xtremeDB Configuration: DP-34044
Quickstart Guide

The xtremeDB is a powerful device that has many functions, and in this lies the necessity of configuration. Because an xtremeDB block has configurable inputs that can operate as digital, 0-5V DC, 0-10V DC, 4-20 mA, counter frequency, A/B encoder, ratiometric, and ground input, and configurable outputs that can be PWM, PWM(i), digital or discrete, or open or closed loop. It is up to the user to determine which of these configurations best suits the purpose of the application.

xtremeDB Configuration can be accomplished one of two ways: by connection of an xtremeDB to the xtremeDB Block Tool via a Data Panel programming kit (available at www.datapanel.com/programming-tools), or by the more common method of sending configuration PGN's from the master controller in the system. If you are configuring with individual PGN's, we suggest that you use the free xtremeDB Block Tool to export built J1939 messages for import into your code.

Configurations

The initial step is to plug in your 4 pin power connection, and ensure you have a properly terminated CAN network. Any other connections are at the user's discretion, but not necessary.

Select the part number of the block you are configuring. (A)

We recommend that you select 'Save Configuration' and all other "Transmit ____" messages when configuring your block. (C) If "Save Configuration" is not selected, the block will restore to the default factory configuration on power cycle.

To turn on the device outputs and configure or control sensor outputs, select the "Output Control" tab to access output configuration options. (E)

To save your preset to an external file, select the Save button (F). This is useful for if you must load this same configuration to multiple blocks. Your saved presets can be opened by the application by selecting the Load button (G) and navigating to the desired preset.
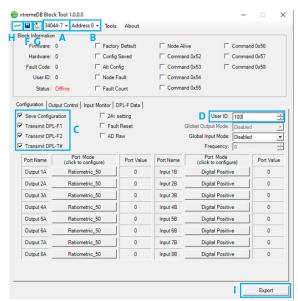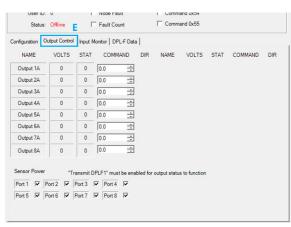
When Using Our Programming Kit

Connect via the UCG (DP-30009) by selecting the connection option. (H) When connected through the UCG, the "Export" button becomes a "Send" button. (I) Messages will be sent directly to the block.

When Using the System Controller

Export your configurations. (I) The exported text file will contain the configuration and output control messages both in decimal and hexadecimal.

0x51h (081) is not a configuration message and should be sent only after the outputs have been set up. 0x52h (082) includes the save function, so when using a controller, we recommend that you send this message last if you want to save the configuration.

NOTE: The default Baud rate for all Data Panel devices is 250kb/s. The STAT LED will remain off if the block is still in factory mode.

NOTE: The default device Source Address (SA) for all xtremeDB blocks is 224 (0xE0). If using a different source address, select a new SA from the dropdown menu under 'Address 0'. xtremeDB blocks will dynamically assign the destination SA to each status message based on the received controller SA. (B)

NOTE: Should you need to track different configurations for multiple systems, you may want to assign a User ID to your configuration. This can be done by entering a value into the User ID field. The User ID will be set in message 0x52h (082) in Byte 8 and returned in STAT. We recommend to check the User ID, if set, and then wait for the bit containing the received command message between sent configuration messages. This ensures the success of your configuration. (D)

NOTE: xtremeDB blocks require a minimum message spacing of 4 mSec between each configuration message.

NOTE: Any voltage within the 9...32V DC range will not damage the block. Voltage faults don't affect the device's functionality.

For persisting questions, email one of our engineers at dptech@murrinc.com or call our company phone.

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