

THDP-PNX8550-I: NXP® Nexperia™ PNX8550 Reference Design

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Brief

THDP-PNX8550-I is the first version of system solution based on PNX8550 from TenHz. The Nexperia PNX8550 Home Entertainment Engine is targeted for mid- to high-end analog/digital TVs and server products. It provides built-in LCD support and advanced features such as 100-Hz progressive scan, decoding, and display of one HD or two SD streams simultaneously, robust picture enhancement algorithms, and scaling.

THDP-PNX8550-I offers a standardized hardware platform for building high-end analog/digital televisions supporting NTSC and ATSC standards (SD and HD resolutions), as well as state-of-the-art picture improvement processing. It enables rapid system development of advanced IP and dual-functionality (IP and broadcast) set-top boxes. It leverages the power and flexibility of the PNX8550 home entertainment engine and the latest AV codecs, including H.264 and WMV9, to support advanced features such as video telephony, picture improvements, time-shift recording, DVD playback, storage, personal video recording, network connectivity, and even voice over IP.

THDP-PNX8550-I is specially suitable for applications such as high/medium end LCD TV, DSTB, meeting demonstration system, out-door advertisement device, personal game machine, digital video recorder, media center computer, information publishing platform, high definition digital firm cinema, multimedia entertainment terminal, DVB-T/S/C STB, family cinema system and so on.

THDP-PNX8550-I is an all-inclusive development platform, its available peripherals include: DDR SDRAM, NAND Flash, USB Host, networks, PCI, 1394, IDE, SATA, ITU656/TS, I2S, Smart card, LCDS LCD, A/V display, AC'97, audio amplifier, MemoryStick, IrDA and etc. It also provides TenHz Linux 2.0 and winCE.net 5.0 development environment, and speed up customer's time-to-market.



Embedded Development Kits

- ◆ THDP-PNX8550-I board
- ◆ Included Quick Start CD-ROM:
 - Yamon Bootloader Software
 - TenHz Linux 2.0 SDK for PNX8550, including completed cross-development toolchains, root filesystem and software development manual (Linux kernel and driver source codes are further charged)
 - WinCE 5.0 APP SDK (WinCE 5.0 BSP source codes are further charged)
 - Board schematics (PDF)
 - THDP-PNX8550-I hardware development manual
- ◆ THDP-AU1200-II accessories: RS-232 Serial Cable, 12V DC Adapter

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Specification

Function Unit		Interface/Feature	Description	Note*
Mini-system		CPU	PNX8550@266MHz	
		NAND Flash	64MB by default	
		DDR SDRAM	DDR-I@400MHz, 64/128/256MB , 128MB by default	
		JTAG	14-Pin EJTAG	
PCI	Network	Ethernet	10/100M Ethernet	98Mbps
	USB	USB Host	2.0 EHCI, USB 1.1 OHCI compatible	
	SATA	Serial ATA	Two SATA, support double 160G SATA HD.	
	PCI	Standard PCI	Two standard PCI slots, 33MHz, 3.3V	
	miniPCI	miniPCI	One miniPCI slot, 33MHz, 3.3V	
System Interface	AC'97	Headphone-Out	44.1KHz, stereo double-channel	
		Micphone-In	Single-channel	
		LINE-In	Analog line-in	
		Audio Amplifier	2.5W speaker output	
	Video	LVDS	18-bit/24-bit, support 35-42" LCD	
		S-Video	S-Video TV-OUT	
		Composite	Video-Composite TV-OUT	
	Other	COM	RS-232 Serial UART	
		Modem UART	Full-function modem UART	
		RTC	Real Time Clock	
	Power	DC Input	12V/2A , 2.1mm Power Socket	
		Reset	One system reset button	
		Consumption	3W average	
	Size	-	200mm x 170mm	

* Note: For reference only. Storage devive's performance is based on READ speed.

Please visit www.tenhz.com for more products and solutions.