

BOOMER-III (BM3) MOBITEX MODEM MODULES

BM3-900M - Mobitex 900MHz

BM3-800M - Mobitex 800MHz

BM3-400M - Mobitex 400MHz

The Wavenet family of Boomer-III Mobitex modules are high-performance wireless transceivers developed specifically for integration by original equipment manufacturers (OEM).

This wireless module is incorporated into various vertical solutions ranging from handheld terminals (HHT) for public safety, transport and logistics, to machine-to-machine (M2M) applications for meter reading, vending machines and point-of-sale. The Boomer-III family offer integrators superior performance in critical areas of reliability, receiver sensitivity, noise immunity, power efficiency and simplicity of integration.

High Reliability

The Boomer-III family have been designed for maximum reliability and is ideal for those applications requiring a rugged, industrial grade solution capable of operating 24-hours a day, 7-days a week (24/7). The module design has addressed environmental issues associated with ESD, vibration, shock, and temperature extremes to a higher level than other products in the market.

Connectivity Plus

Wireless coverage is all about maintaining connectivity whether in-building or in fringe areas. The Boomer-III family set new standards for receiver sensitivity, which, combined with up to 2W output power, ensures that products integrated with this module work seamlessly in locations that would otherwise not support wireless communications.

Efficient Power Management

The Boomer-III family excels in portable applications, which require compatibility with 3.6V lithium battery technology. Designers can therefore create longer-lasting and smaller devices by virtue of being able to use smaller batteries and operate for extended periods of time down to lower voltages. The high efficiency transmitter incorporated into the design combined with the advanced power management features of the software insure that mobile, fixed or portable applications can be implemented with maximum power efficiency in mind.



Small Compact Design

The Boomer-III family is available in a rugged, small form factor design suitable for integration within handheld devices or machine enclosures. Unique to the modules is the status view window on the case, which allows viewing of transmit, receive and power LED's for visual diagnostic information and feedback.

Common Interface

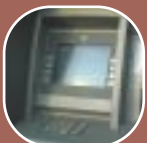
The ability to future-proof a design or provide network flexibility is a consideration of most integrators. The Boomer-III family of modules are physically identical and share a common electrical interface. Wavenet is committed to maintaining this interface across future modules thereby reducing the work required by integrators to upgrade should they desire to do so. Within the BM3 family are modules which support alternative networks such as DataTAC, GPRS and CDMA thus enabling a common product to be deployed as a multi-network solution.

On-Board Applications

Special versions of the Boomer-III modem have extended capability to contain on-board third-party application software for a complete embedded solution. This feature can allow, in some applications, the elimination of a separate microprocessor which would otherwise be only necessary for low level interfacing yielding a significant simplification and cost reduction in the final solution. A specific On-Board Application Software Development Kit (SDK) is available for developers to assist this process and it contains a GNU 'C-code' compiler, sample source code, OBA loader utility and full documentation.



TRANSPORTATION



VENDING



EMERGENCY SERVICES



UTILITIES



POINT OF SALE

Comprehensive Developer Support

A complete developers program is offered by Wavenet to assist integrators in the design, testing and implementation phases of their wireless applications. This includes a developer's kit, modem software tools, sample source code and prototyping components. Wavenet's experienced team of RF and software engineers are available to give technical support as required. Developers can also be assured of long-term product supply and support.

The standard Integrator Developer Kit for the BM3 family of wireless OEM modems includes the following items:

- Host Evaluation Board for interface to a PC for testing
- Power cable for connection to a variable power supply
- Sample 1/4 wave antenna
- Antenna cable
- Software Developers Kit on CDROM containing Integrators Guide and User Manual, Modem communications software, device drivers and sample source code
- PC Serial interface cable
- 5 sample FPC strips for prototyping purposes
- 5 sample FPC connectors for prototyping purposes
- Modem

Specifications:		BM3-400MU	BM3-400ME	BM3-800M	BM3-900M
Radio Protocol:	Mobitex	GMSK Modulation			
Radio Parameters:	Transmit Frequency:	425.5-426.1 MHz 459.6-459.9 MHz	405-420 MHz	806-825 MHz	896-902 MHz
	Receive Frequency:	440-440.6 MHz 453.1-453.4 MHz	415-430 MHz	851-870 MHz	935-941 MHz
	Channel spacing:	12.5 kHz			
	Input Sensitivity:	< -115 dBm (10% BLER)			
	Output power:	2W nominal (0.5W to 2W variable control)			
Power Requirements:	Supply Voltage:	3.8V _{DC} nominal, 3.4 to 4.8V _{DC} operating range			
	Current Consumption:	Power down 20 µA Typical			
		Sleep mode 5 mA Typical			
		Receive mode 50 mA Typical Transmit mode 1.6 A Typical			
Environmental:	Operating Range:	-30 to +60°C			
	Storage Range:	-40 to +70°C			
Packaging:	Size:	68 x 42 x 8 mm (+/- 0.5mm)			
	Weight:	< 80 grams			
Interfaces:	Host Connection:	30 pin (0.5 mm pitch) FPC			
	Antenna Connection:	External: typically half wave			
		50 Ohms MMCX (Female on modem)			
		Return Loss: = 10dB			
		Straight or Right angle connection			
	Mounting:	4 x M2.5 screws			
Host Protocol:	Mobitex	Mobile Asynchronous Communications (MASC) Serial asynchronous, 3.0V logic level			

Note: Wavenet continually seeks to improve product performance. Specifications are subject to change. TBC denotes "To Be Confirmed".

