

VisionSTK-6ULL-NFC

Linux & NFC – Hands on KIT

i.MX 6ULL Applications Processor PN7150 NFC (Near Field Communication Controller)

The **i.MX 6ULL** is a power efficient and cost-optimized applications processor family featuring an advanced implementation of a single Arm Cortex-A7 core, which operates at speeds up to 900 MHz.

PN7150 is the high-performance version of PN7120, the plug'n play NFC solution for easy integration into any OS environment, reducing Bill of Material (BOM) size and cost. PN7150 controllers are ideal for home-automation applications such as gateways and work seamlessly with NFC connected tags.

Hardware Description:

Throughout the course engineers will use development boards prepared by SOMLabs & NXP. The VisionSOM-6ULL in conjunction with VisionCB-6ULL is low cost hardware based on the NXP i.MX6ULL. VisionSOM-6ULL provides a variety memory configuration including flexible range of DDR3L, NAND, eMMC and SD memory card that meets our customers' requirements. OM5578/PN7150ARDM is NXP development board with Arduino compatible header.

VisionSTK-6ULL-NFC includes:

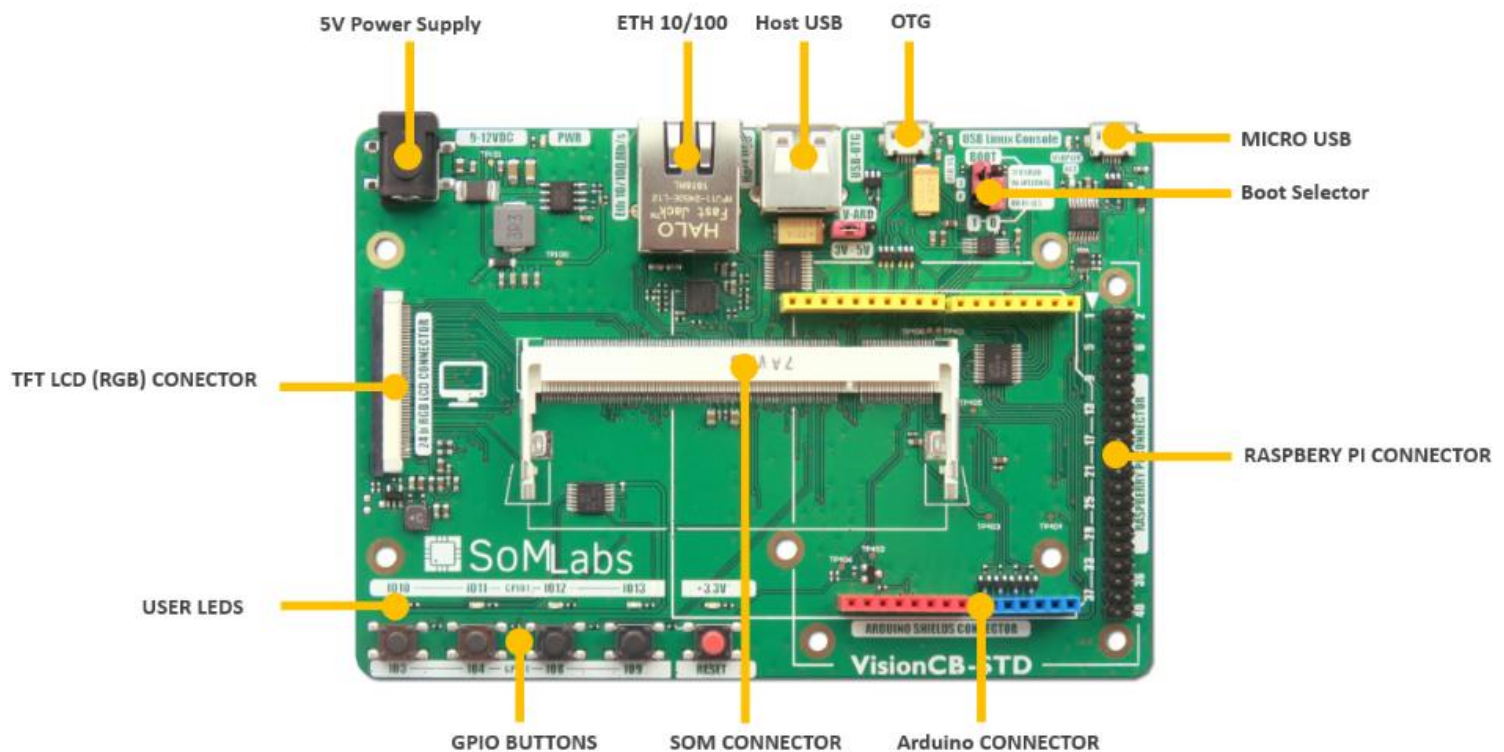
VisionSTK-6ULL (Starter Kit for I.MX6ULL)

OM5578/PN7150ARDM (Starter kit for PN7150)

VisionSTK-6ULL includes:

VisionCB-6ULL-STD – Carrier Board

P/N: VisionCB-6ULL



VisionSOM-6ULL– System on Module (SOM)

P/N: SLS16Y2_792C_512R_SD_0SF_C

- ✓ Latest NXP I.MX6ULL Cortex A7 –900Mhz
- ✓ Popular SODIM 200 Footprint
- ✓ SD Card for easy development
- ✓ Industrial Temperature Range
- ✓ Altium Designer's file available
- ✓ NAND and eMMC for Program Memory



OM5578/PN7150ARDM Includes:

PN7150 NFC Arduino Shield

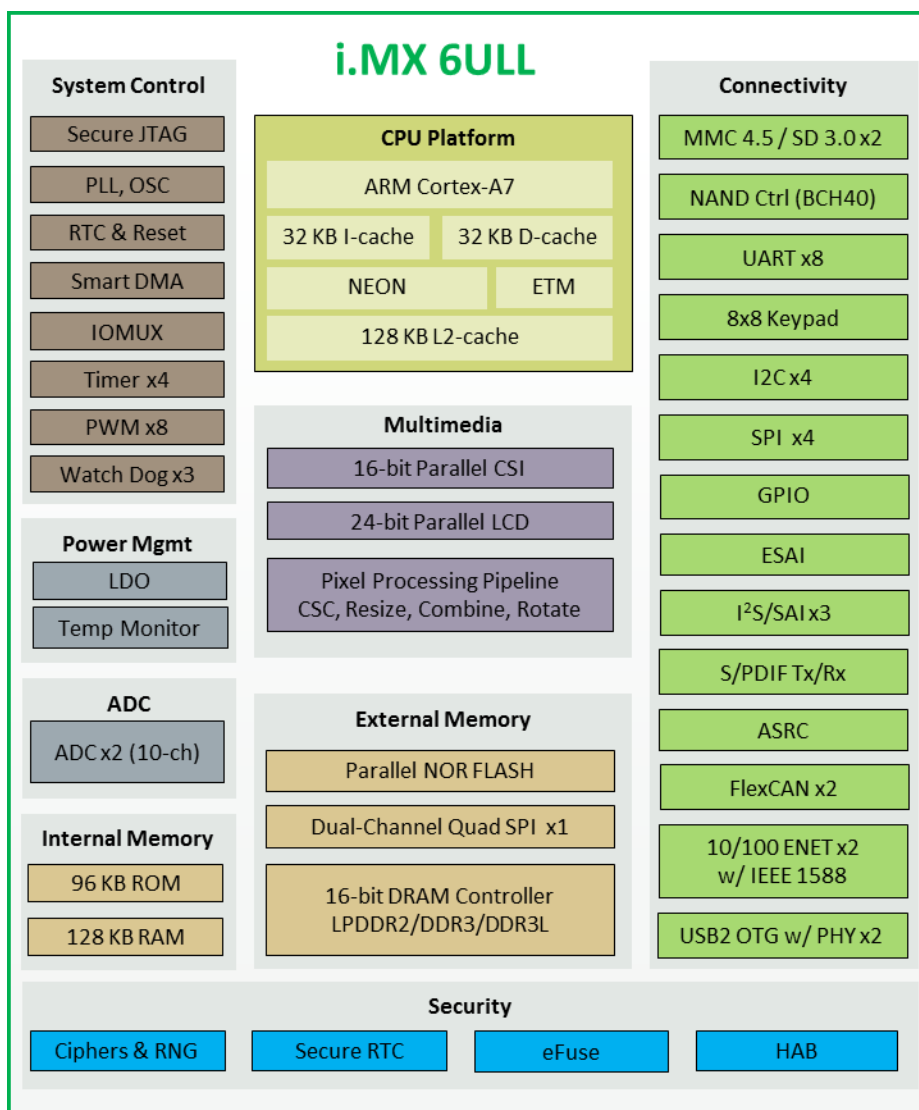
PN7150 NFC Controller SBC Kit for Arduino



NFC Forum Type 2 Tag (Sample Card)



i.MX 6ULL Applications Processor Overview



Specifications

- Process: SMIC40LL
- Core voltage: 1.1V
- Package:
- 289 MAPBGA, 14x14mm, 0.8mm pitch
- 272 MAPBGA, 9x9mm, 0.5mm pitch
- Temperature: -40C to 105C (Tj)

Enablement

Key Features and Advantages

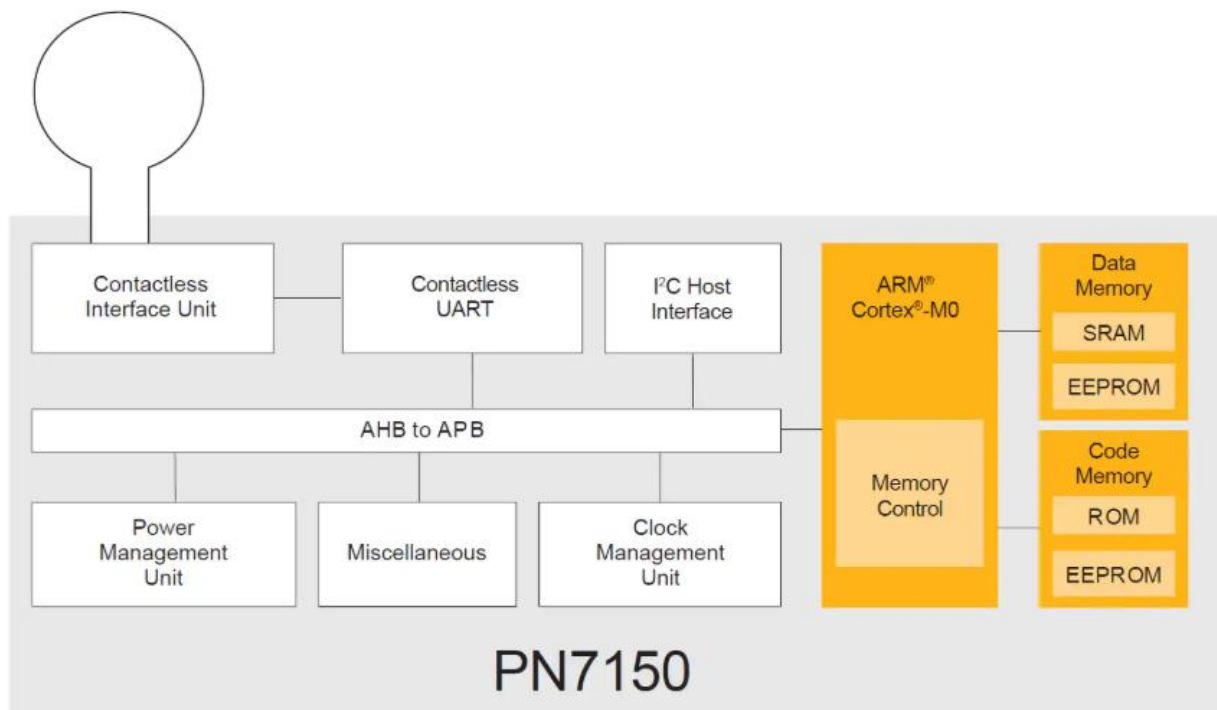
- ARM Cortex-A7 @ up to 900 MHz, 128 KB L2 cache
- Parallel LCD Display up to WXGA (1366x768)
- 8/10/16/24-bit Parallel Camera Sensor Interface
- 16-bit LP-DDR2, DDR3/DDR3L
- 8/16-bit Parallel NOR FLASH / PSRAM
- Dual-channel Quad-SPI NOR FLASH
- 8-bit Raw NAND FLASH with 40-bit ECC
- 2x MMC 4.5/SD 3.0/SDIO Port
- 2x USB 2.0 OTG, HS/FS, Device or Host with PHY
- Audio Interfaces include ESAI, 3x I2S/SAI, S/PDIF Tx/Rx
- 2x 10/100 Ethernet with IEEE 1588

PN7150 NFC (Near Field Communication Controller)



High performance NFC controller, supporting all NFC Forum modes, with integrated firmware and NCI interface

Close



Full hardware and software compatibility

- Support for Linux, Android, Windows IoT, RTOS, NulIOS

All NFC operating modes

- Read/Write Mode: ISO/IEC 14443 A&B up to 848 kbit/s, FeliCa at 212 & 424 kbit/s, MIFARE Classic with 1K, 4K, NFC Forum type 1, 2, 3, 4, 5 tags, ISO/IEC 15693
- All peer-to-peer modes
- Card Emulation Mode (from host): NFC Forum T4T (ISO/IEC 14443 A&B) at 106 kbit/s, NFC Forum T3T (FeliCa, PN7150 only)

Key Benefits

- Seamless integration of NFC into any application, especially those with OS systems
- Plug-and-play NFC operation with many platforms, including most LPC, QorIQ®, Kineticis and i.MX boards
- All typical NFC use cases, including pairing, personalization, extended user interface, maintenance, etc

- Fast deployment of advanced, fully interoperable NFC functionality, with a lower overall cost