

ROM-5720 Evaluation Kit

Development Kit for SMARC 2.0/2.1 Computer-on-Module ROM-5720

Features

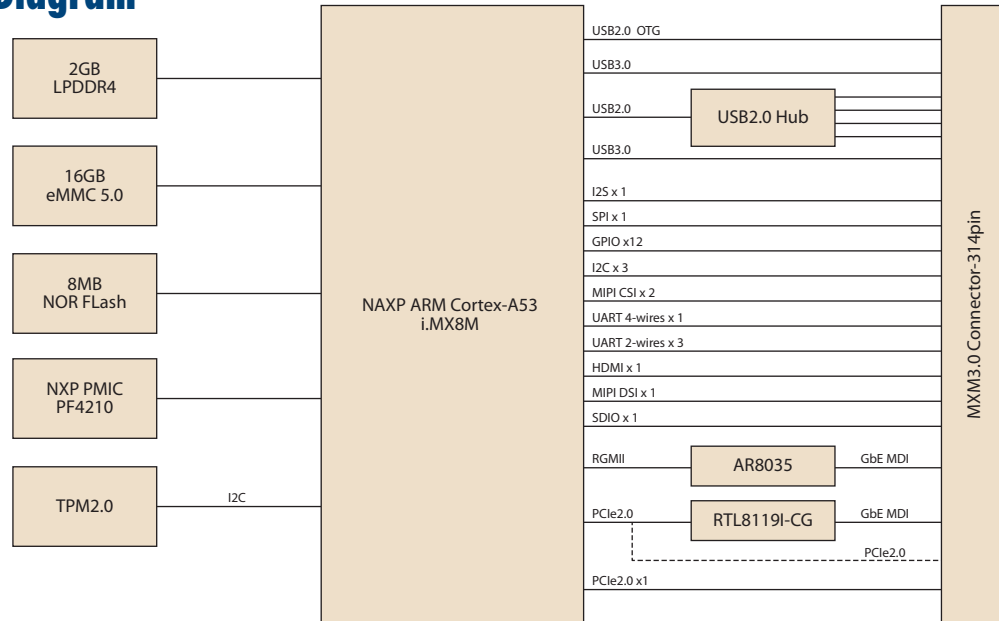
- NXP i.MX 8M processor with dual or quad Arm Cortex A53 cores
- 1 x Arm Cortex-M4 core
- Onboard 2GB LPDDR4 memory and eMMC 16GB
- 1 x HDMI2.0 up to 4096 x 2160, 1 x 4-Lane MIPI DSI
- 2 x USB3.0, 4 x USB2.0, 4 x UART, 4 x I2C, 12 x GPIO, 1 x PCIe2.0, 1 x 4-lane MIPI CSI camera input, 1 x 2-lane MIPI CSI camera input and 2 x Gigabit LAN
- Supports OpenGL ES 3.1/3.0/2.0/1.1, Open CL 1.2, and Vulkan hardware accelerators
- Supports 4Kp60 HEVC/H.265 decoding with HDR
- Cable pack & panel included
- Evaluative image & test utility built-in



Specifications

| | | |
|------------------|-----------------------|---|
| Form Factor | | ROM-5720 Evaluation Kit |
| Processor System | CPU | NXP i.MX 8M dual Arm Cortex A53 cores, up to 1.5GHz |
| | MCU | 1 x Arm Cortex-M4 core |
| Memory | Technology | LPDDR4-1866 MHz |
| | Capacity | Onboard 2GB LPDDR4 |
| | Flash | 16 GB eMMC NAND Flash for O.S. and 8 MB QSPI NOR Flash for Advantech boot loader |
| Graphics | LVDS/MIPI DSI | 1 x 4-lane MIPI DSI, up to 1920 x 1080 @ 60Hz |
| | HDMI | 1 x HDMI2.0, up to 4096 x 2160 at 60 Hz |
| | Parallel RGB | - |
| | VGA | - |
| | Graphics Engine | Vivante GC7000 Lite, supports OpenGL ES 1.1, 2.0, 3.0, 3.1, Open CL 1.2, and Vulkan |
| Ethernet | H/W Video Codec | Decoder: HEVC/H.265(4Kp60), VP9(4Kp60), H.264(4Kp30), MPEG-2, MPEG-4p2, VC-1, VP8, RV9, AVS, MJPEG, H.263 |
| | Chipset | 1 x NXP i.MX8M Integrated RGMII; 1 x RTL8119L-CG Giga LAN controller or 1 x PCIe x 1-lane(option) |
| RTC | Speed | 2 x 10/100/1000 Mbps |
| | RTC | Yes |
| WatchDog Timer | RTC | 1-6553s, default 60s, power on/off 1s |
| Security | | TPM 2.0 |
| I/O | PCIe | 1 x PCIe 2.0 |
| | SATA | - |
| | USB | 2 USB3.0, 4 USB2.0, 1 USB2.0 OTG |
| | Audio | 1 x I ² S |
| | SPDIF | - |
| | SDIO | 1 |
| | Serial Port | 1 x 4-wire UART (H/W flow control) and 3 x 2-wire UART |
| | SPI | 1 |
| | CAN | - |
| | GPIO | 12 |
| | I ² C | 4 with interrupt |
| | Camera Input | 1 x 4-lane MIPI CSI, 1 x 2-lane MIPI CSI |
| | System Bus | - |
| | Touch | - |
| Keypad | - | |
| Power | Power Supply Voltage | Fixed 5V ± 5% DC source |
| | Power Consumption | 5.3W (Max) |
| Environment | Operating Temperature | 0 ~ 60 °C / -40 ~ 85 °C |
| | Operating Humidity | 5 ~ 95% relative humidity, non-condensing |
| Mechanical | Dimensions (W x D) | 82 x 50 mm |
| Operation System | | Linux & Android |
| Certifications | | CE/FCC Class B |

Block Diagram



Ordering Information

| Part No. | Description |
|------------------|-------------------------|
| ROM-DK5720-F0A1E | ROM-5720 Evaluation Kit |

Packing List

| Part No. | Description |
|-------------------|--|
| 9680015491 | miniPCIe to PCIe adapter card MP2W-S-SMA V2.2a |
| 96965901001 | ASS'Y ROM-DB5901 A102-1 SMARC Carry Board |
| 9696EG56000 | ROM-EG56-A101-1 ASS'Y DSI to HDMI board |
| 9696MEG510E | ROM-EG51 A101 ASS'Y CODEC Board |
| 9696MEG700E | ROM-EG70 A101 ASS'Y SPI/I2C Board |
| 9696R572020 | ROM-5720 A101-4 i.MX8M-CD LPDDR4 2GB |
| 96PSA-A36W12R1-3 | ADAPTER 100-240V 36W 12V 3A |
| SQF-ISDM1-16G-21C | SQF I-SD UHS-I MLC 16G (0~70°C) |
| 1700030999-01 | A cable 2*4P-2.54/ 2*4P-2.54 10cm |
| 1700031000-01 | A cable 1*4P-2.0/1*4P-2.0 10cm |
| 1700030769-01 | A cable mini SAS 36P/1*5P-2.0+2*20P-1.25+5P 17.5 |
| 1700023619-01 | A cable USB-A 4P(M)/micro USB 5P(M) 1m ADAM-T212 |
| 1700019077-11 | M Cable USB-A 4P(M)/M-USB 5P(M) 150cm |
| 1700019474 | M Cable D-SUB 9P(F)/D-SUB 9P(F) RS232/RS485 100c |
| 1700031482-01 | M cable USB-A 4P(M)/1*5P-2.54 60cm |
| 1701100300 | F Cable IDE#3 10P-2.54/D-SUB 9P(M) 30cm |
| 1700018730 | A Cable 2*5P-2.0/USB-A 4P(F)*2 25CM F/9 for1PPC |
| 1970004440T001 | Heat spreader 82x42x6 mm ROM-5720 |
| 1960063089N001 | Heat sink 82x42x13 mm ROM-5720 |

Optional Accessories

| Part No. | Description |
|----------------|---|
| 1700001524 | Power Cord 3P UL 10A 125 V 180 cm |
| 170203183C | Power Code 3P Europe (WS-010+WS-083)183cm |
| 1700008921 | Power Cord 3P PSE 183cm |
| 170203180A | Power Cord 3P UK 2.5A/3A 250V 1.83M |
| EWM-W163M201E | 802.11a/b/g/n/ac, QCA6174A-5, 2T2R, with BT4.2, Full size Mini PCIe |
| 1750008717-01 | Dipole Ant. D.B 2.4/5G WIFI 3dBi SMA/M-R BLK |
| 1750007965-01 | Antenna cable, SMA (M) to MHF4, 300mm |
| EWM-C117FL06E* | LTE/HSPA+/GPRS module, w/ SIM Slot, for Taiwan |
| 1750007990-01 | Antenna 4G/LTE full band L=11 cm 50 Ohm |
| 1750006009 | Antenna Cable SMA (F) to MHF 1.32 25cm |

*Please contact us to get suitable cellular module for your region.