Product Accelerator Board
3PB1002 series

ELETTRONICA
GF
A FAE TECHNOLOGY COMPANY

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
- Supports all NXP i.MX8M Mini processor variants
- Compact dimensions only 152 x 100 mm
- Supports all 3SM1008M SoM Modules
- Compatible also with 3SM1008N SoM Modules
- Flexible and expandable solution
- Huge availability of peripherals
- EGF SW Upgrade platform for updates through USB pendrives or OTA

SOM Module
CPU

- NXP i.MX 8M Mini Solo\Dual\Quad Arm® Cortex®-A53 core
- Standard or Lite CPU options
- CPU frequency up to 1800 MHz
- Additional Cortex-M4F Core up to 800 MHz

STORAGE / BOOT MEMORY

- From 8 to 64 GB eMMC Flash memory

DRAM MEMORY

- Up to 4GB DDR4 memory with 32 bit wide Bus

Carrier Board
MULTIMEDIA[1]

- 10.1" LVDS display connector (display available on request)
- Support for PCT projective capacitive touch screen
- Support for 4-wire Resistive touch screen
- MIPI CSI Camera connector (5MP Camera available on request)
- Integrated Audio Codec

SYSTEM

- Single +12 / 24 VDC ±10% power supply
- On board regulators for all integrated functions
- Power consumption depends on application

TEMPERATURE[2]

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

I/O PERIPHERALS[1]

- USB 2.0 Host
- USB 2.0 OTG
- Ethernet 1Gbps
- 1 x CAN BUS Interface with integrated Transceiver
- RS-232 (with hardware flow-control)
- RS-485 full duplex
- Serial port SW selectable between RS-232 and RS-485 full duplex
- 2 x Digital I/O
- 2 x SPI interfaces
- 2 x I2C Bus interfaces
- BLE 5.0
- WiFi 2.4 GHz IEEE 802.11 b/g/n
- GPIOs available
- Buzzer
- Temperature sensor
- RTC
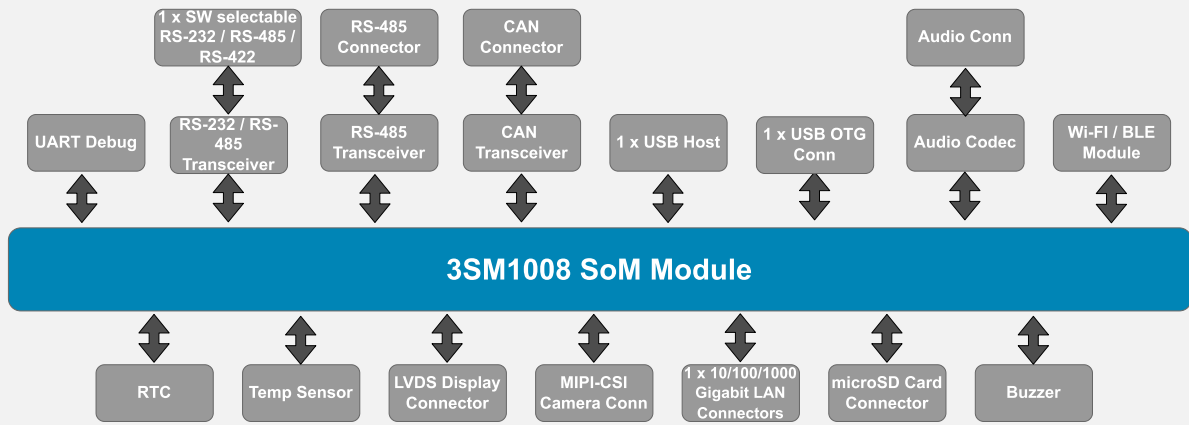- microSD slot

OPERATING SYSTEMS

- Linux (Cortex® - A53 core) + FREERTOS (Cortex® - M4F)

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[1] Please note that not all the functions may be available simultaneously, due to pin mux limitation of CPU. For more information, refer to NXP user's manual.

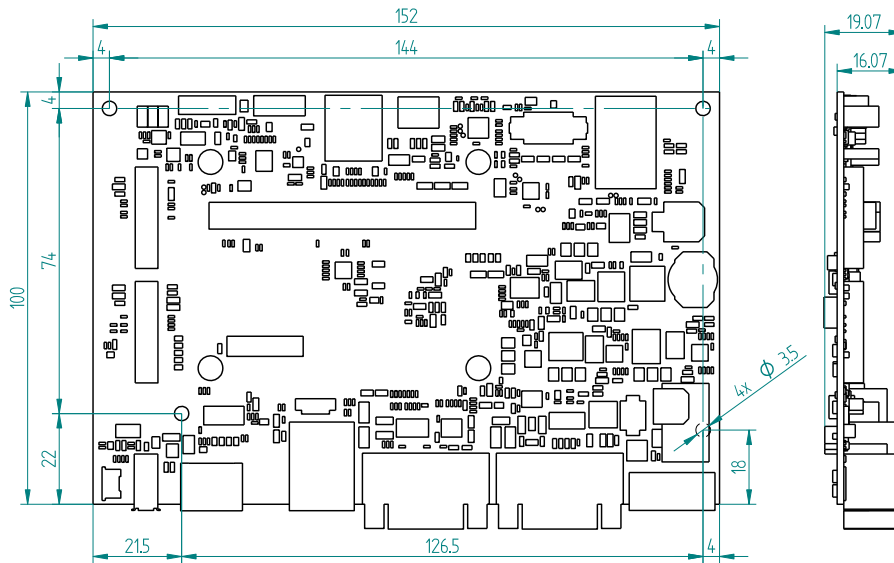[2] These temperatures are the ambient operating temperature ranges for the components used into SoM, with exception of iMX8M Mini processor, which is specified on junction operating temperature range, 0-95°C for commercial version and -40-105°C for industrial version. SoM ambient operating temperature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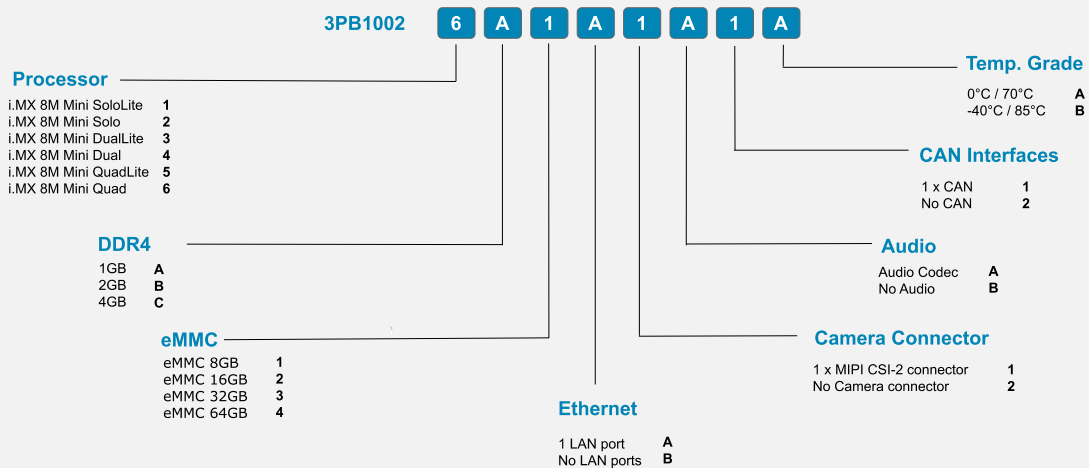
NXP PARTNER PROGRAM

3PB1002-FL-EN_A02.doc

BOARD DIAGRAM

DIMENSIONS (mm)

ORDERING INFORMATION OPTIONS

3PB1002	6	A	1	A	1	A	1	A

Processor

i.MX 8M Mini SoloLite	**1**
i.MX 8M Mini Solo	**2**
i.MX 8M Mini DualLite	**3**
i.MX 8M Mini Dual	**4**
i.MX 8M Mini QuadLite	**5**
i.MX 8M Mini Quad	**6**

DDR4

1GB	**A**
2GB	**B**
4GB	**C**

eMMC

eMMC 8GB	**1**
eMMC 16GB	**2**
eMMC 32GB	**3**
eMMC 64GB	**4**

Ethernet

1 LAN port	**A**
No LAN ports	**B**

Camera Connector

1 x MIPI CSI-2 connector	**1**
No Camera connector	**2**

Audio

Audio Codec	**A**
No Audio	**B**

CAN Interfaces

1 x CAN	**1**
No CAN	**2**

Temp. Grade

0°C / 70°C	**A**
-40°C / 85°C	**B**

Default configuration:

3PB10026A1A1A1A   i.MX 8M Mini Quad, 1GB DDR4, 8GB eMMC, Gigabit LAN Port, MIPI Camera Conn, Audio , CAN, Commercial Range

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