

# Product Information

## HWRD600-QEE Series

### MU-MIMO 802.11ac Wave1 Industrial Access Point



## Features

- ❖ IEEE 802.11ac/a/b/g/n compliant
- ❖ 2.4GHz and 5GHz dual radios
- ❖ 2.4GHz 28dBm and 5GHz 21dBm aggregate power
- ❖ Data rates of up to 867Mbps in 802.11ac 80MHz channels
- ❖ Distance Adjustment for long range transmission
- ❖ IP30 Metal Enclosure
- ❖ Push-Button Reset
- ❖ Dynamic DNS
- ❖ Ping Watchdog
- ❖ Auto Reboot Service
- ❖ Support AP Mass Management Software via SNMP Protocol

## Applications

- 802.11b/g/n AP/802.11ac+802.11a/n AP
- Point to Point / Point to Multi-Point/ Coverage/ CPE
- Design for Hard-to-Wire Industrial Application

## Specifications

System Memory	128MB DDR2
NOR Flash	16MB
Antenna	Based on Applications
Interface	2x Gigabit Port (Auto MDI-X)
LED	7 LEDs total, Power, LAN1, LAN2, Signal LED 1,2,3,4
Power over Ethernet	Passive PoE 24-56V or IEEE 802.3af/at PoE on LAN0
DC Power	1x DC Jack Connector
Power Consumption	8.6W(Max)
Certification	RoHS Compliance
Environmental	Temperature: Operating: Operating: -20~70°C, Storage: -40~90°C, Humidity (non-condensing): Operating: 5% to 95%, Storage: Max. 90%
Enclosure Type	IP30
Dimensions	30X140X122mm
Other Features	Surge Suppressor, Watchdog Timer

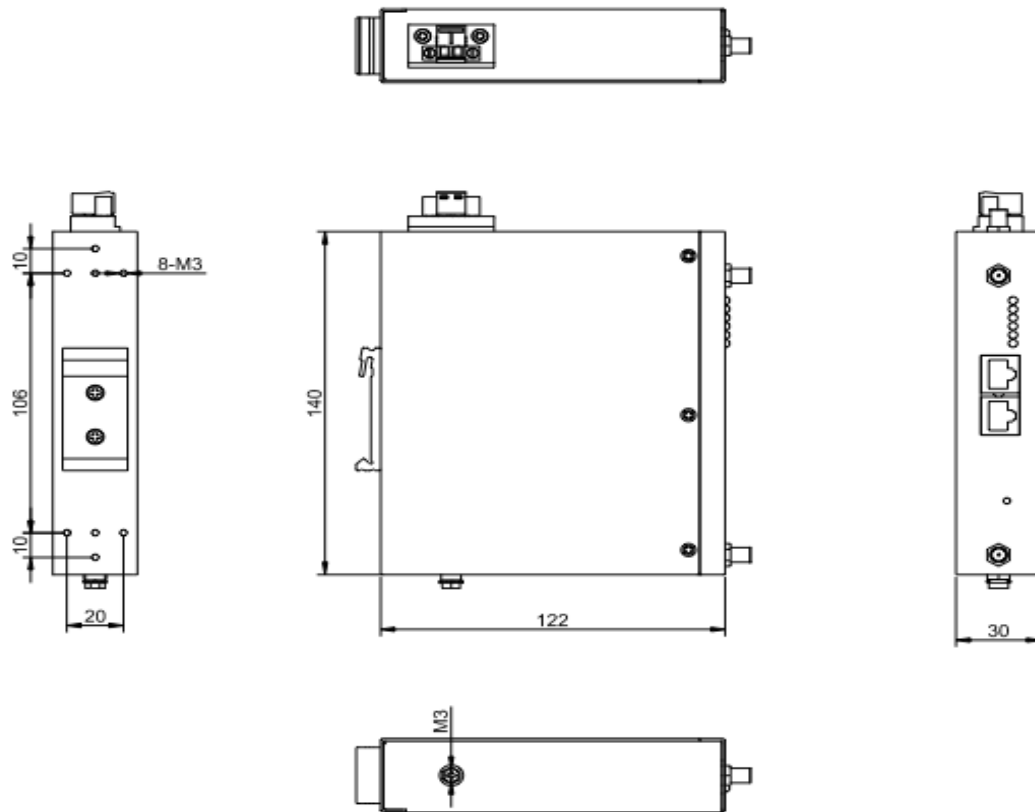
## RF Performance Table

	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance		Data Rate	RX Sensitivity	Tolerance
2.4GHz 802.11b	1Mbps	28dBm	33dBm	±2dB	2.4GHz 802.11b	1Mbps		±2dB
	5.5Mbps	28dBm	33dBm	±2dB		5.5Mbps		±2dB
	11Mbps	28dBm	33dBm	±2dB		11Mbps		±2dB
	6Mbps	30dBm	35dBm	±2dB		6Mbps		±2dB
	9Mbps	30dBm	35dBm	±2dB		9Mbps		±2dB
	12Mbps	30dBm	35dBm	±2dB		12Mbps		±2dB
2.4GHz 802.11g	18Mbps	30dBm	35dBm	±2dB	2.4GHz 802.11g	18Mbps		±2dB
	24Mbps	30dBm	35dBm	±2dB		24Mbps		±2dB
	36Mbps	28dBm	33dBm	±2dB		36Mbps		±2dB
	48Mbps	27dBm	32dBm	±2dB		48Mbps		±2dB
	54Mbps	26dBm	31dBm	±2dB		54Mbps		±2dB
2.4GHz 802.11n HT20	MCS 0	30dBm	35dBm	±2dB	2.4GHz 802.11n HT20	MCS 0		±2dB
	MCS 1	28dBm	33dBm	±2dB		MCS 1		±2dB
	MCS 2	28dBm	33dBm	±2dB		MCS 2		±2dB
	MCS 3	28dBm	33dBm	±2dB		MCS 3		±2dB
	MCS 4	27dBm	32dBm	±2dB		MCS 4		±2dB
	MCS 5	26dBm	31dBm	±2dB		MCS 5		±2dB
	MCS 6	25dBm	30dBm	±2dB		MCS 6		±2dB
	MCS 7	24dBm	29dBm	±2dB		MCS 7		±2dB
2.4GHz 802.11n HT40	MCS 0	29dBm	34dBm	±2dB	2.4GHz 802.11n HT40	MCS 0		±2dB
	MCS 1	27dBm	32dBm	±2dB		MCS 1		±2dB
	MCS 2	27dBm	32dBm	±2dB		MCS 2		±2dB
	MCS 3	27dBm	32dBm	±2dB		MCS 3		±2dB
	MCS 4	26dBm	31dBm	±2dB		MCS 4		±2dB
	MCS 5	25dBm	30dBm	±2dB		MCS 5		±2dB
	MCS 6	24dBm	29dBm	±2dB		MCS 6		±2dB
	MCS 7	23dBm	28dBm	±2dB		MCS 7		±2dB

	Data Rate	TX Power (per chain)	TX Power (2 chains)	Tolerance
5GHz 802.11a	6Mbps	20dBm	23dBm	±2dB
	9Mbps	20dBm	23dBm	±2dB
	12Mbps	20dBm	23dBm	±2dB
	18Mbps	20dBm	23dBm	±2dB
	24Mbps	20dBm	23dBm	±2dB
	36Mbps	18dBm	21dBm	±2dB
	48Mbps	16dBm	19dBm	±2dB
	54Mbps	15dBm	18dBm	±2dB
5GHz 802.11n/ac VHT20	MCS 0	19dBm	22dBm	±2dB
	MCS 1	19dBm	22dBm	±2dB
	MCS 2	19dBm	22dBm	±2dB
	MCS 3	18dBm	21dBm	±2dB
	MCS 4	18dBm	21dBm	±2dB
	MCS 5	17dBm	20dBm	±2dB
	MCS 6	16dBm	19dBm	±2dB
	MCS 7	14dBm	17dBm	±2dB
5GHz 802.11n/ac VHT40	MCS8	13dBm	16dBm	±2dB
	MCS 0	18dBm	21dBm	±2dB
	MCS 1	18dBm	21dBm	±2dB
	MCS 2	18dBm	21dBm	±2dB
	MCS 3	17dBm	20dBm	±2dB
	MCS 4	17dBm	20dBm	±2dB
	MCS 5	16dBm	19dBm	±2dB
	MCS 6	15dBm	18dBm	±2dB
5GHz 802.11ac VHT80	MCS 7	14dBm	17dBm	±2dB
	MCS 8	13dBm	16dBm	±2dB
	MCS 9	13dBm	16dBm	±2dB
	MCS 0	18dBm	21dBm	±2dB
	MCS 1	18dBm	21dBm	±2dB
	MCS 2	18dBm	21dBm	±2dB
	MCS 3	17dBm	20dBm	±2dB
	MCS 4	17dBm	20dBm	±2dB
MCS 5	16dBm	19dBm	±2dB	
MCS 6	15dBm	18dBm	±2dB	
MCS 7	14dBm	17dBm	±2dB	
MCS8	13dBm	16dBm	±2dB	
MCS9	13dBm	16dBm	±2dB	

	Data Rate	RX Specifications Sensitivity	Tolerance
5GHz 802.11a	6Mbps	-94dBm	±2dB
	9Mbps	-94dBm	±2dB
	12Mbps	-92dBm	±2dB
	18Mbps	-91dBm	±2dB
	24Mbps	-90dBm	±2dB
	36Mbps	-86dBm	±2dB
	48Mbps	-83dBm	±2dB
	54Mbps	-80dBm	±2dB
5GHz 802.11n/ac VHT20	MCS 0	-93dBm	±2dB
	MCS 1	-90dBm	±2dB
	MCS 2	-87dBm	±2dB
	MCS 3	-83dBm	±2dB
	MCS 4	-80dBm	±2dB
	MCS 5	-77dBm	±2dB
	MCS 6	-74dBm	±2dB
	MCS 7	-73dBm	±2dB
5GHz 802.11n/ac VHT40	MCS8	-71dBm	±2dB
	MCS 0	-90dBm	±2dB
	MCS 1	-88dBm	±2dB
	MCS 2	-85dBm	±2dB
	MCS 3	-82dBm	±2dB
	MCS 4	-80dBm	±2dB
	MCS 5	-75dBm	±2dB
	MCS 6	-73dBm	±2dB
5GHz 802.11ac VHT80	MCS 7	-73dBm	±2dB
	MCS 8	-70dBm	±2dB
	MCS 9	-68dBm	±2dB
	MCS 0	-89dBm	±2dB
	MCS 1	-87dBm	±2dB
	MCS 2	-85dBm	±2dB
	MCS 3	-83dBm	±2dB
	MCS 4	-80dBm	±2dB
MCS 5	-78dBm	±2dB	
MCS 6	-75dBm	±2dB	
MCS 7	-72dBm	±2dB	
MCS8	-70dBm	±2dB	
MCS9	-68dBm	±2dB	

## Dimension Drawings



Units:mm

## Ordering Information

HWRD600-QEE	2.4G Single Channel 23dBm, up to 28dBm & 5.8G Single Channel 18dBm, up to 21dBm (11ac wave 1); -20~70°C operating temperature
HWRD600-QEEW	2.4G Single Channel 23dBm, up to 28dBm & 5.8G Single Channel 18dBm, up to 21dBm (11ac wave 1); -40~70°C operating temperature