

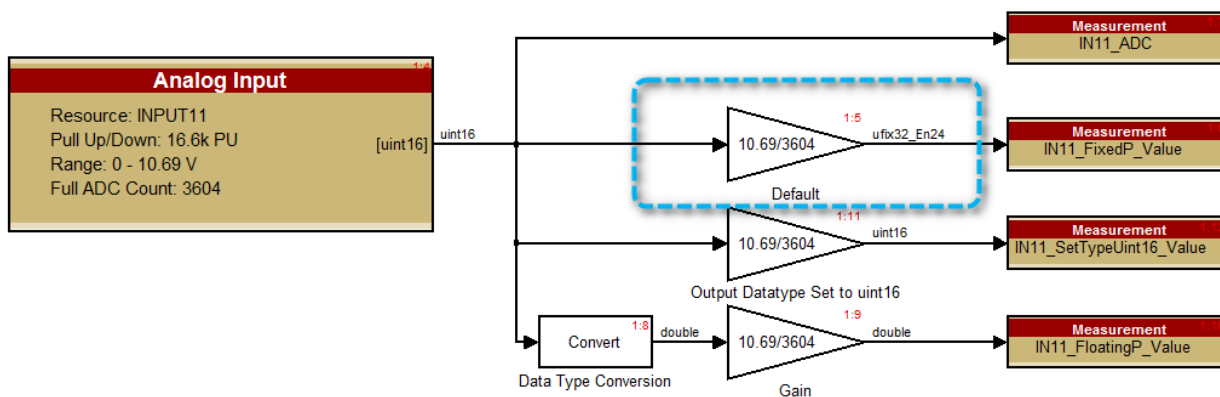


## Application Note: APPNOTE\_2015a001\_000

For consistency between ECU targets and model portability, in Raptor 2015a\_0.0.1, analog inputs will output a uint16 data type representing the ADC counts. In prior releases the data type was set via back propagation. The resolved value would often be floating point, especially on displays where the output represented a floating point voltage 0-10.0 V.

**Note: Care should be taken with existing models when updating to Raptor 2015a to assure that the proper value is passed downstream.**

Simulink 'Gain' blocks, for example will inherit output data types via internal rule by default which will lead to a Simulink fixed point data-type which may produce results which differ from an implementation with floating point data type. In the example below the output of the first gain is 'ufix32\_en24' whereas when the Analog Input block inherited data type via back propagation the data type would have been 'double'.



The screenshot shows the RaptorCal™ Tool interface. The Signals window displays a tree view for testFP\_005, with the following structure:

- System
  - testFP
    - Foreground
      - Counter
      - IN11\_ADC
      - IN11\_FixedP\_Value
      - IN11\_FloatingP\_Value
      - IN11\_SetTypeUint16\_Value
    - Power\_Down

The data table shows the following values:

	A	B
1	IN11_ADC	1316.00
2	IN11_FixedP_Value	65489424.00
3	IN11_SetTypeUint16_Value	3.00
4	IN11_FloatingP_Value	3.90
5		
6		
7		