Blue Chip Technology

TM1

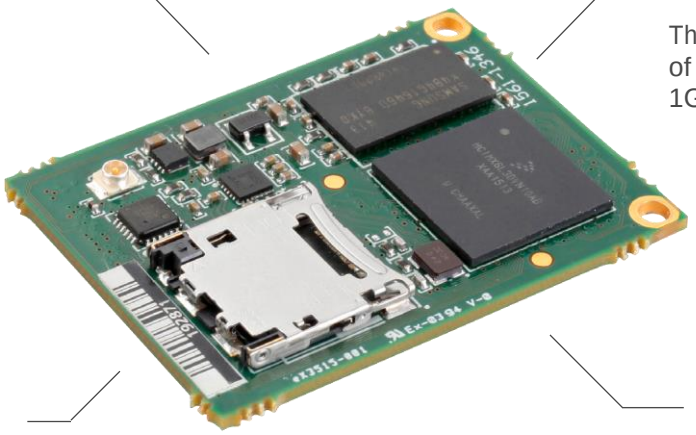
Low-cost, low-power computer-on-module with a powerful ARM Cortex™ A9 processor.

Low Power Consumption

Using just 480mW at desktop, the TM1 is ideal for battery-powered products.

Flexible Clocking Scheme

The iMX6 processor is capable of running from 24MHz up to 1GHz.



Long Life Components

Carefully chosen components mean the TM1 will be available for at least 10 years.

Compact Size

At just 42mm by 30mm, the TM1's small form factor means your product can maintain a low profile.

Cortex A9 | Linux | Android | Windows | Bluetooth | WiFi

SUMMARY

The TM1 computer-on-module offers high performance, long life, low power consumption and low cost in a tiny module.

Capable of running full operating systems or bare metal applications and featuring a flexible processor clocking scheme, the TM1 is suitable for a range of performance and power consumption requirements.

The TM1 can run with no display or drive an LCD screen, making it a perfect partner for many applications.

- 1GHz ARM Cortex A9 processor
- Neon Floating Point Co-Processor
- Vivante GC355 Vector Graphics GPU
- Vivante GC320 Composition Processing Core
- 256MB, 512MB and 1GB low-power memory options
- 8GB eMMC Flash or MicroSD storage options
- WiFi 802.11 a/b/g/n 2.4GHz and 5GHz
- Bluetooth 4.1 and BLE 4.0
- USB Host, USB Device, four UARTs
- SPI port, I²C bus, 60 GPIOs
- Runs Android, Linux and Windows EC 2013
- Low power operation - just 480mW idle at desktop

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TECHNICAL SPECIFICATIONS

Core System

Processor	NXP iMX6 Solo Lite ARM Cortex™ A9 Single CPU Core 1GHz CPU Clock Speed 32KB L1 Instruction Cache 32KB L1 Data Cache 256KB unified I/D L2 Cache NEON MPE Coprocessor with SIMD MP
Memory	Low Power DDR3 DDR-800 Memory Speed 16-bit Memory Bandwidth 256MB, 512MB and 1GB options
Graphics	GPU2Dv2 - 2D Graphics Processor (BitBlt) GPUVG - OpenVG 1.1 Graphic Processing Unit PXP - PiXel Processing Pipeline LCD 18-bit, up to 225 Mpixels/sec @ 1366 x 768
Security	ARM TrustZone including the TZ architecture Secure Non-Volatile Storage, including Secure RTC Central Security Unit - for IC Identification Module A-HAB - Advanced High Assurance Boot - HABv4
Storage	8GB eMMC Flash or MicroSD Socket
Audio	I2S up to 192 kHz stereo inputs and outputs S/PDIF interface Audio Codec onboard Microphone in / Line in, Headphone output
Camera Interface	Digital BT656-compliant interface
Operating System Support	Ubuntu Linux 14.04 LTS Android 4.43 Microsoft Windows Embedded Compact 2013
Real Time Clock	Yes
Watchdog	Yes

I/O

Ethernet	10/100 Mbit LAN - physical layer on module Supports Auto MDIX
Wireless	Wi-Fi 802.11 a/b/g/n 2.4GHz and 5GHz Station and Access Point operation Bluetooth 4.1, BLE 4.0 Single UFL connector for both devices Recommended antenna for R&TTE compliance
Serial	4 UARTs up to 5MHz operation Supports RS232 interface (level shifting required) Supports 9-bit RS485 multidrop mode USB 2.0 Host (HS, FS, LS) USB 2.0 Device (HS & FS) SPI port with chip selects I²C bus up to 400KHz
GPIO	Up to 60 inputs and outputs Pins can be configured to suit your design Peripheral pins are software-controlled to 1.8 or 3.3v Peripheral pins are GPIO or dedicated interfaces

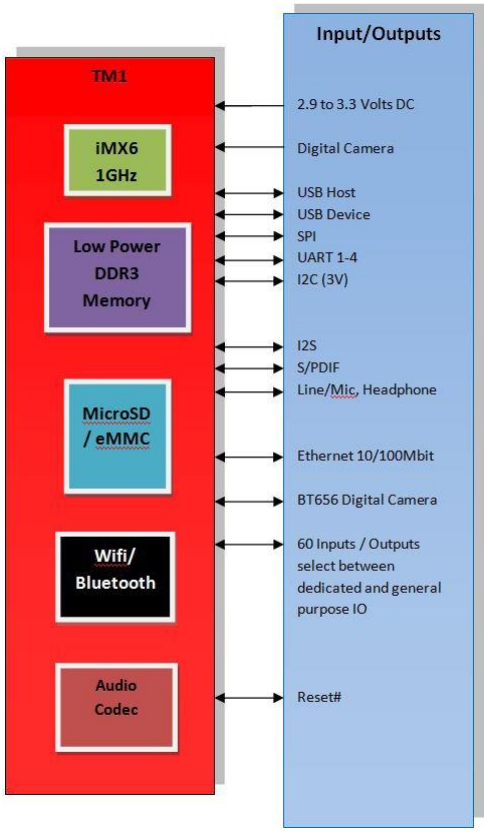
Power

Input Voltage	2.9 to 3.3 Volts DC
Power Consumption	S3 suspend to RAM 74mW Linux desktop 480mW

Physical

Operating Temperatures	Standard 0°C to 70°C Extended -40°C to 85°C Humidity 20% to 80% non-condensing
Dimensions & Mounting	42mm (W) x 30mm (L) x 5.3mm (D) 2 corner screw mounts provide secure fitment
Approvals	CE, UKCA Thermal
Connector	100-way Hirose DF40C-100DP_0.4V(51)

BLOCK DIAGRAM



For more information, visit our website:

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