Xploris Specifications

Parameter	Description
SCIENCE DATA LOGGING	
Built-in Accessible Sensors	5 built in sensors: temperature, light, distance, sound, voltage
Max. Sampling Speed	100/s
Sampling Resolution	12-bit
Measurement memory size	100,000 samples
Display type	Numeric data, bar graph
Remote Data Collection	Yes
Automatic Sensor Testing & Calibration	Yes
CONTROL OUTPUTS	
Open Collector switches	2 x Open Collectors outputs able to switch up to 1A
Voltage output	2 x 5V @ 100mA
Servo engine drivers	2 x PWM servo engine drivers
ART	
Image memory size	30 animations or 1800 images
Display type	16x16 pixels images and animations
GENERAL	
Display	Full color LED dot Matrix 16x16 pixels
Communication	USB 2.0, Bluetooth 4.2 (BLE)
Speaker	0.7W 8 ohm
Keypad	7 keys
Internal Rechargeable Battery	LiPO 3.7V

Battery Life	Up to 150 hours (Datalogging, Control), 8 hours (Art)
Size	φ= 104, H = 30 mm
Weight	140gr.
Temperature Range	-10 to 50 °C
Standard Compliance	CE, FCC

Built-in Sensor Specifications

Sensor Type	Max. Range	Accuracy
Temperature	-25 to 125 °C	±1 °C
Distance	30 to 450 cm	±3 mm
Light	0 to 60,000 lx	±10 %
Sound Level	40 to 93 dB	±4 dB
Voltage	0 − 5V	±2 %

XploriLab Software Specifications

Parameter	Description
CODING	
BLOCKLY/SCRATCH editor	Data types, variables, logical operators, if else conditions, loops, input and output, operations
Python editor	Python editor, Blockly to Python
Code flashing	Flash the created code to the XPLORIS via USB/BT
SENSING & DATA LOGGING	
Data Retrieval	Real time up to 100 samples per second, or download Xploris stored data
Display for k-6	Real time gauges and pictograph
Data Display	Line graphs, bar graphs, tables
Data Logging Configuration	Sensor selection, sampling rate, sampling points
Graph Manipulation	Placing and moving up to two markers on the graphs, zoom in/out, graph cropping, graph color change
Graph Annotation	Adding text and images to the graph
Functions	Average, Linear regression, derivative
CONTROL	

Inputs	Light, distance, temperature, sound, voltage
Conditions	Sensor level: grater, smaller, between, rising above, falling below a user defined value
Outputs	Animation speed, servo speed, servo angle, left Contact on/off, right contact on/off, left 5V on/off, right 5V on/off
ART	
Drawing tools	Pencil, color selection, color duplicator, line, rectangle, color fill, pan
Animation tools	Duplicate image, image speed change, adding sound track
Animation layers	Supports 3 layers per animation frame
Pixel art library	Download from a cloud base library of images and animation
image flashing	Flash an image or animation via USB/BT, to be displayed on XPLORIS display
OS	Windows, Mac, iOS, Android