



Make it wireless

# **Wireless Solution for Everyone**



# Mireless Solutions LEVervone

# FASTRACK "Plug & Play" Modem M1306B THE M2M MODEM FOR WIRELESS CONNECTIVITY

WAVECOM's rugged, discrete Fastrack GSM/GPRS Modem has proven itself for stable, reliable performance on wireless networks worldwide for many years and continues to deliver rapid time to market and painless integration for M2M (Machine-to-Machine) applications.

Fully certified, the dualband 900/1800 MHz Fastrack M1306B offers GPRS Class10 capability and Open AT® Plug-Ins as TCP/IP and Internet. The TCP/IP Plug-In includes the basic internet protocols (TCP/IP/UDP/DNS) and the Internet Plug-In adds the E-mail and FileTransfer capability.

With a broad range of input voltage from 5.5V to 32V and easy connection via standard RS-232 serial link, the Fastrack is a real Plug-and-Play-Solution for wireless communication. Together with the Open AT<sup>®</sup> Software Suite and the two General Pupose input/output pins, this modem can easily be used for alarm, telemetry and any other application.

For easy start up, GLYN offers a Starter-Kit for the Fastrack Modem, which includes all necessary accessories and the Open AT<sup>®</sup> Software Suite.

# **PRODUCT FEATURES:**

# Wireless Processing Power:

- ARM 7, 32-Bit, 52MHz max.
- Program Flash: up to 1.5 MByte
- Up to 13MIPS

### **Operating-System Open AT® OS 6.57 with:**

- VariPower (programmable Power Saving Modes)
- RTC with Calendar
- More than 350 AT Commands and APIs
- Investment Protection with: DOTA Type 1 (Open AT<sup>®</sup> Application) DOTA Type 2 (WAVECOM OS)

### **Open AT® Plug-Ins:**

- TCP/IP Plug-In: TCP/IP/UDP/DNS/PING
- Internet Plug-In: adds Email (POP3/SMTP)&FTP
- Security Plug-In (available 2007)
- Easy Data Logging /Report Creation and Transfer

### **Physical:**

- Overall Dimensions: 73 x 54 x 25 mm
- Weight: 82 g
- Temperature Range: - Operating Class A -20°C - +55°C

### **GSM Features:**

- Dual-Band (900/1800 MHz)
- Audio Codec (FR/HR/EFR)
- GSM CSD 14.4 Kbps
- GPRS Multislot Class 10, Class B
- Enhanced AEC & Noise Reduction

#### Interfaces

- SMA Antenna Connector
- Internal 3V SIM-Card Reader
- 15 Pin high-density SUB-D Connector: - Audio: Microphone and Speaker - RS-232 serial Link Supporting: - Remote Control by AT Commands
- Serial Baud Rate up to 115.2 Kbps 2 x GPIOs/l<sup>2</sup>C (multiplexed)
- Power Supply
- Input Voltage : 5.5V 32V Peak 1.7A @ 5.5V

#### **Approval & Quality:**

- R&TTE Directive, GCF-CC, CE Marking
- Manufacturing: ISOTS 16949
- Quality: ISO 9001
- RoHS compliant according Directive 2002/95/EC

#### **Ordering Information:**

Manufacturer	Product Name	Product Description
WAVECOM	M1306B V6.57	Fastrack Modem, GSM 900/1800, GPRS CI.10 and TCP Plug-In
WAVECOM	M1306B V6.57 IP	Fastrack Modem, GSM 900/1800, GPRS CI.10 and Internet Plug-In
WAVECOM	M1306B SK	Fastrack Starter Kit including all necessary Accessories
Ansmann	M1306B POWER SUPPLY	Power Supply 12V/1.25A regulated with Molex Connector
YAMAICHI	M1203A RS232-CABLE	RS-232 serial Data Cable for Fastrack Modem, Length 2 m
EAD	DUALBAND SMA-MALE	Triband GSM 900/1800/1900 MHz Antenna with SMA-Connector
EAD	EADTARGAN SMA-RIGHT	90° - Triband GSM 900/1800/1900 MHz Antenne with SMA-Connector

V6.57 refer to the current software version at the time of printing. Product name will change accordingly when new software versions are released. Software updates are available free of charge within the same main version.

# **INTEGRA "Plug & Play" Modem M2106B** MAKE YOUR MACHINES WIRELESS

Build around WAVECOM's field-proven technology and small enough to fit into the tightest spaces, the Integra M2106B offers a rapid, handy path to adding wireless capability to any system

"WISMO Within" technology ensures stable, reliable performance on GSM/GPRS networks for the life of your application.

Design innovative applications by taking advantage of the Open AT<sup>®</sup> Software Suite to directly manage external peripheral through UART's, programmable GPIOs and buses.

# PRODUCT FFATURES:

### Wireless Processing Power:

- ARM 7, 32-Bit, 52MHz max.
- Program Flash: Up to 1.5 MByte
- Up to 13MIPS

#### Operating-System Open AT<sup>®</sup> OS 6.57 with:

- VariPower (programmable Power Saving Modes)
- RTC with Calendar
- More than 350 AT Commands and APIs
- Investment Protection with:
- DOTAType 1 (Open AT<sup>®</sup> Application) DOTA Type 2 (WAVECOM OS)

#### **Open AT<sup>®</sup> Plug-Ins**

- TCP/IP Plug-In: TCP/IP/UDP/DNS/PING
- Internet Plug-In: adds Email (POP3/SMTP) & FTP
- Security Plug-In (available 2007)
- Easy Data Logging / Report Creation and Transfer

#### Physical

- Overall Dimensions: 64 x 46 x 12 mm
- Weight: 71 g
- Temperature Range:
- Operating Class A -20°C +55°C
- -40°C +85°C - Storage

#### **GSM Features:**

- Dual-Band (900/1800 MHz)
- Audio Codec (FR/HR/EFR)
- GSM CSD 14.4 Kbps
- GPRS Multislot Class 10, Class B
- Enhanced AEC & Noise Reduction

### **Ordering Information:**

Manufacturer	Product Name	Product Descri
WAVECOM	M2106B V6.57	Integra Moden
WAVECOM	M2106B V6.57 IP	Integra Moden
WAVECOM	M2106B SK	Integra Starter
Diverse	6062-050-00-00-ST	50 Pin Board-to
TPS	ADAPTER MMCX/FME 20	Adapter cable
TPS	ADAPTER MMCX/SMA	Adapter cable

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The Integra has been optimized for wireless Machine-to-Machine applications and is easy to integrate due to standard connectors and the embedded SIM holder. Together with the Open AT<sup>®</sup> Plug-Ins such as TCP/IP and Internet, the Integra can easily be used for alarm, telemetry and any other application.





Interfaces MMCX Antenna Connector
Internal 3V SIM-Card Reader
50 Pin Board to Board Connector:
- 3V SIM (5V SIM with external Level Shifter)
- Audio: 2x Microphone and 2x Speaker
- RS-232 serial Link Interface
- Keypad, up to 5x5 Matrix
- General purpose I/O: 3 Pins
- Software I <sup>2</sup> C Bus
- Analog to digital Converter
- Power Supply
- Input Voltage : 5 V DC ± 5% / 1 A
- Peak 1.32A @ 5V
Approval & Quality:
R&TTE Directive, GCF-CC, CE Marking
Manufacturing: ISOTS 16949
Quality: ISO 9001
RoHS compliant according Directive 2002/95/EC

#### ption

m, GSM 900/1800, GPRS CI.10 and TCP Plug-In m, GSM 900/1800, GPRS CI.10 and Internet Plug-In r Kit

to-Board Connector for Integra Modem MMCX-Male right Angel / FME-Male, Length = 200mm MMCX-Male right Angel / SMA-Female, Length = 127mm

# Vireless Solutions Evervone

# Wireless CPU QUIK Q24 Series **SECURING THE FUTURE**

**Extention of the most popular Family of Wireless CPUs** The popular Quik Series was first launched in 1997 and is especially designed for embedded industrial Machine-to-Machine devices. This new extension includes four versions: Q24 Classic, Q24 Plus, Q24 Extended and Q24 Auto; in order to address a variety of wireless devices. The new Q24 Family offers ultimate design flexibility with a choice of five different radio connectors and built-in SIM holder option. By being hardware and software compatible with the existing Q24 Family, this new series allows seamless upgrade of customer products and devices, thus saving on new design or re-design costs.

The new WAVECOM operating system Open AT® offers extended features and functionality including: Enhanced echo cancellation, rapid battery charger, TCP/IP Plug-In with basic internet protocols as well as an Internet Plug-In with E-mail and File Transfer capabilities.

Each member of the new Q24 Series Family will offer greater DOTA (Download Over-The-Air) capacity making remote e-maintenance and new feature enhancements possible for both the operating system and the application protocols. As with all new WAVECOM solutions, software upgrades to any remote device can be done while the equipment is in the field, without ever having to return it to a service center, thereby increasing the device life span and reducing the total cost of ownership

This new family of solutions is interchangeable with the new RoHS compliant CDMA Q2438 Wireless CPU and can operate worldwide thanks to its quadband GSM and Codec capability. In addition, the new Q24 Family is fully "lead-free" compliant according to RoHS (Restriction of Hazardous Substances) and meets worldwide guidelines of low lead content.

#### **Q24 Classic:**

The Q24 Classic, is the perfect solution for all Machine-to-Machine applications that require basic voice, SMS or circuit switched data wireless connectivity.

#### **Q24 Plus:**

Loaded with complete 2.5G GSM/GPRS voice and data capacity, this super-thin series is designed to fit into any application.

#### Q24 Extended:

Beside the complete 2.5G GSM/GPRS voice and data capacity, the Q24 Extended also offers an extended temperature range.

#### Q24 Auto:

In addition to the GSM/GPRS voice and data capacity, the Q24 Auto also offers an Automotive environmental gualification (temperature / humidity /vibration /...).



# PRODUCT FFATURES:

#### Wireless Processing Power:

- ARM 7, 32-Bit, 52MHz max.
- Program Flash: Up to 1.5 MByte
- Up to 13MIPS

#### Operating-System Open AT<sup>®</sup> OS 6.57 with:

- VariPower (programmable Power Saving Modes)
- RTC with Calendar
- Lilon Battery Charger
- More than 350 AT Commands and APIs
- Investment Protection with: DOTA Type 1 (Open AT<sup>®</sup> Application) DOTA Type 2 (WAVECOM OS)

#### **Open AT® Plug-Ins:**

- TCP/IP Plug-In: TCP/IP/UDP/DNS/PING
- Internet Plug-In: adds Email (POP3/SMTP) & FTP
- Security Plug-In (available 2007)
- Easy Data Logging / Report Creation and Transfer

#### **Physical:**

- Overall Dimensions: 58 x 32 x 3.9 mm
- Weight: < 12 g</p>
- Temperature Range:
- Operating Class A -20°C +55°C
- Operating Class B -30°C +75°C
- (Only Q24 Extended and Auto)
- -40°C +85°C - Storage

#### **Ordering Information:**

Manufacturer	Product Name	Product Descript
WAVECOM	Q24 Classic V6.57	Wireless CPU, G
WAVECOM	Q24 Plus V6.57	Wireless CPU, G
WAVECOM	Q24 Plus V6.57 IP	Wireless CPU, G
WAVECOM	Q24 Ext V6.57	Wireless CPU, G
		extended Temper
WAVECOM	Q24 Ext V6.57 IP	Wireless CPU, G
		extended Temper
WAVECOM	Q24 Auto V6.57	Wireless CPU, G
		automotive Qual
WAVECOM	Q24 Auto V6.57 IP	Wireless CPU, G
		automotive Qual
WAVECOM	Q24 Plus STK	WAVECOM Quik
GLYN	EVBQ24PLUS	GLYN Quik Evalu
YAMAICHI	FMS006Z-0000-BF	SIM Card Reader
YAMAICHI	FMS006Z-2001-1	SIM-Card Reader
YAMAICHI	FMS006-2310-0	SIM-Card Reader
YAMAICHI	FMS006-3000-1	SIM-Card Reader
AVX	24-5087-060-900-861	60 Pin Board-to-I
TPS	ADAPTER CABLE FME 20	Adapter Cable w
TPS	ADAPTER CABLE SMA	Adapter Cable w
VIMCOM	ADAPTER UFL/FME	Adapter Cable Hi

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#### **GSM Features:**

- Quad-Band (850/900/1800/1900 MHz)
- Quad Audio Codec (FR/HR/EFR/AMR)
- GSM CSD 14.4 Kbps
- GPRS Multislot Class 10, Class B
- Enhanced AEC & Noise Reduction

#### Interfaces:

- Antenna Connection:
- U.FL Connector on Bottom Side
- RF Pads supporting soldered coaxial Cable
- IMP Connector
- MMS Connector (optional for Q24 Auto)
- U.FL Connector on top (optional for Q24 Auto)
- SIM Holder on top (optional on Q24 Classic and Plus)
- 60 Pin Board to Board Connector:
- 1.8V/3V SIM (5V SIM with external Level Shifter)
- Audio: 2x Microphone, 2x Speaker
- 2 x RS-232 serial Link up to 115.2 Kbps
- Keypad, up to 5x5 Matrix
- General purpose I/O: 1 Input, 3 Output, 6 I/O
- Software I<sup>2</sup>C Bus
- General purpose serial Interface
- Analog to digital Converter
- Power Supply: 3.6VDC nominal 1.8A Peak

#### Approval & Quality:

- R&TTE Directive, GCF-CC, CE Marking, FCC, PTCRB, China RTE
- Manufacturing: ISOTS 16949
- Quality: ISO 9001
- RoHS Compliant according Directive 2002/95/EC

GSM 850/900/1800/1900

- GSM 850/900/1800/1900, GPRS CI. 10 and TCP/IP Plug-In
- GSM 850/900/1800/1900, GPRS CI. 10 and Internet Plug-In
- GSM 850/900/1800/1900, GPRS CI. 10, TCP/IP Plug-In and
- erature Range
- GSM 850/900/1800/1900, GPRS Cl. 10, Internet Plug-In and erature Range
- GSM 850/900/1800/1900, GPRS Cl. 10, TCP/IP Plug-In and alification
- GSM 850/900/1800/1900, GPRS Cl. 10, Internet Plug-In and alification
- k Starter Kit
- uationboard
- er; cover Type, w/o Switch
- er; push-push; with Switch
- er; push-lock; w/o Switch
- er; with Tray, w/o Switch
- -Board Connector for Quik Q24 Series
- with FME-Male Connector, Length = 200mm
- with SMA Female Connector, Length = 127mm
- Hirose U.FL Male right to FME-Male, Length = 100mm

# Wireless CPU Q2686 MORE POWER, LESS SPACE

The quadband wireless CPU Q2686 has it all: Huge processing power, Open AT<sup>®</sup>, the world's most powerful cellular embedded application environment and the Operating System 6.61 supporting Internet connections. The first in a bold new family of solutions from WAVECOM, the Q2686 is the most compact customizable quadband GSM/GPRS package available. The quadband functionality (GSM 850/900/1800/1900 MHz) allows to use your application in all GSM networks of the world without having different GSM modules. Powered by a new ARM9 processor, which provides up to 87 MIPS (using Vari Speed) along with digital audio capability and extended connectivity features.

With low power consumption, the Q2686 wireless CPU has the performance, flexibility and adaptability you need for your next wireless application. One-third smaller than the previous generation, equipped with up to 44 GPIOs and the largest range of peripheral interfaces, including companion Bluetooth and GPS, the wireless CPU Q2686 is especially suited to telemetry and metering applications.

# PRODUCT FEATURES:

#### Wireless Processing Power:

- ARM 946E-S, 33-Bit, 104MHz
- Program Flash: Up to 1.5 MByte
- Up to 87MIPS

#### Operating-System Open AT® OS 6.61 with:

- RealTime OS (1ms Interrupt Latency)
- VariSpeed (Control of Clock Frequency)
- VariPower (programmable Power Saving Modes)
- RTC with Calendar
- Lilon Battery Charger
- More than 350 AT Commands and 440 APIs
- Investment Protection with: DOTA Type 1 (Open AT<sup>®</sup> Application) DOTA Type 2 (Wavecom OS)

#### **Open AT® Plug-Ins:**

- Internet Plug-In: TCP/IP/UDP/DNS/PING and Email (POP3/SMTP) & FTP
- Security Plug-In (available 2007)
- C-GPS
- Bluetooth

#### Physical:

- Overall Dimensions: 40 x 32.2 x 4 mm
- Weight: 9 g
- Temperature Range:
- Operating Class A -20°C +55°C
- Operating Class B -40°C +85°C
- Storage -40°C +85°C

#### **Ordering Information:**

#### Embed your application

Get the power you need with the new 32-Bit, 104MHz ARM9 processor. Save time and space by using fourth generation Open  $AT^{\circ}$  tools to speed up development.

Use the new Download-Over-the-Air capability for both, the Open  $AT^{\circ}$  operating system and the Open  $AT^{\circ}$  application for upgrades & enhancements. With this WAVECOM solution, has to be returned from the field to a service center. The device life span will be increases and the total cost of ownerships reduced.



#### **GSM Features:**

- Quad-Band (850/900/1800/1900 MHz)
- Quad Audio Codec (FR/HR/EFR/AMR)
- GSM CSD 14.4 Kbps
- GPRS Multislot Class 10, Class B
- Enhanced AEC & Noise Reduction

#### Interfaces:

- Antenna Connection:
- U.FL Connector
- RF Pads supporting soldered Coaxial Cable
- 100 Pin Board to Board Connector:
- 1.8V/3V SIM (5V SIM with external Level Shifter)
- Analog Audio: (2x Microphone, 2x Speaker)
- Digital Audio (PCM)
- USB 2.0 Slave
- 2 x RS-232 serial Link up to 115.2 Kbps
- Keypad, up to 5x5 Matrix
- Up to 44 GPIOs
- SPI and I<sup>2</sup>C-Bus
- 2 x ADC (10-Bit,0-2V)
- Power Supply: 3.6VDC nominal 1.7A Peak

#### **Approval & Quality:**

- R&TTE Directive, GCF-CC, CE Marking, FCC, PTCRB,
- China RTE
- Manufacturing: ISOTS 16949
- Quality: ISO 9001
- RoHS compliant according Directive 2002/95/EC

	Manufacturer	Product Name	Product Description						
1	WAVECOM	Q2686H V6.61	Wireless CPU, GSM 850/900/1800/1900, GPRS CI. 10 and Internet Plug-In						
	GLYN	EVBQ2686	GLYN Quik Evaluationboard for Q2686						
1	WAVECOM	Q2686F STK	WAVECOM Quik Q2686 Starter Kit						
	Panasonic	AXK500145J	100-Pin Board-to-Board Connector						
•	Vimcom	Adapter UFL/FME	Adapter Cable Hirose U.FL Male right to FME-Male, Length = 100mm						

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# Wireless Solutions for Everyone

# Wireless CPU Q2687 EDGE AHEAD, WITH OPEN AT<sup>®</sup>

This pre-packaged solution has it all: huge processing power, Open AT<sup>®</sup>, the world's most powerful cellular embedded application environment, and WAVECOM Operating System 6.61 supporting Internet connections and Bluetooth.

Compatible with all GSM networks across the world, the wireless CPU Q2687 is the most compact customizable quadband GSM/GPRS/EDGE solution available on the market. Powered by an ARM9 processor, it provides even more MIPS than any ARM7 based solutions along with Real Time Management capability and extended connectivity features (such as parallel interface).

With EDGE (Enhanced Data Rates for GSM Evolution) high speed data technology, the Q2687 solution has the perform-

# PRODUCT FEATURES:

#### Wireless Processing Power:

- ARM 946E-S, 32-Bit, 104MHz
- Program Flash: Up to 1.5 MByte
- Up to 87MIPS

#### Operating-System Open AT<sup>®</sup> OS 6.61 with:

- Real Time OS (1ms interrupt Latency)
- VariSpeed (Control of Clock Frequency)
- VariPower (programmable Power Saving Modes)
- RTC with Calendar
- Lilon Battery Charger
- More than 350 AT Commands and 440 APIs
- Investment Protection with: DOTA Type 1 (Open AT® Application) DOTA Type 2 (WAVECOM OS)

#### **Open AT® Plug-Ins:**

- Internet Plug-In: TCP/IP/UDP/DNS/PING and Email (POP3/SMTP) & FTP
- Security Plug-In (available 2007)
- C-GPS
- Bluetooth

#### Physical:

- Overall Dimensions: 40 x 32.2 x 4 mm
- Weight: 9 g
- Temperature Range:
- Operating Class A -20°C +55°C
- Operating Class B -40°C +85°C
- Storage -40°C +85°C

#### **Ordering Information:**

Manufacturer	Product Name	Product Description
WAVECOM	Q2687H V6.61	Wireless CPU, GSM 8
GLYN	EVBQ2687	GLYN Quik Evaluation
WAVECOM	Q2687H STK	WAVECOM Quik Q268
Panasonic	AXK500145J	100 Pin Board-to-Boar
Vimcom	Adapter UFL/FME	Adapter Cable Hirose

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ance, flexibility and adaptability you need for your next M2M, mobile computing or PDA application.

Interchangeable with the wireless CPU Q2686, it offers the extended temperature range needed for hostile industrial environments and meets RoHS environmental standards.





#### **GSM Features:**

- Quad-Band (850/900/1800/1900 MHz)
- Quad Audio Codec (FR/HR/EFR/AMR)
- GSM CSD 14.4 Kbps
- GPRS Multislot Class 10, Class B
- EDGE Multislot Class 10, Class B, MCS 1-9
- Enhanced AEC & Noise Reduction

#### Interfaces:

- Antenna Connection:
- U.FL Connector
- RF Pads supporting soldered Coaxial Cable
- 100 Pin Board to Board Connector:
- 1.8V/3V SIM (5V SIM with external Level Shifter)
- Analog Audio: (2x Microphone, 2x Speaker)
- Digital Audio (PCM)
- USB 2.0 Slave
- 2 x RS-232 serial Link up to 115.2 Kbps
- Keypad, up to 5x5 Matrix
- Up to 44 GPIOs
- SPI and I<sup>2</sup>C-Bus
- 2 x ADC (10-Bit,0-2V)
- DAC
- Power Supply: 3.6VDC Nominal 1.7A Peak

#### Approval & Quality:

- R&TTE Directive, GCF-CC, CE Marking, FCC, PTCRB, China RTE
- Manufacturing: ISOTS 16949
- Quality: ISO 9001
- RoHS compliant according Directive 2002/95/EC

50/900/1800/1900 and GPRS CI. 10 and Internet Plug-In

nboard for Q2687

86 Starter Kit

rd Connector

U.FL Male right to FME-Male, Length = 100mm

# Wireless CPU Q2501 MOVE INTO THE POLE POSITION

Optimize your application with a unique, easy-to-use and fullyintegrated GSM/GPRS/GPS platform. The wireless CPU Q2501 combines state-of-the-art wireless voice and GPRS Class 10 data capabilities with a 16-channel GPS receiver in a single compact package. The Q2501 was designed to meet automotive requirements such as temperature, humidity and vibrations and can be easily integrated due to the small size of just 58x32x6 mm.

# PRODUCT FEATURES:

#### Wireless Processing Power:

- ARM 7, 32-Bit, 52MHz max.
- Program Flash: Up to 1.5 MByte
- Up to 13MIPS

#### Operating-System Open AT<sup>®</sup> OS 6.57 with:

- VariPower (programmable Power Saving Modes)
- RTC with Calendar
- Lilon Battery Charger
- More than 350 AT Commands and APIs
- Investment Protection with: DOTA Type 1 (Open AT<sup>®</sup> Application) DOTA Type 2 (WAVECOM OS)

#### **Open AT® Plug-Ins:**

- TCP/IP Plug-In: TCP/IP/UDP/DNS/PING
- Internet Plug-In: Adds Email (POP3/SMTP) & FTP
- Security Plug-In (available 2007)
- Easy Data Logging/ Report Creation and Transfer

#### **Physical:**

- Overall dimensions: 58 x 32 x 6 mm
- Weight: < 15 g</p>
- Temperature Range:
- Operating Class A -20°C +55°C
- Operating Class B -35°C +85°C
- Storage -40°C +85°C

#### **Approval & Quality:**

- R&TTE Directive, GCF-CC, CE Marking
- Manufacturing: ISOTS 16949
- Quality: ISO 9001
- RoHS compliant according Directive 2002/95/EC

#### **GSM Features:**

- Dual-Band (900/1800 MHz)
- Audio Codec (FR/HR/EFR)
- GSM CSD 14.4 Kbps
- GPRS Multislot Class 10, Class B
- Enhanced AEC & Noise Reduction
- Ordering Information:

# Together with the Open AT<sup>®</sup> Software Suite and the Open AT<sup>®</sup> Plug-Ins such as TCP/IP and Internet, the Q2501 is perfectly suited for telematics, alarms, security and fleet management applications



#### GPS Features:

- 16-Channel Receiver
- Accuracy: 3m CEP
- Start-up time:
- Hot Start 3.5 sec
- Warm Start 33 sec
- Cold Start 41.5 sec
- Protocols:
- NMEA-0183 Input/Output - UBX binary Input/Output

#### Interfaces:

- Antenna Connection:
- 2 serate MMS Connector
- 80 Pins Board to Board Connector, including:
- 3V SIM (5V SIM with external Level Shifter) - Power Supply: 3.6VDC nominal - 1.9A Peak GSM
- Audio: 2x Microphone, 2x Speaker
- 2 X RS-232 serial Link up to 115.2 Kpbs
- Keypad, up to 5x5 Matrix
- General Purpose I/O: 1 Input, 4 Output, 6 I/O
- 1 X ADC, 1 x DAC
- GPS
- 2 X RS-232 serial Link up to 115.2 Kpbs
  - -Timepulse
  - Dead Reckoning Interface (optional)

-		
Manufacturer	Product Name	Product Description
WAVECOM	Q2501B V6.57	Wireless CPU, GSM 900/1800, GPRS CI.10, GPS and TCP Plug-In
WAVECOM	Q2501B V6.57 IP	Wireless CPU, GSM 900/1800, GPRS CI.10, GPS and Internet Plug-In
WAVECOM	Q2501 SK	WAVECOM Quik Starter Kit
GLYN	EVBQUIK-GPS	GLYN Quik Evaluationboard for Q2501B
Molex	52991-0808	80-Pin Board-to-Board Connector
Vimcom	ADAPTER MMS/FME 15	Adapter-Cable MMS-Male to FME Male, Length= 150mm
Vimcom	ADAPTER MMS/SMB 15	Adapter-Cable MMS-Male right to SMA Female, Length= 150mm
Vimcom	ADAPTER MMS/SMA 15	Adapter-Cable MMS-Male right to SMB Male, Length= 150mm

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# Wireless Solutions for Everyone

# Wireless CPU GS64 WIRELESS ACCESS IN SLIMLINE DESIGN

The WAVECOM highly compact and slimline wireless CPU GS64 contains all the GSM/GPRS functionality required for wireless capability. Quadband GSM/GPRS featuring an intrinsic TCP/IP Stack, enables the user to make effective use of GPRS on a global scale. Adaptable to many solutions, the GS64 is easy to integrate and flexible allowing optimum usage of the extended range of input/output capabilities.

Offering superior performance and reliability the GS64 is ideal for applications including PDA, laptops and POS terminals, as well as time critical or intensive monitoring applications and many other telemetry solutions. The wireless CPU GS64 is available also with an integrated SIM holder.

# PRODUCT FEATURES:

#### Physical:

- Overall Dimensions: 37 x 30 x 3.2 mm
- Weight: 5 g
- Temperature Range:
- Operating Class A -20°C +55°C - Storage -40°C - +85°C

#### **GSM Features:**

- Quad-Band (850/900/1800/1900 MHz)
- Quad Audio Codec (FR/HR/EFR/AMR)
- GSM CSD 14.4 Kbps
- GPRS Multislot Class 10, Class B
- Noise Suppression and Echo Cancellation
- Battery Charging Support

#### Internet Protocols:

- TCP/UDP/IP Protocol Stack
- Multi Sockets (up to 15)
- Non blocking Listening/Server Capability
- IPv4 Protocol
- Dynamic & static IP Address Allocation
- PPP Protocol (PAP)

#### **Ordering Information:**

Manufacturer	Product Name	Product Description
WAVECOM	GS64 R2A	Wireless CPU, GSM 850
WAVECOM	GS64 R2A SIM	Wireless CPU, GSM 850
WAVECOM	GR/GS64 STK	WAVECOM Quik GS64 S
Panasonic	AXK5F00547YG	100-Pin Board-to-Board

R2A refer to the current software version at the time of printing. Product name will change accordingly when new software versions are released. Software updates are available free of charge within the same main version.

WAVECOM's Developer's Kit can be used with the GS64 to simplify application development.

The kit provides everything required to design and develop innovative applications and to bring them to market in rapid time.



- 1.8V/3V SIM (5V SIM with external Level Shifter)
- Analog Audio: (2x Microphone, 2x Speaker)
- Digital Audio (PCM)
- USB 2.0
- 2 x RS-232 serial Link
- Keypad, up to 5x4 Matrix
- 9 dedicated and 15 programmable GPIOs
- I<sup>2</sup>C-Bus
- 4 x ADC
- LED Driver

- Power Supply: 3.6VDC nominal – 2 A Peak

#### **Approval & Quality:**

- R&TTE Directive, GCF-CC, CE Marking, FCC, PTCRB, China RTE
- Manufacturing: ISOTS 16949
- Quality: ISO 9001
- RoHS compliant according Directive 2002/95/EC

0/900/1800/1900, GPRS CI. 10 and Internet 0/900/1800/1900, GPRS CI. 10, Internet and SIM Holder Starter Kit d Connector

# Wireless Solutions for Evervone

# Wireless CPU GR64 MAINTAIN EXISTING DESIGN AND ADD VALUE

Optimized for global M2M communications, the wireless CPU GR64 is a Quad Band GSM/GPRS Class 10 compact module. With functionality comparable to the WAVECOM GM47/GM48 and GR47/GR48 modules, the GR64 offers a broad range of voice and data features.

Its intrinsic TCP/IP Stack enables customers to make effective use of GPRS. The GR64 is configurable and possesses an extended range of input/output capabilities.

With its exceptionally powerful processor and enhanced memory, the GR64 is ideal for a broad spectrum of M2M applications including fleet and asset management, POS, vending, security, metering and other solutions. WAVECOM's Developer's Kit can be used with the GR64 to simplify application development. The kit provides everything required to design and develop innovative applications and to bring them to market in rapid time.







# PRODUCT FEATURES:

- Wireless Processing Power:
- ARM 9, 32-Bit, 101MHz
- Program Flash: 2x 124 KByte

#### Physical:

- Overall Dimensions: 50 x 33 x 3.3 mm
- Weight: 9 g
- Temperature Range:
- Operating Class A -20°C +55°C
- Operating Class A -30°C +75°C
- Storage -40°C +85°C

#### **GSM Features:**

- Quad-Band (850/900/1800/1900 MHz)
- Quad Audio Codec (FR/HR/EFR/AMR)
- GSM CSD 14.4 Kbps
- GPRS Multislot Class 10, Class B
- Noise Suppression and Echo Cancellation
- Battery Charging Support

#### **Internet Protocols:**

- TCP/UDP/IP Protocol Stack
- Multi Sockets (up to 15)
- Non blocking Listening/Server Capability
- IPv4 Protocol
- Dynamic & static IP Address Allocation
- PPP Protocol (PAP)

# Interfaces:

- Antenna Connection:
- MMCX- Connector
- RF Pads supporting soldered Coaxial Cable
- 60 Pin Board to Board Connector:
- 1.8V/3V SIM (5V SIM with external Level Shifter) - Analog Audio: (2x Microphone, 2x Speaker)
- Digital Audio (PCM)
- USB 2.0
- 2 x RS-232 Serial Link
- Keypad, up to 4x4 Matrix
- Up to 12 programmable GPIOs
- I<sup>2</sup>C-Bus
- 4 x ADC
- LED Driver
- Power Supply: 3.6VDC nominal 2 A Peak

#### **Approval & Quality:**

- R&TTE Directive, GCF-CC, CE Marking, FCC, PTCRB, China RTE
- Manufacturing: ISOTS 16949
- Quality: ISO 9001
- RoHS compliant according Directive 2002/95/EC

#### **Ordering Information:**

Manufacturer	Product Name	Product Description
WAVECOM	GR64 R2A	Wireless CPU, GSM 850/900/1800/1900, GPRS CI. 10 and Internet
WAVECOM	GR64 R2A SIM	Wireless CPU, GSM 850/900/1800/1900, GPRS CI. 10, Internet and SIM Holder
WAVECOM	GR/GS64 STK	WAVECOM Quik GR64 Starter Kit
WAT	CFS06-60 ABA	60-Pin Board-to-Board Connector

R2A refer to the current software version at the time of printing. Product name will change accordingly when new software versions are released. Software updates are available free of charge within the same main version.

# Wireless CPU Feature Comparision

		Fastrack	& Play Integra	024 Classic	Q24 Plus	Q24	Q24 Auto	Quik Se Q2501B	02438F	Q2686H	Q2687H	GR64	GS64
Processor	Turpo	M1306 ARM7	M2106	ARM7	ARM7	Extended ARM7	ARM7	ARM7	ARM7	ARM9	ARM9	ARM9	
Processor	Type Architecture	32 bit		32 bit	32 bit	32 bit	32 bit	32 bit					
	Top Speed	52MHz		52MHz	52MHz	52MHz	52MHz	52MHz	52MHz	104MHz	104MHz	101MHz	
	Vari Speed	No		No	No	No	No	No	No	26-104MHz	26-104MHz		
	Sleep Mode	32kHz		32kHz	32kHz	32kHz	32kHz	32kHz	32kHz	32kHz	32kHz	32kHz	ļ
	Cache Memory	•	•		•	•	•	•	•	•	•		
Open AT®	DMA (Direct Memory Acces) Open AT®	Open AT®	Open AT®	Open AT®	Open AT®	Open AT®	Open AT®	Open AT®		• Open AT®	• Open AT®	M2Mpower	
Application Execution	Operating System	Open Ar	Open Ai	Open Ar	Open Ar	Open Ar	Open Ai	Open Ar		Real Time	Real Time	wizivipowei	
Encountion	MIPS (Worst / Best case)	9 to 13	9 to 13	1 to 6	9 to 13	9 to 13	9 to 13	9 to 13	5 to 7	12 to 16	12 to 16		
	Application Flash (Byte)	1.5M	1.5M	1.5M	1.5M	1.5M	1.5M	1.5M		1.5M	1.5M	2x124k	
	Application RAM (Byte)	128k	128k	128k	128k	128k	128k	128k		256k	256	124k	
	Free Compiler (GNU)	•		•	•	•	•	•		•	•		
	Thumb Mode Compilation DOTA	• Type I & II	Type I & II	• Type I & II	• Type I & II	• Type I & II	• Type I & II	• Type I & II		• Type I & II	• Type I & II	Type I	
Real Time	HW timers (CPU clock res.)	Type Tot II	туретост	Typer & II	Type Tot II	iyperoxii	туретост	Type totil		•**	•	турет	<u>+</u>
Capabilities	SW Timers	•	•	•	•	•	•	•		•	•		
	External Interruption	• <19ms	<19ms	<19ms	<19ms	<19ms	<19ms	<19ms		<1ms	<1ms		
	RTC Interruption									<1ms	<1ms	wakeup	
	LowLevel Interrupt Routine									•	•		<u> </u>
10	HighLevel Interrupt Routine	•	•	•	•	•	•	•		•	•		100
10	Pins RTOS Interrupt	15+4	50	60 0	60 0	60 0	60 0	80 0		100 🕑	100 😢	60	100
	GPIO/GPO/GPI	0+0+0	0+ <b>0</b> +0	0+0+0	0+0+0	0+0+0	0+0+0	0+0+0	31	up to 44	up to 44	up to 12	9 + 15
	Digital Audio								PCM	PCM (1)	PCM	PCM	PCM
	Analogue Audio	0	<b>0</b> +0	<b>0</b> +0	<b>0</b> +0	<b>0</b> +0	<b>0</b> +0	<b>0</b> +0	0+0	<b>0</b> +0	<b>0</b> +0	<b>0</b> +0	<b>0</b> +0
	ADC		0	0	0	0	0	0		0	0	0	0
	DAC							0			0		<u> </u>
	SPI I2C		0	0	0	0	0	0		0	0		
	RS232		0	0 0	0	0 0	0	•	0 0	0	0	0	0
	USB	0	0		0	6	0	0	2.0 (2)	<b>2</b> .0	<b>2</b> .0	<b>2</b> .0	<b>2</b> .0
	LED driver		0	0	0	0	0	0	2.0 (2)	2.0	2.0	2.0	0
	Buzzer driver or PWM			0	0	0	0	0	0	0	O(PWM)	0	0
	Keyboard		5x5	5x5	5x5	5x5	5x5	5x5	5x5	5x5	5x5	4x4	5x4
	SIM/RUIM	3V SIM	3V SIM	1.8V/3V SIM	1.8V/3V SIM	1.8V/3V SIM	1.8V/3V SIM	3V SIM	3V RUIM	1.8V/3V SIM	1.8V/3V SIM	1.8V/3V SIM	1.8V/3V
				ļ									SIM
Dennes Complex	Expansion Port	F F to 22	-	20	2.0	20	20	20	2.0	not used	parallel	20	2.0
Power Supply	Voltage/VDC (nom) Current/µA (min)	5.5 to 32	5	3,6 5	3,6 5	3,6 5	3,6 5	3,6 5	3,8 5	3,6 17	3,6 17	3,6 17	3,6 17
	Current/mA (idle)	17 @ 13.2V	9	3	3	3	3	3	4(sleep)	1.7	1.7	1,6	1,6
	Current/A (max)	1.7 @ 5.5V	1.32	1.8	1.8	1.8	1.8	1,9	0,67	-	-	2	2
	Vari Power	9	9	9	9	9	9	9	9	9	9		
RF Interface	Solder			•	•	•	•		•	•	•	•	•
	IMP			•	•	•	•			•	•		<u> </u>
	U.FL(bottom side)			•	•	•			•	•	•		•
	U.FL(top side) MMS						option						
	MMCX		•				option	·····				•	<u> </u>
	SMA	•											
Mechanical	Full shielding	•	•	•	•	•	•	•	•	•	•	•	•
	Size/mm	73x54x25	46x64x12	58x32x3.9	58x32x3.9	58x32x3.9	58x32x6.2	58x32x6		40x32.2x4	40x32.2x4	50x33x3.3	37x30x3.2
	Weight/g	82	81	<12	<12	<12	<12	<15	<12	<9	<9	9	5
<b>-</b>	SIM holder	•	•	0000 ( 5500	Optional	Optional	0000 ( 5500	0000/ 5500		0000 ( 5500	0000 ( 5500	0000 / 5500	
lemperature	Class A Class B	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C	-20°C/+55°C		-20°C/+55°C	-20°C/+55°C -40°C/+85°C	-20°C/+55°C	
Wireless	GSM	•	•	•	•	-30 0/+/3 0	-30°C/+75°C •	-33 G/+03 G		-40 C/+03 C	-40 C/+03 C	-30 C/+73 C	•
	GPRS class	10	10		10	10	10	10		10	10	10	10
	EDGE										10		
	1xRTT								•				<u> </u>
D. J.	AMPS								•				<u> </u>
Radio	850MHz 900MHz	-	•	•	•	•	•	-	800	•	•	•	•
	1800MHz	•	•	•		•	•	•			•	•	
	1900MHz	•	•	•	•	•	•		•	•	•	•	•
	Maximum Sensitivity (dBm)	-108@900	-108@900	-110@900	-110@900	-110@900	-110@900	-108@900	-107@800	-110@900	-110@900	-110@900	-110@900
Audio	Codecs (3)	FR/EFR/HR	FR/EFR/HR	FR/EFR/AMR	FR/EFR/AMR	FR/EFR/AMR	FR/EFR/AMR	FR/EFR/HR	EVRC/13k	quad	quad	quad	quad
Location				external (4)	external (4)	external (4)	external (4)	GPS	gpsONE	Plug-In	Plug-In	external (4)	external (4
Solution		0.57	0.57	0.57	0.57	0.57	0.57	0.57		0.01	0.01	DOA	DO A
Open AT® OS Open AT®	TCP/IP	6.57	6.57	6.57	6.57	6.57	6.57	6.57	•	6.61	6.61	R2A	R2A
Plug-Ins		•	•		•	•	•	•	•			•	•
	Internet*	•	•		•	•	•	•		•	•		
	GTi Mono		•	•		•	•	•		•			
	GTi Colour									•	•		
	IBM MQ-TT	•	•			•	•	•		on request	on request		
	Open SIM access			ļ		•	•	•		•**	•		ļ
	Bluetooth					•	•	•		•**	•		
Open AT® IDE	C-GPS Open AT®	•	•	<b>.</b>	•	•	•	•		•**	•		
ohen wi - Ing	Open AT <sup>®</sup> GTi	•	•	•	•	•	•	•		•	•		
	Open AT® built on Eclipse	•	•	•	•	•	•	•		•	•		
	M2M Power											•	1
	Open AT® Applications	Free sources	Free sources	Free sources	Free sources	Eroo courcos	Eroo courcos	Free sources		Free sources	Free sources	Eroo courcos	

NOTES: (1) from 02438v6 onwards, (2) requires external USB transceiver, (3) HR codec versions of 024 classic and 024 Plus available on request, (4) Any external autonomous GPS solution which supports NMEA may be controlled via Open AT®

# Mireless Solutions <u>Evrervome</u>

# **Open AT® Software Suite** SOFTWARE BUILD FOR EMBEDDED APPLICATIONS

heart of millions of industrial cellular products worldwide. It has been purpose designed from day one to serve a broad memory resource overhead.

WAVECOM's innovative Open AT<sup>®</sup> Software Suite is at the range of product designs covering automotive, M2M and mobile professional markets with the minimum processor and

**Open AT® Software Suite** 

#### The Open AT<sup>®</sup> Software Suite consists on the following: Open AT<sup>®</sup> Firmware

- Wireless protocol stacks and peripheral IO device drivers. Open AT<sup>®</sup> Operating Systems
- The Open AT<sup>®</sup> Operating System is the heart of the WAVECOM Family of wireless solutions. It is the brain that thinks, acts, does and makes WAVECOM products more than simple bit-pipe modems - they are highly sophisticated and powerful computing platforms.
- The Real Time OS allows to embed time critical processes, ensures guaranteed response time to hardware timers and external interruptions through a low level interruption handler. It provides also the use of numerous APIs, DOTA and power consumption control.
- With DOTA (Download Over The Air), you can protect your investment over years. It allows the remote upgrade of customer Open AT<sup>®</sup> applications, as well as the entire Open AT<sup>®</sup> Software via wireless cellular networks. This feature makes remote e-maintenance and new feature enhancements a reality. Software upgrades to application equipment can now be done while the equipment is in the field, without ever having to return it to a service center, thereby truly reducing the total cost of ownership.
- Open AT<sup>®</sup> Applications is your real own code or available sample code, which is written in C and runs natively on top of a real time OS, with a minimum memory footprint and processor resource overhead. Application Notes and reference designs helps to develop innovative applications.
- Open AT<sup>®</sup> Plug-Ins are ready to use applications to add on value added functionality. Several Open AT<sup>®</sup> Plug-Ins already exist today and new ones are being added all the time, bringing yet more architecture efficiency enhancements in addition to added value features. In the future, it will be possible to run multiple Open AT® Plug-Ins concurrently on the Wireless CPU.

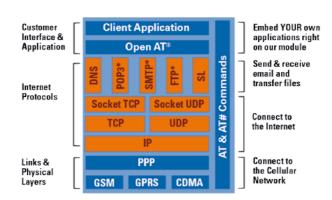
#### - Internet Plug-Ins

Empower your machines and automotive systems with wireless connectivity. Those Plug-Ins allowing a efficiently connection to existing infrastructure, transfer data, control & monitor applications and implement intelligent e-maintenance with with DOTA.Choose between two different Plug-In features. TCP/IP Plug-In enables basic Internet connectivity and the Internet Plug-In adds the ability to send/receive emails and upload/download any number and type of files from a remote server via FTP (File Transfer Protocol).

#### - Controllerless Bluetooth Plug-In

This Plug-In represents additional system efficiency from both a space and cost perspective. The Bluetooth stack and profiles are embedded within the Open AT® Software with which, with the addition of a reduced functionality controllerless (no microprocessor) chipset, a complete Bluetooth system can be realised. This Plug-In is today only available for the wireless CPUs Q2686 and Q2687.

**Open AT® IDEs Open AT®** Open AT<sup>®</sup>GTi Open AT<sup>®</sup> built on Eclipse<sup>™</sup> M2mpower M2M Dev Suite **Open AT® Applications Open AT® Plug-Ins Open AT® OS** RTOS VariSpeed DOTA I,II, III VariPower **MutiTask Time Slice Open AT® Firmware** Device GSM/CDMA/W-CDMA Drivers Bluetooth Other Wireless



#### - Controllerless GPS

This Plug-In is similar to the controllerless Bluetooth solution whereby the GPS stack is embedded as an Open AT® Plug-In, again allowing a reduced RF GPS chipset to be used to create an optimally efficient location solution. This Plug-In is today only available for the wireless CPUs Q2686 and Q2687.

#### - Security Plug-In

This Plug-In adds encryption, authentication and nonrepudiation to the air interface in addition to anti-tampering detection and avoidance. It will be available in 2007.

Open AT<sup>®</sup> IDE

#### Develop your Application in Market recognised Environments

WAVECOM offers a unique family of application-targeted Integrated Development Environments providing developers with the ability to write embedded ANSI C applications, compile them, download them to the Wireless CPU and monitor them during the debugging phase of development. This high level, easy-to-use development tools enables you to run wireless applications right on any WAVECOM Wireless CPU, thereby eliminating extra components. By incorporating existing software building blocks and exchanging application software with other Open AT<sup>®</sup> users, you can further reduce the total cost of your solution.

The Open AT<sup>®</sup> IDE includes a toolset of: Project Wizard, Serial Link Manager, Target Monitor, Terminal Emulator, Software Generation Toolkit and Remote Task Environment

#### ■ Open AT<sup>®</sup> built on Eclipse<sup>™</sup>

For easy start up in designing innovative BUILT ON embedded applications on any wireless CPU's, WAVECOM has selected Eclipse™ as the most adapted development en-



vironment to allow you to start a project, develop, debug, test, compile and download your application in the most seamless way.

Using Open AT built on Eclipse<sup>™</sup>, you get all the efficiency of Open AT<sup>®</sup>, together with the power, ease of use, and flexibility of Eclipse<sup>™</sup>. On both sides, you benefit from the extraordinary acceptance of a community ready to share its experiences and best practices.

And it is very cost-effective, because you don't have to spend a cent to get started. It is free of charge.

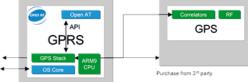
#### Open AT<sup>®</sup> GTi

Open AT<sup>®</sup> GTi is an innovative development platform for creative companies wishing to differentiate their product in the shortest time, without investing in, and maintaining, their own development toolset. By using Open AT<sup>®</sup> GTi, you benefit from an environment that has evolved over more than 10 years and is referenced in some of the most qualitydriven segments, such as automotive and M2M.

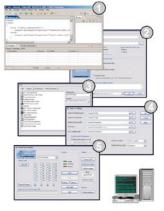
Based on eSIM technology and the WAVECOM wireless CPUs you can use Open AT® GTi for any graphical based application. Together with the associated Tools you can change applications, like changing or adding languages, or graphical elements, easily,

Open AT<sup>®</sup> GTi can be used in a broad spectrum of applications like: building and home security, automatic meter reading, automotive telematics and communication, point of sales, fixed wireless telephones and vending machines.











# Development Tools and Accessories GLYN WAVECOM Evaluationboards

GLYN Evaluationboards provide a easy and cost-efficient way to become familiar with all functions and possibilities of the WAVECOM wireless CPUs.

Dedicated EVBs are available for the Q24 and Q2501 Series, featuring the appropriate wireless CPU and all necessary peripherals. This allows easy evaluation of the GSM/GPRS features The EVBQ2686 is the latest addition to our line of EVBs, designed to show the capabilities of the new Q26 Series. In addition to the standard peripherals, such as power supply, SIM holder and RS232 interface, this Evaluationboard also hosts a USB interface and a DISPLAYTECH 128x64 display. Together with the Open AT<sup>®</sup> software suite – included with all our EVBs – it is very easy to evaluate the complete possibilities of the WAVECOM wireless CPU.

## **Evaluationboard EVBQ2406**

- GLYN Evaluationboard including: WAVECOM Q2406B with Internet Plug-In YAMAICHI SIM-Card Reader RS-232 serial Interface: 9 Pin SUB-D Audio Connectors: 2 x RJ 11 Antenna Connector: FME-Female Test Pins for all Pins of the Module
- Serial Data Cable
- GSM-Magnetic-Mount-Antenna
- CD-ROM with technical Documentation
- Open AT<sup>®</sup> Software Suite

# Evaluationboard EVBQ2501

- GLYN Evaluationboard including: WAVECOM Q2501B with Internet Plug-In YAMAICHI SIM-Card Reader
   2x RS-232 serial Interface: 9 Pin SUB-D
  - Audio Connectors: 2 x RJ 11
  - Antenna Connector: 2 x MMS, including Adapter Cables to FMEf and SMBm Test Pins for all Pins of the Module
- 2x Serial Data Cable
- GSM-Magnetic-Mount and GPS Antenna
- CD-ROM with technical Documentation
- Open AT<sup>®</sup> Software Suite

# Evaluationboard EVBQ26 Series

- GLYN Evaluationboard including: WAVECOM Q2686H for EVBQ2686 WAVECOM Q2687H for EVBQ2687 YAMAICHI SIM-Card Reader RS-232 serial Interface: 9 Pin SUB-D USB Interface
- DISPLAYTECH 128x64 Display
- Antenna Connector:
- Test Pins for all Pins of the Module
- Serial Data Cable
- GSM-Magnetic-Mount Antenna
- CD-ROM with technical Documentation
- Open AT<sup>®</sup> Software Suite

### **WAVECOM Starter Kits**

There are also WAVECOM Starterkits available, which are used as reference environments for the wireless CPUs. Available for the Integra M2106B, the wireless CPU Q24 Series, Q26 Series and the GR/GS64 Series, the Starterkits contain a product-specific Evaluationboard and all needed accessories.

# Wireless Solutions for Everyone

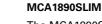
### **GSM** Antennas

GLYN offers a wide range of high-quality GSM, GPS and combined GSM/GPS antennas from the well-known manufacturers Hirschmann, EAD and Vimcom.

### Hirschmann

#### MCA189080

The MCA189080 is a GSM quadband roofmount antenna. The design ensures a perfect fit and the styling of your product will not be altered.



The MCA1890SLIM is a GSM quadband patch antenna with 2500mm cable, for in-car installation.

### MCA1890MP

The MCA1890MP is a GSM quadband round patch antenna ( $\emptyset$  57 mm) with 2500mm cable, for in-car installation.

#### MCA1890MH

The MCA1890MH is a GSM quadband magnetic mount antenna with 2500mm cable. This antenna avoids permanent fixing and can be easily transferred.

#### MCA1890STAT

The MCA1890MH is a GSM dualband outdoor wall mount antenna with 5000mm cable.

### EAD

#### DUALBAND SMA-MALE/ EAD TARGAN SMA-RIGHT

Both antennas are multipurpose flexible whip antennas. Fitted with an SMA-male connector, they can be screwed directly onto the SMAconnector of the WAVECOM Fastrack modem.

#### EAD GSM MINI

The Mini-GSM is a dualband internal groundplane dependend antenna (43x6mm), suitable for hand-held, portable or covert devices.

#### EAD GSM NERIS

The Neris is a triband internal groundplane independend antenna (81x21mm), for handheld or access point applications.

#### EAD GSM S-QUAD

S-QU indep held

S-QUAD is a quadband internal groundplane independend antenna (110x20mm), for handheld or access point applications.



Together with specific adapter cables to connect to the various WAVECOM modules and modems, these antennas ensure good signal quality.



#### GPS1890LP

The GPS1890LP is a low profile interior antenna for GSM and GPS. By the flat design of 100x66 mm and a height of 19 mm this antenna is especially suited for any applications with reduced space.



#### GPS1890PA

The GPS1890PA is an interior on glass GPS and GSM patch antenna with 3000 mm cable. The antenna makes it easy to fulfil all demands regarding fast, easy antenna installation.



#### GPS925

The GPS925 is a high efficient combined GSM and GPS roof mount antenna for car navigation, traffic guidance systems and fleet management.



#### EAD GSM WB-70 SMA

The WB70 is a dualband screw-mount antenna requiring a 16mm borehole. The cable exit is on the underside of the antenna and once mounted is totally enclosed and secure.



#### EAD GPSM WB-80 SMA

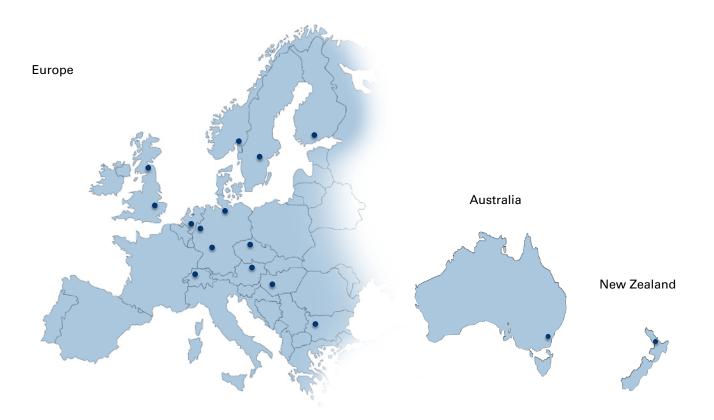
The WB80 is a dualband GSM and GPS screw-mount antenna requiring a 16mm borehole. The antenna is waterproofed and both the GSM and GPS cable exits on the underside of the antenna.

#### EAD GPS 4100 MMS



The GPS4100 (23x23mm) is an internal active GPS antenna designed to be integrated into mobile devices. It is a cost-effective way to design-in GPS functionality.

Other antennas types and specific antenna solutions are available on request.



GLYN GmbH & Co. KG Head Office Am Wörtzgarten 8 D-65510 ldstein Tel. +49-(0)6126-590-222 Fax +49-(0)6126-590-111 Internet: www.glyn.de e-mail: sales@glyn.de

GLYN GmbH & Co. KG Office Nettetal Ringstr. 88 D-41334 Nettetal Tel. +49-(0)2157-124-222 Fax +49-(0)2157-124-211 Internet: www.glyn.de e-mail: nettetal@glyn.de

GLYN GmbH & Co. KG Office Nord Langenharmer Weg 65h D-22844 Norderstedt Tel. +49-(0)40-943615-31 Fax +49-(0)40-943615-30 Internet: www.glyn.de e-mail: nord@glyn.de

GLYN Austria Campus 21 / Businesspark Wien Süd Liebermannstrasse A02/301 A-2345 Brunn am Gebirge Tel. +43-(0)1 86670-214-00 Fax +43-(0)1 86670-214-05 Internet: www.glyn.at e-mail: sales@glyn.at GLYN Switzerland Bachweg 3 CH-8133 Esslingen Tel. +41-(0)44-944 5500 Fax +41-(0)44-944 5509 Internet: www.glyn.ch e-mail: sales@glyn.ch

 GLYN Benelux

 Kerkhofstraat 21

 NL5554 HG Valkenswaard

 Tel.
 +31-(0)40-2049700

 Fax
 +31-(0)40-2049784

 Internet:
 www.glyn.nl

 e-mail:
 sales@glyn.nl

GLYN Czech Republic Evropská 116/655 CZ-160 00 Praha 6 Mobile +420-731515566 Internet: www.glyn.cz e-mail: sales@glyn.cz

GLYN Hurgary Bezerédj utca 8. H-2233 Ecser Tel. +36-(0)29-335-751 Fax +36-(0)29-335-751 Mobile +36-209-220-770 Internet: www.glyn.hu e-mail: sales@glyn.hu

GLYN Finland Tekniikantie 12 SF-02150 Espoo Tel. +358-(0)9-2517-3585 Fax +358-(0)9-2517-3587 Mobile +358-40-772-6585 Internet: www.glyn.de e-mail: finland@glyn.de GLYN Sweden Tammsväg 13 SE-815 76 Söderfors Tel. +46-(0)293-30086 Fax +46-(0)293-30087 Mobile +46-70-3883535 Internet: www.glyn.se e-mail: sales@glyn.se

GLYN Norway Link Electronics AS Postboks 135 Gramveien 76 N-1800 Askim Tel. +47(0)-6988-9899 Fax +47(0)-6988-9799 Internet: www.linknordic.com e-mail: info@linknordic.com

GLYN Bulgaria Cooperations Partner Universal 98 Ltd. Kalina Malina Strasse 8 BG-1111 Sofia Tel. +359-(0)2-8708009 Fax +359-(0)2-9714401 Internet: www.uni98-bg.com e-mail: sales@uni98-bg.com

GLYN Ltd. U.K. 3 Woodbrook Crescent Radford Way GB-CM12 0EQ Billericay Tel. +44-(0)1277-634200 Fax +44-(0)1277-631439 Internet: www.glyn.com e-mail: sales@glyn.com

#### GLYN Ltd. U.K. Northern Office 35 Wansdyke Lancaster Park GB-NE61 3RA Morpeth Northumberland Tel. +44-(0)1670-514616 Fax +44-(0)1670-516936 Internet: www.glyn.com e-mail: sales@glyn.com

GLYN Ltd. Australia Suite 7/201, Lakeside Corporate Centre 29-31 Solent Circuit, Norwest Business Park Baulkham Hills AUS-2154 Sydney Tel. +61-(0)2-8850-0320 Fax +61-(0)2-8850-0370 Internet: www.glyn.com.au e-mail: sales@glyn.com.au

GLYN Ltd. Neuseeland Unit 5/18, Airborne Road Albany, North Shore City 0632 Auckland, New Zealand Tel. +64-(0)9-441-9050 Fax +64-(0)9-441-9060 Internet: www.glyn.co.nz e-mail: sales@glyn.co.nz



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