NeST Software

Creating Innovative Solutions

NeST is a total solution provider for engineering applications and products. We are a global combine and have been a trusted service provider to many Fortune 500 companies. Our passion for quality is reflected in our CMMI L5, ISO 9001-2000, ISO 27001, ASPICE ML5 certifications of our development facilities in India.

NeST has significant experience in developing a wide range of solutions in the Automotive domain. NeST is uniquely placed in being able to cater to both software and hardware product development requirements of our customers, making us an ideal partner for companies looking at an accelerated time to market for their products.

i.MX Series Reference Design

NeST's i.MX31/51 based reference boards are versatile solutions enabling fast time to market for development of new-generation digital display for transportation and industrial applications. Built around Freescale's i.MX series platforms, it has dedicated LCD interface, memory / storage and other external peripheral interfaces required to build a reliable and cost-effective dashboard system. The reference board can be configured to run on different operating systems like Android, Linux and Windows CE. Our application framework exposes a flexible interface to develop GUI intensive and feature rich applications, to deliver a premier user experience.

Features

Platform

- Microprocessors:
  - Freescale i.MX516, 32bit, 600MHz
  - Freescale i.MX31, 32bit, 532MHz
- Operating Systems supported
  - Android v2.2
  - Linux v2.6
  - Windows CE 5.0, 6.0 (Optional)
- Flash Player: Adobe Flashlite 4.0
- FLASH : 64 Mbytes NOR FLASH, 2 Gbytes NAND FLASH
- RAM: 256 Mbytes DDR2 SDRAM

Interfaces

- CAN: 2 ports - CAN specification 2.0B
- USB host: 5 ports – USB 2.0
- RS485/RS232 Interfaces (3)
- Audio Input/Output: Stereo Line in/Line out
- Mic In: Mono Mic In Interface
- Video input: NTSC/PAL - Composite In
- Ethernet: 10/100 Mbps
- Bluetooth: 2.0 + EDR
- Digital I/O: 6; Analog I/O: 14
- Analog I/O: 14; (0–5 VDC)
- Keyboard Interface: Multiple key support

Middleware

- Supports NeST Multimedia Framework
- Audio: MP3, WMA, AAC
- Video: H.264, MPEG2, MPEG4, WMV, AVC1
- Protocols: J1939, NMEA 2000, NMEA 0183 (GPS), KWP 2000, K-Line.
- BT profiles: DUN, HFP, HID, OBEX, MAP

Storage

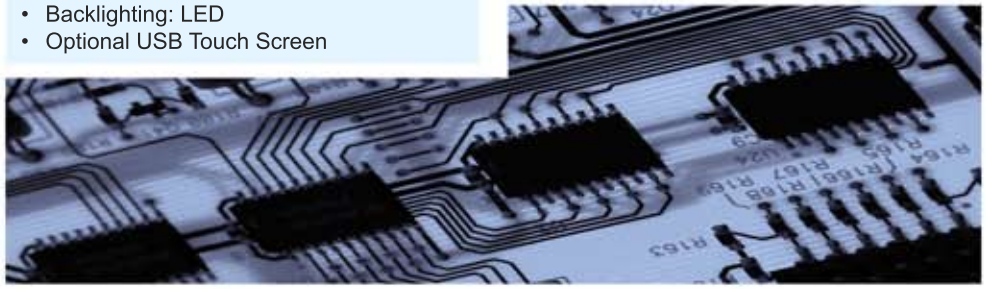
- 2.5" HDD (optional): 40GB/80GB/120GB, SATA interface – (USB to SATA interface is supported)
- SD Cards (2): SDHC - for program updates, storage data, diagnostic data storage.
- USB Memory: USB Mass storage class support.

Display

- Multiple LCD display configurations: Typical size 4" to 7" TFT LCD
- Resolution: WVGA, 800 x 480 pixels, 16-bit color
- Luminance : Sunlight readable (550 cd/m2 reference)
- Orientation: Landscape or portrait
- Backlighting: LED
- Optional USB Touch Screen

Operating Conditions

- Operating Voltage: 7.5 to 36 VDC, protected against reverse polarity and load-dump
- Power Consumption: 16 W Approx. (Without USB devices, HDD)
- Temperature: -40°C to +85°C



EMBEDDED EXPERTISE

Board Design

Specialization in re-engineering of existing products, and reverse engineering of legacy hardware. High proficiency in developing designs and development of reference boards leading to fully manufactured product.

- High speed digital & analog design & sanity testing of boards
- Schematic preparation & PCB design
- Signal integrity analysis & simulation
- Reference boards design & development
- Component selection & BOM optimization
- Specialized FPGA/VLSI group

Board Support Packages & Device Driver Development

Porting, customization & firmware development in multiple OS & hardware platforms and full development of device drivers.

- **OS** : VxWorks, Psos, QNX, Linux, ITRON,WinCE/XP Embedded, RT Linux, Android
- **H/W** : SH7044 to SH7144 RISC, SH4, SH7750, MIPS, Power PC 8245 processors, Hitachi 2623 based H/W, TI-DaVinci, OMAP, Intel PXA270,PXA255, Freescale i.MX
- Drivers for network adaptors, audio, printers, storage devices in multiple platforms

DSP Based Design

- Processor dependant optimization
- Floating point to Fixed point conversion
- MATLAB modeling
- Library development
- Expertise in TI-Da Vinci Series
- TI-OMAP, LSI logic ZSP

Embedded Tools Development

With our ASHLING Microsystems division, we can provide cost effective emulators and tools for MIPS & ARM based processors.

Applications Development

- Customized applications on Embedded Platforms
- Linux (Ver 2.6, MontaVista) & Windows [XP, CE(5.0, 6.0)], Android

Global Delivery Model

NeST's Global Delivery Model encompasses the advantage of offshore centers located in India thereby optimizing cost as well as providing a team with location proximity to the client for hassle free development/solutions

Quality Frameworks

NeST is a CMMI L5 company with ISO 9001 and ASPICE ML 5 certifications. Our quality motto is "Exceed Customer Expectations".

Information Security

NeST secures the IP of clients through ISO27001 certified practices

Global Presence

The NeST Group : Software | Manufacturing | R&D | Systems Integration | Training

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