

AL101 SPECIFICATIONS

TBD = To Be Determined

A. Absolute Maximum Ratings

Maximum Temperature:	+85C
Minimum Temperature:	-40C
Maximum Ambient Pressure:	1.5 atmosphere estimated
Minimum Ambient Pressure:	0.5 atmosphere estimated
Maximum Battery Voltage:	5.5V
Minimum Battery Voltage:	0.9V
Shock Survivability:	20g estimated

B. Sensor (from manufacturer spec sheet)

Device:	STMicro LIS3DSH
Full Scale Acceleration Range:	+/-2g, +/-4g, +/-6g, +/-8g, +/-16g typical
Sensitivity:	varies with sample rate
Acceleration Accuracy:	unspecified
Acceleration Temperature Coefficient:	0.01%/C typical
Acceleration Zero Offset:	+/-40mg typical @ +/-2g
Acceleration Offset Temp. Coefficient:	0.5mg/C typical
Acceleration Noise:	15ug RMS @ 100Hz typical
Raw Sample Rate:	100Hz typical
Sample Rate Accuracy:	unspecified
Sample Rate Temperature Coefficient:	unspecified
Temperature Sensor Resolution:	0.1 C (via numerical proc)
Temperature Sensor Accuracy:	unspecified

c. USB Port

Connector:	Standard Type B
USB Standard:	USB 2.0
Baud Rate:	9600 Baud
Data Bits:	8 data bits
Parity:	none
Stop Bits:	1
Hand shaking:	none

D. Real-Time Clock

Accuracy (worst case):	+/- 25ppm (~ +/-2.2 sec/day) at 25C
Temperature Sensitivity :	-110ppm @ 85C rel to 25C -130ppm @ -40C rel to 25C
Programmability:	year, month, day, hour, minute, second programmable via USB

E. Memory

Capacity:	8GB microSDHC supplied
Format:	FAT16 for 2GB or smaller FAT32 for 4GB to 32GB exFAT for 64GB or larger
Speed Grade:	2 or greater
Data Format:	ASCII, comma-separated-value (CSV)

F. Sample Rates

Rate: 100Hz/N where N is 5 to 250 (20Hz to 0.4Hz). "100Hz" value depends on sensor specs.

G. Power

Battery: 1 or 2 C-size cells
Life: Estimated 1 year @ 10 s/sec sample rate, burst 10 minutes every hour. Estimated 2 year, no memory card, real time clock only.
USB: Battery power not used when USB is connected

H. Mechanical

Size: 145cm (length including mounting tabs) X 91.4cm (width) X 55cm (height including cover)
Weight: Estimated: 400gr incl batteries
Enclosure: Polycarbonate UV stabilized, weather proof (gasket seal), IP65-rated, UL rated fire resistant. Heavy duty integral mounting tabs. Not for use exposed to petro-chemicals.

Regulatory:

Meets RoHS (hazardous material free). Designed to meet FCC/CE emissions and susceptibility standards.

i. Shipping Package

AL101:

Enclosure & circuit board

USB Cable:

With Standard TypeB plug

Memory card:

MicroSDHC 8GB, Class 2 or 4,

Magnetic wand:

Included

Foam battery retainer:

Included

Batteries:

NOT included

