

M2M Gateway Solution

M2M (Machine-to-Machine) Device Solution

AP-M2M300 AP-M2M300 3G UMTS based M2M Device
AP-M2M200 AP-M2M200 GSM based M2M Device
AP-M2M100 AP-M2M100 Wired M2M Device

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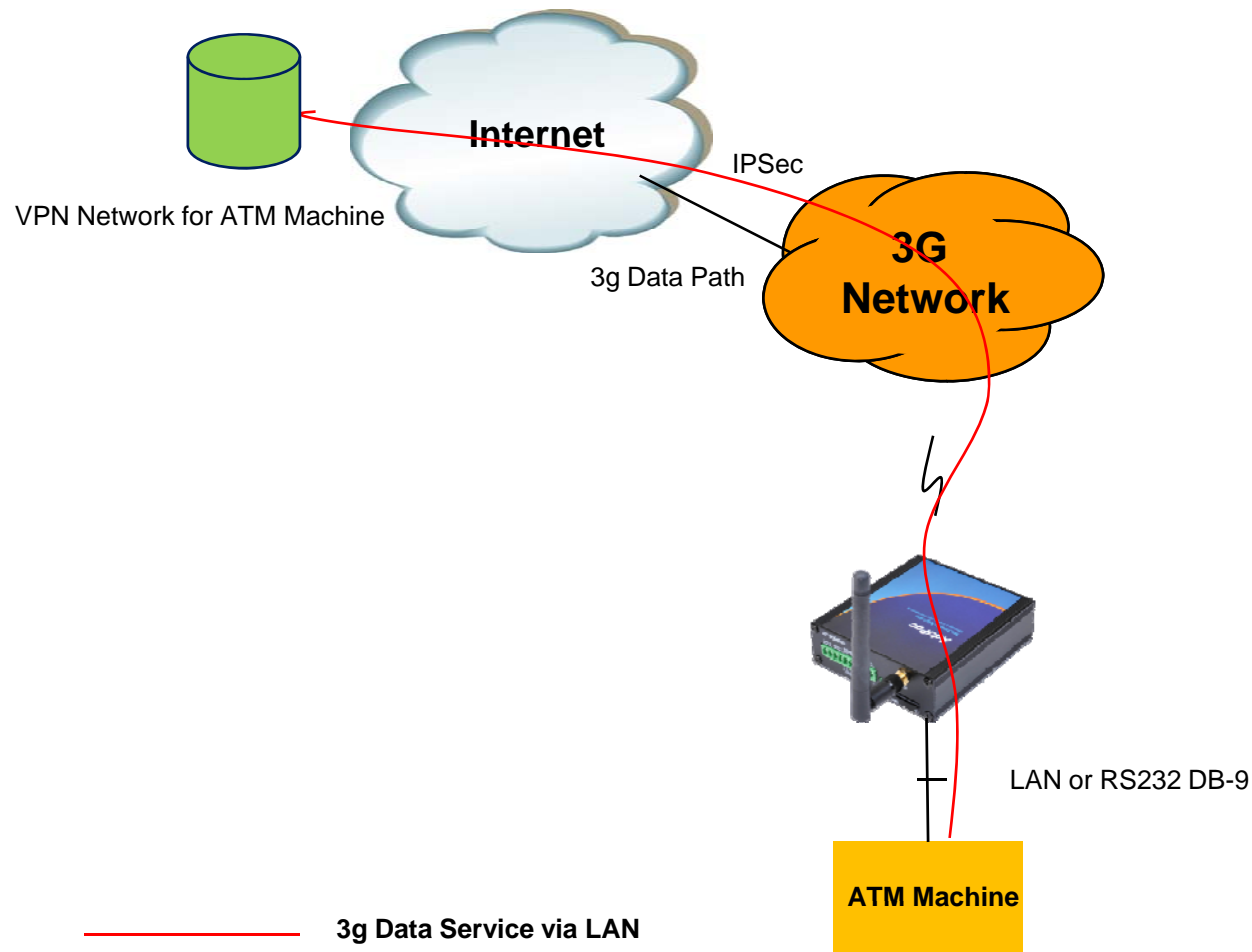
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M2M Gateway Service Diagram (Example : ATM Machine)



M2M Gateway Comparison Table

	AP-M2M300 (3G)	AP-M2M200(GSM)	AP-M2M100 (Wired)
			
3G Channel	1	N/A	N/A
2G GSM Channel	N/A	1	N/A
2G Band	Quad-Band	Quad-Band	N/A
Mobile (3G, GPRS) Data Service via LAN, RS232C	Support	Support	N/A
USIM, SIM Card Slot	1	1	N/A
External Antenna Port	1	1	
10/100Mbps LAN Ports	1	1	1
RS232C (DB-9)	1	1	1
Analog Input Interface (current, voltage, pulse)	Support	Support	Support
Alarm, Relay Out	Support	Support	Support
RS232/RS485	Support	Support	Support



AP-M2M300 3G UMTS M2M Gateway

Product Overview

AP-M2M300 3G UMTS M2M Gateway

- High Performance RISC & Programmable Architecture
- 3G UMTS based Network Interface
- One(1) Antenna Port & USIM Card Slot Interface
- One(1) 10/100Mbps Fast Ethernet LAN Port Interface
- RS232C (DB9) Port Interface
- RS232/RS485 Interface(Selected by Internal DIP Switch)
- Two(2) Relay Out Interface
- Analog Voltage or Current Interface (Selected by Internal DIP Switch)
- Pulse or Alarm Input Interface (Selected by Internal DIP Switch)
- DC12V External Power Supply, Battery Input Interface (DC12V)
- Powerful Network Protocols (PPPoE, DHCP, Static Routing, etc)
- Firmware Upgradeable Architecture
- Smart Web Manager
- Smart NMS for Large Scale Deployment
- Light and Compact Design with External Power Supply

Hardware Specification

AP-M2M300 3G UMTS M2M Gateway

RISC
CPU

High-end
DSP

- RISC Microprocessor Computing Power
- 3G UMTS Data Network Interface
- Cellular Network Interface
 - 1-Port USIM Card Slot
 - 1-Port 3G Antenna Interface
- Network Interface
 - One(1) 10/100Mbps Fast Ethernet LAN Interface (RJ45)
 - One(1) RS232C Interface (DB9)
- Terminal Block Interface
 - RS232 or RS485 Interface
 - Analog Voltage or Current Input Interface (1N1, IN2)
 - Pulse or Alarm Input Interface (IN1)
 - Two(2) Relay Out Interface
- DC12V External Power Supply, Battery Power Supply Input

Hardware Specification

AP-M2M300 3G UMTS M2M Gateway

RISC
CPU

High-end
DSP

Network interface Configuration

Front Side



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Hardware Specification

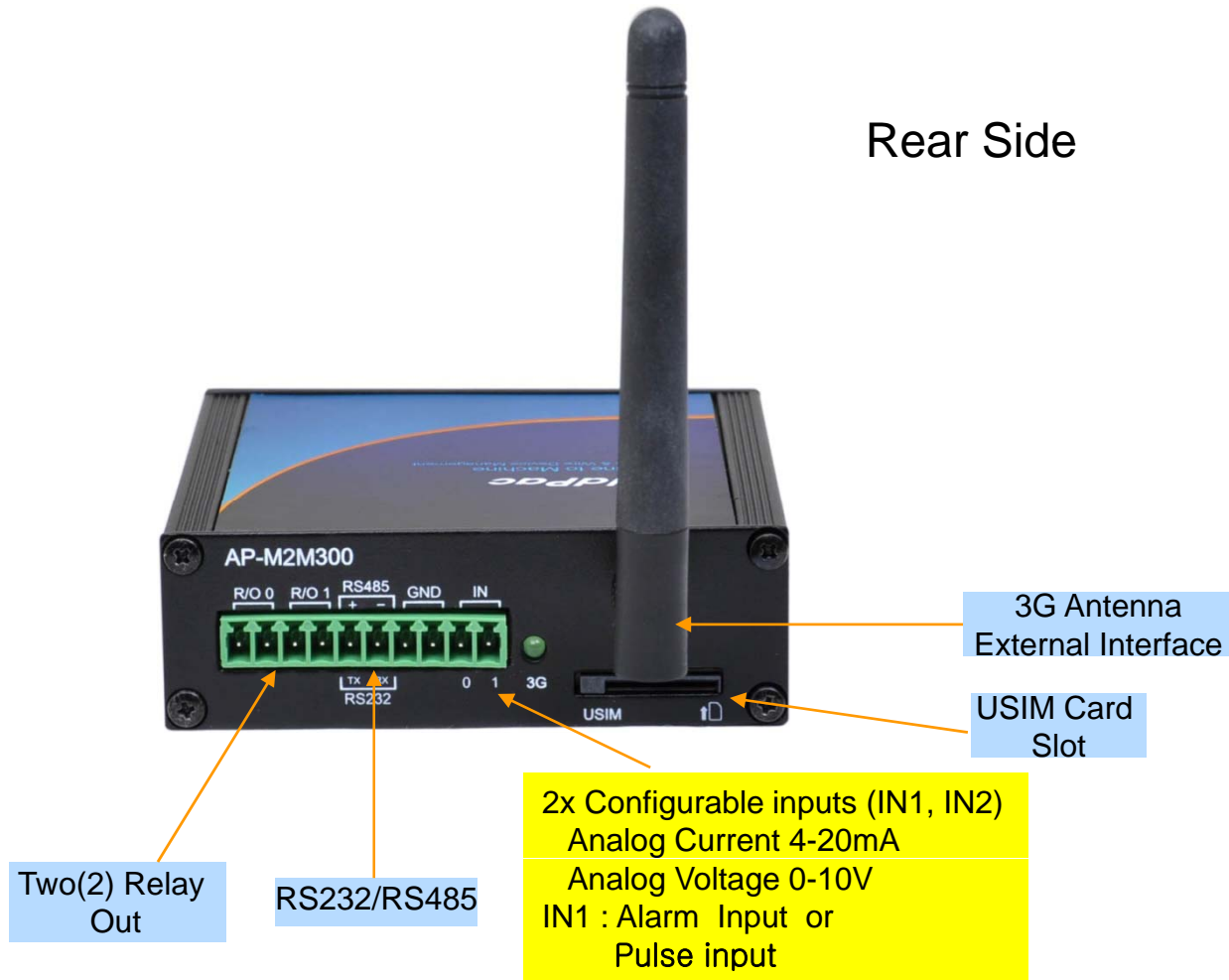
AP-M2M300 3G UMTS M2M Gateway

RISC
CPU

High-end
DSP

Network interface Configuration

Rear Side



Hardware Specification

AP-M2M300 3G UMTS M2M Gateway

RISC
CPU

High-end
DSP

AP-M2M300 3G UMTS M2M Device	Basic Specifications
3G Antenna Interface	External 3G Antenna
USIM Card Slot	3G USIM Card Slot
Ethernet Interface	1-Port 10/100Mbps Ethernet Interface(RJ-45)
Serial Interface	1-Port RS232C Serial Interface Interface(DB-9)
Flash Memory	4Mbyte High-speed Flash Memory
Base Memory	32Mbyte High-speed SDRAM
I/O Interface	Analog Voltage (0 ~10V) (IN1, IN2)
	Analog Current (4~20mA) (IN1, IN2)
	Pulse Input or Digital Input (IN1)
	RS232/RS485 Interface
Power Requirement	Power Supply Adaptor / VAC 110~220V, 50/60Hz, 12V/1A
Operating Temperature	0°C ~ 45°C (32 °F ~ 122°F)
Storage Temperature	-40°C ~ 85°C (-40°C ~ 185°F)
Relative Humidity	5% ~ 95% (Non-condensing)
Dimension	28mm x 86mm x 95mm (H x W x D)
Weight (Kg)	0.32Kg



AP-M2M200 GSM M2M Gateway

Product Overview

AP-M2M200 GSM M2M Gateway

- High Performance RISC & Programmable Architecture
- GSM based Network Interface
- One(1) Antenna Port & SIM Card Slot Interface
- One(1) 10/100Mbps Fast Ethernet LAN Port Interface
- RS232C (DB9) Port Interface
- RS232/RS485 Interface(Selected by Internal DIP Switch)
- Two(2) Relay Out Interface
- Analog Voltage or Current Interface (Selected by Internal DIP Switch)
- Pulse or Alarm Input Interface (Selected by Internal DIP Switch)
- DC12V External Power Supply, Battery Input Interface (DC12V)
- Powerful Network Protocols (PPPoE, DHCP, Static Routing, etc)
- Firmware Upgradeable Architecture
- Smart Web Manager
- Smart NMS for Large Scale Deployment
- Light and Compact Design with External Power Supply

Hardware Specification

AP-M2M200 GSM M2M Gateway

RISC
CPU

High-end
DSP

- RISC Microprocessor Computing Power
- GSM GPRS Data Network Interface
- Cellular Network Interface
 - 1-Port SIM Card Slot
 - 1-Port GSM Antenna Interface
- Network Interface
 - One(1) 10/100Mbps Fast Ethernet LAN Interface (RJ45)
 - One(1) RS232C Interface (DB9)
- Terminal Block Interface
 - RS232 or RS485 Interface
 - Analog Voltage or Current Input Interface (1N1, IN2)
 - Pulse or Alarm Input Interface (IN1)
 - Two(2) Relay Out Interface
- DC12V External Power Supply, Battery Power Supply Input

Hardware Specification

AP-M2M200 GSM M2M Gateway

RISC
CPU

High-end
DSP

Network interface Configuration

Front Side



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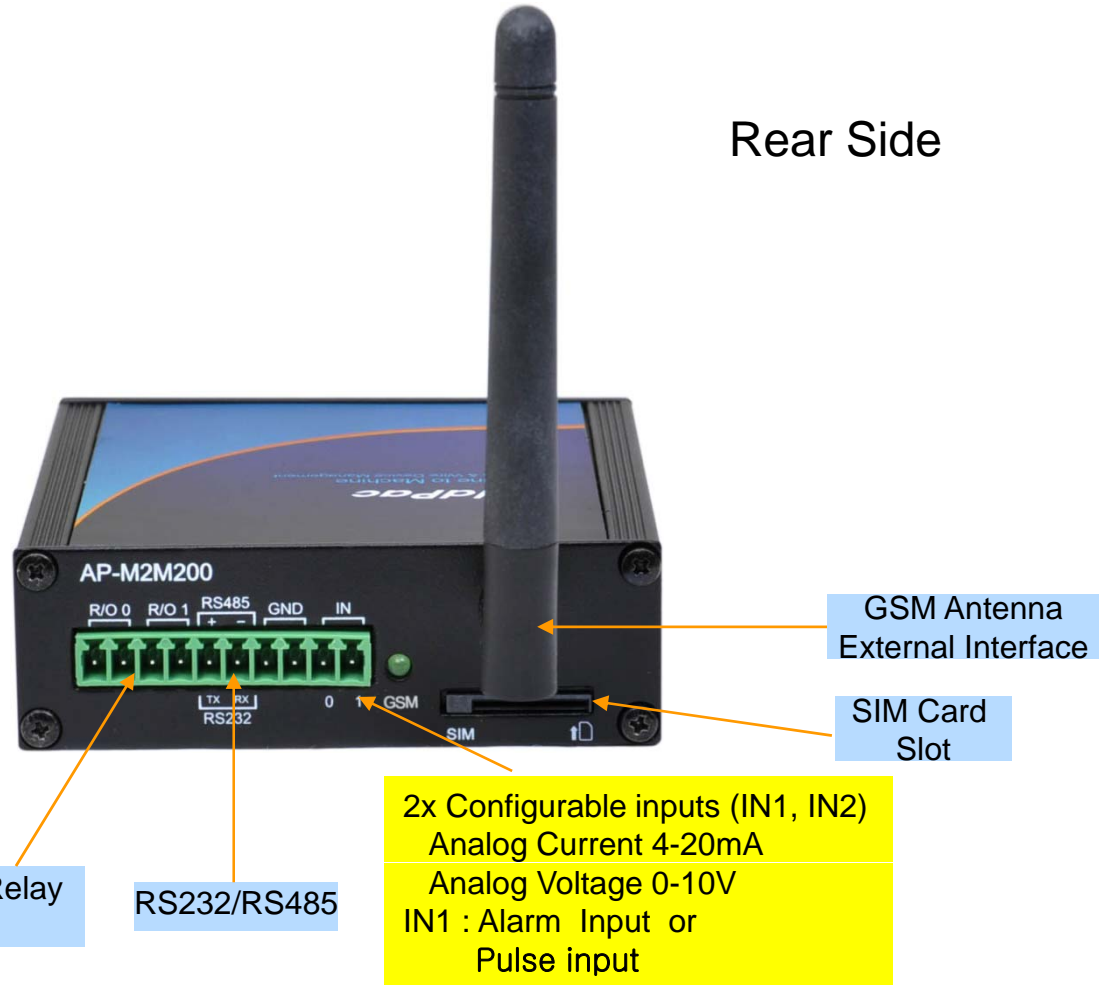
Hardware Specification

AP-M2M200 GSM M2M Gateway

RISC
CPU

High-end
DSP

Network interface Configuration



Hardware Specification

AP-M2M200 GSM M2M Gateway

RISC
CPU

High-end
DSP

AP-M2M200 GSM M2M Device	Basic Specifications
GSM Antenna Interface	External GSM Antenna
SIM Card Slot	GSM SIM Card Slot
Ethernet Interface	1-Port 10/100Mbps Ethernet Interface(RJ-45)
Serial Interface	1-Port RS232C Serial Interface Interface(DB-9)
Flash Memory	4Mbyte High-speed Flash Memory
Base Memory	32Mbyte High-speed SDRAM
I/O Interface	Analog Voltage (0 ~10V) (IN1, IN2)
	Analog Current (4~20mA) (IN1, IN2)
	Pulse Input or Digital Input (IN1)
	RS232/RS485 Interface
Power Requirement	Power Supply Adaptor / VAC 110~220V, 50/60Hz, 12V/1A
Operating Temperature	0°C ~ 45°C (32 °F ~ 122°F)
Storage Temperature	-40°C ~ 85°C (-40°C ~ 185°F)
Relative Humidity	5% ~ 95% (Non-condensing)
Dimension	28mm x 86mm x 95mm (H x W x D)
Weight (Kg)	0.32Kg



AP-M2M100 LAN M2M Gateway

Product Overview

AP-M2M100 LAN M2M Gateway

- High Performance RISC & Programmable Architecture
- One(1) 10/100Mbps Fast Ethernet LAN Port Interface
- RS232C (DB9) Port Interface
- RS232/RS485 Interface(Selected by Internal DIP Switch)
- Two(2) Relay Out Interface
- Analog Voltage or Current Interface (Selected by Internal DIP Switch)
- Pulse or Alarm Input Interface (Selected by Internal DIP Switch)
- DC12V External Power Supply, Battery Input Interface (DC12V)
- Powerful Network Protocols (PPPoE, DHCP, Static Routing, etc)
- Firmware Upgradeable Architecture
- Smart Web Manager
- Smart NMS for Large Scale Deployment
- Light and Compact Design with External Power Supply

Hardware Specification

AP-M2M100 LAN M2M Gateway

RISC
CPU

High-end
DSP

- RISC Microprocessor Computing Power
- Network Interface
 - One(1) 10/100Mbps Fast Ethernet LAN Interface (RJ45)
 - One(1) RS232C Interface (DB9)
- Terminal Block Interface
 - RS232 or RS485 Interface
 - Analog Voltage or Current Input Interface (1N1, IN2)
 - Pulse or Alarm Input Interface (IN1)
 - Two(2) Relay Out Interface
- DC12V External Power Supply, Battery Power Supply Input

Hardware Specification

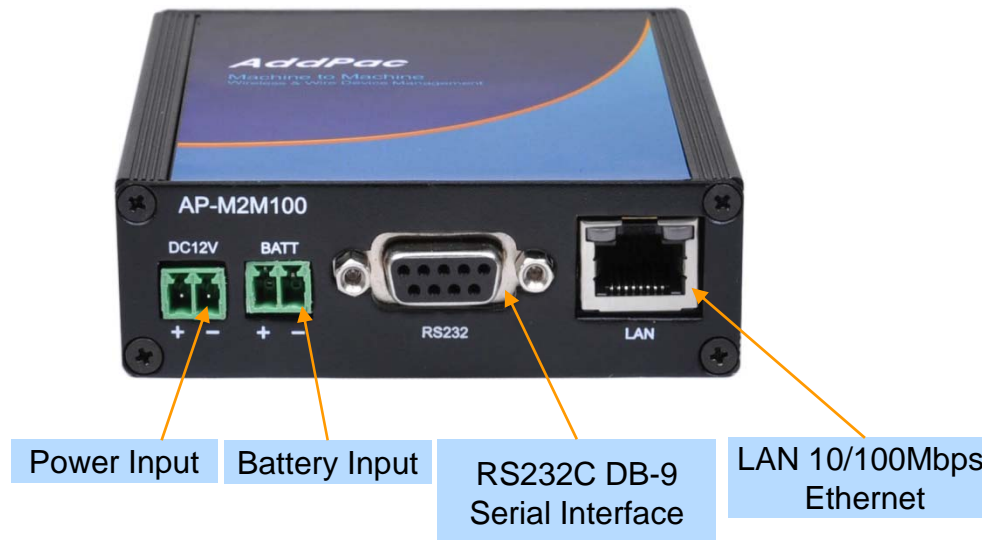
AP-M2M100 LAN M2M Gateway

RISC
CPU

High-end
DSP

Network interface Configuration

Front Side



Hardware Specification

AP-M2M100 LAN M2M Gateway

RISC
CPU

High-end
DSP

AP-M2M100 M2M Device	Basic Specifications
Ethernet Interface	1-Port 10/100Mbps Ethernet Interface(RJ-45)
Serial Interface	1-Port RS232C Serial Interface Interface(DB-9)
Flash Memory	4Mbyte High-speed Flash Memory
Base Memory	32Mbyte High-speed SDRAM
I/O Interface	Analog Voltage (0 ~10V) (IN1, IN2)
	Analog Current (4~20mA) (IN1, IN2)
	Pulse Input or Digital Input (IN1)
	RS232/RS485 Interface
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Hardware Specification

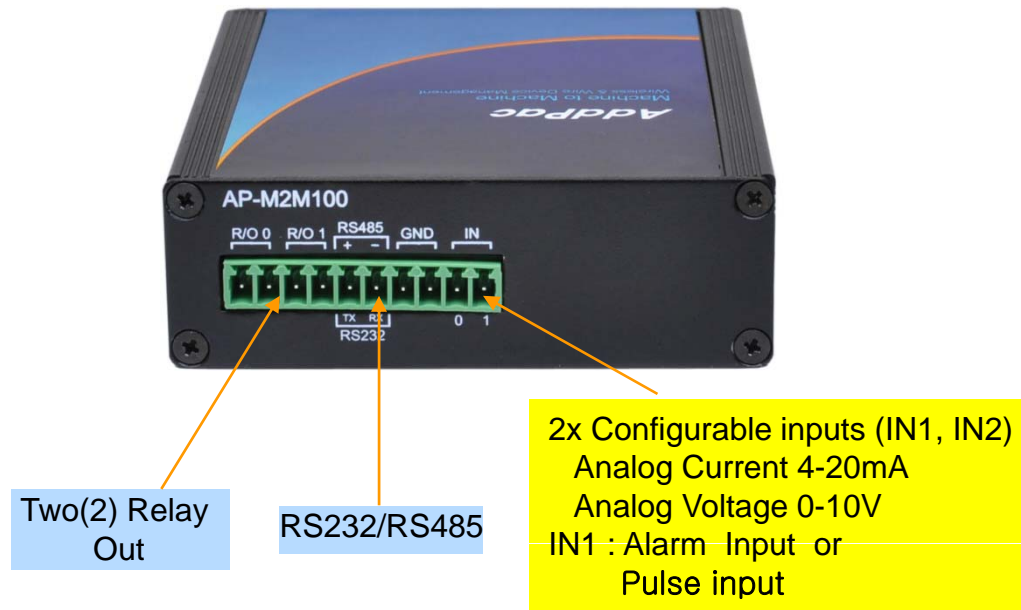
AP-M2M100 M2M Device

RISC
CPU

High-end
DSP

Network interface Configuration

Rear Side





3G Module Specification

3G Module Specification

- ✓ 3G UMTS/HSDPA/HSUPA Characteristics
 - Class A User Requirement : data & voice simultaneously
 - UMTS Terrestrial Radio Access FDD
 - 3GPP Release 6 High Speed Packet Access(HSPA)
 - Dual-band Support*(Option)
 - Band I (2100MHz),Band VIII (900MHz)
 - Dual-band Support* (Option)
 - Band II (1900MHz),Band V (850MHz)
 - WCDMA/HSDPA/HSUPA Power Class
 - Power Class 3 (24dBm) for WCDMA/HSDPA/HSUPA Mode
 - PS(Packet Switched) Data Rate
 - HSUPA category 6, up to 5.76Mbps UL
 - HSDPA category 8, up to 7.2Mbps DL
 - WCDMA PS data up to 384kbps DL/UL
 - CS(Circuit Switched) Data Rate
 - WCDMA CS data up to 64Kbps DL/UL

3G Module Specification

- ✓ 2G GSM Characteristics (Backward Compatibility)
 - Class B Mobile Station
 - Quad-band Support
 - GSM 850MHz, E-GSM 900MHz
 - DCS 1800MHz, PCS1900MHz
 - GSM Power Class
 - Power Class 4 (33dBm) for GSM/E-GSM bands
 - Power Class 1 (30dBm) for DCS/PCS bands



2G GSM Module Specification

GSM Module Specification

- Bearers : GSM + GPRS multislots class 10
- Quad-Band EGSM 850/900/1800/1900MHz
- Normal Sensitivity
 - 850MHz Rx -102 dBm (min.) -110 dBm (typ)
 - 900MHz Rx -102 dBm (min.) -110 dBm (typ)
 - 1800MHz Rx -102 dBm (min.) -109 dBm (typ)
 - 1900MHz Rx -102 dBm (min.) -109 dBm (typ)
- Tx Performances
 - 850MHz Tx +33 dBm (max.)
 - 900MHz Tx +33 dBm (max.)
 - 1800MHz Tx +30 dBm (max.)
 - 1900MHz Tx +30 dBm (max.)
- Power Class 4 (33dBm nominal maximum output power)
- Codec
 - FR-EFR-HR-AMR



Thank you!

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