



Mecha Comet

Handheld programmable computer

FEATURES

- ✓ 1.8 GHz ARM 64-bit Quad-core
- ✓ 4GB LPDDR4
- ✓ Wireless, BT 5.0, BLE
- ✓ Onboard PCIe 2.0 support
- ✓ 32GB eMMC onboard (high speed)
- ✓ Rich peripheral I/O support
- ✓ 40-pogo pins
- ✓ Mechanix OS (Debian 12), Yocto



HARDWARE SPECIFICATIONS

| Parameters | Description |
|------------|---|
| SOC | NXP i.MX 8M Mini (64-bit) Quad-Core ARM Cortex-A53 (1.8 GHz per core) 32KB L1 Cache, 512 kB L2 Cache Cortex-M4 core up to 400MHz |
| RAM | 4GB DDR4 LPDDR4 |
| Disk | 32 GB eMMC NAND Flash (110 MB/s write, 250 MB/s read) |
| GPU | Vivante GC NanoUltra 3D (1 shader), GC30 2D |
| VPU | Encoding - 1080p60 H.264, VP8 Decoding - 1080p60 H.265, H.264, VP8, VP9 |
| Wireless | 2.4 GHz and 5.0 GHz IEEE 802.11ac wireless |
| Bluetooth | Bluetooth 5.0, BLE |
| Display | 3.4", LCD with LED-Backlit 480 x 480, 200 pixels per inch Capacitive 2-finger touch |
| Audio | High-Performance, Ultra-low Power Consumption 1.2 W rated power, 6 Ohm rated impedance Dual - 100 Hz ~ 10 kHz Digital, PDM Microphone MEMS |



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|----------|---|
| Camera | OV5640 5 MP Sensor, Autofocus 1080p: 30 fps, 960p: 45 fps, 720p: 60 fps |
| PCIe | PCIe 2.0 (5 Gbps), M.2 slot with M-key for 2230 cards |
| USB | 1x USB Type-A 2.0 with OTG, 1x USB Type-A 2.0 |
| Ethernet | 1x Gigabit Ethernet |
| Power | USB Type-C, 5V DC (2-3A) 3000 MaH LiPO Battery Fast Charging, 0 to 50% in 25 mins 2.5 - 10 W Consumption |

| | |
|--------|---|
| RTC | Secure RTC with Onboard Coin-Cell |
| ADC | 16-bit, Single Channel |
| Motion | 6-Axis Gyroscope |
| LED | 1x RGB Programmable LED |
| Crypto | ARM Hardware Crypto Accelerator Isolated Trust anchor for RSA, ECC, AES keys Accelerated engine for OpenSSL 3.0, 1.1.1g |
| Pins | 40 pogo pins with - 14x GPIO, 4x ADC, 2x UART, 2x I2C, 1x SPI, 2x PWM, 1x USB, 1x RTC |



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|------------|-------------------------------|
| Dimensions | 70 mm x 150 mm x 16.5 mm |
| Weight | 215 grams (7.5 Oz) |
| Screws | M2.5 Socket Head (Allen) Bolt |



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