USING USB2Dynamixel

#1 Individual READ commands:

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Statistics: s. Failed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 7557 uSec

Slowest Cycle time : 14778 uSec

Average Cycle time : 8819,3875 uSec

Standard Deviation : 1667,14390271019

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Fastest Individual Device: ID 11, reply time 204 uSec

Slowest Individual Device: ID 13, reply time 1595 uSec

#2 Read multiple devices using one BULK\_READ command:

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Statistics: ailed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 2404 uSec

Slowest Cycle time : 3761 uSec

Average Cycle time : 2896,2875 uSec

Standard Deviation : 299,443349974165

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Fastest Individual Device: ID 18, reply time 3 uSec

Slowest Individual Device: ID 11, reply time 2582 uSec

**USB2AX w/ firmware 0.5**

#1 Individual READ commands:

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Statistics: s. Failed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 7677 uSec

Slowest Cycle time : 11699 uSec

Average Cycle time : 8322,2625 uSec

Standard Deviation : 773,042944210573

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Fastest Individual Device: ID 11, reply time 193 uSec

Slowest Individual Device: ID 12, reply time 1029 uSec

#2 Read multiple devices using one BULK\_READ command:

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Statistics: ailed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 3466 uSec

Slowest Cycle time : 5877 uSec

Average Cycle time : 4258,355 uSec

Standard Deviation : 427,25981436943

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Fastest Individual Device: ID 13, reply time 5 uSec

Slowest Individual Device: ID 11, reply time 3683 uSec

**TEENSY, compiled with TRANSMIT\_FLUSH\_TIMEOUT = 5 (DEFAULT) in usb\_serial.c**

#1 Individual READ commands:

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Statistics: ecs. Failed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 39685 uSec

Slowest Cycle time : 45540 uSec

Average Cycle time : 41101,475 uSec

Standard Deviation : 41086,9750638889

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Fastest Individual Device: ID 11, reply time 4297 uSec

Slowest Individual Device: ID 12, reply time 5868 uSec

#2 Read multiple devices using one BULK\_READ command:

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Statistics: ailed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 6678 uSec

Slowest Cycle time : 8981 uSec

Average Cycle time : 7718,0725 uSec

Standard Deviation : 7703,57284075099

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Fastest Individual Device: ID 13, reply time 5 uSec

Slowest Individual Device: ID 11, reply time 7284 uSec

**TEENSY, compiled with TRANSMIT\_FLUSH\_TIMEOUT = 1 in usb\_serial.c, BRIDGE SIMPLE**

#1 Individual READ commands:

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Statistics: s. Failed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 7653 uSec

Slowest Cycle time : 13721 uSec

Average Cycle time : 8940,105 uSec

Standard Deviation : 8925,60529409771

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Fastest Individual Device: ID 11, reply time 204 uSec

Slowest Individual Device: ID 12, reply time 1636 uSec

#2 Read multiple devices using one BULK\_READ command:

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Statistics: ailed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 2738 uSec

Slowest Cycle time : 4725 uSec

Average Cycle time : 3290,9425 uSec

Standard Deviation : 3276,44330117374

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Fastest Individual Device: ID 17, reply time 4 uSec

Slowest Individual Device: ID 11, reply time 2579 uSec

**TEENSY, compiled with TRANSMIT\_FLUSH\_TIMEOUT = 1 in usb\_serial.c, SEMI COMPLETE OPTIMIZED CODE 6/Maio/2019**

#1 Individual READ commands:

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Statistics: s. Failed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 6647 uSec

Slowest Cycle time : 20508 uSec

Average Cycle time : 8378,9375 uSec

Standard Deviation : 1112,02808579359

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Fastest Individual Device: ID 17, reply time 166 uSec

Slowest Individual Device: ID 11, reply time 12522 uSec

#2 Read multiple devices using one BULK\_READ command:

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Statistics: ailed runs: 0)

Cycles ran : 400

Cycles failed : 0

Fastest Cycle time : 2176 uSec

Slowest Cycle time : 4752 uSec

Average Cycle time : 2763,5425 uSec

Standard Deviation : 325,750116183786

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Fastest Individual Device: ID 13, reply time 6 uSec

Slowest Individual Device: ID 11, reply time 1159 uSec