

Model Information



■ Features

- Ti Sitara AM3354 @ 720MHz, 256MB DDR2
- 720p Video
- 1 x microSD, 1 x CFAST
- 2 x LAN
- 1 x USB 2.0 OTG
- 2 x USB 2.0 Host
- 2 x RS232/422/485
- 1 x CAN Bus
- 8 x Digital-I/O
- 1 x I²C
- 1 x SDIO-Slot for Wi-Fi
- 1 x mPCIe-slot for 3G-Modem
- 1 x Console Port
- Low Power, fanless
- Debian GNU/Linux, Windows EC 7
- DIN RAIL mountable

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Alekto 2

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■ 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, I²C, 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.

■ Application

- Building automation system
- Automatic warehouse control system
- Self-service banking system (ATM)
- Wafer fabrication system
- Database server
- Small development host
- Remote and distributed serial devices control
- SCADA system
- Industrial / Factory / Laboratory automation
- WEB and Mail server
- Print server
- Small desktop with X11 windows manager and office software

■ System

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, SATA as data storage

Network

2x 100/10 MBit Ethernet

Display & Audio

- Display
- PowerVR SGX530 3D engine, resolution up to 720p
 - OpenGL-ES 1.1+2.0, Direct3D Mobile, OpenVG 1.0, OpenMax
- Audio
- 2 channel 48kHz over display

Expansion Slots

- 1x SDIO for WLAN 802.11b/g
- 1x miniPCIe via USB 2.0 (for WLAN, GPS, GSM/3G/4G card)
- SIM card for GSM/3G/4G modems in miniPCIe slot

Peripherals

- 2x USB 2.0 as Host
- 1x USB 2.0 OTG
- 1x Console Port RS232
- 1x I²C
- 2x RS232/422/485

CAN Bus

- 1x CAN High Speed, 20kbps up to 1Mbps
- Signals: CAN_H, CAN_L, CAN_GND
- VScan CAN API, CANFestival, CANopen, LinCAN

Digital Input/Output

- 8x TTL signals (64mA sink / 32mA source)
- Configurable Input/Output (0/2/4/6/8 inputs)
- Maskable IRQ for input signals
- Terminal block connector

LED

- 1x Power, 1x 3G
- LAN: 2x Link and Speed
- Serial: 2x Tx/D and Rx/D

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■ Serial Ports

Features

- 2x RS232/422/485
- Highspeed UART, 128 Byte FIFO (FT2232D)
- 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
- RS232: Tx/D, Rx/D, RTS, CTS, DTR, DSR, DCD, RI, GND
 - RS422: Tx+/-, Rx+/-, GND

Signals	<ul style="list-style-type: none">• RS485 2–wire: Data+/-, GND• RS485 4–wire: Tx+/-, Rx+/-, GND
RS485 Data Direction Control	by ARTc (Automatic Receive Transmit control)
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■ Power and Environment	
Power	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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
MTBF	n.a.
Approvals	<ul style="list-style-type: none">• EMC: FCC Class A, CE Class A• Environment: RoHS
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■ Mechanical	
Dimensions	161×112×53 mm ³ (W×L×H) 171×128×53 mm ³ including all connectors
Weight	0.8kg
Construction Material	1mm Metalsheet
Mounting	<ul style="list-style-type: none">• DIN Rail• Wall mount
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■ Software Specifications	
Linux	Debian GNU/Linux Kernel 3.2 for ARM
Windows	Windows Embedded Compact 7
Android	to come soon
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■ Ordering Information	
Part No.	6820
Product Name	OnRISC Alekto 2
Packing list	OnRISC Alekto 2 system
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■ Optional accessories	
Power supply	Power adapter 12V @ 1.5A
Boot microSDs	<ul style="list-style-type: none">• with Debian GNU/Linux installed (4/8GB)• with Windows EC 7 installed (4/8GB) + License
Wi-Fi	SDIO card for WLAN 802.11b/g
GSM/UMTS	mPCIe card for 3G modem
Starter Kit	<ul style="list-style-type: none">• 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

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Windows EC7 on Alekto 2

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