0x01FOA002

Sources: AEM S2 & EMS-4 (30-6XXX)

20ms continuous (50hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			ADCR18	16 bit unsigned
2-3			ADCR15	16 bit unsigned
4-5			ADCR16	16 bit unsigned
6-7			ADCR08	16 bit unsigned

Scaling		Offset	Range	DBC Unit Type
0.00007782 V/bit	0	0	0 to 5.0999 V	voltage:V
0.00007782 V/bit	0	0	0 to 5.0999 V	voltage:V
0.00007782 V/bit	0	0	0 to 5.0999 V	voltage:V
0.000326 V/bit	0	0	0 to 21.3644 V	voltage:V

Scaling		Offset	Range	DBC Unit Type
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==

Message ID: 0x01FOA003

Sources: Infinity EMS (30-71XX)

AEM S2 & EMS-4 (30-6XXX)

20ms continuous (50hz)

Byte	Bit	Bitmask	Label	Data Type
0			Lambda #1	8 bit unsigned
1			Lambda #2	8 bit unsigned
2-3			Vehicle Speed	16 bit unsigned
4			Gear Calculated	8 bit unsigned
5			Ign Timing	8 bit unsigned
6-7			Battery Volts	16 bit unsigned

Scaling		Offset	Range	DBC Unit Type
0.00390625 Lambda/bit	0.5	0.5	0.5 to 1.496 Lambda	afr:LA
0.00390625 Lambda/bit	0.5	0.5	0.5 to 1.496 Lambda	afr:LA
0.0062865 kph/bit	0	0	0 to 411.986 km/h	speed:km/h
1	0	0	0 to 255	unitless:
35156 Deg/bit	-17	-17	to 72.65 Deg	angle:deg
0.0002455 V/bit	0	0	0 to 16.089 Volts	voltage:V

Scaling		Offset	Range	DBC Unit Type
0.057222 AFR/bit	7.325	7.325	7.325 to 21.916 AFR	afr:AFR Gasoline
0.057222 AFR/bit	7.325	7.325	7.325 to 21.916 AFR	afr:AFR Gasoline
0.00390625 mph/bit	0	0	0 to 255.996 MPH	speed:mph
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==

Message ID: 0x01FOA004

Sources: Infinity EMS (30-71XX) V96.1+

20ms continuous (50hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			MAP	16 bit unsigned
2			VE	8 bit unsigned
3			FuelPressure	8 bit unsigned
4			OilPressure	8 bit unsigned
5			LambdaTarget	8 bit unsigned
6	0 (hdb)	0	FuelPump	Boolean
1	2	4	Fan 1	Boolean
2	4	8	Fan 2	Boolean
3	8	16	N2O Active	Boolean
4	16	32	O2FB Active	Boolean
5	32	64	EngineProtectOut	Boolean
6	64	128	MILOutput	Boolean
7 (msb)	128	256	Lean Protect	Boolean
0 (hdb)	0	1	Oil Press Protect	Boolean
1	2	2	2 Step Fuel	Boolean
2	4	4	2 Step Spark	Boolean
3	8	8	Sync State	Boolean
4	16	16	A/C On	Boolean
5	32	32	BoostCut	Boolean
6	64	64	CoolantProtect	Boolean
7 (msb)	128	128	DBZ Error	Boolean

Scaling		Offset	Range	DBC Unit Type
0.1 kPa/bit	0	0	0 to 6,553.5 kPa	pressure:kPa
1 %/bit	0	0	0 to 255 %	fraction:%
0.040 bar/bit	0	0	0 to 10.2 Bar	pressure_gauge:bar(g)
0.040 bar/bit	0	0	0 to 10.2 Bar	pressure_gauge:bar(g)
0.00390625 Lambda/bit	0.5	0.5	0.5 to 1.496 Lambda	afr:LA
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:

Scaling		Offset	Range	DBC Unit Type
0.014504 PSI/bit	-14.6960	-14.696	to 935.81 PSIg	pressure_gauge:psig(g)
<==	<==	<==	<==	<==
0.580151 PSIg/bit	0	0	0 to 147.939 PSIg	pressure_gauge:psig(g)
0.580151 PSIg/bit	0	0	0 to 147.939 PSIg	pressure_gauge:psig(g)
0.057222 AFR/bit	7.325	7.325	7.325 to 21.916 AFR	afr:AFR Gasoline
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==

Message ID: 0x01FOA005

Sources: Infinity EMS (30-71XX) V96.1+

20ms continuous (50hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			LaunchRampTime [ms]	16 bit unsigned
2-3			MassAirflow [gms/s]	16 bit unsigned
4-5			MassAirflow [gms/rev]	16 bit unsigned
6			Clutch Pressure	8 bit unsigned
7	0 (hdb)	0	Brake Sw	Boolean
1	2	2	Clutch Sw	Boolean
2	4	4	Shift Sw	Boolean
3	8	8	Staged Sw	Boolean
4	16	16	----	Boolean
5	32	32	----	Boolean
6	64	64	----	Boolean
7 (msb)	128	128	----	Boolean

Scaling		Offset	Range	DBC Unit Type
10 mS/bit	0	0	0 to 655,350 mS	time:ms
.05 [gms/s] / bit	0	0	0 to 3,276.75 gms/s	mass_flow:g/s
.0005 [gms/rev] / bit	0	0	0 to 32.7675 gms/rev	unitless:
0.344738 Bar/bit	0	0	0 to 87.91 Bar	pressure_gauge:bar(g)
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
0 = false, 1 = true	0	0	0/1	unitless:
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Scaling		Offset	Range	DBC Unit Type
<==	<==	<==	<==	<==
.00661387 [lb/min]/bit	0	0	0 to 433.440 lb/min	mass_flow:lb/min
.0000661387 [lb/rev]/bit	0	0	0 to 4.3344 lb/rev	unitless:
5 PSIg/bit	0	0	0 to 1275 PSIg	pressure_gauge:psig(g)
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==

Message ID: 0x01FOA006

Sources: Infinity EMS (30-71XX) V96.1+

40ms continuous (25hz)

Byte	Bit	Bitmask	Label	Data Type
0			InjPulse	8 bit unsigned
1			Inj[Lambda]B	8 bit unsigned
2			PrimaryInjDuty [%]	8 bit unsigned
3			Modu Sw	8 bit unsigned
4			Water Pressure	8 bit unsigned
5			Pan Pressure	8 bit unsigned
6-7			Est Torque	16 bit unsigned

Scaling		Offset	Range	DBC Unit Type
0.1 mS/bit	0	0	0 to 25.5 mS	time:ms
0.5 %/bit	-64.00	-64	to 63.5 %	fraction:%
0.392157 %/bit	0	0	0 to 100 %	fraction:%
1	0	0	0 to 255	unitless:
0.040 bar/bit	0	0	0 to 10.2 Bar	pressure_gauge:bar(g)
1 kPa/bit	0	0	0 to 255 kPa	pressure:kPa
0.1 Nm/bit	-3276.8	-3276.8	to 3276.7 Nm	torque:N.m

Scaling		Offset	Range	DBC Unit Type
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
0.580151 PSIg/bit	0	0	0 to 147.939 PSIg	pressure_gauge:psig(g)
0.14504 PSI/bit	-14.696	-14.696	to 22.289 PSIg	pressure_gauge:psig(g)
0.0737562 ft-lbs/bit	-2416.8432	+/-	2416.77 ft-lbs	torque:ft.lb

Message ID: 0x01FOA007

Sources: Infinity EMS (30-71XX) V96.1+

40ms continuous (25hz)

Byte	Bit	Bitmask	Label	Data Type
0			InjPulse	8 bit unsigned
1			Inj[Lambda]B	8 bit unsigned
2			PrimaryInjDuty [%]	8 bit unsigned
3			Modu Sw	8 bit unsigned
4			Water Pressure	8 bit unsigned
5			Pan Pressure	8 bit unsigned
6-7			Est Torque	16 bit unsigned

Scaling		Offset	Range	DBC Unit Type
0.1 mS/bit	0	0	0 to 25.5 mS	time:ms
0.5 %/bit	-64.00	-64	to 63.5 %	fraction:%
0.392157 %/bit	0	0	0 to 100 %	fraction:%
1	0	0	0 to 255	unitless:
0.040 bar/bit	0	0	0 to 10.2 Bar	pressure_gauge:bar(g)
1 kPa/bit	0	0	0 to 255 kPa	pressure:kPa
0.1 Nm/bit	-3276.8	-3276.8	to 3276.7 Nm	torque:N.m

Scaling		Offset	Range	DBC Unit Type
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
<==	<==	<==	<==	<==
0.580151 PSIg/bit	0	0	0 to 147.939 PSIg	pressure_gauge:psig(g)
0.14504 PSI/bit	-14.696	-14.696	to 22.289 PSIg	pressure_gauge:psig(g)
0.0737562 ft-lbs/bit	-2416.8432	+/-	2416.77 ft-lbs	torque:ft.lb

[illegible][illegible]

Contained in CAN DBC Files:		AEM Infinity US 20161025.dbc	
US Units (F / PSI / MPH / A/R)			
Scaling	Offset	Range	DBC Unit Type
0.1 PSlg/bit	0	0 to 655.35 PSlg	pressure_gauge.pslg
420.0		420.0	420.0
0.014504 PSl/bit	-14.6960	-14.696 to 935.81 PSlg	pressure_gauge.pslg
420.0	420.0	420.0	420.0
420.0	420.0	420.0	420.0

[illegible]

Contained in CAN DBC Files*		AEM Infinity US 20161025.dbc	
		US Units (F / PSI / MPH / AFR)	
Scaling	Offset	Range	DBC Unit Type
0.014504 PSI/bit	-14.6960	-14.696 to 935.81 PSi	pressure_gauge.psi[g]
0.014504 PSI/bit	-14.6960	-14.696 to 935.81 PSi	pressure_gauge.psi[g]
<min	<min	<min	<min
1.8 Deg F/bit	-58	-58 to 401 F	
<min	<min	<min	<min

[illegible][illegible]

Contained in CAN DBC Files:	AEM Infinity US 20161025.dbc
	US Units (F / PSI / MPH / AFR)

.001465 AFR/bit	0	0 to 96.0088 AFR	afr:AFR Gasoline

Contained in CAN DBC Files*		AEM 30-2340 4ch UEGO US 20161213.dbc AEM 30-2340N 4ch UEGO US 20161213.dbc	
		US Units (l / Psi / MMH / APM)	
Scaling	Offset	Range	DBC Unit Type
.001465 AFR/hit	0	0 to 0.96.0088 AFR	afr:AFR Gasoline
.001465 AFR/hit	0	0 to 0.96.0088 AFR	afr:AFR Gasoline
.001465 AFR/hit	0	0 to 0.96.0088 AFR	afr:AFR Gasoline
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[illegible]

Contained in CAN DBC Files:		TBD	
		US Units (F / PSI / MPH / AFR)	
Scaling	Offset	Range	DBC Unit Type
.001465 AFR/bit	0	0 to 96.0088 AFR	af:AFR Gasoline
.001465 AFR/bit	0	0 to 96.0088 AFR	af:AFR Gasoline
<000	<000	<000	
<000	<000	<000	<000

Contained in CAN DBC Files:		TBD	
		US Units (F / PSI / MPH / AFR)	
Scaling	Offset	Range	DBC Unit Type
.001465 AFR/bit	0	0 to 96.0088 AFR	af- <i>AFR Gasoline</i>
.001 PSI/bit	-15	-15 to 50.535 PSIg	<i>pressure_gauge-psi(g)</i>
<000	<000	<000	<000
<000	<000	<000	<000

[illegible]

Contained in CAN DBC Files*:		AEM 30-2340 4Ch UEGO US 20161213.dbc	
		AEM 30-2340N 4Ch UEGO US 20161213.dbc	
		US Units (F / PSI / MPH / AFR)	
Scaling	Offset	Range	DBC Unit Type
<==	<==	<==	<==

Message ID: 0x000001B1
Sources: AEM 4 Ch UEGO (30-2340) MODE 3
30-2340N same w/11 bit & 1mBit/sec

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Message ID: 0x000001B2
Sources: AEM 4 Ch UEGO (30-2340) MODE 4
30-2340N same w/11 bit & 1mBit/sec
40ms continuous (25hz)

[illegible]

Contained in CAN DBC Files:		AEM 30-2340 4Ch UEGO US 20161213.dbc AEM 30-2340N 4Ch UEGO US 20161213.dbc US Units (F / PSI / MPH / APR)	
Scaling	Offset	Range	DBC Unit Type
C101	C101	C101	C101
C102	C102	C102	C102
C103	C103	C103	C103
C104	C104	C104	C104
C105	C105	C105	C105
C106	C106	C106	C106
C107	C107	C107	C107
C108	C108	C108	C108
C109	C109	C109	C109
C110	C110	C110	C110
C111	C111	C111	C111
C112	C112	C112	C112
C113	C113	C113	C113
C114	C114	C114	C114
C115	C115	C115	C115
C116	C116	C116	C116
C117	C117	C117	C117
C118	C118	C118	C118
C119	C119	C119	C119
C120	C120	C120	C120
C121	C121	C121	C121
C122	C122	C122	C122
C123	C123	C123	C123
C124	C124	C124	C124
C125	C125	C125	C125
C126	C126	C126	C126
C127	C127	C127	C127
C128	C128	C128	C128
C129	C129	C129	C129
C130	C130	C130	C130
C131	C131	C131	C131
C132	C132	C132	C132
C133	C133	C133	C133
C134	C134	C134	C134
C135	C135	C135	C135
C136	C136	C136	C136
C137	C137	C137	C137
C138	C138	C138	C138
C139	C139	C139	C139
C140	C140	C140	C140
C141	C141	C141	C141
C142	C142	C142	C142
C143	C143	C143	C143
C144	C144	C144	C144
C145	C145	C145	C145
C146	C146	C146	C146
C147	C147	C147	C147
C148	C148	C148	C148
C149	C149	C149	C149
C150	C150	C150	C150
C151	C151	C151	C151
C152	C152	C152	C152
C153	C153	C153	C153
C154	C154	C154	C154
C155	C155	C155	C155
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C157	C157	C157	C157
C158	C158	C158	C158
C159	C159	C159	C159
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C161	C161	C161	C161
C162	C162	C162	C162
C163	C163	C163	C163
C164	C164	C164	C164
C165	C165	C165	C165
C166	C166	C166	C166
C167	C167	C167	C167
C168	C168	C168	C168
C169	C169	C169	C169
C170	C170	C170	C170
C171	C171	C171	C171
C172	C172	C172	C172
C173	C173	C173	C173
C174	C174	C174	C174
C175	C175	C175	C175
C176	C176	C176	C176
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C179	C179	C179	C179
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C181	C181	C181	C181
C182	C182	C182	C182
C183	C183	C183	C183
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C188	C188	C188	C188
C189	C189	C189	C189
C190	C190	C190	C190
C191	C191	C191	C191
C192	C192	C192	C192
C193	C193	C193	C193
C194	C194	C194	C194
C195	C195	C195	C195
C196	C196	C196	C196
C197	C197	C197	C197
C198	C198	C198	C198
C199	C199	C199	C199
C200	C200	C200	C200

[illegible][illegible][illegible]

Contained in CAN DBC Files*		AEM 30-2340 4Ch UEGO US 20161213.dbc	
		AEM 30-2340N 4Ch UEGO US 20161213.dbc	
US Units (F / PS / MPH / APR)			
Scaling	Offset	Range	DBC Unit Type
<C>	<C>	<C>	<C>
<F>	<F>	<F>	<F>
<P>	<P>	<P>	<P>
<M>	<M>	<M>	<M>
<A>	<A>	<A>	<A>
<R>	<R>	<R>	<R>
<S>	<S>	<S>	<S>
<V>	<V>	<V>	<V>

[illegible]

Contained in CAN DBC Files*		TBD	
Scaling	Offset	Range	DBC Unit Type
<=0	<=0	<=0	<=0
1 ft-lb/bit	0	-32,767 to +32,767 ft-lb	torque:ft.lb
1 HP/bit	0	-32,767 to +32,767 HP	power:hp
0.00390625 ft-lb/bit	0	0 to 0.9969375 ft-lb	torque:ft.lb
0.00390625 HP/bit	0	0 to 0.9969375 HP	power:hp

Contained in CAN DBC Files*:		TBD	
		US Units ($\text{ft} / \text{PSI} / \text{MPH} / \text{AFR}$)	
Scaling	Offset	Range	DBC Unit Type
$\ll 0$	$\ll 0$	$\ll 0$	$\ll 0$
0.00390625 ft-lb/bit	0	-127.996 to +127.996 ft-lb	torque:ft.lb
0.00390625 HP/bit	0	-127.996 to +127.996 HP	power:hp
$\ll 0$	$\ll 0$	$\ll 0$	$\ll 0$

[illegible][illegible]

Contained in CAN DBC Files:		AEM GPS GAUGE 30-0313-US.dbc	
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
<0.0	<0.0	<0.0	<0.0
<0.0	<0.0	<0.0	<0.0

Contained in CAN DBC Files*:		AEM GPS GAUGE 30-0313-US.dbc	
		US Units (F / PSI / MPH / AFR)	
Scaling	Offset	Range	DBC Unit Type
0.01 mph/bit	0	0 to 655.35 MPH	speed:mph
1 ft/bit	0	-32,768 to 32,767 Feet	distance:ft
<C10	<C10	<C10	<C10
<C10	<C10	<C10	<C10
<C10	<C10	<C10	<C10

	TBD		TBD
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50ms continuous (20hz)				
Byte	Bit	Bitmask	Label	Data Type
0-1			Pressure	16 bit unsigned

Message ID: 0x000A0302
Sources: AEM Temperature Gauge 300F (30-0302)

50ms continuous (20hz)				
Byte	Bit	Bitmask	Label	Data Type
0-1			Temperature	16 bit unsigned

Message ID: 0x000A0305
Sources: AEM EGT Gauge 1800F (30-0305)

50ms continuous (20hz)				
Byte	Bit	Bitmask	Label	Data Type
0-1			Temperature	16 bit unsigned

Message ID: 0x000A0306
Sources: AEM Boost Gauge 50psia (30-0306)

50ms continuous (20hz)				
Byte	Bit	Bitmask	Label	Data Type
0-1			Pressure	16 bit unsigned

Message ID: 0x000A0307
Sources: AEM Pressure Gauge 150psig (30-0307)

50ms continuous (20hz)				
Byte	Bit	Bitmask	Label	Data Type
0-1			Pressure	16 bit unsigned

Message ID: 0x000A0308
Sources: AEM Pressure Gauge 75psia (30-0308)

50ms continuous (20hz)				
Byte	Bit	Bitmask	Label	Data Type
0-1			Pressure	16 bit unsigned

Message ID: 0x000A0309
Sources: AEM Pressure Gauge 15psig (30-0309)

50ms continuous (20hz)				
Byte	Bit	Bitmask	Label	Data Type
0-1			Pressure	16 bit unsigned

Message ID: 0x000A0000
Sources: AEM Vehicle Dynamics Module (30-2203)

100ms continuous (10hz)				
Byte	Bit	Bitmask	DBC Label	Data Type
0-3			GPS_Latitude	32 bit float
4-7			GPS_Longitude	32 bit float

Message ID: 0x000A0001
Sources: AEM Vehicle Dynamics Module (30-2203)

100ms continuous (10hz)				
Byte	Bit	Bitmask	DBC Label	Data Type
0-1			GPS_Speed	16 bit unsigned
2-3			GPS_Altitude	16 bit signed
4-5			GPS_Course	16 bit unsigned
6			GPS_Satellite_Count	8 bit unsigned
7			GPS_Valid	8 bit unsigned

Message ID: 0x000A0002
Sources: AEM Vehicle Dynamics Module (30-2203)

200ms continuous (5hz)				
Byte	Bit	Bitmask	DBC Label	Data Type
0			GPS_Valid	8 bit unsigned
1			GPS_Year	8 bit unsigned
2			GPS_Month	8 bit unsigned
3			GPS_Day	8 bit unsigned
4			GPS_Debug_Flags	8 bit unsigned
5			GPS_Hours	8 bit unsigned
6			GPS_Minutes	8 bit unsigned
7			GPS_Seconds	8 bit unsigned

Message ID: 0x000A0003
Sources: AEM Vehicle Dynamics Module (30-2203)

10ms continuous (100hz)				
Byte	Bit	Bitmask	DBC Label	Data Type
0-1			X_Axis_Accel	16 bit signed
2-3			Y_Axis_Accel	16 bit signed
4-5			Z_Axis_Accel	16 bit signed
6			-	8 bit unsigned
7			-	8 bit unsigned

Message ID: 0x000A0004
Sources: AEM Vehicle Dynamics Module (30-2203)

10ms continuous (100hz)				
Byte	Bit	Bitmask	DBC Label	Data Type
0-1			X_Axis_Yaw_Rate	16 bit signed
2-3			Y_Axis_Yaw_Rate	16 bit signed
4-5			Z_Axis_Yaw_Rate	16 bit signed
6			-	8 bit unsigned
7			-	8 bit unsigned

Message ID: 0x00000026
Sources: AEM WB Ethanol/Boost Gauge (30-4910)

10ms continuous (100hz)				
Byte	Bit	Bitmask	Label	Data Type
0-1			Lambda	16 bit unsigned
2-3			Pressure	16 bit unsigned
4			Fuel Temperature	8 bit signed
5			Flex Fuel Ethanol Content	8 bit unsigned
6	0 (lsb)	0	AFR Ready	Boolean
	1	2	AFR Heater Open Error	Boolean
	2	4	AFR C12.25 Error	Boolean
	3	8	AFR Sensor Heating Up	Boolean
	4	16	AFR Low Voltage	Boolean
	5	32	AFR Heater Time-Out Error	Boolean
7 (msb)	6	64	AFR Heater Short Error	Boolean
	7	128	AFR Overtemp Error	Boolean
	0 (lsb)	0	Alarm Status	Boolean
	1	2	Alarm Source	Boolean
	2	4	Alarm Source	Boolean
	3	8	Alarm Source	Boolean

SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0.01 bar/bit	0	0 to 655.35 bar	pressure:bar

US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
0.1450377 PSig/bit	0	0 to 9502.575 PSig	pressure_gauge:psig

Contained in CAN DBC Files*: TBD			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
1 degC/bit	0	0 to 65535 degC	temperature:C

Contained in CAN DBC Files*: TBD			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
1.8 degF/bit	32	0 to 117995 degF	temperature:F

Contained in CAN DBC Files*: TBD			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
1 degC/bit	0	0 to 65535 degC	temperature:C

Contained in CAN DBC Files*: TBD			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
1.8 degF/bit	32	0 to 117995 degF	temperature:F

Contained in CAN DBC Files*: TBD			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0.01 bar/bit	0	0 to 655.35 bar	pressure:bar

Contained in CAN DBC Files*: TBD			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
0.1450377 PSig/bit	0	0 to 9502.575 PSig	pressure_gauge:psig

Contained in CAN DBC Files*: TBD			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0.01 bar/bit	0	0 to 655.35 bar	pressure:bar

Contained in CAN DBC Files*: TBD			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
0.1450377 PSig/bit	0	0 to 9502.575 PSig	pressure_gauge:psig

Contained in CAN DBC Files*: TBD			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0.01 bar/bit	0	0 to 655.35 bar	pressure:bar

Contained in CAN DBC Files*: TBD			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
0.1450377 PSig/bit	0	0 to 9502.575 PSig	pressure_gauge:psig

Contained in CAN DBC Files*: TBD			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0.0006894757 bar/bit	0	0 to 45.184 bar	pressure:bar

Contained in CAN DBC Files*: TBD			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
.01 psig/bit	0	0 to 655.35 psig	pressure_gauge:psig

Contained in CAN DBC Files*: AEM VDM 30-2203 SI 20161008.dbc			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
Degrees reference WGS-84 datum North is positive	0	+90.00 (north) to -90.00 (south) Degrees	angle:deg
Degrees reference WGS-84 datum East is positive	0	+180.00 (east) to -180.00 (west) Degrees	angle:deg

Contained in CAN DBC Files*: AEM VDM 30-2203 US 20161008.dbc			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
<===	<===	<===	<===
<===	<===	<===	<===

Contained in CAN DBC Files*: AEM VDM 30-2203 SI 20161008.dbc			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0.010609344 kph/bit	0	0 to 1054.684 kph	speed:mph
0.3048 meter/bit	0	-9.887 to 9.887.4 meters	distance:m
0.01 deg/bit	0	0 to 655.35 degrees	angle:deg
1	0	0 to 255	unitless:
1	0	0 to 255	unitless:

Contained in CAN DBC Files*: AEM VDM 30-2203 US 20161008.dbc			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
0.01 mph/bit	0	0 to 655.35 MPH	speed:mph
1 ft/bit	0	-32,768 to 32,767 Feet	distance:ft
<===	<===	<===	<===
<===	<===	<===	<===

Contained in CAN DBC Files*: AEM VDM 30-2203 SI 20161008.dbc			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0 = N/A, 1 = OK	0	0-255	unitless:
2000	2000	2000-2255 Years UTC	unitless:
1	0	0-255 Months UTC	unitless:
1	0	0-255 Days UTC	time:day
1	0	0-255	unitless:
1	0	0-255 Hours UTC	time:h
1	0	0-255 Minutes UTC	time:min
1	0	0-255 Seconds UTC	time:s

Contained in CAN DBC Files*: AEM VDM 30-2203 US 20161008.dbc			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===

Contained in CAN DBC Files*: AEM VDM 30-2203 SI 20161008.dbc			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0.0002441406 g /bit	0	-8g to +8g	acceleration:G
0.0002441406 g /bit	0	-8g to +8g	acceleration:G
0.0002441406 g /bit	0	-8g to +8g	acceleration:G
1	0	---	---
1	0	---	---

Contained in CAN DBC Files*: AEM VDM 30-2203 US 20161008.dbc			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===

Contained in CAN DBC Files*: AEM VDM 30-2203 SI 20161008.dbc			
SI Units (C / kPa / kph / Lambda)			
Scaling	Offset	Range	DBC Unit Type
0.01525879 deg/s/bit	0	-500 deg/s to +500 deg/s	angular_speed:deg/s
0.01525879 deg/s/bit	0	-500 deg/s to +500 deg/s	angular_speed:deg/s
0.01525879 deg/s/bit	0	-500 deg/s to +500 deg/s	angular_speed:deg/s
1	0	---	---
1	0	---	---

Contained in CAN DBC Files*: AEM VDM 30-2203 US 20161008.dbc			
US Units (F / PSI / MPH / AFR)			
Scaling	Offset	Range	DBC Unit Type
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===
<===	<===	<===	<===

Contained in CAN DBC Files*		TBD	
		SI Units (C / kPa / kph / Lambda)	
Scaling	Offset	Range	DBC Unit Type
.0001 Lambda/bit	0	0 to 6.5535 Lambda	afR-LA
0.00689476 kPa/bit	-2.09636	-2.09636 to 449.752 kPa	pressure:kPa
1 degC/bit	0	-40 degC to 125 degC	temperature:C
1 %/bit	0	0 to 100%	fraction:%
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:
0 = false, 1 = true	0	0/1	unitless:

4	16	---	Boolean
5	32	---	Boolean
6	64	---	Boolean
7 (msb)	128	---	Boolean

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Message ID: 0x00000027

Sources: AEM WB Ethanol/Boost Gauge (30-4910)
10ms continuous (100hz)

Byte	Bit	Bitmask	Label	Data Type
0-1			Lambda Upper Limit	16 bit unsigned
2-3			Lambda Lower Limit	16 bit unsigned
4-5			Alarm Delay Limit	16 bit unsigned
6-7			Alarm Delay Counter	16 bit unsigned

Contained in CAN DBC Files*		TBD	
Scaling	Offset	Range	DBC Unit Type
.0001 Lambda/bit	0	0 to 6.5535 Lambda	afr:LA
.0001 Lambda/bit	0	0 to 6.5535 Lambda	afr:LA
1 mS/bit	0	0 to 65,535 mS	time:ms
1 mS/bit	0	0 to 65,535 mS	time:ms

Contained in CAN DBC Files*		TBD	
Scaling	Offset	Range	DBC Unit Type
.001465 AFR/bit	0	0 to 96.0088 AFR	afr:AFR Gasoline
.001465 AFR/bit	0	0 to 96.0088 AFR	afr:AFR Gasoline
<==	<==	<==	<==
<==	<==	<==	<==

Message ID: 0x00000028

Sources: AEM WB Ethanol/Boost Gauge (30-4910)
10ms (100hz) only in alarm mode

Byte	Bit	Bitmask	Label	Data Type
0-1			Alarm Lambda	16 bit unsigned
2-3			Alarm Pressure	16 bit unsigned
4-5			Alarm Reset Limit	16 bit unsigned
6-7			Alarm Reset Counter	16 bit unsigned

Contained in CAN DBC Files*		TBD	
Scaling	Offset	Range	DBC Unit Type
.0001 Lambda/bit	0	0 to 6.5535 Lambda	afr:LA
0.00689476 kPa/bit	-2.09636	-2.09636 to 449.752 kPa	pressure:kPa
1 mS/bit	0	0 to 65,535 mS	time:ms
1 mS/bit	0	0 to 65,535 mS	time:ms

Contained in CAN DBC Files*		TBD	
Scaling	Offset	Range	DBC Unit Type
.001465 AFR/bit	0	0 to 96.0088 AFR	afr:AFR Gasoline
.001 PSI/bit	-15	-15 to 50.535 PSI	pressure_gauge:psi(g)
<==	<==	<==	<==
<==	<==	<==	<==

* ECU, VDM, Air/Fuel Sensor/Devices, DBC files can be found at <http://aemelectronics.com/?q=forum/dbc-files-can-configuration-downloads-requests-share>