



# Wireless LAN Module



## WIFI-RT5392-SB-R10

### Features

1. Half-size PCIe Mini card
2. 2.4GHz 802.11b/g/n supports 2Tx/2Rx 2-stream MIMO to enable data rates up to 300Mbps for a 40MHz channel.
3. 20MHz/40MHz bandwidth
4. Solid design with external antenna diversity
5. Low power consumption and high performance
6. Supports 802.11x authentication, WEP 64/128, WPA, WPA2, TKIP, AES, WAPI encryption
7. Supported operating systems: Windows® XP, CE6.0, XPE, 2000, Vista 32/64, Windows® 7 32/64, Linux, MAC



## WIFI-RT3593-DB-R10

### Features

1. Half-size PCIe Mini card
2. Dual band 802.11a/b/g/n supports 3Tx/3Rx 3-stream MIMO to enable data rates up to 450Mbps for a 40MHz channel.
3. 20MHz/40MHz bandwidth
4. Solid design with external antenna diversity
5. Low power consumption with advanced power management
6. Supports 802.11x authentication, WEP 64/128, WPA, WPA2, WAPI encryption.
7. Supported operating systems: Windows® XP, CE6.0, XPE, 2000, ME, 98SE, Vista 32/64, Windows® 7 32/64, Linux, MAC

Model	WIFI-RT5392-SB-R10	WIFI-RT3593-DB-R10
Standards	IEEE 802.11b/g/n, Wi-Fi compliant	IEEE 802.11a/b/g/n, Wi-Fi compliant
Rate	300 Mbps PHY rate in 2T2R mode	450 Mbps PHY rate in 3T3R mode
Interface	PCIe Mini card	PCIe Mini card
Controller Chip	Ralink RT5392	Ralink RT3593
Connectors	2 x U.FL (I-PEX) antenna connectors	3 x U.FL (I-PEX) antenna connectors
Security	WEP 64/128, WPA, WPA2, TKIP, AES, WAPI	WEP 64/128, WPA, WPA2, WAPI
Frequency Range	2.4GHz	2.4/5GHz
Modulation Type	802.11b (DSSS): CCK, DQPSK, DBPSK 802.11g (OFDM): BPSK, QPSK, 16-QAM, 64-QAM 802.11n (OFDM): BPSK, QPSK, 16-QAM, 64-QAM	802.11a (OFDM) 802.11b (DSSS): CCK, DQPSK, DBPSK 802.11g (OFDM): BPSK, QPSK, 16-QAM, 64-QAM 802.11n (OFDM): BPSK, QPSK, 16-QAM, 64-QAM
Supported OS	Windows® XP, CE6.0, XPE, 2000, Vista 32/64, Windows® 7 32/64, Linux, MAC	Windows® XP, CE6.0, XPE, 2000, ME, 98SE, Vista 32/64, Windows® 7 32/64, MAC
Receiver Sensitivity	802.11b: -84dBm (Typical) at 11 Mbps 802.11g: -71dBm (Typical) at 54 Mbps 802.11n: -71dBm (Typical) at 300 Mbps	802.11a: -71dBm (Typical) at 54 Mbps 802.11b: -80dBm (Typical) at 11 Mbps 802.11g: -73dBm (Typical) at 54 Mbps 802.11n: -71dBm (Typical) at 450 Mbps
Power Consumption	255mA@3.3V in continuous Tx 495mA@3.3V in continuous Rx	430mA@3.3V in continuous Tx 460mA@3.3V in continuous Rx
Temperature	Operating: -10°C ~ 70°C Storage: -40°C ~ 150°C	Operating: -10°C ~ 70°C Storage: -40°C ~ 150°C
Humidity	Operating: 10% ~ 90%, non-condensing Storage: 5% ~ 95%, non-condensing	Operating: 10% ~ 90%, non-condensing Storage: 5% ~ 95%, non-condensing
Dimensions (W x D x H)	28 mm x 30 mm x 4 mm	28 mm x 30 mm x 4 mm
Weight	NW: 11g	NW: 11g
Safety & EMC	CE/FCC/TELEC	CE/FCC/TELEC

## Ordering Information

Part No.	Description	Part No.	Description
WIFI-RT5392-SB-R10	Wi-Fi module with RT5392 single chip, 2T2R, single band, RoHS	32501-000200-100-RS	Antenna; RF cable; outside diameter: 1.13mm; L=128mm; 0-6 GHz; (A)reverse sma jack, nut *1+washer *2; (B)I-PEX; RoHS
WIFI-RT3593-DB-R10	Wi-Fi module with RT3593 single chip, 3T3R, dual band, RoHS	32505-000900-100-RS	External antenna; WLAN; RG 178; 108mm; TANK-700-QM67-R10; PEAK GAIN 2.0DBI; Exceltek; 2.4-2.5 GHz/5.15-5.85 GHz; reverse SMA plug; RoHS



## WMUSB-V01-R20

USB embedded module with VIA wireless LAN module

### Features

1. IEEE 802.11b DSSS/IEEE 802.11g OFDM high rate compatible
2. USB embedded module
3. Supports RF On/Off mechanism
4. Supports an external or internal LED indicator
5. WEA/WAP support



## WMPCIE-V01-R30

PCIe Mini card wireless LAN module

### Features

1. PCIe Mini card form factor
2. High speed wireless connection to 54Mbps
3. Solid design with external antenna diversity
4. Low power consumption and high performance
5. Enhanced wireless security

Model	WMUSB-V01-R20	WMPCIE-V01-R30
Standards	IEEE 802.11 b/g	IEEE 802.11 b/g/n
Interface	USB 1.1/2.0 interface	PCIe Mini card
Controller Chip	VIA VT6656	Ralink
Connectors	2 x U.FL (I-PEX) antenna connectors	2 x U.FL (I-PEX) antenna connectors
Security	Supports WEP, WPA 1.0/2.0	64/128-bit WEP, WPA, WPA2, TKIP, AES
Frequency Range	2.4 ~ 2.5GHz	2.412-2.472 GHz
Modulation Type	802.11b : DQPSK, DBPSK, DSSS and CCK 802.11g : BPSK, QPSK, 16QAM, 64QAM, OFDM	IEEE 802.11b (DSSS): CCK, DQPSK, DBPSK 802.11g (OFDM): BPSK, QPSK, 16-QAM, 64-QAM
Supported OS	Windows® 98SE/ME/2000/XP	Windows® 2000/XP/Vista
Receiver Sensitivity	802.11b (8% PER) -83 dBm (Typical) at 11Mbps 802.11g (10% PER) -68 dBm (Typical) at 54Mbps	802.11g: -72 dBm (Typical) at 54 Mbps 802.11b: -88 dBm (Typical) at 11 Mbps
Power Consumption	382 mA @ 5V Tx mode/High speed 305 mA @ 5V Rx mode/High speed	868mA@3.3V in continue Tx 485mA@3.3V in continue Rx
Temperature	operation: 0°C ~ 60°C	Operation: 5°C to 55°C Storage: -20°C to 70°C
Humidity	operation: 10% ~ 90%, non-condensing	Operation: 10% ~ 90% (non-condensing) Storage: 5% ~ 90% (non-condensing)
Dimensions	60 mm x 25 mm	510 mm x 30 mm
Weight	NW: 8 g	NW: 5 g
Compliance Certifications	FCC, CE	FCC

## Ordering Information

Part No.	Description	Part No.	Description
WMPCIE-V01-R30	802.11 b+g PCIe Mini card wireless LAN module with Ralink	32500-001900-RS	RF cable; 300MM; 28AWG; (A) SMA connector; (B) MHF20278-11R-13; ROHS
WMUSB-V01-R20	802.11 b+g USB embedded module with VIA VT6656	32000-102500-RS	USB cable, 2x4pin 2.0mm to JST SHR-06V 1.00mm, L: 150mm
32505-000100-100-RS	2 dBi 109mm antenna	32500-001000-RS	5 dBi 173mm antenna

# IGCME-1300

PCIe Mini VGA adapter card, RoHs

## IEI Scalable Display Solution

The IGCME-1300 is applied to expand one VGA port for the IEI motherboard with a PCIe Mini slot for multiple display applications.

### Compatible models

KINO-QM670-R10

PCIE-Q670-R10

## Features

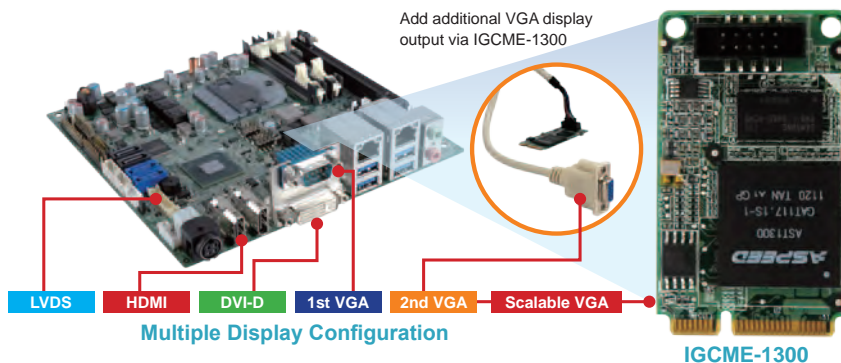
1. Support PCIe VGA/2D Controller, 1920x1200@60Hz 32bpp
2. DDR3 SDRAM supports up to 800 MHz speed
3. Compliant with PCI Express Mini specification 1.2

## Specifications

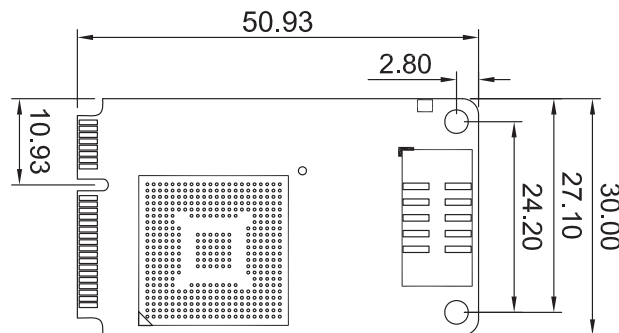
- ◆ Form Factor  
PCI Express Mini card
- ◆ Display Controller  
Aspeed AST1300
- ◆ Internal Connector  
1 x 10-pin (2x5) box header by 2.0mm pitch
- ◆ Compatible OS  
Windows® 2000/XP/Server 2003/Server 2008/ (32bit) Win7  
Linux kernel version 2.6.32 above
- ◆ Power Supply  
On-board 3.3V
- ◆ Operating Temperature  
-10°C ~ 60°C
- ◆ Operating Humidity  
5% ~ 95%, non-condensing
- ◆ Dimensions (LxW)  
50mm x 30mm
- ◆ Weight  
70g

## Packing List

1 x IGCME-1300 PCIe Mini VGA adapter card	1 x QIG
VGA cable, 600 mm length (Pitch=2.0mm) (P/N: 32003-001500-100-RS)	



## Dimensions (mm)

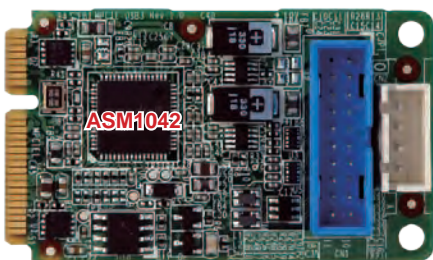


## Ordering Information

Part No.	Description
IGCME-1300-R10	PCIe Mini VGA adapter card, RoHs

# MPCIE-USB3

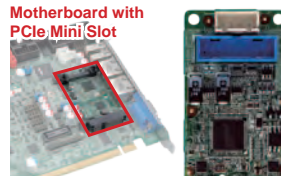
PCIe Mini USB 3.0 adapter card, RoHs



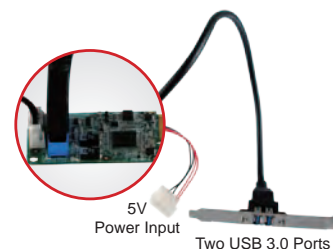
## IEI USB 3.0 Expanded Solution

The MPCIE is applied to add additional super speed USB 3.0 ports for the motherboard with a PCIe Mini slot.

Motherboard with PCIe Mini Slot



MPCIE-USB3



## Specifications

- ◆ Form Factor  
PCI Express Mini card
- ◆ USB 3.0 Controller  
Asmedia ASM1042
- ◆ Internal Connector  
1 x 20-pin (2x10) box header
- ◆ Power Jack  
1 x 4-pin box header
- ◆ Compatible OS  
Windows® 2000/XP/Server 2003/Server 2008/Vista/7  
Linux kernel version 2.6.32 above
- ◆ Operating Temperature  
-10°C ~ 60°C
- ◆ Operating Humidity  
5% ~ 95%, non-condensing
- ◆ Dimensions (LxW)  
50 mm x 30 mm
- ◆ Weight  
70g

## Packing List

1 x MPCIE-USB3 PCIe Mini USB 3.0 adapter card	
1 x Dual USB 3.0 type A port cable with bracket (P/N: 19800-010500-200-RS)	
1 x Power cable (P/N: 32102-020900-100-RS)	1 x QIG

## Ordering Information

Part No.	Description
MPCIE-USB3-R10	PCIe Mini USB 3.0 adapter card, RoHs
19800-010500-200-RS	Dual USB 3.0 type A port cable with bracket

## Features

1. Supports two external USB 3.0 type A ports
2. USB 3.0 provides up to 5Gbps of transferring rate
3. Backward compatible with USB 2.0 and USB 1.0/1.1 devices
4. Fully compliant with USB 3.0 rev 1.0 specifications and Intel® xHCI rev 0.96 specifications, with transfer rates up to 5Gbps
5. Compliant with PCI Express Mini specification 1.2

## Dimensions (mm)

