UC San Diego

**Sean Wiggins <swiggins@ucsd.edu>**

# Re: Checking in

**Allen Nance** <anance@embms.com> Tue, Mar 7, 2023 at 10:05 AM
To: Sean Wiggins <swiggins@ucsd.edu>

Hi Sean:
I have put a new version 3B04230307 on the shared drive.
It transfers two channels on the each packet.
Because of the way we take data off the FIFO, the numbers of samples
is 5*62 = 310 with 2 channels at 2 bytes each = 1240 bytes
Each packet starts with a time tag of 12 bytes.
Byte 1 - Year
Byte 2 - Month
Byte 3 - Day
Byte 4 - Hour
Byte 5 - Minute
Byte 6 - Second
Bytes 7-10 - binary microseconds
Bytes 11-12 - zero

I have also put a C program under a new folder called UDPserver.
It has the source code and was compiled on Win10 with the gcc compiler.

The important things are:
1. The logger comes up not transmitting data.
2. If you send it a UDP packet with "Open" as the first bytes, it will start sending UDP packets.
3. This "Open" packet should be 100 bytes or more because very small packets are discarded.
4. If you send it a UDP packet with "Close" it will stop sending UDP data (>100 bytes, see last comment).
5. It will always log data to disk like normal.

The example program "udpserver" sends the "Open" packet and then checks received packets for consistent
packet to packet time tags. It actually just checks the usecs portion right now.
If it detects a time tag glitch, it will print and error.
Otherwise it just prints a "." for every 1000 packets received
with a line wrap at 50 "."s.

I have tried 3 and 4 channels also.
4 channels does not work at all and I have little hope of being able to make it work with this hardware. (maybe with a single board and faster processor).
3 channels is "close" to working. Maybe with some more optimization I could get it to work.
But I have done a lot of tweaking to get to run as fast as it is now.

-Allen

On 3/3/2023 2:09 PM, Sean Wiggins wrote:

> Allen,