

OM_READER_DATA_PACKET Struct Reference

Binary data file reader

```
#include <omapi.h>
```

Data Fields

unsigned short	packetHeader
unsigned short	packetLength
unsigned short	deviceId
unsigned int	sessionId
unsigned int	sequenceId
OM_DATETIME	timestamp
unsigned short	light
unsigned short	temperature
unsigned char	events
unsigned char	battery
unsigned char	sampleRate
unsigned char	numAxesBPS
signed short	timestampOffset
unsigned short	sampleCount
unsigned char	rawSampleData [480]
unsigned short	checksum

Detailed Description

Internal structure of a binary file data block.

This structure would not typically be used by an API client.

Definition at line **1272** of file [omapi.h](#).

Field Documentation

unsigned char battery

@23 +1 Last recorded battery level in raw units, 0 = unknown

Definition at line **1283** of file [omapi.h](#).

unsigned short checksum

@510 +2 Checksum of packet (16-bit word-wise sum of the whole packet should be zero)

Definition at line **1289** of file [omapi.h](#).

unsigned short deviceId

@ 4 +2 Device identifier, 0 = unknown

Definition at line **1276** of file [omapi.h](#).

unsigned char events

@22 +1 Event flags since last packet, b0 = resume logging, b1 = single-tap event, b2 = double-tap event, b3-b7 = reserved for diagnostic use)

Definition at line **1282** of file **omapi.h**.

unsigned short light

@18 +2 Last recorded light sensor value in raw units, 0 = none

Definition at line **1280** of file **omapi.h**.

unsigned char numAxesBPS

@25 +1 0x32 (top nibble: number of axes = 3; bottom nibble: packing format - 2 = 3x 16-bit signed, 0 = 3x 10-bit signed + 2-bit exponent)

Definition at line **1285** of file **omapi.h**.

unsigned short packetHeader

@ 0 +2 ASCII "AX", little-endian (0x5841)

Definition at line **1274** of file **omapi.h**.

unsigned short packetLength

@ 2 +2 Packet length (508 bytes, with header (4) = 512 bytes total)

Definition at line **1275** of file **omapi.h**.

unsigned char rawSampleData[480]

@30 +480 Raw sample data.

Each sample is either 3x 16-bit signed values (x, y, z) or one 32-bit packed value (The bits in bytes [3][2][1][0]: eezzzzz zzzzyyyy yyyyyyxx xxxxxxxx, e = binary exponent, lsb on right)

Definition at line **1288** of file **omapi.h**.

unsigned short sampleCount

@28 +2 Number of accelerometer samples (80 or 120)

Definition at line **1287** of file **omapi.h**.

unsigned char sampleRate

@24 +1 Sample rate code, (3200/(1<<(15-(rate & 0x0f)))) Hz

Definition at line **1284** of file **omapi.h**.

unsigned int sequenceId

@10 +4 Sequence counter, each packet has a new number (reset if restarted)

Definition at line **1278** of file **omapi.h**.

unsigned int sessionId

@ 6 +4 Unique session identifier, 0 = unknown

Definition at line **1277** of file **omapi.h**.

unsigned short temperature

@20 +2 Last recorded temperature sensor value in raw units, 0 = none

Definition at line **1281** of file **omapi.h**.

OM_DATETIME timestamp

@14 +4 Last reported RTC value, 0 = unknown

Definition at line **1279** of file **omapi.h**.

signed short timestampOffset

@26 +2 Relative sample index from the start of the buffer where the whole-second timestamp is valid

Definition at line **1286** of file **omapi.h**.