

Product Accelerator Board

3PB1001 series

FEATURES

- Ready to use solution: start developing your product now
- Can be integrated in your product as-is or used as a starting point for a customization
- High performance, ready for IA-driven future
- Powerful graphic performance, ideal to create next-generation HMIs
- Ideal for multimedia applications
- Supports all NXP i.MX8M Plus processor variants
- Compatible with future 3SM1010 i.MX9 SoM Modules
- Compact dimensions only 160 x 100 mm
- Supports 3SM1009 SoM Modules
- Flexible and expandable solution
- EGF SW Upgrade platform for updates through USB pendrives or OTA



SOM Module

CPU

- NXP i.MX 8M Plus Solo\Dual\Quad Arm® Cortex®-A53 core
- Standard or Lite CPU options
- Neural Processing Unit (NPU) option
 - 2.3 TOP/s Neural Network performance
- Supports Arm® Cortex®-A53 core frequency up to 1800 MHz
- Additional Cortex-M7 Core up to 800 MHz

Carrier Board

MULTIMEDIA AND HUMAN INTERFACE

- 3 display connectors available:
 - HDMI display
 - LVDS display
 - MIPI or secondary LVDS display
- 2 camera connectors available
 - MIPI-CSI Camera Interface (4-lane) with HDR ISP
- Integrated Audio Codec
 - Multifunctional Headphone Jack with Mic
- SPDIF available on Expansion Connector
- 7", 10.1", 15.6" and other custom size displays available on request

SYSTEM

- Single +12 / 24 VDC ±5% power supply
- On board regulators for all integrated functions
- Power consumption depends on application

STORAGE / BOOT MEMORY

- From 8 to 64 GB eMMC Flash memory

DRAM MEMORY

- Up to 4GB LPDDR4 memory with 32 bit wide Bus

I/O PERIPHERALS

- 2 x USB 3.1 Host Connectors
- 1 x microSD card Connector
- 1 x M.2 key M for external SSD (optional)
- 1 x M.2 key E Connector for Wifi / BT Modules
- 1 x microUSB Debug UART connector to simplify SW debugging
- Up to 4 x RS-232 UART Interfaces
- Up to 2 x CAN FD Interfaces (with integrated transceiver)
- Onboard RTC
- Up to 2 x Gigabit LAN Interfaces
- Expansion connector for I2C / PWM and GPIOs

TEMPERATURE¹

- 0 to 70°C for commercial version
- -40 to 85°C for industrial version

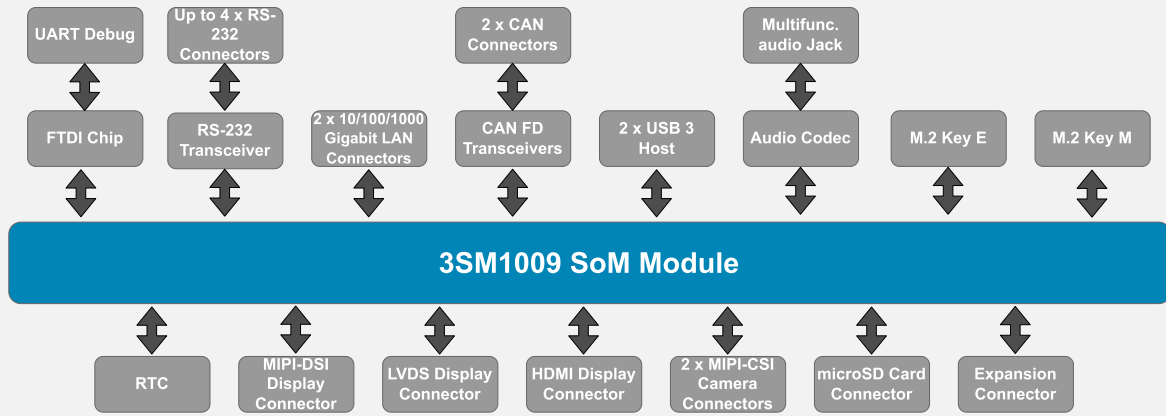
OPERATING SYSTEMS

- Linux (Cortex® - A53 core) + FREERTOS (Cortex® - M7)

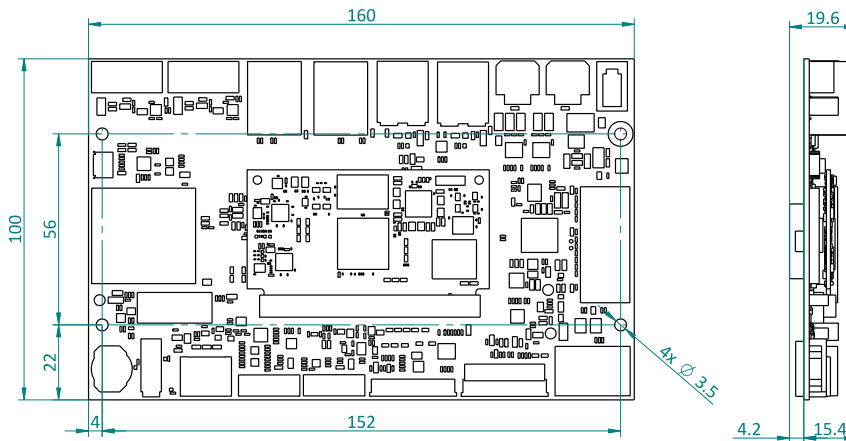
¹ These temperatures are the ambient operating temperature ranges for the components used into SoM, with exception of iMX8M Plus processor, which is specified on junction operating temperature range, 0-95°C for commercial version and -40-105°C for industrial version. SoM ambient operating temperature depends on the application and on the cooling measures applied



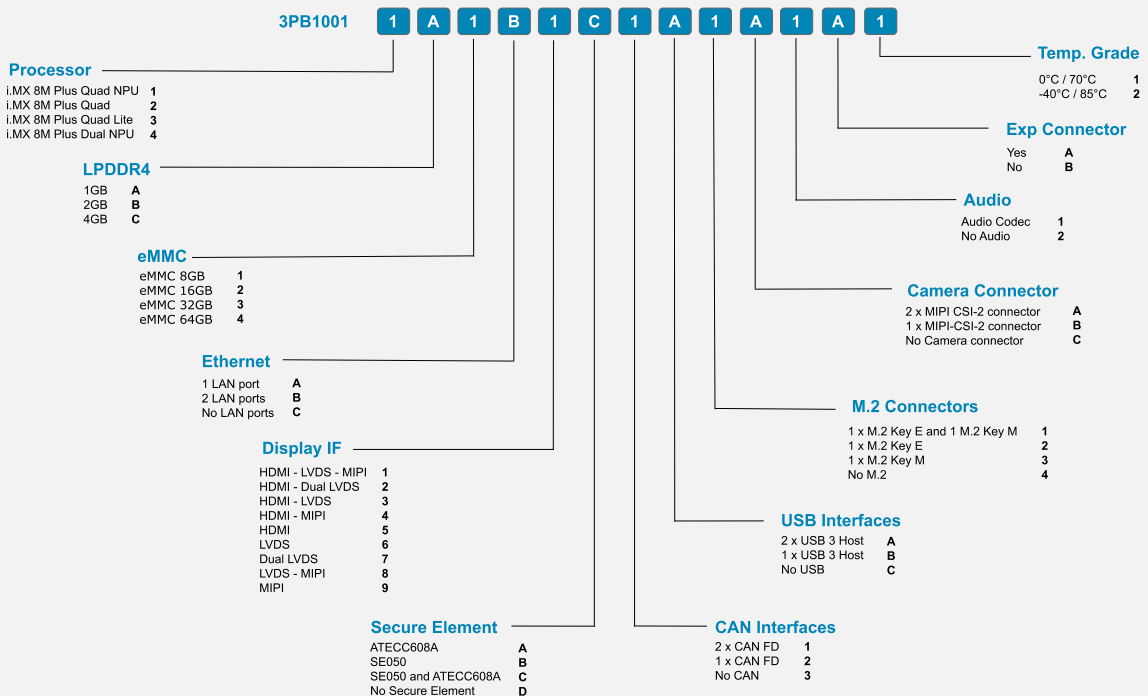
BOARD DIAGRAM



DIMENSIONS (mm)



ORDERING INFORMATION OPTIONS



Default configuration:

3PB10011A1B1C1A1A1A1 i.MX 8M Plus Quad NPU, 1GB LPDDR4, 8GB eMMC, 2 Gigabit LAN Ports, HDMI, Single LVDS and MIPI-DSI, SE050, ATECC608A, 2 CAN FD, 2 USB Host, M.2 Key E, M.2 Key M, 2 MIPI Camera Connector, Audio, Exp Connector, Commercial Range

Some code combinations are not allowed and others are available on customizations only, for more information please contact Eletronica GF sales dept.

