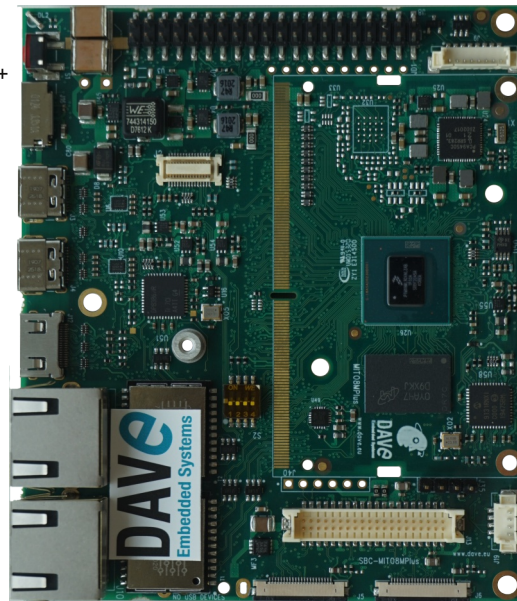# ORCA SBC
all-in-one solution

NXP i.MX8M Plus Embedded
SINGLE BOARD COMPUTER

- **SOM:**
  - ORCA SOM based on NXP i.MX8M Plus Dual-Quad core Cortex-A53 + Neural Processing Unit + 1x Cortex-M7
- **STORAGE NAND SLC or eMMC on board for all sizes**
- **SECURITY:** SE050 Edge Lock on board
- **ETHERNET:** 2x10/100/1000Mbps (1x with TSN support)
- **VIDEO INPUT:** Dual MIPI CSI compatible with RPi cameras
- **USB 3.0 Host and Device**
- **SD card**
- **SERIAL:** 1x RS485
- **DISPLAY:** HDMI, Dual MIPI DSI, Dual LVDS
- **TOUCH:** capacitive
- **AUDIO:** Stereo OUT and MIC in
- **DIMENSIONS:** 88x103mm - Standard DIN (6 modules)
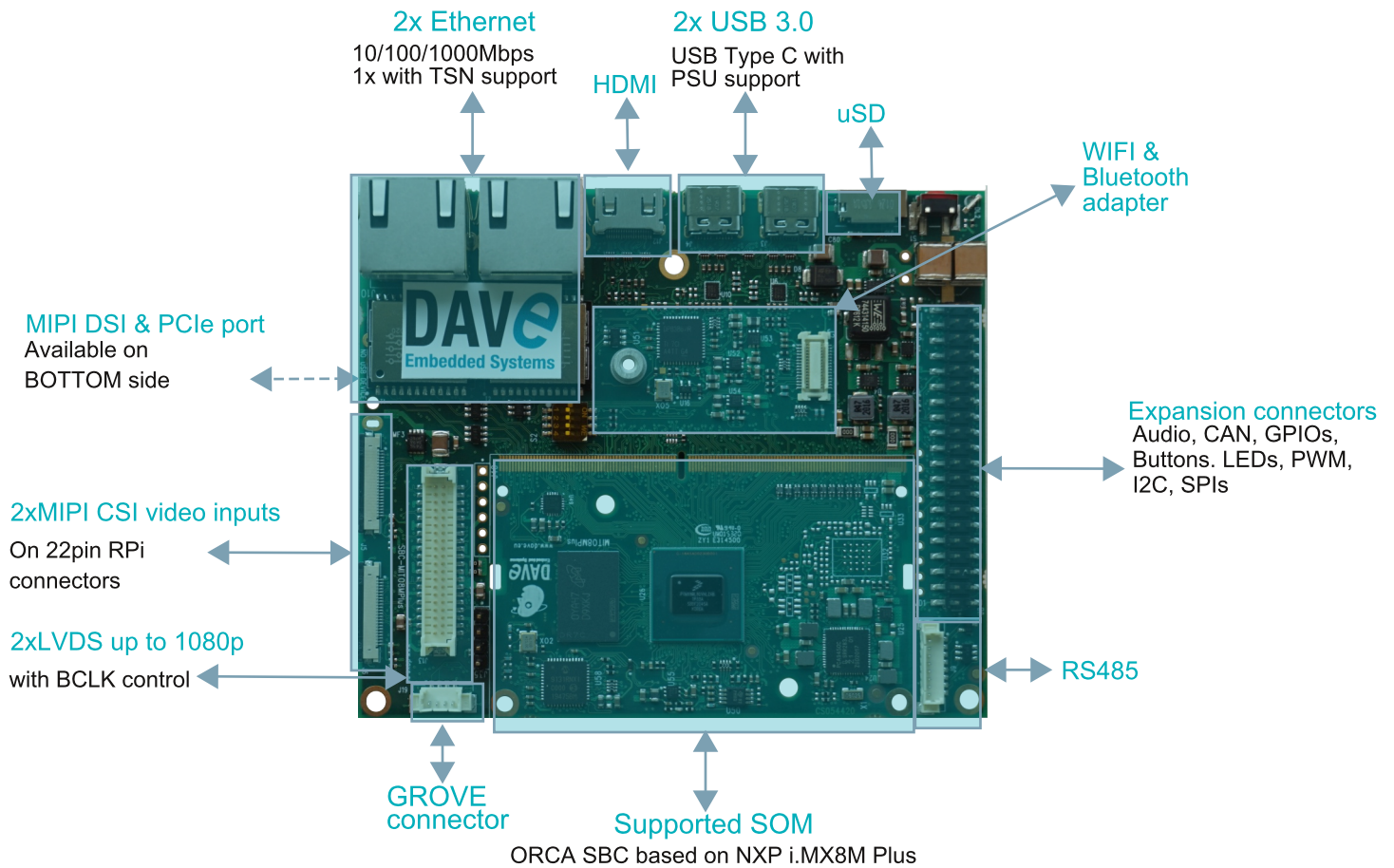 PSU: USB C Power Supply standard
  Designed for industries:

LOGIC LAB
IEC-61131
PLC runtime

ORCA SBC is part of DAVE Embedded Systems'portfolio of Single Board Computer solutions it is based on ORCA SOM System On Module based on NXP's System On Chip. ORCA SBC Single Board Computer has a 6 Modules DIN Bar and can be configured in order to be boxed with a finished product shape. This Single Board Computed is designed for long-term availability within the industrial qualification. EU or other countries' official certification is an optional for this Single Board Computer. The ORCA SBC Single Board Computer has a wide range of peripherals available: Dual Ethernet GB with TSN support, SD card, HDMI, Dual USB 3.0 with PSU support. Internally are supported DSI port, DUal LVDS ports, dual MIPI CSI port with Raspberry connector and a multiple of expansion connectors for PCIexpress,audio, RS485 etc . The Single Board Computer hosts onboard the ORCA SBC System On module integrates which integrates the SOC NXP i.MX8M Plus with Artifical Intellgence with
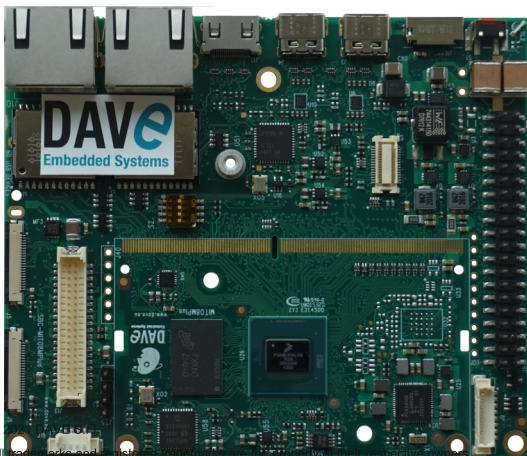
the Neural Processing Unit, Security with the edge lock SE050 and up to 8GB RAM size and eMMC with more than 64GB storage size. The ORCA SBC Single Board Computer has a number of expansion connectors useful also as an evaluation kit for the ORCA SOM System On module. ORCA SBC System On Module is designed for industrial application. It can be provided with an enclosure and it is suitable for EU or other countries certification. DAVE Embedded Systems is available for the support you on this topic. The ORCA SBC Single Board Computer is provided within a Software Development Kit which enable customers to get complete control of the board. The Software Development Kit is called DESK DAVE Embedded Software Kit and it is based on the NXP official Software Development Kits. DESK provides access to the source code of both the bootloader and the Linux Kernel.

Technical Specifications

2x Ethernet
10/100/1000Mbps
1x with TSN support

HDMI

2x USB 3.0
USB Type C with
PSU support

uSD

**WIFI &
Bluetooth
adapter**

MIPI DSI & PCIe port
Available on
BOTTOM side

Expansion connectors
Audio, CAN, GPIOs,
Buttons. LEDs, PWM,
I2C, SPIs

2xMIPI CSI video inputs
On 22pin RPi
connectors

2xLVDS up to 1080p
with BCLK control

RS485

**GROVE
connector**

Supported SOM
ORCA SBC based on NXP i.MX8M Plus

Mechanical Size

88x103mm (Standard 6M DIN Bar size)

©
All [illegible]
All features and specifications subject to change without notice.

- CE mark (Industrial grade) ready to use solution
- Ready to use for integration behind a display
- DAVE Embedded Systems is available for design the enclosure

Product Code Configurator

Visit our WIKI page:
https://wiki.dave.eu/index.php
/ORCA_SBC_SBC/Part_num
ber_composition

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