

phyCORE[®]-AM65x

The phyCORE-AM65x module brings secure boot, multiprotocol gigabit industrial communication, graphics, functional safety features and time-sensitive networking (TSN) to the phyCORE family. The phyCORE-AM65x SOM is ideal for industrial communication systems, factory automation, edge computing, grid infrastructure and applications where high reliability is needed.



Sitara AM65x processor

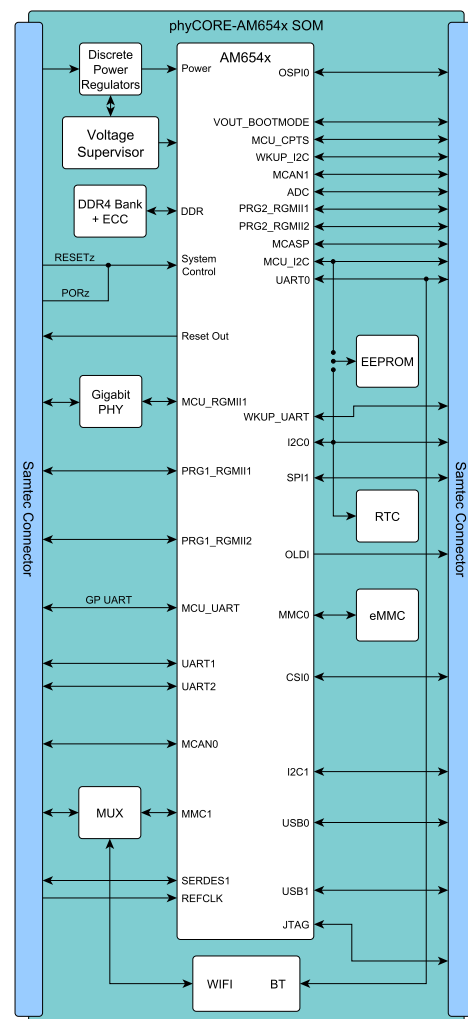
- Quad ARM[®] Cortex[®]-A53 CPUs and dual-core Arm[®] Cortex[®]-R5F MCU subsystem
- 3D Graphics support via PowerVR SGX544 Core
- Extended Hardware encryption technology and Secure Boot

Features

- Up to 6 Gigabit Industrial Communication interfaces (PRU-ICSSG)
- Single Lane PCIe 3.0
- OctoSPI Bus Support
- LVDS Display Support
- CSI Camera Support
- MIPI DPI Display Support
- USB 3.0/2.0 Dual Role
- 2.4 GHz 802.11 b/g/n + BLE 4.2 + BT 2.1+EDR

Product Integration

- Global Technical Support
- Product Life-Cycle Management program
- Production-ready Linux/Yocto BSP
- FCC / CE product reference design
- Carrier Board Full Schematic Review
- Pin Mux Configuration tools
- System Architecture Consulting



SOM Variants

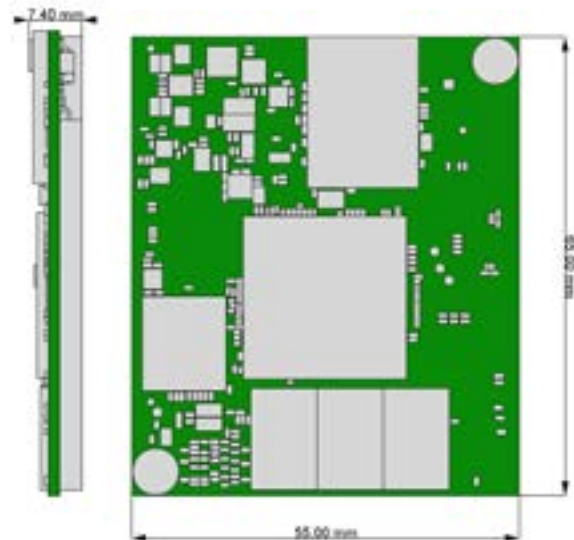
	Module	Standard Part # PCM-067-111101111
Processor	2x dual-core ARM® Cortex®-A53 CPUs and 1 dual-core ARM® Cortex®-R5F	TI Sitara AM6548
Frequency	1.1 GHz (2.53 DMIPS/core) / 400 MHz max speed (668 DMIPS/core)	1.1 GHz / 400 MHz
Safety Features	Cryptographic acceleration, Device identity, Secure boot, Debug security, External memory protection, Trusted execution environment, Networking security, Secure storage	Included
DDR4	1 GB-8 GB + 1 GB ECC	2 GB
eMMC	4-32 GB	4 GB
EEPROM	4 kB	4 kB
Ethernet PHY	10/100/1000 Mbit/s	1x 10/100/1000 Mbit/s
Temperature	-40°C to +85°C	-40°C to +85°C
BSP	Linux / TI-RTOS (future) / Android (future)	Linux

* Please contact us for additional standard SOMs

SOM Interfaces

Interfaces	Standard	Maximum*
UART	5	5
CAN	2	2
SPI	1	4
I ² C	4	6
MMC/SDIO	1	1
Ethernet	1	1
Industrial Ethernet	4	6
USB	1	1x 2.0/3.0 Dual Role
eQEP	0	2
PWM	0	6
ADC	1	1
OLDI (LVDS)	1	1
Audio	1	3
eCAP	1	1
MIPI-CSI	1	1
PCIe 3.0	1	2
JTAG	0	1
MIPI-DPI	1	1

* The processor interface functions can be used multiple times through PINMUX. However, not all interfaces will be available at the same time.



Physical Data

Dimensions	55 x 65 mm
Weight	–
Operating Temperature	-40°C to +85°C
Power Supply	VCC 3.3V
Connector	2x90 SamTec Connector

Ordering information

Part number

Contact PHYTEC sales@phytec.com