

Single Board Computer



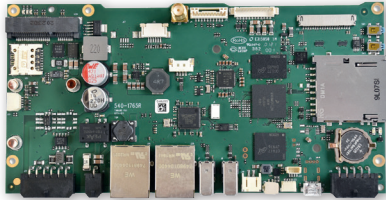
TANARO CORE

core by Garz & Fricke

Single Board Computer (SBC) based on NXP i.MX8M Mini processor

High performance with low power consumption for edge computing with integrated connectivity and multimedia interface

HIGHLIGHTS



CPU
NXP i.MX 8M Mini Family

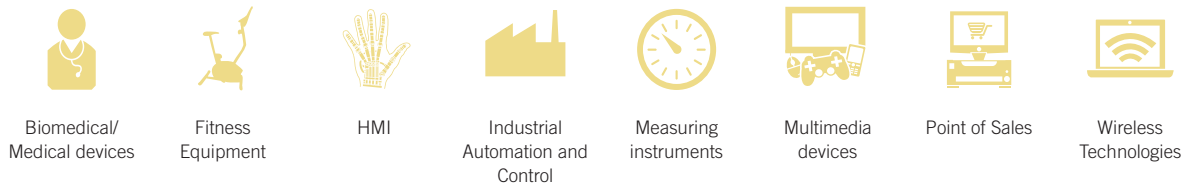
CONNECTIVITY
Wifi/BT, 1x GbE, 1x 100MbE, up to 3x USB, 2x RS232, RS485, CAN

GRAPHICS
GC320 2D accelerator + GCNanoUltra 3D accelerator

MEMORY
Soldered on Board LPDDR4 memory



MAIN FIELDS OF APPLICATION



FEATURES

Processor	NXP i.MX 8M Mini Family based on ARM® Cortex®-A53 cores + general purpose Cortex®-M4 400MHz processor: i.MX 8M Mini Quad – Full featured, 4x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Dual – Full featured, 2x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Solo – Full featured, 1x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Quad Lite Full featured, 4x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Dual Lite – Full featured, 2x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Solo Lite – Full featured, 1x Cortex®-A53 cores up to 1.8GHz	USB	1x USB 2.0 OTG micro-AB up to 2x USB 2.0 Type-A
Memory	1 GB 32 bit LPDDR4	Audio	1x speaker (connector), 1 W RMS (8Ω) parallel to internal speaker Digital Mic In connector (2x PDM inputs)
Graphics	GC320 2D accelerator + GCNanoUltra 3D accelerator Embedded VPU (not for Lite processors), able to offer: VP9, HEVC/H.265, AVC/H.264, VP8 HW Decoding AVC/H.264, VP8 HW encoding OpenGL ES 2.0, OpenVG 1.1 support	Serial Ports	2x RS-232, RS-485
Video Interfaces	LVDS Single/Dual Channel connector MIPI-CSI Camera interface connector	Power Supply	9 ÷ 32 VDC
Video Resolution	Up to 1920x1080p60, 24bpp	Operating System	Yocto
Mass Storage	eMMC: 4 GB MLC SD slot: 4 bit MMC/SDIO/SD/SDHC	CAN Bus	1x CAN (ISO/DIS 11898)
Networking	1x GbEthernet interfaces 1x 100MbEthernet shielded single band WiFi 802.11 b/g/n with Bluetooth 4.0 mPCIe (half size) socket for modems	Operating Temperature*	0°C ÷ +60°C
		Dimensions	159.0 x 18.0 x 80.0 mm

*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider application-specific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.



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BLOCK DIAGRAM

