

# OnRISC Alekto 2

## RISC-CPU Based TI Sitara AM3354 Industrial Embedded Computer

<b>System</b>	
Hardware	Ti Sitara AM3354 RISC CPU @ 720MHz 256MB DDR2 Real time clock
Mass Storage	microSD-card as internal boot device, SD 2.0 / SDHC CFast-Slot Type II, SATA as data storage
Network	2 x 1000/100/10 GigaBit Ethernet
Display & Audio	Display <ul style="list-style-type: none"> <li>PowerVR SGX530 3D engine, resolution up to 720p</li> <li>OpenGL-ES 1.1 + 2.0, Direct3D Mobile, OpenVG 1.0, OpenMax</li> </ul> Audio <ul style="list-style-type: none"> <li>2 channel 48kHz via HDMI</li> </ul>
Expansion Slots	1 x SDIO for WLAN 802.11b/g 1 x miniPCIe via USB 2.0 (for WLAN, GPS, GSM/3G/4G card) SIM card for GSM/3G/4G modems in miniPCIe slot
Peripherals	2 x USB 2.0 as Host 1 x USB 2.0 OTG 1 x Console Port RS232 1 x I <sup>2</sup> C 2 x RS232/422/485
CAN Bus	1 x CAN High Speed, 20kbps up to 1Mbps Signals: CAN_H, CAN_L, CAN_GND VScom CAN API, CANFestival, CANopen, LinCAN
Digital Input/Output	8 x TTL signals (64mA sink / 32mA source) Configurable Input/Output (0/2/4/6/8 inputs) Maskable IRQ for input signals Terminal block connector
LED	1 x Power, 1x 3G LAN: 2 x Link and Speed Serial: 2 x TxD, RxD
<b>Serial Ports</b>	
Features	2 x RS232/422/485 Highspeed UART, 128 Byte FIFO (FT232D) RS232: up to 500 kbps RS422/485: up to 3.0 Mbps
Available Modes	RS232 RS422 full duplex RS485 4-wire, full duplex RS485 2-wire, half duplex, without echo Configured by DIP-Switch or Software
Signals	RS232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND RS422: Tx+/-, Rx+/-, GND RS485 2-wire: Data+/-, GND RS485 4-wire: Tx+/-, Rx+/-, GND
RS485 Data Direction Control	by ARTc (Automatic Receive Transmit control)
<b>Software Specifications</b>	
Linux	Debian GNU/Linux Kernel 3.2 for ARM
Windows	Windows Embedded Compact 7
Android	Coming soon
<b>Power and Environment</b>	
Power	Input 9 - 32V DC 1.5A @ 12V without Wi-Fi and 3G cards 3-pin Terminal block connector, polarity neutral Auxiliary Output 5V @max. 0.5A on Digital-I/O connector
Temperature	Operating CFast mode: -10°C - 50°C, without Wi-Fi and 3G Operating OTG mode: -10°C - 75°C, without Wi-Fi and 3G Storage: -20°C - 85°C Humidity: 10-85% non-condensing

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MTBF	n.a.
<b>Mechanical</b>	
Dimensions	161 x 112 x 53 mm <sup>3</sup> ( W x L x H ) 171 x 128 x 53 mm <sup>3</sup> including all connectors
Weight	0.8kg
Construction Material	1mm Metalsheet
Mounting	DIN Rail Wall mount
<b>Approvals</b>	
EMC	FCC Class A, CE Class A
Environment	RoHS
<b>Ordering Information</b>	
Art. No.	6820
Product Name	OnRISC Alekto 2
Packing List	<ul style="list-style-type: none"> <li>◆ OnRISC Alekto 2 System</li> <li>◆ Power Supply : Power adapter 12V @ 1.5A</li> <li>◆ Boot microSDs : with Debian GNU/Linux installed (4/8GB) with Windows EC 7 installed (4/8GB) + License</li> <li>◆ Wi-Fi : SDIO card for WLAN 802.11b/g</li> <li>◆ GSM/UMTS : mPCIe card for 3G modem</li> <li>◆ Starter Kit : OnRISC Alekto 2 system 4GB microSD card for Linux inserted Power adapter 12V @ 1.5A Adapter cable for console port Documentation and Development Software on DVD</li> </ul>
Optional Accessories	

## Overview

The OnRISC Alekto 2 is a RISC industrial embedded computer based on ARM Cortex-A8 with NEON SIMD Coprocessor. The great variety of interfaces like LAN, CFast, USB, I<sup>2</sup>C, serial interface, digital I/O plus more options makes it easy to connect various industrial devices to the OnRISC.

Compact dimensions and DIN Rail mounting capability make the OnRISC to a space saving and flexible mounting industrial computer. It is feasible to be installed even in space limited environments. The internal microSD slot protects the system software against accidentally removal.

The miniPCIe slot provides opportunities for wireless communication. For example WLAN cards are available, and the connected SIM slot allows to use GSM/3.5G modems.

Due to RISC based architecture the OnRISC has very small power consumption, so fanless heat dissipation is possible. Working in a wide temperature range from -10°C up to 50/75°C the OnRISC can be applied in under harsh industrial conditions. Therefore the OnRISC is downright designed for industrial automation.

The embedded computer runs full-featured Debian GNU/Linux on ARM operating system Kernel. This system is installable on a microSD card to place in the internal card-reader.

With Debian's repository database it is easy to install and update the free software on the OnRISC. The OnRISC is capable to act directly as a software development host, WEB, Mail, Print and Database server or as a desktop computer with X11 window manager and many more.

Windows Embedded Compact 7 is also available as operating system. More software is under development.

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