

NET2272 Key Features

- ◆ Hi-Speed USB 2.0 Peripheral Port
- ◆ Fully backwards compatible to Full-Speed USB connections
- ◆ Firmware available for Media Transfer Protocol (MTP), Communications Device (CDC), Remote NDIS (RNDIS), and Mass Storage
- ◆ Software driver support for WinCE and Linux
- ◆ Sustained throughput, up to 40MBytes/sec
- ◆ Lowest active power requirements (186 mW)
- ◆ Lowest standby power (8.1µW)
- ◆ Variable I/O voltage (1.8V to 5.0V)
- ◆ 6x6mm, 64 ball, Lead-Free BGA Package

Application:

Mobile/PDA Phones

PLX Product:

NET2272 – USB 2.0 Hi-Speed Device Controller

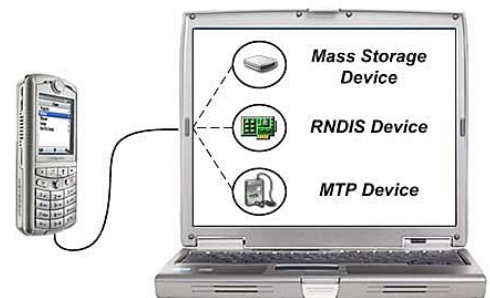
Key Benefit:

Wide Range of Available Software

Functional Software Solutions

Today's mobile phones have more functionality than ever before. Many of the new features such as digital photography, connecting to the internet, and media storage require a high bandwidth USB connection to the PC. Depending on the feature, mobile phones can connect or interface to PCs as different devices. Software is required to support the different interfaces.

PLX Technology offers a wide range of drop-in software examples designed for the NET2272. Mobile phones can adopt PLX's software to implement device protocols such as CDC, RNDIS, Mass Storage, and MTP. These examples are available for platforms such as WinCE, Linux, and others.



Using PLX's software can save a developer both time and money by quickly bringing the product to market.

Protecting Digital Media with MTP

The demand for rich media content is growing at a rapid pace. With this demand comes the need to protect the content with digital rights management (DRM). A vital part of Microsoft's solution to this need is the Media Transfer Protocol (MTP). As opposed to Mass Storage, which gives a USB Host full control of the storage medium, MTP is an object based protocol, which is implemented as a vendor specific class on USB. MTP provides a framework that enables a more sophisticated





DRM solution. MTP support is required for Microsoft PlaysforSure Certification.

The NET2272 has been designed into a myriad of MTP devices, most notably Microsoft's Portable Media Center (e.g. Freescale i.MX21 PMC Reference Design, www.freescale.com/imx). Microsoft's MTP Device Simulator Kit ships with code that runs on the NET2272. Furthermore, PLX provides a complete MTP client for customers using Linux platforms.

CDC, RNDIS, and Mass Storage

In the past, legacy mobile phones have used RS232 serial ports to connect to the PC. To leverage existing PC software built for serial ports, PLX provides the USB Communications Device Class (CDC) device example, which allows any NET2272-enabled device to enumerate and appear to the USB Host as a virtual COM port. The CDC host drivers are shipped standard with Windows and other operating systems.

Other mobile phones, like Microsoft SmartPhones, use Remote NDIS (RNDIS) to connect as a network interface over USB. RNDIS is a protocol established by Microsoft which is supported in most Windows platforms. PLX supports RNDIS on a wide variety of NET2272-based device platforms.

The NET2272 also supports USB Mass Storage Class firmware for WinCE and Linux. With other platforms, PLX provides portable Mass Storage firmware for the NET2272.

Software	WinCE 5.0	Linux 2.6
Mass Storage Class	✓	✓
Media Transfer Protocol (MTP)	✓	✓
Communications Device Class (CDC)	✓	✓
Remote NDIS (RNDIS)	✓	✓

Table 1: NET2272 software support

Additional PLX Advantages

The NET2272 USB 2.0 Hi-Speed device controller is optimized for the mobile phone application. Its small size (6x6mm BGA), low power consumption (186mW active, 8.1µW standby), and flexible I/O voltage (1.8 to 5.0V) make it easy to connect to many mobile phone chipsets.

- ◆ Superior USB 2.0 expertise and support
- ◆ Wide Range of Application Notes
- ◆ Schematic and Layout Design Reviews
- ◆ USB 2.0 Compliance Testing
- ◆ PCI-Based Development Systems

Design Tools & Documentation:

NET2272:

<http://www.plxtech.com/products/NET2000/NET2272/default.asp>

USB Software:

<http://www.plxtech.com/products/NET2000/software/default.asp>

Available on PLX website:

- ◆ Data Book, Application Notes, Performance Reports, Migration Guide, Design Guidelines, Video Demos, and more.

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