

Using the ATI CANverter Configuration Tool

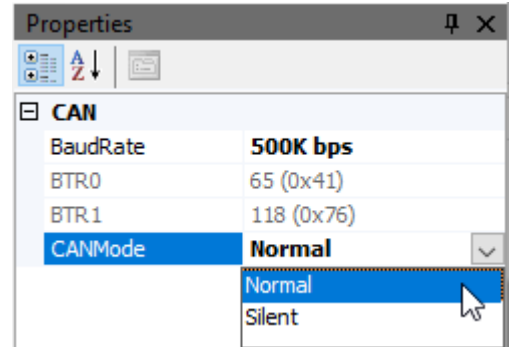
The CANverter's ATI Configuration Tool software is used to configure the channels as inputs or outputs, digital or analog, and define the signals in the CAN data field. The CANverter communication settings are configured by clicking on one of the highlighted CAN pins or accessing Device -> Configure -> CAN from the menu.



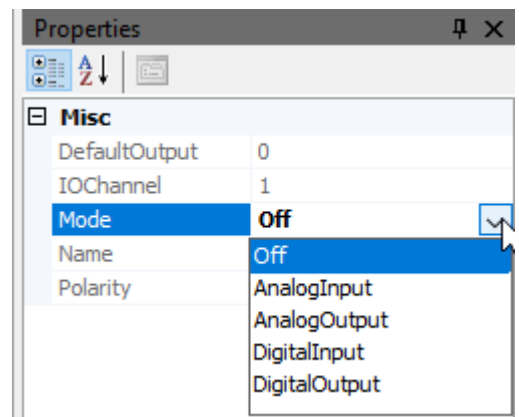
The **Property Editor** – Device Configuration window contains the following field definitions:

CAN Group:

- **BaudRate** – This shows a pull-down combination selection that allows you to select pre-defined CANchip parameters or custom via the dropdown box shown below.
- **BTR0, BTR1** – The bit timing registers. The values are auto-calculated when selecting a pre-defined BaudRate. Setting the BaudRate to Custom enables editing of the bit timing registers.
- **CANMode** – Select between Normal and Silent modes of CAN communication:
- **Normal(default)** – The CANverter will send, receive and acknowledge CAN messages that it receives.
- **Silent** – The CANverter will monitor activity on the network, but its communications will be disabled. The CANverter will essentially be “invisible” to the CAN network.



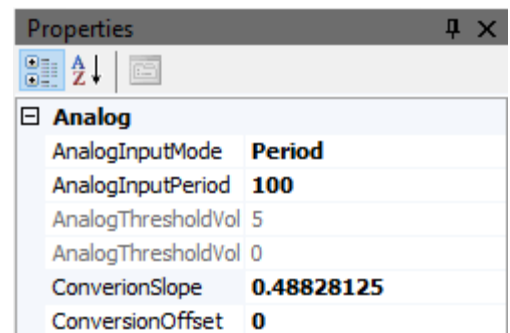
The Pin Configuration Editing window contains the following Common field definitions parameters when the I/O Channel mode is set to “AnalogInput” or “AnalogOutput”:



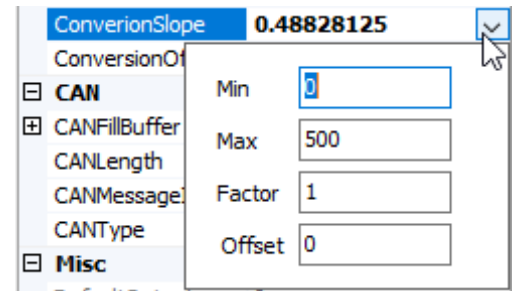
Analog Group:

The scale and offset sent down to the device is based on what the user enters here and the Engineering Offset/Slope values.

- **AnalogInputMode** – Select Period or OnLevel.
- **AnalogInputPeriod** – The period in milliseconds at which the CAN message is transmitted on the CAN channel.
- **AnalogThresholdVoltsHigh** – The voltage value used as the High level for Onlevel Mode. (not used in period mode).
- **Analog ThresholdVoltsLow** – The voltage value used as the Low level for Onlevel Mode. (used in period mode).



- **ConversionSlope** – The slope (scaler) used to convert to and from raw byte values to engineering values. The value is calculated by value provided in the dropdown box.
- **ConversionOffset** – The offset used to convert to and from raw byte values to engineering values.

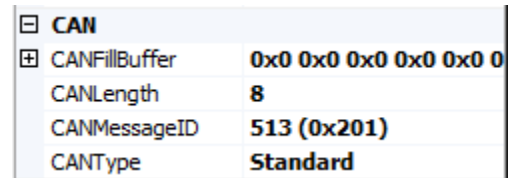


Note: Conversion Slope and Offset are automatically calculated if you drag a signal from a CAN Database to the pin.

Important: Configuration parameters for analog and digital inputs will not be available to configure (they will appear grayed out) if CAN Mode is set to Silent Mode. Silent Mode disables the CANverter from sending messages. Click on CAN H or CAN L pins to access the CAN mode parameter in the Properties Window.

CAN Group:

- **CANFillBuffer** – The default data that is placed in the CAN message buffer and sent in the CAN message along with the changes made by Analog/Digital inputs.
- **CANLength** – Data Length Code (DLC) – the length of the message buffer.
- **CANMessageID** – The CAN Identifier defining the CAN Frame.
- **CANType** – Indicates whether the message is a Standard (11-bit) or Extended (29-bit) CAN Identifier.



The Pin Configuration Editing window contains the following Common field definitions parameters when the I/O Channel mode is set to “DigitalInput” or “DigitalOutput”:

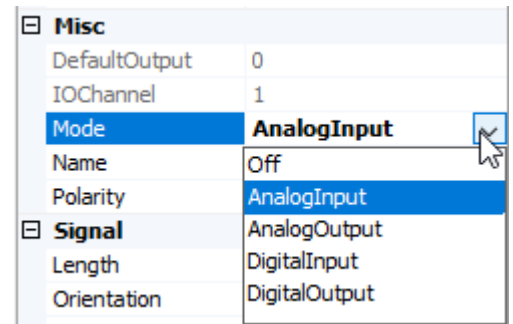
Digital Group:

- **DigitalInputMode** – Select Period, OnChange, OnHigh, or OnLow
 - Period mode will transmit a message at the defined rate.
 - OnChange transmits the message when the state of the input changes.
 - OnHigh transmits the message when the signal goes High.
 - OnLow transmits the message when the signal goes Low.
- **DigitalInputPeriod** – The period in which the CAN Message is transmitted when the Digital Input Mode is set to Period.
- **Threshold** – Defines the trigger threshold level.
 - For Digital Output mode: the value of the CAN data that delineates between true or false as designated by the Signal Group| Length field. For example, if the Signal Group| Length field is 3 bits, the threshold value must be between 0 and 7. In this case, if the Threshold = 4, the condition will be true for CAN data values of 4 to 7. If the CAN data value is 3 or lower the condition will be false.
 - For Digital Input mode: the value sets the voltage level that delineates the shift between a binary 0 or binary 1 (true or false).

Important: Configuration parameters for analog and digital inputs will not be available to configure (they will appear grayed out) if CAN Mode is set to Silent Mode. Silent Mode disables the CANverter from sending messages. Click on CAN H or CAN L pins to access the CAN mode parameter in the Properties Window.

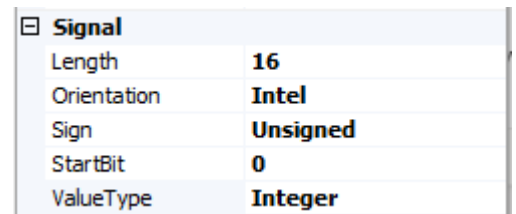
Misc Group:

- **DefaultOutput** – The value for the output signal on start.
- **Pin** – The designated pin number.
- **Mode** – Select one of the following mode types:
 - For I/O 1-4: Off, AnalogInput, AnalogOutput, DigitalInput, or DigitalOutput
 - For PWM Output: Off, Control, Duty Cycle or Frequency
- **Name** – The given name of the signal. This is set from the signal from the database or user set.
- **Polarity** – For Digital Inputs/Outputs, selects between normal or inverted logic.
 - Normal: True = High, For the PWM output the DutyCycle setting defines High Time.
 - Inverted: True = Low, For the PWM output the DutyCycle setting defines Low Time.



Signal Group:

- **Length** – Defines the length of the signal in the message data field.
- **Orientation** – Motorola (Big Endian – MSB on the left) or Intel (Little Endian – MSB on the right) can be used here.
- **Sign** – Can be Unsigned or Signed.
- **StartBit** – The starting bit as selected from the start of the bit stream coming into the CAN buffer.
- **ValueType** – Select integer (Int32) or floating point (Float32).



For additional questions, contact ATI support at support@accuratetechnologies.com.

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