Catalyst AL

Low Power CoM - Intel Atom E3900



- **Highly Customizable**
- **Catalyst Compatible**
- **Intel® Atom™ E3900 Powered**
- **Industrial Grade**
- **IoT Ready**
- **Open Platform**

Features

Highly Customizable - Compact Eurotech-proprietary form factor for flexible hardware and software customization
Catalyst Compatible - Drop-in replacement for earlier Catalyst versions (i.e. BT, TC, XL) offers a simple and cost-effective upgrade for long-term programs
Intel Atom E3900 Powered - Delivers more performance using less power, along with enhanced graphics capabilities and faster cores
Industrial Grade - Designed to last, with high reliability connectors, ECC memory and extended temperature tested (-40 to +85°C)
IoT Ready - Provides a wide range of networks and I/O interfaces in a compact form factor: Gigabit Ethernet, GPIOs, high speed serial, USB and PCIe
Open Platform - Features Everyware Software Framework (ESF), the Java/OSGi-based middleware that accelerates IoT gateway development and enables remote management

Description

The Catalyst AL is a small form factor Computer on Module (CoM) designed for use in Embedded and Industrial IoT projects requiring high reliability, continuity and a long-life cycle, allowing for a range of flexible customization options. Measuring just 100x67mm and designed to operate in extended temperatures, the Catalyst AL is an excellent option for use in rugged, fanless embedded systems.

Based on the Intel E3900 (Apollo Lake) processor family, the Catalyst AL provides a drop-in replacement for previous Catalyst generations (Catalyst BT, TC and XL), requiring minimal or no changes to existing carrier boards. It is available in two and four core versions, with up to 8GB of RAM with ECC, up to 32GB of eMMC and two SATA interfaces.

The Catalyst AL makes it possible to leverage the multimedia capabilities of the Intel HD graphics 50x GPU, driving up to three simultaneous independent screens. MIPI camera input and HD audio are also supported. It also accelerates the implementation of field and system interfaces by providing high speed serial, USB 3.0 and 2.0, Gigabit Ethernet and GPIOs.

As with all Eurotech boards and systems, the Catalyst AL is compatible with Everyware Software Framework (ESF), a commercial, enterpriseready version of Eclipse Kura, the open source Java/ OSGi middleware for IoT gateways. Distributed and supported by Eurotech, ESF adds advanced security, diagnostics, provisioning, remote access and full integration with the Everyware Cloud (EC) IoT integration platform (available separately).

Used stand-alone, or in conjunction with EC, the Catalyst AL provides a fast track go-to-market solution for embedded and Industrial IoT projects of any size.

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Ordering code: CPU-300-25-XX							
XX		-01	-05	-09	-10	-14	-18
PROCESSOR	CPU	x5-E3930 1.3GHz, Dual Core	x5-E3940 1.6GHz, Quad Core	x7-E3950 1.6GHz, Quad Core	x5-E3930 1.3GHz, Dual Core	x5-E3940 1.6GHz, Quad Core	x7-E3950 1.6GHz, Quad Core
MEMORY	RAM	2GB DDR3L ECC1866MHz, Single Ch	4GB DDR3L ECC1866MHz, Single Ch	8GB DDR3L ECC1866MHz, Single Ch	2GB DDR3L ECC1866MHz, Single Ch	4GB DDR3L ECC1866MHz, Single Ch	8GB DDR3L ECC1866MHz, Single Ch
STORAGE	Embedded	No (32GB Max)	8GB eMMC (32GB Max)		No (32GB Max)	8GB eMMC (32GB Max)	
	SATA	2x SATA 3.0					
	Other	1x SDIO					
I/O INTERFACES	Ethernet	1x 10/100/1000Mbps					
	USB	2x USB 3.0 7x USB 2.0					
	Serial	2x High Speed RX/TX (3.6Mb/s) 1x Debug Port			2x High Speed with Flow Control (3.6Mb/s) 1x High Speed RX/TX (3.6Mb/s) 1x Debug Port		
	Digital I/O	4x GPIO (3.3V) 4x GPIO (1.8V)			7x GPIO (3.3V) 2x GPIO (1.8V)		
	Video	1x LVDS 2x DDI			1x LVDS		
	Backlight Control	Yes					
	Camera	4x Lane MIPI CSI (up to 5M Still Cut Resolution, up to 1920x1080@30fps Video Capture) 4x Lane MIPI DSI					
	Audio	Intel HD Audio					
	PCI Express	4x PCIe Gen 2					
	I2C	Up to 4x, 1.8V			Up to 5x, 3.3V Up to 4x, 1.8V		
	SPI	No			1x		
	I2S	1x					
	SMBus	1x					
	LPC	1x					
OTHER	RTC	Yes (Battery on Carrier)					
	Watchdog	Yes - Dedicated Chip					
	TPM	Factory Option	Yes	Factory Option		Yes	Factory Option
	Sensors	Temperature					
POWER	Input	9-36VDC					
	Consumption	7W Typ. (9W Max.)	10W Typ. (12.5W Max.)	13W Typ. (15W Max.)	7W Typ. (9W Max.)	10W Typ. (12.5W Max.)	13W Typ. (15W Max.)
ENVIRONMENT	Operating Temp	-40 to +85°C					
	Storage Temp	-40 to +85°C					
MECHANICAL	Dimensions	100x67mm (LxW) - Catalyst Form Factor					
SOFTWARE	OS	Eurotech Everyware Linux 1.6 - Kernel 3.14 - Factory Option: Windows 10 IoT Enterprise					
	SDK	Yocto-based Eclipse Tooling					
	IoT Framework	Azul Java SE Embedded Version 8 - Everyware Software Framework (Java/OSGi)					

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