ONTRAK
CONTROL SYSTEMS
DATA ACQUISITION AND CONTROL

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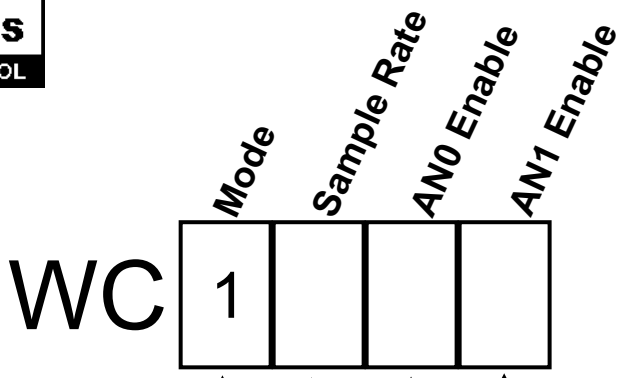
ADU73 Quickstart Guide



1	Normal
2	Reserved
3	Reserved

	With One Channel Enabled	With Two Channels Enabled
1	2.5Hz (400ms)	1.25Hz (800ms)
2	5Hz (200ms)	2.5Hz (400ms)
3	20Hz (50ms)	10Hz (100ms)
4	100Hz (10ms)	50Hz (20ms)
5	200Hz (5ms)	100Hz (10ms)
6	500Hz (2ms)	250Hz (4ms)
7	1KHz (1ms)	500Hz (2ms)

0	AN0 Disabled
1	AN0 Enabled

0	AN1 Disabled
1	AN1 Enabled

NOTES:

1. Power on default word is WC1411. Configures mode to Normal, 100Hz sample rate, AN0 and AN1 enabled.

2. All digits must be specified, and valid, or entire WCnnnn command is ignored.

3. When WCnnnn command is sent, A/D is reset, configured, and a zero scale, and full scale internal calibration is performed. Data not available for up to 6 sample times.

4. In polling mode, when data is read at or below sample rate, every reading contains new data. Reading faster than the sample rate results in duplicate readings.

Full Scale = 16777215
Zero Scale = 00000000

Noise increases with sample rate reducing the effective resolution. See table 2 for effective resolution at each sample rate.

Table 1: ADU73 Configuration Word Worksheet

Table 2: ADU73 Resolution in Bits - Effective (p-p)

Sample Rate

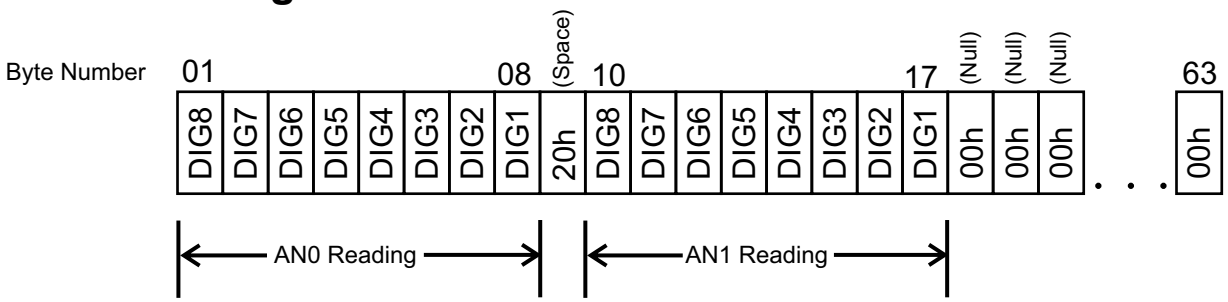
Mode			1	2	3	4	5	6	7
	1	Normal	Ratio-Metric 24(24) Absolute 24(23)	Ratio-Metric 24(22.4) Absolute 23.4(22.7)	Ratio-Metric 23.9(21.2) Absolute 23.2(20.2)	Ratio-Metric 23.6(20.6) Absolute 22.8(20)	Ratio-Metric 23.1(20.4) Absolute 22.3(19.6)	Ratio-Metric 22.4(19.7) Absolute 22.1(19.2)	Ratio-Metric 22.2(19.2) Absolute 21.9(18.8)

Command Summary:

WCnnnn - Resets A/D,configures A/D, initiates zero scale and full scale calibration
RC - Returns Present Configuration Number (4 bytes)
RD0 - Returns present reading of AN0. (8 bytes, 00000000-16777215, includes leading zeros)
RD1 - Returns present reading of AN0. (8 bytes, 00000000-16777215, includes leading zeros)
RD - Returns present reading of AN0 and AN1. (Two 8 byte numbers includes leading zeros, space (20H) delimiter)
SS -Start Stream
SC -Cancel Steam

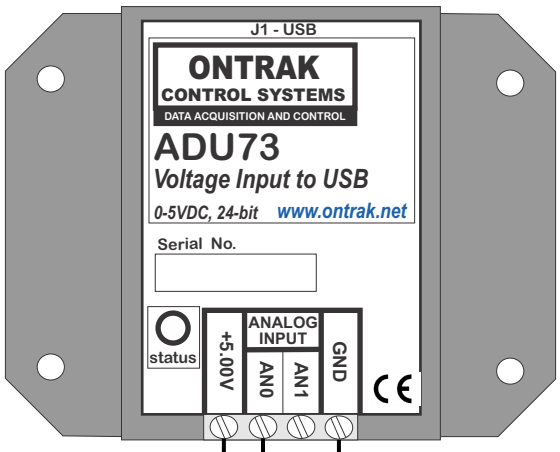
Note: Disabled channels return 00000000 regardless of input voltage level.

Fig 1: ADU73 Stream Packet Format



Note: Stream packet is identical to response from RD command, but is received on the Streaming Pipe

Fig 2 : Typical Application Example



TE Connectivity
String Pot
10K ohm

1. WC1210 configures for normal operation with a sample speed of 5Hz, AN0 enabled, AN1 disabled, for an effective resolution of 24 bits.

2. RD0 command returns reading from 00000000-16777215

Channel AN0 Voltage = ((reading/16777215) X 5.00)

Channel AN0 Percent FS = ((reading/16777215) X 100)

Reading is ratio-metric for best noise immunity.