

VIA

Mobile360 M820

Fanless ultra-compact
in-vehicle 360° surround view
surveillance & ADAS system



Features

- Qualcomm® APQ8096SG Embedded Processor
- VIA ADAS including FCW, LDW, BSD, SLD, D-MOD, PAS, DMS
- 360° real-time SVS display with VIA Multi-Stitch technology
- VIA E-Track with real-time remote monitoring
- 9~36V DC-in with ACC/IGN support & 12V/1A DC-out

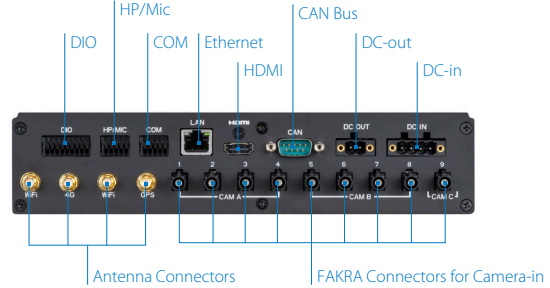
Specifications

Model Name	Mobile360 M820
Processor	Qualcomm® APQ8096SG Embedded Processor - Two high-performance Kryo cores up to 2.342GHz - Two low power Kryo cores up to 1.593GHz
System Memory	4GB POP LPDDR4 RAM
Storage	16GB eMMC flash memory 2 M.2 SATA slots 2 2.5" SATA HDD/SSD storage bays
Graphics	Qualcomm® Adreno™ 530 GPU 3D graphics accelerator with 64-bit addressing 624MHz Graphics engine supporting OpenGL ES 3.1/GEP, GL4.4, DX11.3/4, OpenCL 2.0, Renderscript-Next Supports H.264, VP8, HEVC 8/10-bit, VP9 video decoding up to: 4K@60fps, 1080p@240fps, 8 x 1080p@30fps
Trusted Platform Module	TPM1.2 : ST33TPM1212C
Camera-in Interface	3 DS90UB964-Q1 Quad FPD-Link III deserializer Hub
LAN	RTL8111G Ethernet Controller
Wireless Connectivity	NFA324A-12H32 QCA6174A-1 Wi-Fi 802.11a/b/g/n/ac + BT 4.1 combo LGA module Qualcomm WGR7640 GPS/GNSS RF receiver MAX-7C-0 u-blox 7 GNSS module
Audio	Qualcomm WCD 9335 Audio Codec 2 Qualcomm WSA8810 Class-D Smart Speaker Amplifier
HDMI	Integrated HDMI 2.0 transmitter
Expansion I/O	1 miniPCIe slot (USB only)
Front Panel I/O	2 USB 3.0 ports 1 Micro USB 2.0 port (for debugging) 1 Micro SD card slot 1 SIM card slot 2 2.5" HDD/SSD bays 1 Power button
Back Panel I/O	1 HDMI port 1 DIO port 1 COM port 1 CAN bus port 1 Gigabit Ethernet port 9 FAKRA connectors for camera-in 1 Headphone/Mic-in connector 4 Antenna connectors for Wi-Fi, 3G, 4G, GPS 4-pole Phoenix 9~36V DC-in 2-pole Phoenix 12V DC-out
Power Supply	9~36V DC-in with ACC/IGN
Operating System	Android 8.0
VIA Smart ETK	RTC Wake-up, Suspend, Watchdog timer, CAN bus, GPIO
Operating Temperature	-20°C ~ 70°C
Storage Temperature	-20°C ~ 70°C

Front Panel External I/O



Back Panel External I/O



Specifications

Model Name	Mobile360 M820
Operating Humidity	0~95% (non-condensing)
Vibration Loading During Operation	ISO-16750-3 Test VII compliance
Shock During Operation	ISO-16750-3 Test VII compliance
Mechanical Construction	Aluminum alloy top cover Metal chassis housing
Dimensions	240mm(W) x 53mm(H) x 180mm(D) (9.45" x 2.09" x 7.09")
Weight	3.0kg (6.61lbs.)
Compliance	CE, FCC

Ordering Information

Part Number	SoC Frequency	Description
M360-820-1Q21A1	Qualcomm® APQ8096SG Embedded Processor @ 2.342GHz/1.593GHz	Fanless mobile system with 2.342GHz Qualcomm® APQ8096SG Embedded Processor, 4GB POP LPDDR4 RAM, HDMI, 2 USB 3.0, Micro USB 2.0 (debugging), DIO, COM, CAN Bus, Gigabit Ethernet, 9 FAKRA connectors for camera-in, Wi-Fi, Bluetooth 4.1, GPS, SIM card slot, Micro SD card slot, 2 M.2 slots, 2 2.5" SSD/HDD bays, 12V DC-out, 9~36V DC-in with ACC/IGN

Optional Accessories

Camera & Accessories

Part Number	Description
99G40-08075Z	1.0MP FOV-40 720p CMOS automotive-grade camera
99G40-08074Z	1.0MP FOV-190 720p CMOS automotive-grade camera
99G33-230396	10M FAKRA cable
99G33-230406	15M FAKRA cable

Display Accessories

Part Number	Description
99G73-01034C	10" Resistive touch monitor (1280x800)
99G73-01030C	7" Resistive touch monitor (1280x800)

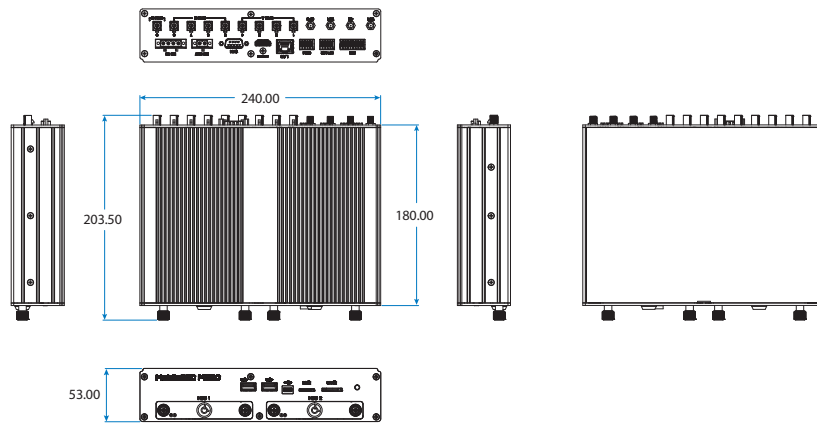
Storage Options

Part Number	Description
99G61-080554	512GB Transcend 2.5" MLC SSD (-40°C-90°C)
99G61-080904	128GB Transcend 2.5" MLC SSD (-40°C-90°C)

Wireless Accessories

Part Number	Description
99G40-071467	4G LTE/DC-HSPA+/EGPRS Mobile broadband full-size miniPCIe module (For North America Regions)
99G40-071967	4G LTE/DC-HSPA+/EGPRS Mobile broadband full-size miniPCIe module (For APAC+ South America Regions)
99G40-071457	4G LTE/DC-HSPA+/EGPRS Mobile broadband full-size miniPCIe module (For EU/APAC Regions)

Dimensions



Unit: mm

Packing List

Items

- Mobile360 M820 system
- Phoenix plug to DC jack
- COM cable (for debugging)
- GPS antenna
- 2 Wi-Fi/BT antennas
- Mounting bracket
- Screw pack for mounting