

Flex-PMN01

PXA270 Based Portable Media Navigator (PMN) Solution



Flex-PMN01 Solution Overview

Flexcomm Limited as one of the worldwide leader with years of experience in the XScale® solution for Communications and Consumer Electronics market is ready to deliver PMN; a Portable Media Navigator (PMN) reference platform as another quality solution product that combine a wealth of functionality and performance in its compact form factor.

The highly scalable architecture of PMN enables easy product and features upgrade for OEMs. For instance, with minimal design customization, the platform is capable of supporting bigger size LCD panel. This helps OEMs to minimize their investment in product roadmap development cycle. This contributes to the fact that the PMN solution is lower in cost, faster TTM, and less investment risk compare to other products or solutions in the same category.

With high performance PXA270 as the Embedded Processing Unit, it supports all standard multimedia file formats such as WAV, MP3, WMA, MPEG4 (WMV), ASF and MPEG1 (MPG/MPEG/DAT), AVI. As a plus point, any future new multimedia file format can be supported by software upgrading of PMN. The advanced PXA270 Wireless MMX™ and Speedstep® technology (DVM) significantly improve performance of media playback and reduce power consumption. This translates into smaller capacity of battery cells is needed, a lighter and more cost effective platform.

The solution is more than just a normal PMP. It features a 3.5" touch screen LCD which allow user to view photos, play games, listening to music as well as accessing its GPS functions. Built on the SIRF Star III chipset, the GS-86 GPS module is able to support high sensitivity level of very weak signal acquisition and tracking. It allows the receiver to track the satellites using up to 20-channel correlators and provides fast TTFF for cold start, warm and hot start.

Functionality searching and navigation can be achieved by touch screen or highly friendly 5-way joystick button. The USB connectivity offers an exciting sharing experience of contents among the users. Content is stored in the SD card. It's running on the Window CE platform.

It is only 130 (L) x 82 (W) x 24 (H) mm in size (with embedded antenna), which is a handy GPS unit that provide greater multimedia entertainment experience for the users.

Hardware Configuration

CPU	PXA-270 416 MHz, also support 312MHz and 520MHz
Video	Display: 3.5" Color TFT LCD
	LED Backlight
	Resolution: 320x240, 65K colors
Memory	Flash: 32MB Strata Flash, can be upgraded to 64MB
	RAM: 32MB SDRAM, can be upgraded to 64MB
	Optional: MSystem DOC 512MB, can be upgraded to 2GB
	Support extended SD memory card
GPS	GS-86 (Built-in SiRF III GPS module)
Audio	WMA, MP3 WAV Playback support
Input/Output	Touch Panel: Resistive type touch panel
	Input Method: Stylus
	Speaker: Built-in type speaker x 1
	Headphone and AV Out: 3.5mm Mini jack x 1
	USB: USB 1.1 (Client) for ActiveSync
Buttons/ Switches	6 function buttons: Menu, Back, Volume Up, Volume Down, Zoom In, Zoom Out
	5-way Joystick: Up, Down, Left, Right, Enter
	Reset button, Power On/Off button, Sleep Mode button
Indicator	LED (Single Color): Green (Static)
	Battery Charging: Red (Static)
Battery	Rechargeable Lithium Ion, 1300mAh
Charging	Power adapter
	Charging Time: 2.5 ~ 3.0 hours
AC-DC Adapter	Input: 100~240VAC
	Output: 5VDC, 2A
	Connection: AC adapter connect to main unit directly
Device Physical Char	Dimension: 130 mm (L)x 82 mm (W)x 16 ~ 24mm (H)
Operation System	Windows CE 5.0 Chinese/English Core Edition
Applications	Customized Shell
	Media Player: MP3,WMA,WAV,MPEG4(WMV),ASF,MPEG1(MPG/MPEG/DAT),AVI
	System Setup
	GPS Navigation
Accessories	A/V Cable x 1
	AC-DC power adapter x 1
	Quick Reference Guide x 1

Software Configuration

- ◆ Operating System: WinCE 5.0 Core Edition
- ◆ Boot Loader: Supporting Flash memory, Boot Logo, OS update
- ◆ AC97 Codec
 1. Support external stereo ear phone
 2. Support software volume setting
 3. Support touch panel
- ◆ Media player supports MP3, WMA, WAV, MPEG4 (WMV), ASF, MPEG1 (MPG/MPEG/DAT), AVI
- ◆ User Interface: All the function can be accessed by keypad or touch-panel.



Function Buttons	Description
My Video	Play Video (wmv,asf,dat,mpeg,mpg,avi)
My Music	Play Audio (mp3,wma,wav)
My Photo	View Photo (jpg)
GPS	GPS Navigation System
Setup	System Setup

GPS Navigation



GPS Module	GS-86 (built-in SiRF Star III chipset)
	Receiver Specifications
	(i) Frequency: L1 GPS (1575.42MHz)
	(ii) C/A Code: 1.023 MHz chip rate
	(iii) Channel: 20 Channels
	Accuracy
	(i) 10meters, 2D RMS
	(ii) 7meters, 2D RMS, WAAS Corrected
	(iii) 1-5meters, DGPS Corrected
	Time Accuracy
	1ms synchronized to GPS time
	Acquisition Time
(i) Reacquisition: 0.1 sec (average)	
(ii) Hot Start: 1 sec (average)	
(iii) Warm Start: 38 sec (average)	
(iv) Cold Start: 42 sec (average)	
Dynamics Conditions	
(i) Altitude: 18,000meters (<60,000 feet) Max	
(ii) Velocity: 736m/s (<1,000 Knots) Max	
(iii) Acceleration: 4G. Max	
(iv) Motional Jerk: 20m/s Max	