Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

The RapidConnect ZigBee USB Stick is a plug-and-play ZigBee Smart Energy or ZigBee Home Automation solution. Powered by MMB Networks' RapidConnect embedded software platform, it enables customers to add a fully-functional ZigBee Smart Energy or Home Automation implementation to any device with a USB port.

In addition to RapidConnect's Serial Protocol, MMB has a full-featured Java library to simplify integration. All of our modules include additional serial flash, which allows for robust support of over-the-air updates. Customers' products can be field upgraded to add features or the latest ZigBee standard.

MMB Networks offers a variety of hardware and software tools to facilitate integration. For more information, please visit http://www.mmbnetworks.com

Contents

1 | General Information

Please note specifications cited as EM357 are taken from the EM357 datasheet (this should also be noted where referred to).

2 | Supported Operating Systems

- Windows XP SP3 or above
- Windows Vista
- Windows 7
- Windows 8
- MAC OS-X
- Linux*

* The Linux kernels listed here (plus all future kernels) include native support for the USB Stick. For questions about compatibility with earlier versions, please contact MMB Networks.

Kernel Version	Build
3.0.88	longterm
3.2.50	longterm
3.4.55	longterm
3.10.4	longterm
3.11-rc3	stable
3.12-rc1	mainline

Drivers for these systems are available on the MMB Networks website.
The bridge chip is a CP2104 with Vendor ID 0x10C4 and Product ID 0x88A4.

3 | Memory

SKU	RAM (kB)	On-Chip Flash (kB)	Serial Flash (kB)
Z357PA30-USB	12	192	512

4 | Electrical Specifications

4.1 | Absolute Maximum Ratings

Parameter	Minimum	Maximum	Units
Supply Voltage, Vdd	-0.3	5.8	V
Storage Temperature range	-40	105	°C

4.2 | Recommended Operating Conditions

Parameter	Test Condition	Min	Typical	Max	Units
Supply Voltage, Vdd		4.75	5	5.25	V
Supply Current	TX set to +20dBm			218	mA
Supply Current	RX mode			53.5	mA
Operating Temperature Range		-20	25	80	°C

5 | **RF Specifications**

5.1 | Receive Specifications

Note: The Typical number indicates one standard deviation above the mean, measured at room temperature (25°C). The Min and Max numbers were measured over process corners at room temperature.

Parameter	Test Condition	Min	Typical	Max	Units
Frequency range		2400		2500	MHz
Sensitivity	1% PER, 20 byte packet defined by IEEE 802.15.4-2003	-107	-106	-100	dBm
Saturation (maximum input level for correct operation)		-3	2		dBm
High-side adjacent channel rejection	IEEE 802.15.4-2003 signal at -82dBm		41		dBm
Low-side adjacent channel rejection	IEEE 802.15.4-2003 signal at -82dBm		40		dBm
2nd high-side adjacent channel rejection	IEEE 802.15.4-2003 signal at -82dBm		54		dBm
2nd low-side adjacent channel rejection	IEEE 802.15.4-2003 signal at -82dBm		52		dBm
Relative frequency error (2x40ppm required by IEEE 802.15.4-2003)		-120		120	ppm
Relative timing error (2x40ppm required by IEEE 802.15.4-2003)		-120		120	ppm
Linear RSSI range		35			dB

5.2 | Transmit Specifications

Parameter	Test Condition	Min	Typical	Max	Units
Output Power at highest power setting		20	21	21.5	dBm
Error vector magnitude as per IEEE 802.15.4			5	15	%
Carrier frequency error		-40		40	ppm
PSD Mask relative	3.5 MHz distance from carrier	-20			dB
PSD Mask absolute	3.5 MHz distance from carrier	-30			dBm

6 | **Mechanical Specifications**

6.1 | Physical Dimensions
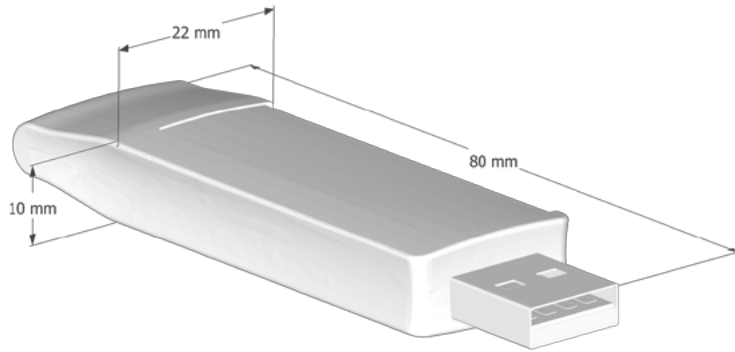
Dimension	Distance
Length	80 mm
Width	22 mm
Height	10 mm

7 | **Regulatory Approvals**

7.1 | FCC

7.1.1 | FCC Notice
This device (Z357PA30-USB) complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

To comply with FCC RF Exposure requirements, users of this device must ensure that the module be installed and/or configured to operate with a separation distance of 20cm or more from all persons.

Usage of Channel 26 at full power will result in non-compliance to FCC standards. Manufacturer recommends avoiding use of channel 26 and if necessary only use with a reduced power setting. For further details please contact Manufacturer.

Caution:
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

7.1.3 | Labeling Requirements
The user of this device is responsible for meeting the FCC labeling requirements. A clearly visible label on the exterior enclosure of an incorporating device must list the MMB Research Inc. FCC ID "XFFZ357PA20" and the FCC Notice above (section 9.1.1).

The exterior label should use the wording "Contains" or "Contains Transmitter Module". For example:

Contains FCC ID: XFFZ357PA20
or
Contains Transmitter Module FCC ID: XFFZ357PA20

Any similar wording that expresses the same meaning may be used.

7.2 | Industry Canada (IC)

7.2.1 | IC Notice
This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

7.2.2 | Labeling Requirements

The host device shall be properly labelled to identify the modules within the host device. The Industry Canada certification label of a module shall be clearly visible at all times when installed in the host device, otherwise the host device must be labelled to display the Industry Canada certification number of the module, preceded by the words "Contains transmitter module", or the word "Contains", or similar wording expressing the same meaning, as follows:

Contains transmitter module IC: 8365A-Z357PA20

7.3 | EU

This device is compliant with the following EU standards: ETSI EN 300 328 (v1.8.1), ETSI EN 301 489 1 (v1.9.2) and ETSI EN 301 489 17 (v2.2.1), provided that the transmit power level is set to -2 dBm.

8 | Ordering Information

SKU	Serial Flash Memory (kB)
Z357PA30-USB	512

MMB Networks

25 Prince Arthur Ave.   416.636.3145

Toronto, Ontario, Canada   info@mmbnetworks.com

M5R 1B2   www.mmbnetworks.com