

Nintendo DS Tools Overview

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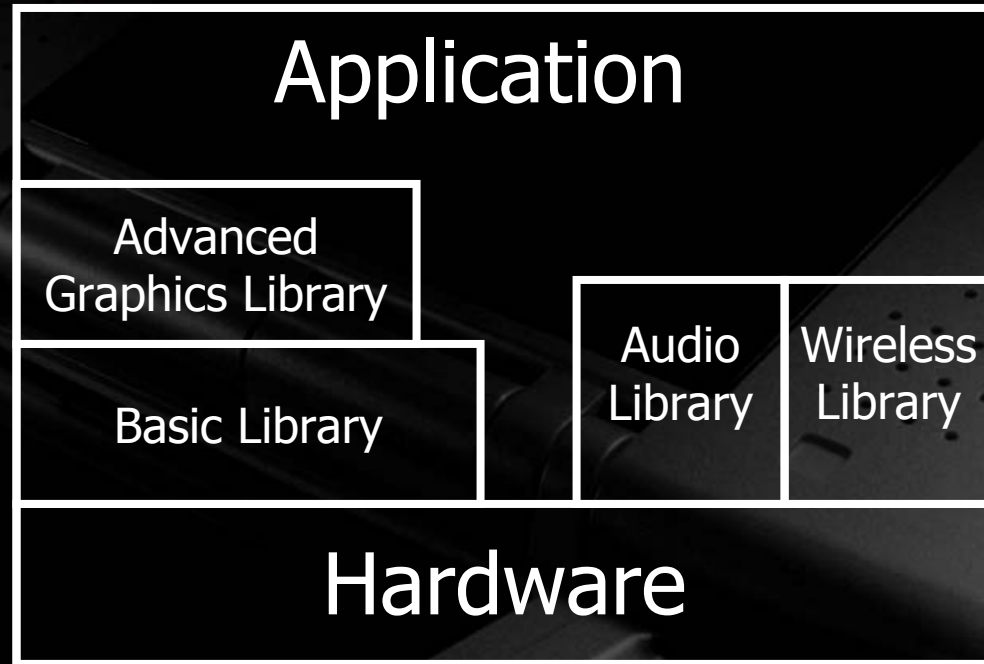
Overview

- Windows 2000/XP dev environment
- Tools for every aspect of development
 - Dev kits, compiler, SDK, 2D and 3D Graphics tools, Audio tools, etc.
- Goal is to reduce development costs



Development Library

- NITRO SDK
 - Basic Library (OS, GX, PAD, VI, etc.)
 - Documentation (Programming Manual, etc.)
 - Sample Demos
 - Wireless Library
 - Audio Library



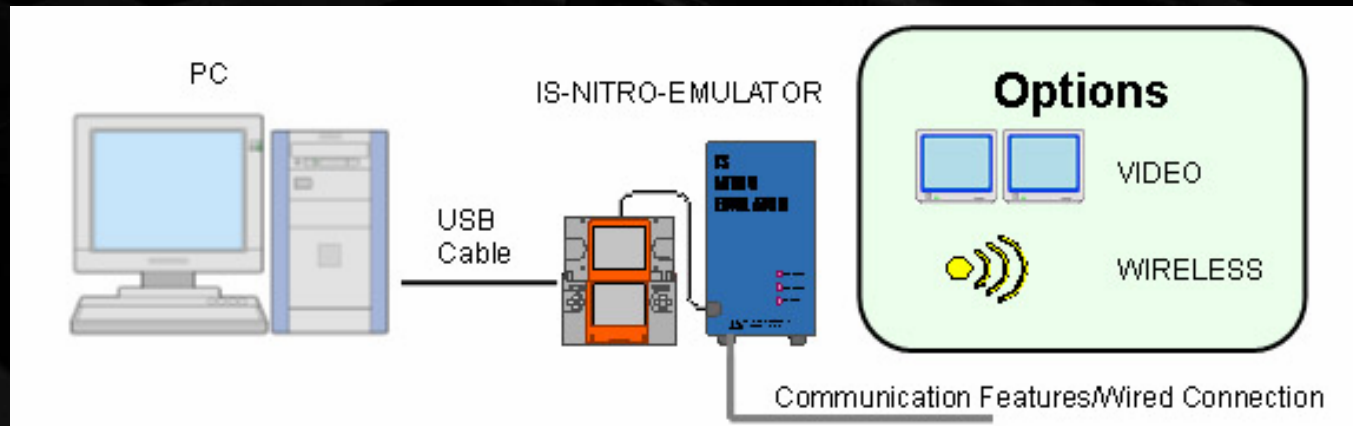
Hardware Tools

- IS-NITRO-EMULATOR
 - IS-NITRO-DEBUGGER kit
 - USB 2.0 connection to PC
 - Program one Flash Card at a time
 - Wireless Network Communication using LAN cable
 - Available now for \$1,895



Hardware Tools

- IS-NITRO-EMULATOR Options
 - A/V Output to LCD/TV
 - Cost: \$479
 - Wireless Communication upgrade
 - Cost: \$479



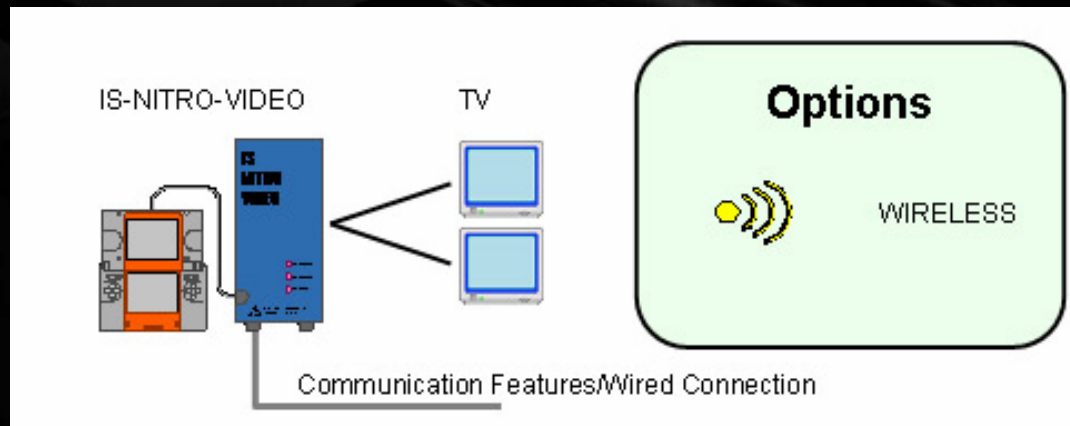
Hardware Tools

- IS-NITRO-VIDEO
 - Output game images to TV
 - Debugging, shows and exhibitions
 - Requires 2 TVs for both Nintendo DS screens
 - Supports wireless communication via LAN cable
 - Cost: \$939



Hardware Tools

- IS-NITRO-VIDEO Options
 - Wireless Communication upgrade
 - Cost: \$479



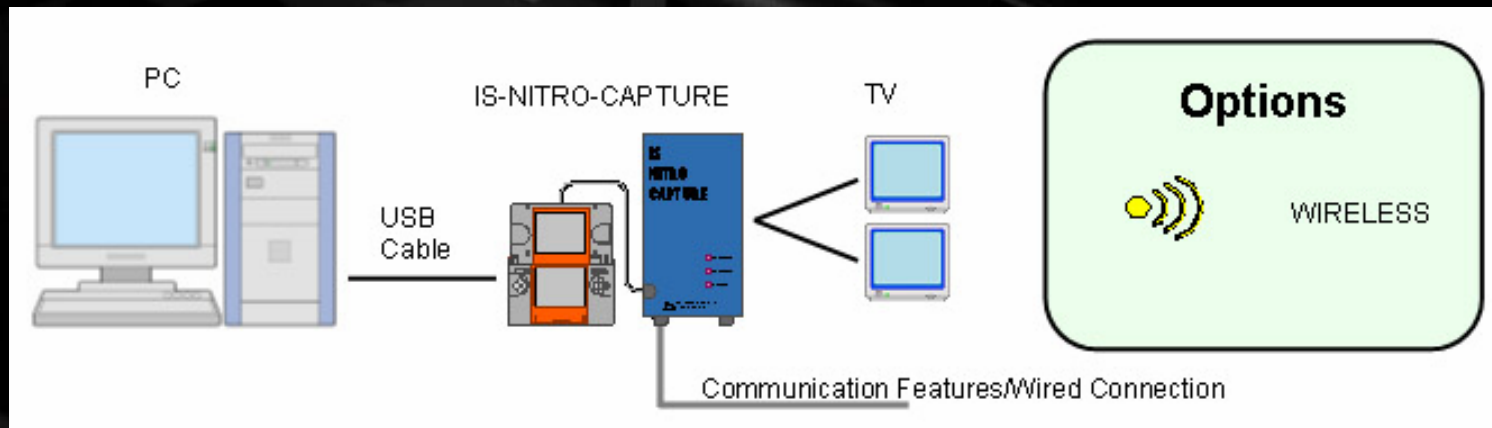
Hardware Tools

- IS-NITRO-CAPTURE
 - Output game images to PC (digital data)
 - Still images (BMP), Animation
 - Output to one monitor/split screens
 - USB 2.0 connection to PC
 - Supports wireless communication via LAN cable
 - Cost: \$1,419



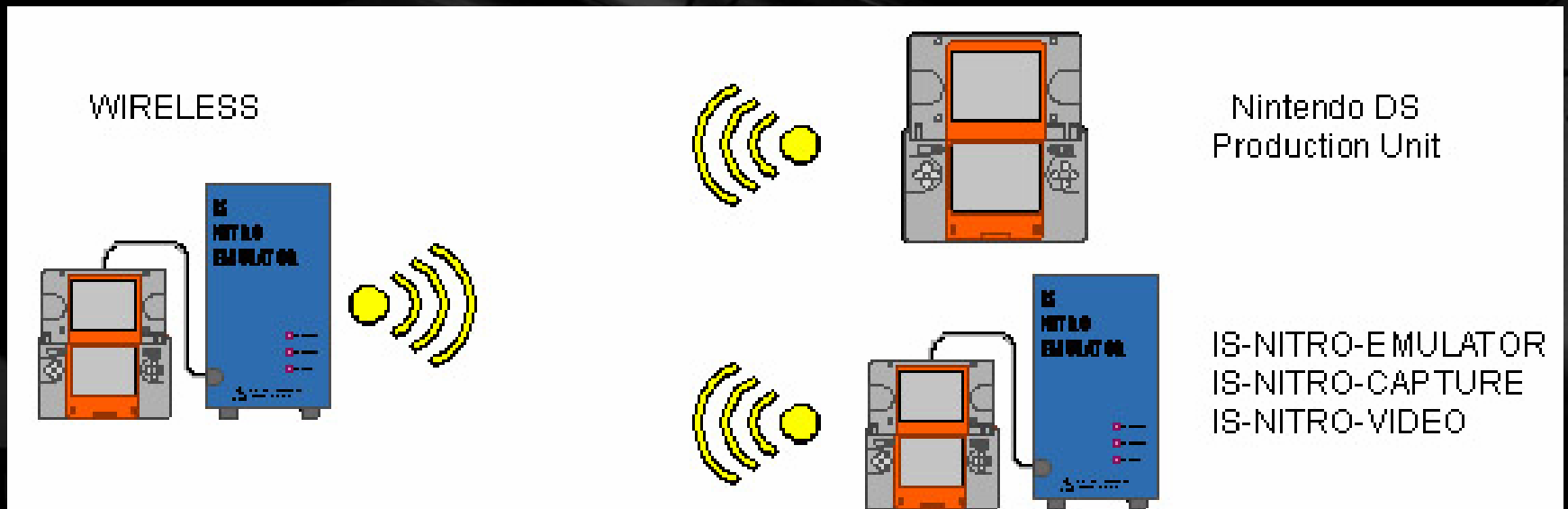
Hardware Tools

- IS-NITRO-CAPTURE Options
 - Wireless Communication upgrade
 - Cost: \$479



Hardware Tools

- Wireless communication ability for Nintendo DS dev tools & production units



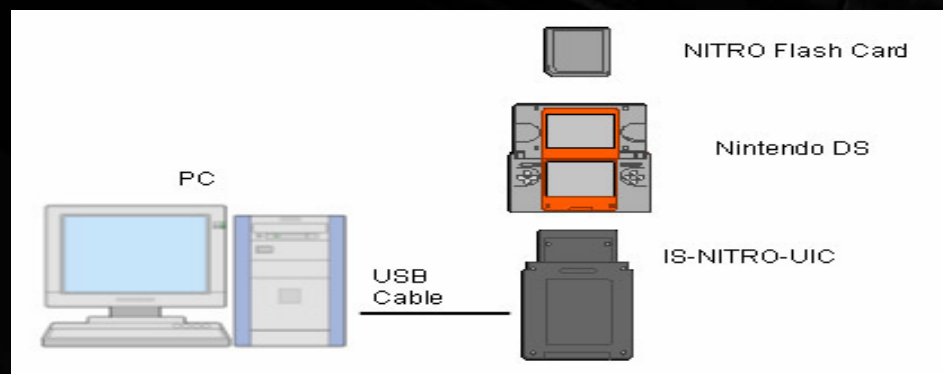
Hardware Tools

- IS-NITRO-HUB
 - Connects up to 16 dev tools
 - IS-NITRO-EMULATOR
 - IS-NITRO-VIDEO
 - IS-NITRO-CAPTURE
 - Test/develop wireless feature w/o interference
 - EXT port for noise
 - Cost: \$655



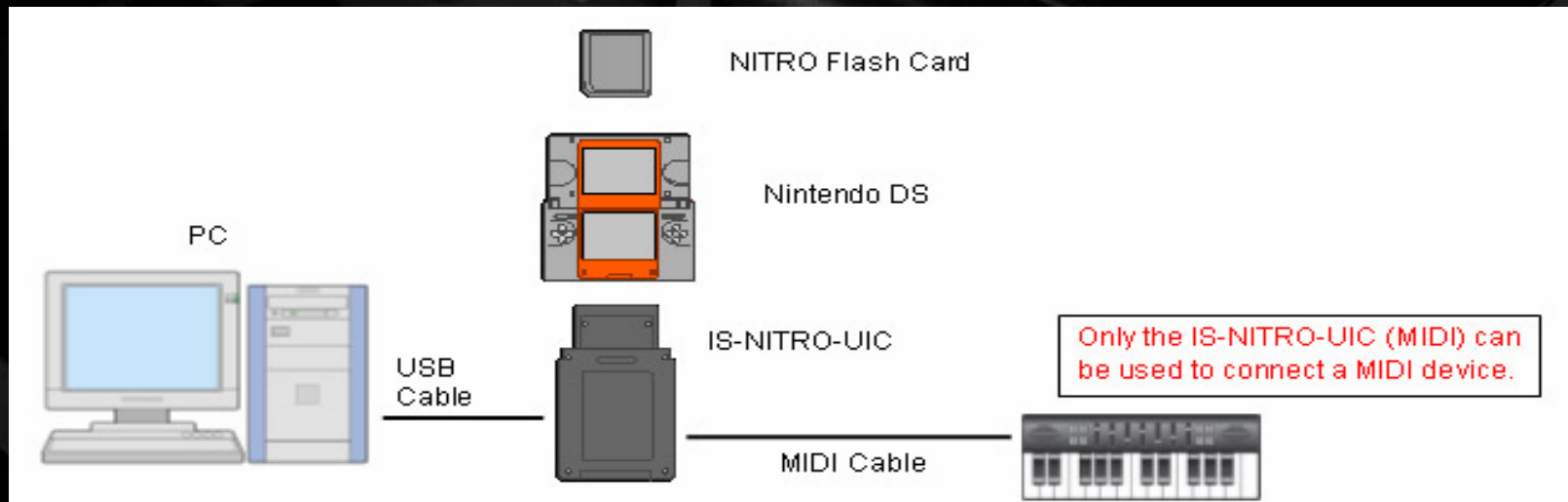
Hardware Tools

- IS-NITRO-UIC
 - View/verify data on the Nintendo DS
 - Includes Communication Library
 - USB 2.0 connection to PC
 - Cost: \$479



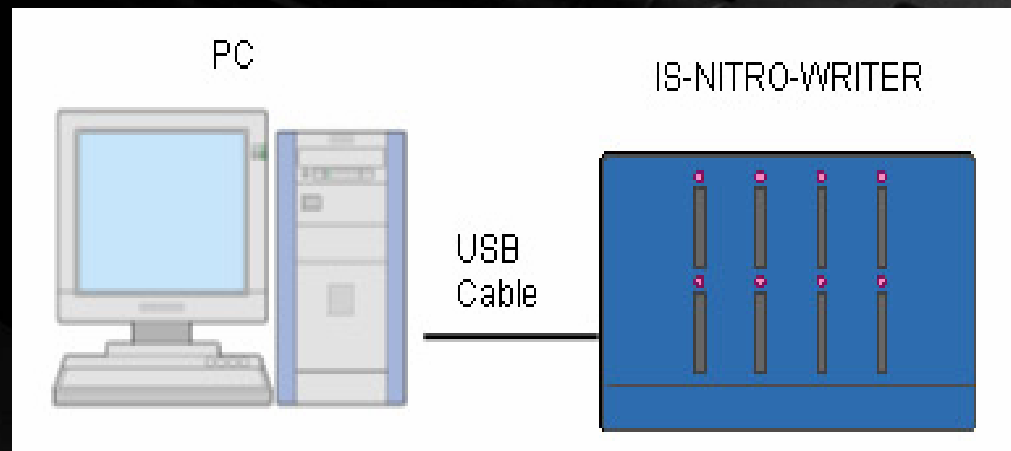
Hardware Tools

- IS-NITRO-UIC MIDI
 - UIC + Verify Sound on the Nintendo DS
 - Cost: \$769



Hardware Tools

- IS-NITRO-WRITER
 - Up to 8 Cards can be programmed
 - USB 2.0 connection to PC
 - Multiple units using USB HUB
 - Cost: \$1,895



Hardware Tools

- NITRO Flash Card
 - Test / Debug / Demo Tool
 - 512 Mb available, larger capacity in dev
 - Works with Nintendo DS (production ver)
 - IS-NITRO-VIDEO / IS-NITRO-CAPTURE
 - Available with Backup Memory options
 - 4/64Kb EEPROM, 2Mb Flash
 - Cost: \$180



Software Tools

- ensata
 - Nintendo DS Software Emulation
 - Emulates ARM9 Features/Functions
 - Supported Features
 - Both Display Screens
 - Touch Screen using PC mouse
 - Audio
 - Writing to the Backup Memory
 - Cost: Free!



Software Tools

- Metrowerks CodeWarrior for Nintendo DS
 - IDE for Nintendo DS development
 - C/C++ Compiler
 - Source Code Debugger
 - IS-NITRO-EMULATOR hardware
 - ensata
 - Command line / makefile
 - Cost: Free of charge!



Software Tools

- NITRO-System Tools and Libraries
 - Basic Tools and Libraries for Nintendo DS Game Software Development
 - Reduce Software Development Time
 - Cost: Free!



Software Tools

- NITRO-System Tools
 - NITRO Intermediate File Plug-ins
 - NIF = XML-format text file
 - Stores 3D model data and animation data
 - Maya (Alias) – Available now
 - 3D Studio Max (discreet) – Rel 10/04
 - SOFTIMAGE 3D – upon request!
 - Photoshop Plug-ins
 - Making Texture Files for 3D CG Tools



Software Tools

- NITRO-System Tools
 - 3D Material Editor
 - Loads NIF
 - Confirm Model Structure, Edit material setting, Write back edited data to NIF
 - 3D Binary Converter
 - XML-format NIF → binary format
 - Binary format is used with 3D GL



Software Tools

- NITRO-System Tools
 - NITRO-CHARACTER
 - 2D character, screen, OBJ data
 - Creates OBJ animation
 - 2D Binary Converter
 - Input: 2D Intermediate Binary File (CHARACTER)
 - Output: Binary data format used with 2D GL



Software Tools

- NITRO-System Tools
 - NITRO-Viewer
 - 2D/3D CMND/DATA via the Host I/O
 - Draws 2D/3D images on Nintendo DS
 - NITRO-Viewer Controller
 - Draw-CMNDs to Viewer via Host I/O
 - Multiple GC tools simultaneously



Software Tools

- NITRO-System Tools
 - Archiver
 - Nintendo DS ROM file system
 - Collect small files into a large file
 - NITRO-Composer
 - Sound Data Creation Environment



Software Tools

- NITRO-System Libraries
 - Built on NITRO SDK
 - Foundation Library
 - Heap Manager, Archive Manager, Utilities
 - High-Level Libraries
 - Graphics Foundation, 2D Graphics, 3D Graphics, Graphics Utility, NITRO-Composer



3rd Party Tools

- OPTiX iMageStudio for Nintendo DS
 - Web Technology Corp.
 - 2D Graphics Tool / Optimizer
 - Supports Nintendo DS Compression Texture
 - Color Reduction Engine
 - Reduces the need for touch-up
 - Cost: \$2,300/License



Programmers Tools

- NITRO SDK
- IS-NITRO-DEBUGGER
- CodeWarrior for Nintendo DS
- NITRO-System Library
- Archiver
- 3D Binary Converter
- 2D Binary Converter
- IS-NITRO-UIC
- IS-NITRO-VIDEO
- IS-NITRO-HUB
- Flash Cards



Artists Tools

- NITRO SDK
- IS-NITRO-DEBUGGER
- NITRO-System Library
- NITRO-CHARACTER
- iMageStudio for DS
- Photoshop Plug-ins
- NIF Plug-ins
- 3D Material Editor
- NITRO-Viewer
- NITRO-Viewer Controller
- IS-NITRO-UIC
- IS-NITRO-CAPTURE
- IS-NITRO-VIDEO



Sound Creation Tools

- NITRO SDK
- IS-NITRO-DEBUGGER
- NITRO-System Library
- NITRO-Composer
- IS-NITRO-UIC MIDI
- Archiver



Q/A Tools

- IS-NITRO-WRITER
- Flash Card + Backup Memory Board
- IS-NITRO-VIDEO
- IS-NITRO-CAPTURE
- IS-NITRO-HUB
- Nintendo DS Production Units



Tools Support

- Technical Support Plan
 - Web Site: <http://www.warioworld.com>
 - Accounts: <https://www.warioworld.com/createaccount.html>
 - Newsgroups: <https://www.warioworld.com/news/>
 - Email: Support@noa.com
 - Phone lines: (425) 861-2715

