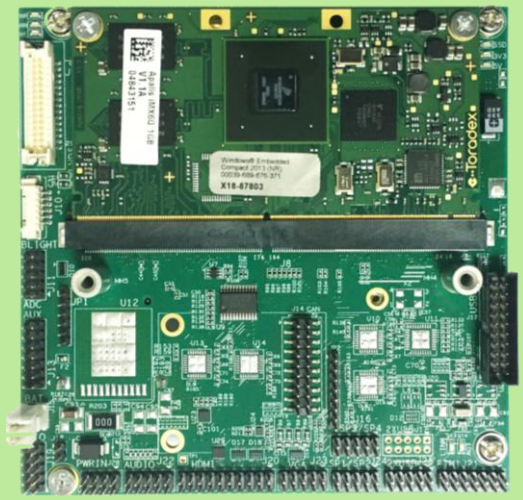
EAGLET ARM SBC Family

Compact Long-Life SBC with Toradex Apalis ARM Computer-on-Modules



Off the Shelf ARM Computing Solution

Eaglet provides a rugged, compact, ready-to-run, complete embedded computing solution based on the Toradex Apalis family of ARM modules. Eaglet 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.

Eaglet 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
  - 4 RS-232/422/485 serial ports
  - 1 Gigabit Ethernet port
  - 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
  - PCIe MiniCard and mSATA sockets
- Dual CAN option
- 5VDC input
- Small size: 4.0" x 4.0" (102mm x 102mm)
- -40°C to +85°C (-40°F to +185°F) operating temperature

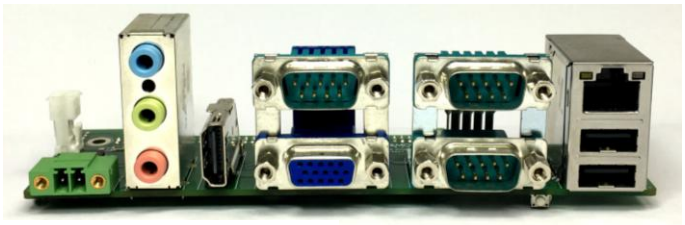
Selection of Toradex ARM COMs

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 Dual core	Quad Core	Quad 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 for more information.

Linux Board Support Package

The Eaglet 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 Eaglet. Just plug the SD into Eaglet and the board is ready to run.



Eagle panel I/O board

CAN daughterboard

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EAGLET: ARM SBC using Toradex Apalis ARM COMs

Specifications

Supported COMs	Apalis iMX6 800MHz or 1GHz ARM Cortex A9 Apalis T30 1.4GHz ARM Cortex A9 Apalis TK1 2.2GHz ARM Cortex A15
Networking	2 Gigabit Ethernet ports
Serial ports	8 RS-232/422/485 ports with software configuration
USB ports	4 USB 2.0 ports
iMX6 Video Display	VGA 1280x1024; LVDS 1920x1200 dual ch; HDMI 1.4a up to 1080p/60Hz
T30 Video Display	VGA 1920x1200; LVDS 2048x1536 dual ch; HDMI 1.4a up to 1080p/60Hz
TK1Video Display	VGA N/A; LVDS 1920x1200; HDMI 1.4b up to 3840x2160p
Mass storage	1 micro SD & 1 mSATA socket
Camera input	MIPI CMOS sensor interface
Audio	HD audio line in, line out
Data acquisition and control	4 12-bit A/D, 4 PWM 8 GPIO, 3.3V logic levels 4 opto-isolated in / 4 opto out, 3-28VDC
Connectivity	1 I2C, 1 SPI, 2 CANbus 2.0 on pin headers
I/O expansion	PCIe MiniCard socket (with SIM socket) Type specific connector for custom I/O
Input power	9VDC to 36VDC
Power Consumption	10.2W@12V input or 10.8W@36V input
Operating temp	-40°C to +85°C for i.MX6, T3 and TK1 CPUs
Shock & Vibration	MIL-STD-202G compatible
Dimensions	4.0" x 5.75" (102mm x 146mm)
RoHS	Compliant

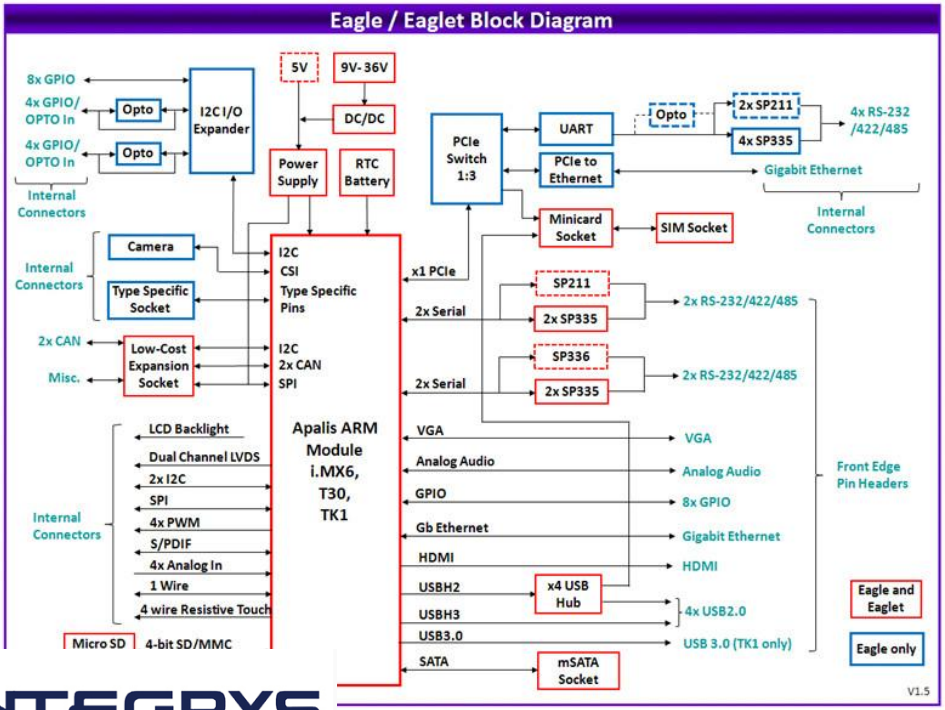
Ordering Information

EGLT-MX6-Q2G-XT	Eaglet SBC, i.MX6 quad core 1GHz CPU, 2GB memory, wide temp
EGLT-T30-Q1G-XT	Eaglet SBC, T30 quad core 1GHz CPU, 1GB memory, wide temp
EGLT-TK1-Q2G-ET	Eaglet SBC, TK1 quad core 1GHz CPU, 1GB memory, wide temp
EGLT-LC-BB	Eaglet Baseboard for Toradex Apalis
DK-EGLT-MX6Q2G-LNX	Eaglet Development Kit with i.MX6 SBC, Linux OS on micro SD, and cable kit
DK-EGLT-T30Q1G-LNX	Eaglet Development Kit with T30 SBC, Linux OS on Micro-SD, and cable kit
DK-EGLT-TK1Q1G-LNX	Eaglet Development Kit with TK1 SBC, Linux OS on Micro-SD, and cable kit
SDK-EGL-MX6-LNX	Linux BSP for Eagle / MX6 on Micro-SD
SDK-EGL-T30-LNX	Linux BSP for Eagle / T30 on Micro-SD
SDK-EGL-TK1-LNX	Linux BSP for Eagle / TK1 on Micro-SD
PNL-EGL-01	Eagle/Eaglet Panel I/O Board
CK-EGLT-01	Eaglet Cable Kit, no HDMI cable
CK-EGLT-02	Eaglet Cable Kit, with HDMI cable

Industrial ARM Systems

Eaglet 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



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