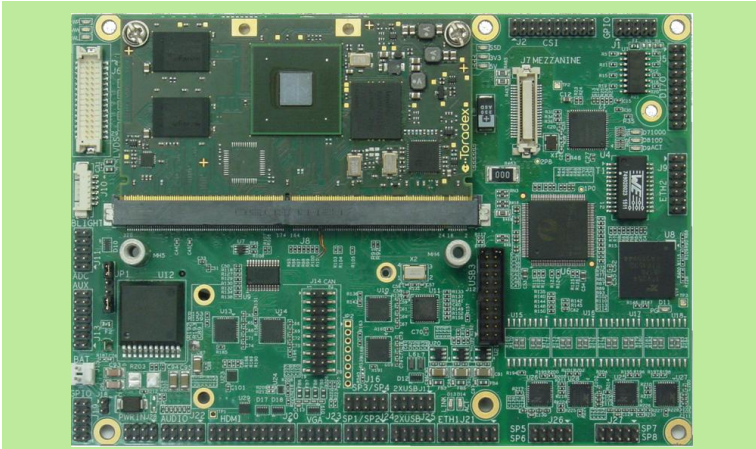


# EAGLE ARM SBC Family



## 3.5 Inch Form Factor SBC with Toradex Apalis ARM Computer-on-Modules



### Off the Shelf ARM Computing Solution

Eagle provides a rugged, compact, ready-to-run, complete embedded computing solution based on the Toradex Apalis family of ARM modules. Eagle is a 2-board "COM-based SBC" consisting of a baseboard plus installed CPU module. The baseboard provides a socket to mount the ARM module and then provides all the power and I/O circuitry necessary to turn it into a complete SBC. The use of a socketed CPU module provides easy field upgradability and ensures the longest possible product lifetime.

Select from 3 different processor families according to the performance you need. Select models are available as standard off the shelf configurations; others are available as special order.

Eagle offers wide temperature operation over the full industrial range of -40 to +85°C. Actual temperature range will be determined by the installed ARM module.

### Accessories

A panel I/O board is available with industry-standard I/O connectors to simplify system assembly. The board plugs onto the front edge of the Eaglet SBC and provides access to 2 USB ports, 1 Ethernet port, 2 serial ports, VGA, HDMI, 8 GPIO lines, audio, and power input. Remaining I/O features may be accessed with cables.

An optional daughterboard provides dual opto-isolated CAN ports with jumper-selected split bias termination.

Cable kits are also available, providing access to all I/O features on the board, including the I/O accessed with the panel I/O board.

- ◆ Choice of Toradex ARM Computer-on-modules:
  - NVIDIA Tegra T3 1.4GHz quad core Cortex A9
  - i.MX6 NXP/Freescale 1.0GHz quad core Cortex A9
  - NVIDIA Tegra TK1 up to 2.2GHz quad core Cortex A15
- ◆ Standard baseboard I/O features:
  - 4 USB 2.0 ports
  - 8 RS-232/422/485 serial ports
  - 2 Gigabit Ethernet ports
  - VGA, HDMI and dual channel LVDS display options
  - HD audio interface with MIC in and Line out
  - 4 12-bit A/D; 4 PWM; I2C; SPI; 16 GPIO lines
  - 4 opto-isolated digital inputs; 4 opto-isolated digital outputs
  - Camera serial interface (CSI)
  - PCIe MiniCard and mSATA sockets
  - "Type specific" I/O connector for mounting custom daughterboard
- ◆ Wide input 9VDC to 36VDC power supply
- ◆ 3.5 inch form factor: 4.0" x 5.75" (102mm x 146mm)
- ◆ -40°C to +85°C (-40°F to +185°F) operating temperature

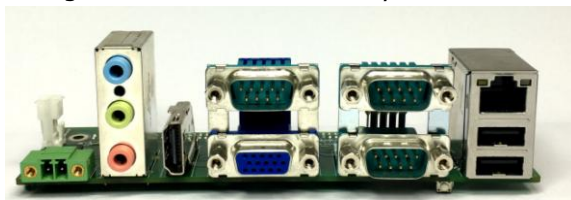
### Selection of Toradex ARM COMs

Apalis iMX6	Apalis T30	Apalis TK1
Freescale i.MX6	NVIDIA Tegra 3	NVIDIA Tegra K1
ARM Cortex A9	ARM Cortex A9	ARM Cortex A15
Quad core	Quad Core	Quad core
Dual core		
1GHz / 800MHz	1.4GHz	Up to 2.2GHz
512MB to 2GB DDR3 RAM	1GB or 2GB DDR3 RAM	2GB DDR3 RAM
4GB eMMC flash	4GB/8GB eMMC flash	16GB eMMC flash
End of life 2028	End of life 2025	End of life 2025

See [www.toradex.com](http://www.toradex.com) for more information.

### Linux Board Support Package

The Eagle Linux BSP is based on the Open Embedded Build Framework. The BSP is delivered on a 32GB micro-SD module and contains all drivers necessary for controlling all peripherals on Eagle. Just plug the SD into Eagle and the board is ready to run.



Eagle panel I/O board



CAN daughterboard



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# EAGLE: ARM SBC using Toradex Apalis ARM COMs

## Specifications

<b>Supported COMs</b>	Apalis iMX6 800MHz or 1GHz ARM Cortex A9 Apalis T30 1.4GHz ARM Cortex A9 Apalis TK1 2.2GHz ARM Cortex A15
<b>Networking</b>	2 Gigabit Ethernet ports
<b>Serial ports</b>	8 RS-232/422/485 ports with software configuration
<b>USB ports</b>	4 USB 2.0 ports
<b>iMX6 Video Display</b>	VGA 1280x1024; LVDS 1920x1200 dual ch; HDMI 1.4a up to 1080p/60Hz
<b>T30 Video Display</b>	VGA 1920x1200; LVDS 2048x1536 dual ch; HDMI 1.4a up to 1080p/60Hz
<b>TK1 Video Display</b>	VGA N/A; LVDS 1920x1200; HDMI 1.4b up to 3840x2160p
<b>Mass storage</b>	1 micro SD & 1 mSATA socket
<b>Camera input</b>	MIPI CMOS sensor interface
<b>Audio</b>	HD audio line in, line out
<b>Data acquisition and control</b>	4 12-bit A/D, 4 PWM 16 GPIO, 3.3V logic levels 4 opto-isolated in / 4 opto out, 3-28VDC
<b>Connectivity I/O expansion</b>	1 I2C, 1 SPI, 2 CANbus 2.0 on pin headers PCIe MiniCard socket (with SIM socket) Type specific connector for custom I/O
<b>Input power</b>	9VDC to 36VDC
<b>Power Consumption</b>	10.2W@12V input or 10.8W@36V input
<b>Operating temp</b>	-40°C to +85°C for i.MX6, T3 and TK1 CPUs
<b>Shock &amp; Vibration</b>	MIL-STD-202G compatible
<b>Dimensions</b>	4.0" x 5.75" (102mm x 146mm)
<b>RoHS</b>	Compliant

**EGL-MX6-Q2G-XT**

**EGL-T30-Q1G-XT**

**EGL-TK1-Q2G-ET**

**EGL-DX-BB**

**DK-EGL-MX6Q2G-LNX**

**DK-EGL-T30Q1G-LNX**

**DK-EGL-TK1Q2G-LNX**

**SDK-EGL-MX6-LNX**

**SDK-EGL-T3-LNX**

**SDK-EGL-TK1-LNX**

**PNL-EGL-01**

**CK-EGL-01**

**CK-EGL-02**

Eagle SBC, i.MX6 quad core 1GHz CPU, 2GB memory, wide temp

Eagle SBC, T30 quad core 1GHz CPU, 1GB memory, wide temp

Eagle SBC, TK1 quad core 1GHz CPU, 1GB memory, wide temp

Eagle 3.5 inch Baseboard for Toradex Apalis COMs

Eagle Development Kit with i.MX6 SBC, Linux OS on micro SD, and cable kit

Eagle Development Kit with T30 SBC, Linux OS on Micro-SD, and cable kit

Eagle Development Kit with TK1 SBC, Linux OS on Micro-SD, and cable kit

Linux BSP for Eagle / MX6 on Micro-SD

Linux BSP for Eagle / T3 on Micro-SD

Eagle/Eaglet Panel I/O Board

Eagle Cable Kit, no HDMI cable

Eagle Cable Kit, with HDMI cable

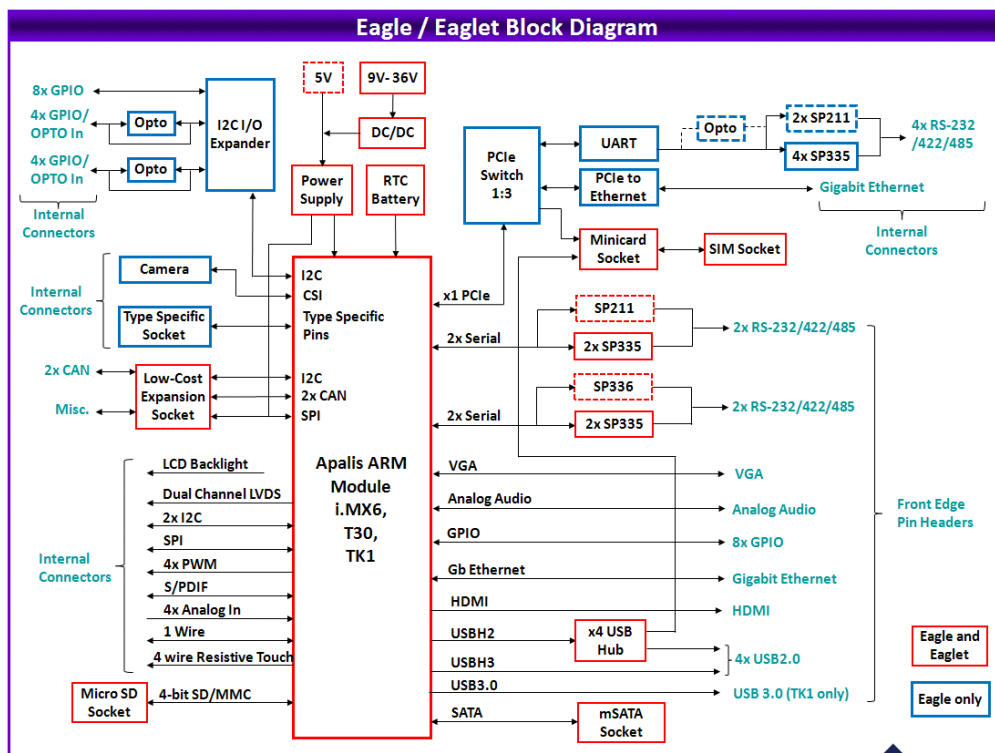
## Industrial ARM Computers

Eagle is available as a complete packaged system with integrated Linux OS. The enclosure supports table top, bulkhead, and DIN rail mounting options. Dimensions: 183W x 165D x 81H mm (7.2W x 6.5 x 3.1 in).



**Midi Enclosure**

## Ordering Information



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