Raw Data Format

Data is Real.
There is an SPI Receiver that sits between the Raspberry Pi and FPGA.
There is a piece of code : SPI_Reciever.cpp that reads and packs the raw ADC data into format described below and then publishes using ZMQ.
Thereafter a RawDataLogger.cpp subscribes to ZMQ feed and logs into log file.
This is what I start unpacking.

1 Sweep = 4096 bytes		
RPDS Header	CH1 Data	CH2 Data
64 bytes	2016 bytes	2016 bytes

RPDS Header Structure

The only useful information is the timestamp(subtract one from other to get sweep time) and PRI Count (sweep count). The rest is mostly not correct from what I gathered.

- u4Sync = rpdsHeader(1:4);
- u4Info = rpdsHeader(5:8);
- u4RpdsLength = rpdsHeader(9:12);
- u4PayloadLength = rpdsHeader(13:16);
- u8SystemTime = rpdsHeader(17:24);
- u2SweepCount = rpdsHeader(25:26);
- u2eADCMode = rpdsHeader(27:28); { eADC=0, eCounter=1 };
- u2eCounterMode = rpdsHeader(29:30); { eNormal=0, eUpDown=1, eConstants=3 }
- u4PRI = rpdsHeader(31:34);
- u2SampleRate = rpdsHeader(35:36);
- u1Sparesx24 = rpdsHeader(37:60);
- u4Checksum = rpdsHeader(60:63);