Model Information

■ Features

- Sitara AM3352 Cortex-A8 @ 600MHz
- 256MB DDR3
- 256MB NAND Flash (for boot)
- 1 x SD-Slot
- 3 x LAN (1 Gigabit, 2 Fast Ethernet)
- 2 x USB 2.0 Host
- 2 x RS232/422/485
- 8 x Digital-I/O (4 Input, 4 Output)
- 1 x I²C
- 1 x mPCIe-slot for 3G/4G-Modem, GPS and other
- 1 x SIM card slot
- 1 x WLAN 802.11b/g/n (optional)
- 2 x antenna sockets (optional)
- 1 x Console serial Port
- Low Power, fanless, no cables
- Operating Temperature −20°C - 65°C
- Debian GNU/Linux
- DIN RAIL mountable
- Starter kit available

Contact Online...

Baltos iR 3220

Quick Link: | **Features** | **More Pictures** | **Overview** | **System** | **Serial Ports** | **Power and Environment** | **Mechanical** | **Software Specifications** | **Ordering Information** | **Options** | **Packaging** |

■ More Pictures

Click on the thumbnails for the large picture ...

>Back to top

■ Overview

OnRISC Baltos iR 3220 is a fanless industrial embedded PC in compact dimensions, designed for DIN Rail mounting. It is based on an ARM Cortex-A8 with NEON SIMD Coprocessor, up to 1GHz CPU clock speed. Low power consumption, wide temperature range -20°C to 65°C and flexible power supply (12-50V DC) make it an ideal system for industrial automation.
The system allows extension with GPS and GSM/3G/4G communication, so installation on mobile bases is possible. WLAN is available as usual, two locations for antenna sockets are provided. Models with further extended temperature range are available, allowing for remote installations.
The great variety of interfaces like LAN, serial ports, USB, I²C, Digital I/O plus more options makes it easy to connect various industrial devices and field buses to the Baltos.
The embedded computer runs Linux on ARM operating system Kernel 3.18. This system is installable on the internal NAND Flash memory, or on an SD card in the front side slot. For boot from NAND Flash a system configuration with buildroot is supported. With Debian's repository database it is easy to install and update the free software on the Baltos. VS provides information for configuration and sample installations of Linux for Baltos.

■ System

Hardware	• Sitara AM3352 ARM Cortex-A8 RISC CPU @ 600MHz • 256MB DDR3 • Real time clock with battery backup
Mass Storage	• 256MB NAND Flash memory (bootable) • SD 2.0 / SDHC SD-card slot (bootable)
Network	• 1x 1000/100/10 Mbps Gigabit Ethernet • 2x 100/10 Mbps on integrated Fast Ethernet Switch
Expansion Slots	• 1x miniPCIe via USB 2.0 (for GPS, GSM/3G/4G card) • SIM card for GSM/3G/4G modems in miniPCIe slot
Serial Peripherals	• 2x USB 2.0 Host • 2x RS232/422/485 high speed • 1x Console Port RS232 • 1x I²C
Digital Input/Output	• 4x TTL Output signals (64mA sink / 32mA source) • 4x TTL Input signals • IRQ for input signals • Terminal block connector
LED	• 1x Power, 1x 3G, 1x WLAN, 1x Application • LAN: 3x Link and Speed

■ Serial Ports

Features	• 2x RS232/422/485 • Highspeed UART, 64 Byte FIFO (16C750) • RS232: up to 921.6/1000 kbps • RS422/485: up to 3.7 Mbps
Available Modes	Configured by DIP-Switch or Software • RS232 • RS422 full duplex • RS485 4-wire, full duplex • RS485 2-wire, half duplex, without echo
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	Driver Automatic via RTS

■ Power and Environment

Power	• Input 12 - 50V DC • 0.2A @ 12V minimal • 0.8A @ 12V typical • 3-pin Terminal block connector • Auxiliary Output 5V @max. 0.5A on Digital-I/O connector
Temperature	• Operating −20°C - 65°C • Storage: −30°C - 85°C • Humidity: 10-85% non-condensing
MTBF	n.a.
Approvals	• EMC: FCC Class A, CE Class A • Environment: RoHS

■ Mechanical

Dimensions	154×104×50 mm³ (W×L×H)
Weight	0.55kg
Construction Material	0.8mm Metalsheet black
Mounting	• DIN Rail • Wall mount

■ Software Specifications

Linux	Debian:
	    Latest stable release available as ready-to-run SD card image or can be built/customized via vsdebootstrap project (Github)
	Buildroot:
	    BSP with Kernel and bootloader patches and basic configuration (Github)
	Yocto:
	    layer-baltos with Kernel and bootloder patches suitable for new projects or integration into already available projects (Github)
	
	Buildroot and Yocto are suitable for installation to NAND Flash

■ Ordering Information

6831	OnRISC Baltos iR 3220+DS9

■ Options

6689	WLAN Kit internal internal module 802.11b/g/n, pigtail and antenna Purchase time option, not for later retrofitting
6690	WLAN Kit external USB stick 802.11b/g/n, antenna
6031	Power supply adapter 12V DC, 1A
Request	Boot SD with Debian GNU/Linux installed (4/8GB)
3304	GSM/UMTS mPCIe card for 3G modem
3306	GSM/UMTS/LTE mPCIe card for 3G/4G modem
Request	GPS mPCIe card for use of active antenna
6835	Starter Kit • 4GB SD card for Linux • Power adapter 12V @ 1A • Adapter cable for console port • Documentation and Development Software on DVD

■ Packaging

Packing list	• OnRISC Baltos iR 3220 system • Printed Quick Installation Guide • Ferrite Core for Power Supply cable • Terminal blocks for Power Supply, Digital-I/O • DIN Rail Clamp • Wall mounting plates

Baltos iR 3220