



# MOTOROLA VC6096

## WWAN IN-VEHICLE/FIXED MOUNT MOBILE COMPUTER

### GET THE MOST OUT OF YOUR DRIVERS AND YOUR VEHICLES WITH MOTOROLA'S VC6096

The VC6096 In-Vehicle/Fixed-Mount Mobile Computer is an all-in-one in-cab solution designed to help transportation and logistics providers achieve cost-effective compliance, maximize driver productivity, improve safety and vehicle utilization, reduce costs and improve customer service. Designed to handle Less Than Truckload (LTL), Truck Load (TL) and Over the Road (OTR) operations, the device is built to handle the rigors of the road while delivering the comprehensive wireless voice and data capabilities you need to maximize operational efficiency — including simultaneous wireless WAN (WWAN), wireless LAN (WLAN), Bluetooth, GPS and telematics support.

### BUILT FOR THE ROAD

The VC6096 is built from the inside out to handle life on the road. With IP64 sealing, the device is impervious to dust and can handle exposure to liquid from any direction — from rain to a spilled beverage. Military and industrial grade specifications for vibration, shock, solar radiation and more ensure reliable operation despite constant exposure to outdoor environmental conditions as well as vehicle movement. The result is the superior uptime you need to keep your drivers — and your business — moving.

### AN OPEN EXTENSIBLE SOLUTION

Instead of a proprietary point-solution, the industry standards-based VC6096 gives you the power of choice — you can choose the hardware, peripherals and applications that best suit your unique enterprise requirements. A true platform for comprehensive fleet management, the VC6096 enables the collection of a wealth of real-time data — from mileage, location, driver performance, and vehicle metrics to hours of service and arrival and departure times — as well as the ability to deploy applications that will maximize that data. Regardless of whether you or a third party independent software vendor develops your application or whether you choose existing software applications, you're in charge of your own data — you control where and how your information is stored and can drive new functionality as required — all without the traditional monthly fees per vehicle. In addition, integrated Bluetooth allows enterprises to add peripherals as needed. For example, a handheld mobile computer can provide drivers involved in direct store delivery (DSD), route accounting and more with bar code scanning to automate and error-proof on the spot order reconciliation, electronic signature capture for proof of delivery and credit and debit card processing for instant payment.

### FEATURES

#### Common Motorola architecture with XScale® PXA270 @ 624 MHz and Microsoft Windows Mobile 6.5 Professional

Easily leverage applications developed for other Motorola rugged mobile computers; support for a wide range of applications, real-time processing and data storage needs

#### Integrated 3.5G GSM HSDPA WWAN

Provides simultaneous voice and data as well as the bandwidth to support the most data intensive applications

**SAE J1708 and  
SAE J1939**

Enables connectivity to heavy-duty vehicle telematics bus for real-time telematics information

**Integrated  
802.11a/b/g WLAN**

Seamless integration with your existing WLAN for powerful real-time data visibility

**Rugged construction:  
IP64-sealed, aluminum  
rear housing and  
MIL-STD-810F  
military ratings**

Designed to withstand the most extreme environments, protects your investment; dramatically reduces downtime and repair costs

**SiRFstarIII GSC3ef/  
LP GPS chipset**

Autonomous GPS support for robust location-based applications; SUPL 1.0 compliant; high performance, power-efficient processor capable of acquiring and maintaining a signal lock in areas where signals are typically weak, expanding the coverage area for GPS applications; faster time to first fix (TTFF); flexibility to operate in either standalone or assisted GPS (aGPS) mode (carrier dependent) for faster and more accurate positioning — especially in challenging areas

**6.5 inch color high  
definition VGA  
resistive touchscreen  
display (640 x 480)**

Easy to view in any lighting; supports display of high resolution images including video and maps

**ROBUST WIRELESS CONNECTIVITY  
INSIDE AND OUTSIDE THE FOUR WALLS**

Keep your drivers connected to business systems, dispatch and more as they roll down the road throughout the day with comprehensive wireless communications. Compatibility with the 3.5G GSM HSDPA WWAN networks provides simultaneous voice and data services — and the bandwidth required for the most processing intensive applications. And the Wi-Fi 802.11a/b/g radios enable the easy connection to any available WLAN, providing cost-effective wireless voice and data communications when drivers are inside the enterprise campus or hotspots.

**ACHIEVE COST-EFFECTIVE COMPLIANCE,  
INCREASE DRIVER PRODUCTIVITY AND  
IMPROVE CUSTOMER SERVICE WITH  
BEST-IN-CLASS GPS FUNCTIONALITY**

Do you know where your trucks are? With integrated GPS, you will. Chosen for its superior sensitivity and tracking capabilities, the high performance SiRFstarIII GSC3f/LP chipset provides the real-time asset visibility needed to support a multitude of real-time location based applications, from directions for drivers to real-time fleet location for dispatchers. The chipset delivers expanded coverage for GPS applications by enabling the rapid and highly accurate capture of signals in some of the most challenging environments, including urban canyons and areas where foliage is very dense. Data is quickly, easily and accurately captured as drivers travel the roads, enabling enterprises to automate completion of driver logs, time cards, highway fuel tax reports and more. The reduction in paperwork enables drivers to cover more miles, make more stops and reduce your internal administrative burden — paperwork completed by hand no longer requires entry into your computer systems. And the real-time visibility into the location of your vehicles enables route optimization and dynamic routing, reducing the number of miles traveled while ensuring that customers receive deliveries on time, every time. And whether drivers need turn-by-turn directions to the next stop or an alternate route to avoid a traffic jam due to an accident or roadwork, the high resolution color VGA resistive touchscreen enables the display of highly accurate interactive detailed route maps to keep drivers moving and on schedule.

**IMPROVE SAFETY AND THE LIFECYCLE  
OF YOUR VEHICLE FLEET WITH  
TELEMATICS SUPPORT**

The VC6096 offers integrated telematics support, allowing enterprises to automatically monitor and collect information related to the operation of vehicle engines. This data provides dispatchers with visibility into the driving habits of individual drivers as well as vehicle health. Visibility into engine error codes enables proactive maintenance to protect driver productivity and vehicle utilization. Operators with heavy braking habits can be counseled on the safety issues associated with tailgating in the many-ton vehicles as well as the unnecessary wear and tear on brakes. Visibility into excessive revolutions per minute (RPMs) helps dispatch spot inefficient vehicle use — a practice that not only increases fuel consumption but also engine wear and tear. The result is the power to not only protect, but also improve the lifecycle of one of your most expensive assets — your vehicles.

**REDUCE FUEL COSTS**

Simultaneous support for GPS and telematics applications provides the information you need to minimize mileage as well as ensure that the driving habits of your workers minimize fuel usage. As a result, the VC6096 becomes an important cost-containment tool — especially crucial with diesel fuel costs at an historical high.

**ENABLE COST-EFFECTIVE  
COLLECTION OF DATA FOR  
TEMPERATURE SENSITIVE LOADS**

Support for analog input allows you to track and record the temperature of a refrigerated load as well as the fuel levels in the refrigeration unit. As a result, without requiring any effort on the part of your drivers, you can provide proof that loads remained within acceptable temperature levels throughout transport. Drivers can receive real-time alerts if refrigerator fuel levels or refrigerator temperatures are reaching pre-set thresholds to enable proactive steps to prevent spoilage. Required data in the food transport industry is collected easily and cost-effectively; the safety of the food supply chain is improved; and the potential liability associated with spoilage is significantly reduced.

## **RICH VOICE COMMUNICATIONS**

Since the VC6096 enables drivers to place and receive phone calls, your drivers are always connected to dispatchers and are never more than seconds away. The integrated internal speaker and microphone combines with Bluetooth to allow drivers to choose their preferred hands-free voice mode: a wireless Bluetooth headset or speakerphone.

## **EASY TO USE**

When you put the VC6096 inside the cabs of your trucks, you give your drivers easy-to-use technology that virtually eliminates the need for training. The large 6.5 inch VGA display is easy to see in practically any lighting condition — from total darkness to bright sunlight, even when viewed through polarized sunglasses. The touchscreen display enables easy data input — even with gloved hands. Microsoft® Windows® Mobile provides a familiar interface as well as compatibility with many of today's mobile applications. And programmable soft keys can provide single-key simplicity for frequently repeated tasks.

## **REDUCE THE COST AND COMPLEXITY OF MOBILITY**

Integrated voice and data simplifies life for your drivers...and your IT staff. Your drivers enjoy an all-in-one office in a single device — no need to purchase a cell phone for voice, a mobile computer to automate data collection, GPS for location-based services and a telematics solution to capture vehicle performance metrics. Fewer devices to purchase, support and manage frees IT staff to focus on more critical business initiatives, while reducing your capital and operational

expenditures. Part of Motorola's leading rugged mobile computer line, the VC6096 offers the shared hardware and software architecture required to integrate seamlessly into your existing Motorola infrastructure. Applications developed for other Motorola rugged mobile computers can be easily ported to the VC6096, dramatically reducing software development and training requirements, and increasing the return on investment for existing applications.

## **ENTERPRISE CLASS MANAGEABILITY**

With the addition of Motorola's Mobility Services Platform (MSP), your drivers remain out on the road, while you remain in control of your mobile devices. MSP allows you to quickly and easily deploy, provision, track and troubleshoot all your VC6096 and Motorola handheld mobile computers right over the air, anywhere in the world, all from a central location — bringing an unprecedented level of simplicity and low cost to the management of mobile devices.

## **END-TO-END SERVICES KEEP YOUR VC6096 MOBILE COMPUTERS UP AND RUNNING AT PEAK PERFORMANCE**

Take advantage of 'from the manufacturer' expertise with Motorola's Enterprise Mobility Services. To help protect your investment, Motorola recommends Service from the Start with Comprehensive Coverage. This unique service covers normal wear and tear, as well as internal and external components damaged through accidental breakage — significantly reducing your unforeseen repair expenses. And options such as Express Shipping and Fastrack help to further minimize downtime in the unlikely event your device requires repair.

### **MSP compatible**

Easy and cost-effective centralized remote management

### **128MB RAM/256MB Flash**

Provides memory space required to enable robust performance for database applications

### **User accessible SD card slot**

Provides additional memory and expandable functionality

### **High quality speaker, microphone and receiver**

Superior voice quality and performance

### **Five user-programmable soft keys**

Enables easy automation of workflows for improved driver productivity

### **WPAN: Bluetooth® v2.0, Class II**

Wireless connectivity to modems, printers, headsets and more; v2.0 provides additional throughput (up to 3 Mb/s), improved security and additional profiles for expanded connectivity to more device types

For more information on the VC6096, please visit us on the web at [www.motorola.com/VC6096](http://www.motorola.com/VC6096) or access our global contact directory at [www.motorola.com/enterprisemobility/contactus](http://www.motorola.com/enterprisemobility/contactus)

# SPECIFICATIONS CHART

## PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

Dimensions	9.53 in. H x 9.25 in. W x 1.95 in. D 24.2 cm H x 23.5 cm W x 4.95 cm D
Weight	4.85 lbs./2.2 kg
External Keyboard	Full backlit QWERTY, 65-key with tactile feedback and audible key beep
Power	Powered by vehicle: voltage input — 10V to 33Vdc, negative ground, non-terminated power cable at vehicle end; maintained real time clock when external power is disconnected
Soft Keys	Five: user programmable
Display	6.5 in. color VGA (640x480) resistive touchscreen
Interface Ports	(2) USB 1.1 host Type A connectors (1) USB 1.1 device Type mini-B connector (1) 10/100 Base-T Ethernet port (1) 50 pin auxiliary port to support: (1) SAE J1708 or SAE J1939 connection for reading from and writing to the engine bus (2) full RS-232 connections (8) digital inputs (switch to ground or switch to vehicle battery voltage) (8) digital outputs (relay driver, 200mA drive capability) (2) analogue inputs, up to 34V maximum
Expansion Slot	SD slot (maximum 2 GB)
Audio	Headset mode (via Bluetooth wireless headset); speakerphone mode (via internal speaker and microphone); volume control
Antenna	Combination WLAN/WWAN external antenna; internal Bluetooth antenna; external GPS antenna
<b>PERFORMANCE CHARACTERISTICS</b>	
CPU	XScale™ PXA270 624 MHz processor
Operating System	Microsoft® Windows Mobile® 6.5 Professional Edition
Memory (RAM/ROM)	128MB SDRAM/256MB Flash
<b>USER ENVIRONMENT</b>	
Operating Temp.	-4° to 140° F/-20° to 60° C
Storage Temp.	-40° to 140° F/-40° to 60° C
Relative Humidity	Up to 95% non-condensing at 50° C
Environmental Sealing	IP64 (dust tight and able to withstand splashing from any direction)
ESD	±15kV air discharge, ±8kV direct discharge
Vibration	MIL-STD 810E, Method 514.4, Ground Mobile (VIII)
Mechanical Shock	MIL-STD 810E 516.4, Procedure 1 — Functional Shock

Crash Hazard	MIL-STD-810E, 516.5 Proc VI
Thermal Shock	-40° F to +176° F/-40° C to +80° C
Salt Fog	MIL-STD 810F (survives eight hours of 5 percent salt solution fog at 35° C)
Solar Radiation	MIL-STD 810E, Method 505.3, Procedure I
Altitude	Operating range: 1,200 ft./365 m below sea level to 15,000 ft./4,572 m above sea level

## WIRELESS LAN DATA COMMUNICATIONS

WLAN	IEEE 802.11a/b/g* Wi-Fi radios
WLAN Security	WPA2, WEP (40 or 128 bit), TKIP, TLS, TTLS (MS-CHAP), TTLS (MS-CHAP v2), TTLS (CHAP), TTLS-MD5, TTLS-PAP, PEAP-TLS, PEAP (MS-CHAP v2), AES, LEAP Supports government grade FIPS 140-2 WLAN encryption

## WIRELESS WAN DATA COMMUNICATIONS

WWAN Radio	GSM: 3.5G HSDPA
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## WIRELESS PAN DATA COMMUNICATIONS

WPAN (Bluetooth)	Class II, v2.0 EDR, 3 Mb/s, internal antenna
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## GPS DATA COMMUNICATIONS

GPS	SiRFstarIII GSC3ef/LP GPS chipset; integrated Autonomous GPS (A-GPS); SUPL 1.0 compliant
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## ACCESSORIES

Vehicle power cable, fixed mount power supply, CLA power supply, GPS antenna; WWAN/WLAN antenna; WAN antenna cable; WLAN antenna cable; 6 and 9 pin combination cable, 6 and 9 pin Deutsch telematics cable, accessory cable (for 50-pin connector)

## REGULATORY

Environmental	RoHS/WEEE compliant
Electrical Safety	UL/cUL 60950-1, IEC EN 60950-1
Product Flammability	IEC UL94-V0
WLAN and Bluetooth	USA: FCC Part 15.247, 15.407; Canada: RSS-210; EU: EN 300 328, EN 301 893
Quad Band GSM/EDGE	USA: FCC Part 22, Part 24; Canada: RSS-GSM/EDGE: 132, RSS-133; EU: EN301 511, EN301 908
RF Exposure	USA: FCC Part 2, FCC OET Bulletin 65 Supplement C; Canada: RSS-102; EU: EN 50360
EMI/RFI	North America: FCC Part 15, Class B; Canada: ICES 003 Class B; EU: EN55022, EN 301 489-1, EN 301 489-7, EN 301 489-17, EN 301 489-19, EN 301 489-24

For countries outside USA, Canada and European Union, consult your local Motorola representative.

\*802.11a is not available in this product in Thailand.  
NOTE: The VC6096 is part of the VC6000 Series. The VC6000, another model in this series, does not include wireless WAN, wireless LAN, GPS or telematics capabilities.