# CAN BUS Data FG Falcon

Values are in Decimal

CAN DATA Format: Node ID, X1 X2 X3 X4 X5 X6 X7 X8 (Example: 100, 0 0 0 0 0 0 0 0)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ID | X1 | X2 | X3 | X4 | X5 | X6 | X7 | X8 |
| 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

CAN BUS Types:

* HS = High Speed (OBD Port), Rate: 500KBPS
* LS = Low Speed (ICC), Rate: 125KBPS

RED = Unverified

Code Formulas:

1: Uses Major and Minor Value, maximum value of data is 255 (Binary Limit). Major Value \* 255 + Minor Value = Value

2: Data value is used to specify TRUE / FALSE for multiple items. Calculated by checking if a value is higher than ‘N’, then removing it from total. (128, 64, 32, 16, 8 , 4, 2 ,1)

Example Value: 147 is calculated to 128 = True, 64 = False, 32 = False, 16 = True, 8 = False, 4 = False, 2 = True, 1 = True

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CAN ID | Function / Details | ECU Module | CAN BUS | Frequency | Example Data |
| 133 | **Possible YAW Rate Sensor Data** |  |  |  |  |
| 144 | **Steering Wheel Position**  **Angle calculated with formula 1**  X1 = Multiplier (n \* 255)  X2 = Fine Value  Formula for Steering Wheel Angle = (X1 \* 255) + X2  When angle goes into negative, multiplier starts at 255.  For Negative angles use ((((X1 – 255) \* -1) \* 255) + X2) \* -1 |  | HS |  |  |
| 151 |  |  |  |  |  |
| 201 |  |  | HS |  |  |
| 252 | Unknown – Slow update rate, always same data. |  |  |  | 3,0,0,0,0,0,0,0 |
| 288 |  |  |  |  |  |
| 296 | **Lights**  X1 = Headlights  X4 = Indicators | Cluster | LS | 100 |  |
| 301 | **Throttle, RPM, Brakes**  **RPM Calculated with formula 1**  Throttle = X3  RPM = ((X5 \* 255) + X6) / 4  Brakes = X8  X8 = 1 : Brakes On  X8 = 0 : Brakes Off |  | HS |  |  |
| 519 | **Speed, RPM – Node is by for Cluster for RPM and Speed.**  **Speed calculated with formula 1**  Speed = (X5 + (X6 / 255)) \* 2  RPM = X1 and X2, 16 Units in X1 = 1000RPM. X2 is fine multiplier (X2 / 255) = X1 Value. RPM = (X1 + (X2 / 255)) \* 62.5 |  | HS |  |  |
| 528 | **DSC / TSC Module**  **(Cluster indicator light for DSC turns off when this node is detected by cluster)** |  |  |  |  |
| 560 | **Transmission**  **X1 = Transmission Mode**  **X2 = Target Gear Position**  **Note: (While Changing Gears, X1-3 Change)**  X1 = 22 While using Trip Tronic (Gear 6)  X1 = 6 While using drive (Gear 6)  X2 = 255 – Gear 1  X2 = 149 – Gear 2  X2 = 97 – Gear 3  X2 = 72 – Gear 4  X2 = 55 – Gear 5  X2 = 44 – Gear 6  **X8 = transmission fault over 30. Normal value is 1, when set to 2 cluster shows ‘performance mode’** |  |  |  |  |
| 738 |  | ICC Screen | LS | 200 |  |
| 742 |  | ACU | LS | 200 |  |
| 748 | **Steering Wheel Control Buttons**  Used in combination with Node 754  X7 = 16 : Mode button | ACU | LS | 200 |  |
| 751 |  | ACU | LS | 200 |  |
| 754 | **Steering Wheel Control Buttons**  Seek Button - X8 = 9  Volume Up Button - X8 = 17  Volume Down Button - X8 = 25  Mode Button - X8 = 1 and X7 = 72 with combination of node 748 – X7 = 16  Phone Button – X7 = 104 | ACU | LS | 200 |  |
| 756 |  | ACU | LS | 500 |  |
| 761 |  | ACU | LS | 500 |  |
| 764 | **ICC Panel Control Buttons**  Seek Up – X1 = 4  Seek Down – X1 = 8  FM/AM – X1 = 32  SCN/AS – X1 = 64  CD/AUX – X1 = 128  OK – X3 = 33  Volume Up – X4 = 65  Volume Down – X4 = 129 | ICC Screen | LS | 100 |  |
| 775 | **ICC Button Controls**  Rear Demister Toggle – X1 = 32  Window Defog (Front) – X1 = 2  Air Conditioning Toggle – X1 = 128  Close Cabin / Open Cabin – X1 = 64  Off – X2 = 16  Fan Speed Increase – X2 = 4  Fan Speed Decrease – X2 = 8  Cycle Vent Configuration – X2 = 128  Auto Air Conditioning – X2 = 32  Hazard Lights – X3 = 1  AC Temp Up – X3 = 128  AC Temp Down – X3 = 64  Interior Lights – X4 = 160  DSC (Traction Control) Button – X4 = 144  Lock Button – X4 = 192  Unlock Button – X4 = 132 | ICC Screen | LS | 500 |  |
| 777 |  | ACU | LS | 500 |  |
| 779 |  | ACU | LS | 500 |  |
| 781 |  | ACU | LS | 500 |  |
| 783 |  | ACU | LS | 200 |  |
| 785 |  | ACU | LS | 200 |  |
| 787 |  | ICC Screen | LS | 200 |  |
| 789 |  | ICC Screen | LS | 200 |  |
| 791 |  | ACU | LS | 500/1000 |  |
| 832 | **Seat Belt Protection.**  **When testing cluster light went off, X1-8 values set to 100.** |  |  |  |  |
| 851 | **Air-conditioning / HVAC**  X1 = Vent Position / Configuration  X4 = Current AC Set Temperature  X5 = Outside Temperature  X8 = Fan Speed | BCM | LS |  |  |
| 1001 | **Transmission / Current Gear State (Different to Target Gear)**  **X1 = Transmission State**  X1 = 0 – Park  X1 = 28 – Reverse (16 while engine Off), Transitions from 240 -> 31 -> 28 while On.  X1 = 32- Neutral (Transitions from 47 to 32 when changing into N)  X1 = 49 – Gear 1 (D) (Transitions from 63 to 49 when changing into D)  X1 = 50 – Gear 2 (D)  X1 = 51 – Gear 3 (D)  X1 = 52 – Gear 4 (D)  X1 = 53 – Gear 5 (D)  X1 = 54 – Gear 6 (D)  X3 = Changes while off, possible temp sensor? |  | HS |  |  |
| 1027 | **Body Control Status**  **X1 Door status calculated using formula 2**  X1 = Body Status  X2 = Indicator confirmation  X7 = Security / Lock State  X1 - Body Status Formula:  +128 = Front Right door open  +64 = Front Left Door open  +32 = Rear Right Door open  +16 = Rear Left Door open  +8 = Boot  +4 = Rear window demister on  +2 = ?  +1 = ?  X2 – Indicator Confirmation  +32 = Indicator blink after remote unlock / lock  X7 – Lock Status  Less than 20 = Unlocked  More than 200 = Locked | BCM | LS |  |  |
| 1030 | **Body Information (Interior Lights, Ignition / Key State)**  X2 = Ignition / Key State  X3 = Interior Lights  Ignition State Off : X2 = 1  Ignition State Accessories : X2 = 2  Ignition State On : X2 = 4   * On State does not specify engine started, only ECU On.   Interior Lights On : X3 = 8  Interior Lights Off: X3 = 0 | BCM | LS |  |  |
| 1033 | **Additional Body Information (Incomplete)** |  |  |  |  |
| 1063 | **Smartshield Lock? (Caused Immobilise and Cluster reset when invalid data was sent in testing)** |  |  |  |  |
| 1079 | **Hand Brake**  **X3 – Hand Brake On/Off**  X3 = 1 Hand Brake Off  X3 = 17 (+16) Hand Brake On  **Fuel Usage**  **X1 and X2** |  | HS |  |  |
| 1200 | Individual Wheel Speeds  Formula (X1 \* 255) + X2 = Wheel Speed  X1-2 = Front Left Wheel  X3-4 = Front Right Wheel  X5-6 = Rear Left Wheel  X7-8 = Rear Right Wheel | ABS / DSC | HS |  | 0 0 0 0 0 0 0 0  1 50 0 0 0 0 0 0 |
| 1297 |  | Cluster | LS | 1000 |  |
| 1292 |  | ACU | LS | 200 |  |
| 1372 |  | ICC Screen | LS | 500 |  |
| 1782 | Immobilizer PCM communication |  |  |  |  |
| 1788 |  | ACU | LS | 500/1000 |  |