Propeller System Module 3: Manta

Introduction

Manta was designed to be an all purpose controller for a wide array of applications. It can be used as a handheld device or integrated into a front panel. Manta features an 8-core Parallax Propeller Microcontroller and a 3.5" TFT LCD touchscreen with Solomon SSD1921 image processor. The SSD1921 provides accelerated 2D graphics as well as an integrated digital camera interface and jpg codec. Compatible digital camera modules are available in both 1.3 and 2.0 MP versions.

Main Features
* 8-core Parallax Propeller Microcontroller
* Solomon SSD1921 image processor
* 3.5" TFT Touchscreen (320x240x32bit RGB resolution, resistive touch panel)
* Both Full Size SD card and micro-SD card connectors
* USB connector (mini-B) for Programming, Debugging and optional Power
* 9DOF MEMS with 3D Accelerometer, Gyro and Magnetometer
* Real Time Clock with Super-Capacitor Backup.
* Digital Camera Interface for Cameras up to 2.0 MP
* Amplified Stereo Audio Output
* Lithium-Polymer (LiPo) Battery Interface with Charger

Additional Features
* Front Panel Analog Joystick (optional)
* Front Panel Digital Scroll Wheel with Jog (optional)
* Front Panel Tactile Pushbutton Switch (optional)
* Composite NTSC Video Output (optional)
* IR remote control receiver and transmitter (optional)
* XBee compatible wireless module interface
* Nunchuck compatible interface
* 6-9 V Wall Power Input

Manta Physical Layout

Board dimensions are 175x80 mm (6.89x3.14 inches)

3.5" TFT LCD

Pushbutton*

Jog/Scroll wheel*

Analog Joystick*

Nunchuck compatible I2C connector

Full-Size SD Card Connector

Power Switch

USB

Stereo

IR Transmitter & Receiver*

Wall Power*

NTSC Composite Video output*

LiPo battery connector*

Propeller Microcontroller

9DOF MEMS

RTC with Supercapacitor

Digital Camera interface

Xbee connector above uSD card connector

*Optional Items