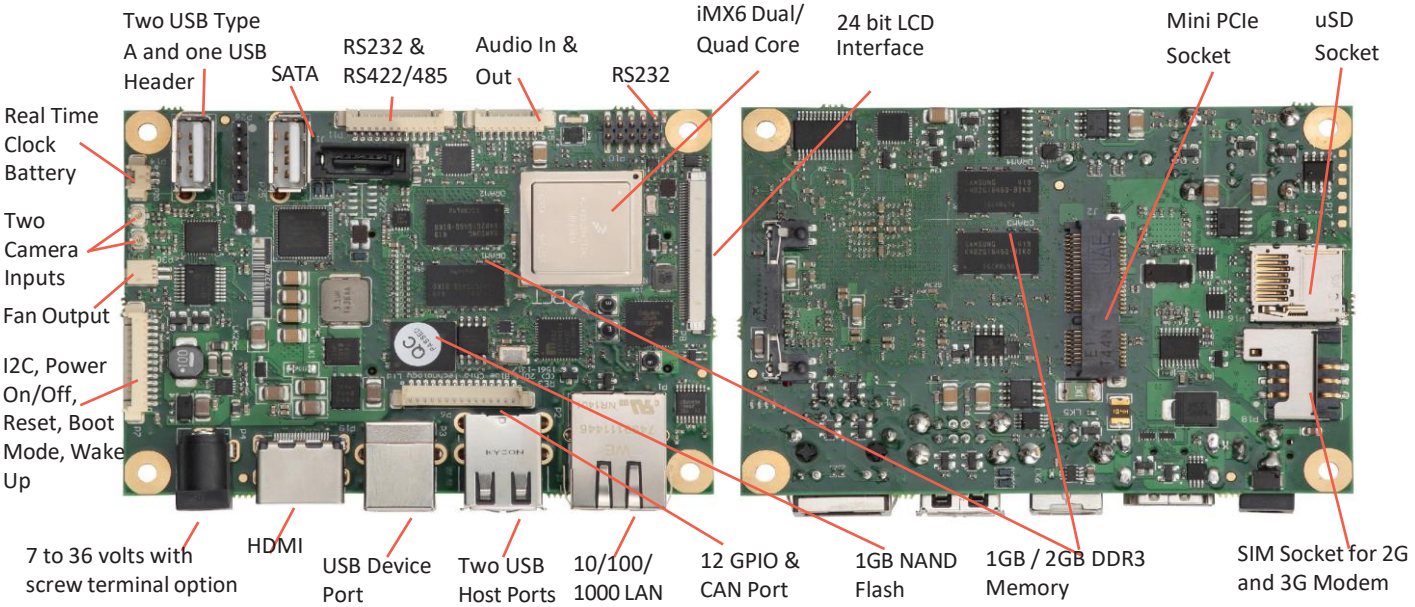
RE3

iMX6 Cortex A9 All in One Computer

PRODUCT INFORMATION

RE3 - For the Engineers



RE3 - The Headlines

- Dual or Quad Cortex A9 1GHz CPU
- 1GB DDR3 Memory, 2GB Option
- 1GB NAND Flash plus uSD Socket for more storage
- H.264 1080p60 decode, 1080p30 encode and 3-D video playback in HD
- Triple Graphics system with a Quad shader 3D unit capable of 200MT/s, separate 2D engine, separate OpenVG Vertex acceleration engine
- Two independent video outputs - HDMI and 24 bit LCD
- Linux, Android and Windows EC 2013*
- 10/100/1000 Mbit LAN
- 5 USB 2.0 & 1.1 compliant Host & 1 Device Ports
- CAN Interface
- Serial ATA 2.5 (SATA) @ 3 Gb/s
- Mini PCIe x1 Socket
- CAN 2.0 Port, 12 off GPIO signals, I2C
- SIM Socket for 2G/3G/4G Modem operation
- Two NTSC/PAL/SECAM Composite Camera inputs
- Wide Input Voltage Range - 7 to 36 volts DC
- Standard and Extended Temperature Options
- Passive Heatsink
- Ultra Compact Size - 70 x 100mm
- Designed, Manufactured and Technical Support in the UK

RE3 - In a few words

The RE3 is the latest addition to Blue Chip Technology's highly successful RE range of all in one ultra compact computers.
Designed and manufactured at Blue Chip Technology's facility in the heart of the UK the RE3 sets new standards for performance and integration with dual and quad core processor options supported by class leading graphics engines to drive two independent displays.
If your product requires a highly integrated computer for its heart with the best CPU performance, amazing video, CAN, Camera (without additional boards!) and 2G/3G modem support, then the RE3 is the answer.

Microsoft® Windows® Embedded Partner
BS EN ISO 9001 Certificate No 33069

RE3

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Processors & Memory

- Processors - Freescale i.MX 6

CPU Technology	Cortex™ A9
CPU Cores	2 or 4
CPU Clock Speed	1GHz
Instruction Cache	32KB per Core
Data Cache	32KB per Core
Unified I/D L2 Cache	1MB shared by cores
Coprocessor	NEON Media Processor per Core

Memory

Technology	DDR3
Speed	1066 (533MHz)
Capacities	1GB, 2GB option
Bus Width :	
Dual Core	64 bit
Quad Core	64 bit

Graphics

- OpenGL ES 2.0 3D acceleration with 4 shaders (up to 200MT/s), OpenCL, 2D accelerator and OpenVG™ 1.1 hardware acceleration
- Full 1080p encode/decode supporting multiple high resolution video inputs/outputs simultaneously
- Hardware Accelerators
  - VPU - Video Processing Unit
  - IPUv3H - Image Processing Unit version 3H (2 IPUs)
  - GPU3Dv4 - 3D Graphics Processing Unit (OpenGL ES 2.0) version 4
  - GPU2Dv2 - 2D Graphics Processing Unit (BitBlt)
  - GPUVG - OpenVG 1.1 Graphics Processing Unit
- ASRC - Asynchronous Sample Rate Converter

Multimedia Inputs/Outputs

- Primary Display - HDMI 1.4 / DVI
- Secondary Display - 24 bit RGB CMOS/TTL with 4 wire Resistive Touch Screen Controller
- Stereo Audio Inputs & Stereo Outputs plus Microphone In

* Please contact Blue Chip Technology Sales for the latest information

Communications

- One 10/100/1000 Mbit LAN
- One CAN 2.0 interface
- Five USB 2.0 Hosts (four type A and one header)
- One USB 2.0 Device Port
- Two RS232 ports, one with handshaking and one RS422/485 port
- Optionals :
  - 2G/3G Modem, GPS, Wi-Fi, Bluetooth via Mini PCIe

Storage

- 1GB SLC NAND Flash
- MicroSD Socket
- SATA 3Gbit Socket

Camera Interfaces

- Two Camera inputs on UFL Connectors
  - Supports NTSC M, NTSC J, NTSC 4.43, PAL B/G/H/I/D, PAL M, PAL N, PAL 60
  - 10-Bit 4x Oversampling (54Msps) ADC with True 10-Bit Digital Processing

Expansion and General Interfacing

- Mini PCIe x1 Socket - with local SIM socket for modem
- 12 GPIO Signals, I2C, system fan output, Real Time Clock (external 3.7 volt battery required)

Operating System Support *

- Yocto Dora 1.5
- Android 4.3 (Jellybean)
- Microsoft Windows Embedded Compact 2013

Environmentals/Mechanicals

Operating Temperatures		
	Standard	0ºC to 70ºC
	Extended	- 40ºC to 85ºC
Humidity	20% to 80% non-condensing	
EMC	Emissions	EN55022 (A)
	Immunity	EN55024
	Safety	EN60950
Dimensions	70 x 100mm	

Power

Input Voltage	7 to 36 Volts DC
Power Consumption	2, 4, 6 watts (Single/Dual/Quad)
Connector	Jack plug or Screw Terminal

Email: sales@bluechiptechnology.co.uk Tel: 44 (0) 1829 772000 Fax: 44 (0) 1829 772001
Website: www.bluechiptechnology.co.uk Blue Chip Technology, Chowley Oak, Tattenhall, Chester. Cheshire CH3 9EX