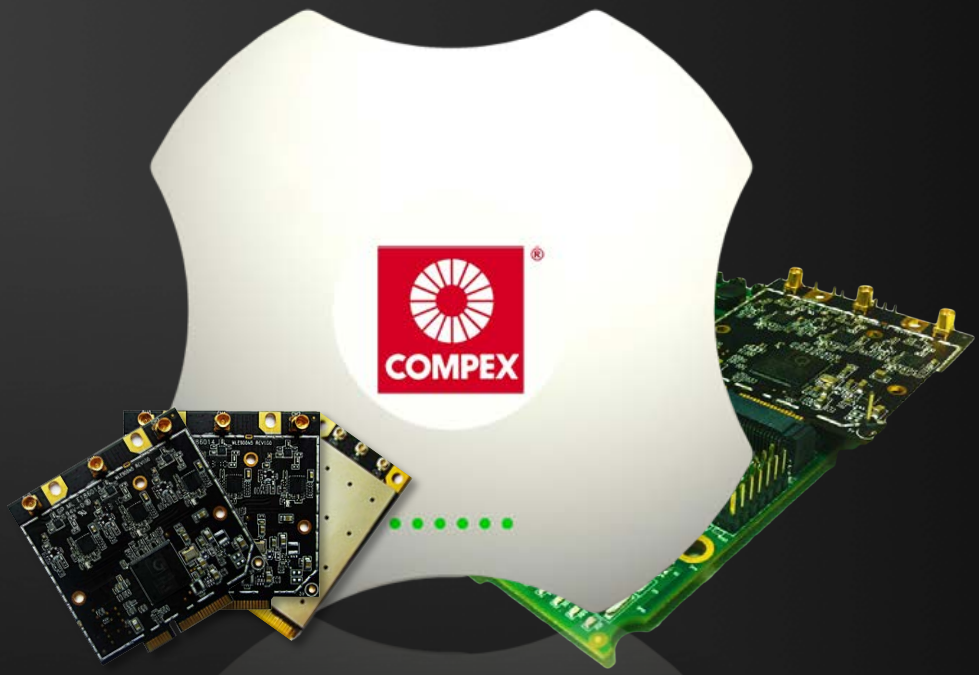


acWave

802.11ac Series – Gigabit WiFi Solutions

Full Products: **ac**Station | **ac**Junior | **ac**Space | acMesh

Components: **ac** radio | **ac** board

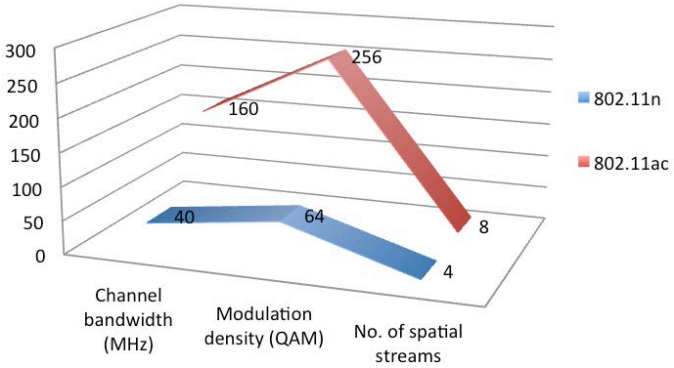
COMPEX

Overview

11ac - 3x Faster & Smarter Wifi

As one of the pioneers in the OEM industry to leverage 11ac technology, Compex acWave series take Wi-Fi speeds to the pinnacle. 3x faster and more scalable, acWave also delivers expanded range, giving you more freedom than ever – excellent for point to point (PtP) and point to multi-point (PtMP) applications. More channel bonding, denser modulation, and more MIMO/spatial streams – all result in an unprecedented wifi speed of 1.3Gbps.

11ac vs 11n



Leading-Edge Industrial Design

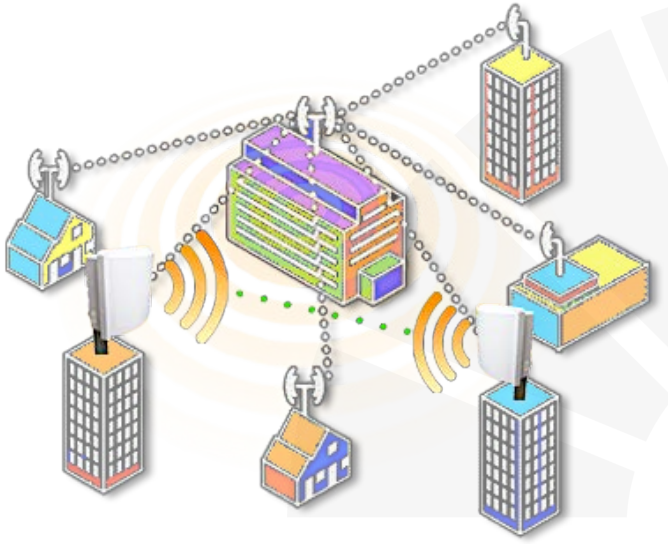
Uniquely designed to be compact in size and elegant in style, Compex acWave features a pyramidal antenna that performs at its best regardless of where it is placed – on the table or mounted on the wall/ceiling, reducing customer intervention to the minimum. The pyramidal antenna is also designed to improve spatial diversity – improving signal strength and throughput over dipole antennas.

Low-cost, high-performing, and compact, the acWave series are extremely versatile and economical to deploy.

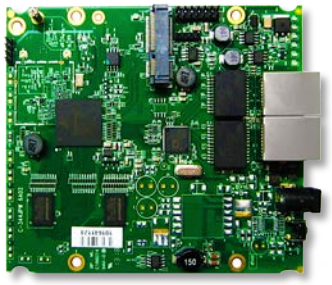
Support for OpenWRT/CompexWRT

Seizing the advantages of both worlds, all Compex acWave radios are supported by ath10k on OpenWRT as well as CompexWRT. Based on OpenWRT architecture, CompexWRT makes it easy for OEM to adopt and modify. Fully compatible with DFS standards, it supports 16 Virtual Access Points per radio. In addition to modified LuCi Webpages, it boasts comprehensive SNMP parameters for monitoring and supports long distance applications.

Perfect Fit for PtP & PtMP

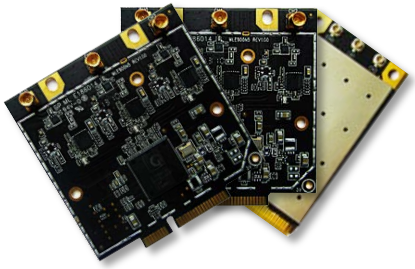


Models



Dual Radio Gigabit Embedded Board

Model	WPJ344
Chipset	Qualcomm-Atheros AR9344 533MHz MIPS74Kc
Firmware	CompexWRT & OpenWRT firmware supported
Dual Radio	On-board a/b/g/n radio & 1 miniPCIe slot that supports all Compex WLE series, including 802.11ac radio
PoE	Integrated 48V 802.3af (alternative 24V PoE available)
Ethernet Port	Support 2 x Gigabit Ethernet Ports



802.11ac miniPCIe Radio

Model	WLE600V5-18	WLE600V5-23	WLE900VX	WLE900V5-18	WLE900V5-23
Chipset	Qualcomm-Atheros QCA9882/QCA9892		Qualcomm-Atheros QCA 9880 Version 2		
Reference Design	TBD	TBD	XB140	XB143	CUS223 (High Power)
Power (per chain)	18dBm	23dBm	2.4GHz@19dBm 5GHz@18dBm	18dBm	23dBm
Power (aggr.)	21dBm	26dBm	2.4GHz@23dBm 5GHz@24dBm	23dBm	28dBm
Speed	2x2 MIMO & up to 867Mbps		3x3 MIMO & up to 1.3Gbps		
Compliance	IEEE 802.11ac compliant & backward compatible with a/n				
Dimension (mm)	50.95 x 30 x 3.2			50.95 x 30 x 3.2	

acStation

Model	acStation AC26
Board Type	WPJ344 (AR9344) + WLE600N5-23 (AR9880)
Frequency	5GHz
Power (aggregate)	26dBm
Gain	19dBi directional antenna
PoE	Manufacturing option of 802.3af (48V) or 24V passive PoE

Models

acJunior

Model	acJunior AC21	acJuniorPlus AC21	
Board Type	WPJ344 (AR9344) + WLE600V5-18 (AR9880)		
Frequency	5GHz	5GHz	2.4GHz
Power (aggregate)	21dBm	21dBm	18dBm
Gain	17dBi directional antenna	17dBi directional antenna	7dBi omni-directional antenna
PoE	Manufacturing option of 802.3af (48V) or 24V passive PoE		

acSpace

Model	acSpace	acSpacePlus	
Board Type	WPJ344 (AR9344) + WLE600V5-18 (AR9882)		
Frequency	5GHz	5GHz	2.4GHz
Power (aggregate)	21dBm	21dBm	18dBm
Gain	4-5dBi internal/pyramid antenna		
PoE	Manufacturing option of 802.3af (48V) or 24V passive PoE		

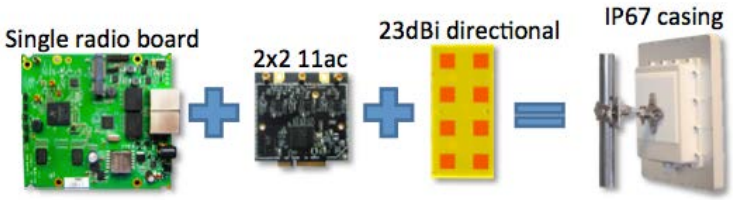
acMesh

Model	acMesh MPS344	
Type	AP or MeshPoint	
Frequency	5GHz	2.4GHz
Power (aggregate)	26dBm	18dBm
Gain	6dBi H&V omni-directional antenna	
PoE	Manufacturing option of 802.3af (48V) or 24V passive PoE	

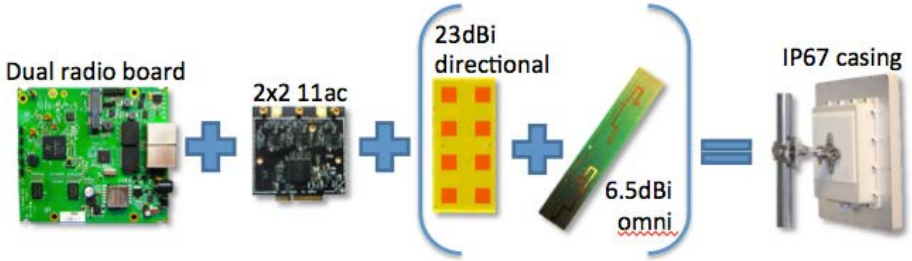
Solutions/Applications

Outdoor Solutions

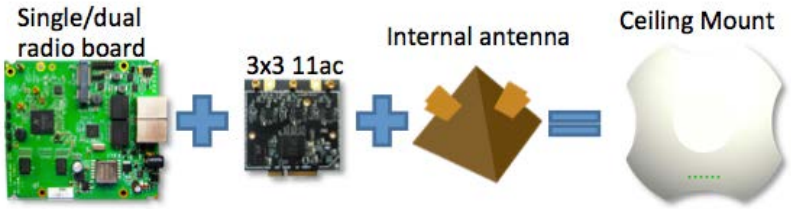
1st Qualcomm Atheros 11ac PtP



1st Qualcomm Atheros 11ac PtP + Coverage



Indoor Solution



Applications

With the advent of 802.11ac, a faster and more scalable version of 802.11n, Gigabit Ethernet offers unprecedented capabilities that fully liberate any wifi moments – ushering in tremendous improvements and benefits. Now, an AP can support more clients than ever before, the client embraces a more seamless experience and more available bandwidth. Not only do files download and emails sync at gigabit speeds, devices' WiFi interface can exchange data with its AP much faster, thus extending battery life.

Leveraging the 11ac technology, Compex acWave series are perfect for organizations reaching the limits of their current Wi-Fi network and those that are striving to adopt next-generation applications or interactive network experiences. With higher throughput, 802.11ac enables Compex acWave to multiply the performance of outdoor and indoor applications:

- *Outdoor: Point to Point & Point to Point + Coverage*
  Higher throughput for backhaul enables 3x faster data transmission, such as video streaming, at gigabit speeds, while accommodating high bandwidth that outdoor evironments demand.

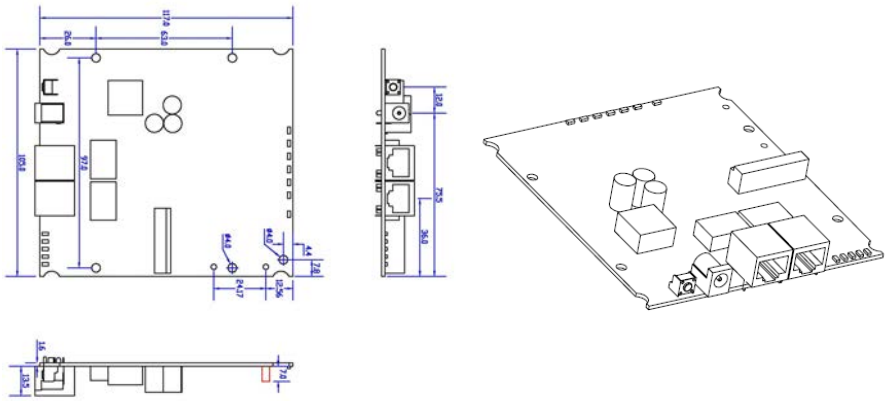
- Indoor: more hops for mesh
  Higher throughput also translates into an increase in the number of hops for MeshPoints, as the effect on backhaul performance is most significant – thus escalating the hops to many more.

Specifications

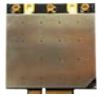
AcWave board: WPJ344

SYSTEM INFORMATION				
Processor		Qualcomm-Atheros AR9344 MIBS 74K		
System Memory		128MB DDR2		
NOR Flash		8MB (max 16MB optional)		
PCIe Slot		9.2mm height miniPCIe slot		
Antenna Connector		2 x U.FL		
On-board Radio	**Transmit Power**	Data Rate	2.4GHz (aggregate)	5GHz (aggregate)
		6M	18dBm	15dBm
		54M	13dBm	11dBm
		HT20M CS0	17dBm	15dBm
		HT20M CS7	13dBm	10dBm
		HT40M CS0	16dBm	15dBm
		HT40M CS7	13dBm	10dBm
	Receiver Sensitivity	Data Rate	2.4GHz	5GHz
		6M	-90dBm	-90dBm
		54M	-75dBm	-74dBm
		HT20M CS0	-90dBm	-90dBm
		HT20M CS7	-72dBm	-71dBm
		HT40M CS0	-88dBm	-88dBm
		HT40M CS7	-70dBm	-70dBm
Ethernet		2 Gigabit ports with Auto-MDI/X		
Extras		Serial Port, JTAG, Reset Button, Surge Arrestor, Watchdog Timer		
Power Solutions	High voltage	DC Jack Input:24-48V, Passive PoE: 24-48V, IEEE 802.3af PoE		
	Low voltage	DC Jack Input: 9-24V, Passive PoE: 12-24V		
PoE Injector Compatibility		IEEE 802.3af/at injectors(both end span and mid span) Passive injectors		
Power consumption (board only)		5W		
ROHS Compliance		Yes		
Humidity		Operating: 5% to 95% (non-condensing) Storage: Max.90% (non-condensing)		
Temperature Range		Operating: -20ºC to 70ºC Storage: -40ºC to 90ºC		
Dimension		117 x 105 x 17 (mm)		

DIMENSION DRAWING



RELATED PRODUCTS

802.11ac miniPCIe	WLE900V5-18 	WLE900V5-23 	WLE900VX 	WLE600V5-18 	WLE600V5-23 
Gigabit Power over Ethernet	POE2408 	- Output Voltage: 24VDC - Max Output Watts: 19W			
USB Extension		- 2 x USB 2.0 ports - 1 x miniPCIe-based USB 2.0 only interface (e.g. 3G modems)			

Specifications

AcWave radio: WLE600V5-18

SYSTEM INFORMATION	
Chipset	QCA9882
Host Interface	PCI-Express 1.1 Standard
Operating Voltage	3.3 VDC
Power Consumption	5W
Antenna Connector	2 x U.FL
Frequency Range	5.150 ~ 5.875 GHz
Modulation Techniques	OFDM: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
RoHS Compliance	Yes
Temperature Range	Operating: -20ºC to 70ºC; Storage: -40ºC to 90ºC
Humidity	Operating:5% to 95% (non-condensing) Storage: Max.90% (non-condensing)
Dimensions	50.95mm x 30 mm x 3.2 mm (H x W x D)

AcWave radio: WLE600V5-23

SYSTEM INFORMATION	
Chipset	QCA9882
Host Interface	PCI-Express 1.1 Standard
Operating Voltage	3.3 VDC
Power Consumption	5W
Antenna Connector	2 x U.FL
Frequency Range	5.150 ~ 5.875 GHz
Modulation Techniques	OFDM: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
RoHS Compliance	Yes
Temperature Range	Operating: -20ºC to 70ºC; Storage: -40ºC to 90ºC
Humidity	Operating:5% to 95% (non-condensing) Storage: Max.90% (non-condensing)
Dimensions	50.95mm x 50 mm x 3.2 mm (H x W x D)

AcWave radio: WLE900V5-18

SYSTEM INFORMATION	
Chipset	QCA9880 Version 2
Host Interface	PCI-Express 1.1 Standard
Operating Voltage	3.3 VDC
Power Consumption	5W
Antenna Connector	3 x U.FL
Frequency Range	5.150 ~ 5.875 GHz
Modulation Techniques	OFDM: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
RoHS Compliance	Yes
Temperature Range	Operating: -20ºC to 70ºC; Storage: -40ºC to 90ºC
Humidity	Operating:5% to 95% (non-condensing) Storage: Max.90% (non-condensing)
Dimensions	50.95mm x 30 mm x 3.2 mm (H x W x D)

AcWave radio: WLE900V5-23

SYSTEM INFORMATION	
Chipset	QCA9880 Version 2
Host Interface	PCI-Express 1.1 Standard
Operating Voltage	3.3 VDC, 5V (compulsory and external)[1]
Power Consumption	7W
Antenna Connector	3 x MMCX Antenna Connector
Frequency Range	5.150 ~ 5.875 GHz
Modulation Techniques	OFDM: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
RoHS Compliance	Yes
Temperature Range	Operating: -20ºC to 70ºC; Storage: -40ºC to 90ºC
Humidity	Operating:5% to 95% (non-condensing) Storage: Max.90% (non-condensing)
Dimensions	50.95mm x 50 mm x 3.2 mm ((H x W x D)

Specifications

AcWave radio: WLE600V5-18

TX SPECIFICATIONS								
	DataRate	**TX Power** (per chain)	**TX Power** (2 chains)	**Tolerance**		**DataRate**	**TX Power** (per chain)	**TX Power** (2 chains)	**Tolerance**
802.11a	6Mbps	18dBm	21dBm	±2dB	**5GHz 11n/11ac HT20**	MCS 0	18dBm	21dBm	±2dB
	9Mbps	18dBm	21dBm	±2dB		MCS 1	18dBm	21dBm	±2dB
	12Mbps	18dBm	21dBm	±2dB		MCS 2	18dBm	21dBm	±2dB
	18Mbps	18dBm	21dBm	±2dB		MCS 3	18dBm	21dBm	±2dB
	24Mbps	18dBm	21dBm	±2dB		MCS 4	18dBm	21dBm	±2dB
	36Mbps	17dBm	20dBm	±2dB		MCS 5	16dBm	19dBm	±2dB
	48Mbps	17dBm	20dBm	±2dB		MCS 6	16dBm	19dBm	±2dB
	54Mbps	15dBm	18dBm	±2dB		MCS 7	15dBm	18dBm	±2dB
						MCS 8	15dBm	18dBm	±2dB
5GHz 11n/11ac HT40	MCS 0	18dBm	21dBm	±2dB	**5GHz 11ac HT80**	MCS 0	18dBm	21dBm	±2dB
	MCS 1	18dBm	21dBm	±2dB		MCS 1	18dBm	21dBm	±2dB
	MCS 2	18dBm	21dBm	±2dB		MCS 2	18dBm	21dBm	±2dB
	MCS 3	18dBm	21dBm	±2dB		MCS 3	18dBm	21dBm	±2dB
	MCS 4	18dBm	21dBm	±2dB		MCS 4	18dBm	21dBm	±2dB
	MCS 5	16dBm	19dBm	±2dB		MCS 5	16dBm	19dBm	±2dB
	MCS 6	16dBm	19dBm	±2dB		MCS 6	16dBm	19dBm	±2dB
	MCS 7	15dBm	18dBm	±2dB		MCS 7	15dBm	18dBm	±2dB
	MCS 8	15dBm	18dBm	±2dB		MCS 8	15dBm	18dBm	±2dB
	MCS 9	13dBm	16dBm	±2dB		MCS 9	13dBm	16dBm	±2dB

RX SPECIFICATIONS							
	DataRate	**Sensitivity**	**Tolerance**		**DataRate**	**Sensitivity**	**Tolerance**
802.11a	6Mbps	-94dBm	±2dB	**5GHz 11n/11ac HT20**	MCS 0	-94dBm	±2dB
	9Mbps	-94dBm	±2dB		MCS 1	-94dBm	±2dB
	12Mbps	-94dBm	±2dB		MCS 2	-92dBm	±2dB
	18Mbps	-92dBm	±2dB		MCS 3	-88dBm	±2dB
	24Mbps	-89dBm	±2dB		MCS 4	-84dBm	±2dB
	36Mbps	-86dBm	±2dB		MCS 5	-81dBm	±2dB
	48Mbps	-82dBm	±2dB		MCS 6	-78dBm	±2dB
	54Mbps	-80dBm	±2dB		MCS 7	-77dBm	±2dB
					MCS 8	-74dBm	±2dB
5GHz 11n/11ac HT40	MCS 0	-93dBm	±2dB	**5GHz 11ac HT80**	MCS 0	-89dBm	±2dB
	MCS 1	-91dBm	±2dB		MCS 1	-88dBm	±2dB
	MCS 2	-90dBm	±2dB		MCS 2	-85dBm	±2dB
	MCS 3	-85dBm	±2dB		MCS 3	-81dBm	±2dB
	MCS 4	-82dBm	±2dB		MCS 4	-79dBm	±2dB
	MCS 5	-78dBm	±2dB		MCS 5	-75dBm	±2dB
	MCS 6	-77dBm	±2dB		MCS 6	-74dBm	±2dB
	MCS 7	-75dBm	±2dB		MCS 7	-72dBm	±2dB
	MCS 8	-73dBm	±2dB		MCS 8	-70dBm	±2dB
	MCS 9	-71dBm	±2dB		MCS 9	-68dBm	±2dB

Specifications

AcWave radio: WLE600V5-23

TX SPECIFICATIONS								
	DataRate	**TX Power** (per chain)	**TX Power** (2 chains)	**Tolerance**		**DataRate**	**TX Power** (per chain)	**TX Power** (2 chains)	**Tolerance**
802.11a	6Mbps	23dBm	26dBm	±2dB	**5GHz 11n/11ac HT20**	MCS 0	23dBm	26dBm	±2dB
	9Mbps	23dBm	26dBm	±2dB		MCS 1	23dBm	26dBm	±2dB
	12Mbps	23dBm	26dBm	±2dB		MCS 2	23dBm	26dBm	±2dB
	18Mbps	23dBm	26dBm	±2dB		MCS 3	23dBm	26dBm	±2dB
	24Mbps	23dBm	26dBm	±2dB		MCS 4	23dBm	26dBm	±2dB
	36Mbps	23dBm	26dBm	±2dB		MCS 5	22dBm	25dBm	±2dB
	48Mbps	21dBm	24dBm	±2dB		MCS 6	21dBm	24dBm	±2dB
	54Mbps	19dBm	22dBm	±2dB		MCS 7	19dBm	22dBm	±2dB
						MCS 8	17dBm	20dBm	±2dB
5GHz 11n/11ac HT40	MCS 0	23dBm	26dBm	±2dB	**5GHz 11ac HT80**	MCS 0	23dBm	26dBm	±2dB
	MCS 1	23dBm	26dBm	±2dB		MCS 1	23dBm	26dBm	±2dB
	MCS 2	23dBm	26dBm	±2dB		MCS 2	23dBm	26dBm	±2dB
	MCS 3	23dBm	26dBm	±2dB		MCS 3	23dBm	26dBm	±2dB
	MCS 4	23dBm	26dBm	±2dB		MCS 4	23dBm	26dBm	±2dB
	MCS 5	22dBm	25dBm	±2dB		MCS 5	22dBm	25dBm	±2dB
	MCS 6	21dBm	24dBm	±2dB		MCS 6	21dBm	24dBm	±2dB
	MCS 7	19dBm	22dBm	±2dB		MCS 7	19dBm	22dBm	±2dB
	MCS 8	17dBm	20dBm	±2dB		MCS 8	17dBm	20dBm	±2dB
	MCS 9	15dBm	18dBm	±2dB		MCS 9	15dBm	18dBm	±2dB

RX SPECIFICATIONS							
	DataRate	**Sensitivity**	**Tolerance**		**DataRate**	**Sensitivity**	**Tolerance**
802.11a	6Mbps	-94dBm	±2dB	**5GHz 11n/11ac HT20**	MCS 0	-94dBm	±2dB
	9Mbps	-94dBm	±2dB		MCS 1	-94dBm	±2dB
	12Mbps	-94dBm	±2dB		MCS 2	-92dBm	±2dB
	18Mbps	-92dBm	±2dB		MCS 3	-88dBm	±2dB
	24Mbps	-89dBm	±2dB		MCS 4	-84dBm	±2dB
	36Mbps	-86dBm	±2dB		MCS 5	-81dBm	±2dB
	48Mbps	-82dBm	±2dB		MCS 6	-78dBm	±2dB
	54Mbps	-80dBm	±2dB		MCS 7	-77dBm	±2dB
					MCS 8	-74dBm	±2dB
5GHz 11n/11ac HT40	MCS 0	-93dBm	±2dB	**5GHz 11ac HT80**	MCS 0	-89dBm	±2dB
	MCS 1	-91dBm	±2dB		MCS 1	-88dBm	±2dB
	MCS 2	-90dBm	±2dB		MCS 2	-85dBm	±2dB
	MCS 3	-85dBm	±2dB		MCS 3	-81dBm	±2dB
	MCS 4	-82dBm	±2dB		MCS 4	-79dBm	±2dB
	MCS 5	-78dBm	±2dB		MCS 5	-75dBm	±2dB
	MCS 6	-77dBm	±2dB		MCS 6	-74dBm	±2dB
	MCS 7	-75dBm	±2dB		MCS 7	-72dBm	±2dB
	MCS 8	-73dBm	±2dB		MCS 8	-70dBm	±2dB
	MCS 9	-71dBm	±2dB		MCS 9	-68dBm	±2dB

Specifications

AcWave radio: WLE900V5-18

TX SPECIFICATIONS								
	DataRate	**TX Power** (per chain)	**TX Power** (3 chains)	**Tolerance**		**DataRate**	**TX Power** (per chain)	**TX Power** (3 chains)	**Tolerance**
802.11a	6Mbps	18dBm	23dBm	±2dB	**5GHz 11n/11ac HT20**	MCS 0	18dBm	23dBm	±2dB
	9Mbps	18dBm	23dBm	±2dB		MCS 1	18dBm	23dBm	±2dB
	12Mbps	18dBm	23dBm	±2dB		MCS 2	18dBm	23dBm	±2dB
	18Mbps	18dBm	23dBm	±2dB		MCS 3	18dBm	23dBm	±2dB
	24Mbps	18dBm	23dBm	±2dB		MCS 4	18dBm	23dBm	±2dB
	36Mbps	17dBm	22dBm	±2dB		MCS 5	16dBm	21dBm	±2dB
	48Mbps	17dBm	22dBm	±2dB		MCS 6	16dBm	21dBm	±2dB
	54Mbps	15dBm	20dBm	±2dB		MCS 7	15dBm	20dBm	±2dB
						MCS 8	15dBm	20dBm	±2dB
5GHz 11n/11ac HT40	MCS 0	18dBm	23dBm	±2dB	**5GHz 11ac HT80**	MCS 0	18dBm	23dBm	±2dB
	MCS 1	18dBm	23dBm	±2dB		MCS 1	18dBm	23dBm	±2dB
	MCS 2	18dBm	23dBm	±2dB		MCS 2	18dBm	23dBm	±2dB
	MCS 3	18dBm	23dBm	±2dB		MCS 3	18dBm	23dBm	±2dB
	MCS 4	18dBm	23dBm	±2dB		MCS 4	18dBm	23dBm	±2dB
	MCS 5	16dBm	21dBm	±2dB		MCS 5	16dBm	21dBm	±2dB
	MCS 6	16dBm	21dBm	±2dB		MCS 6	16dBm	21dBm	±2dB
	MCS 7	15dBm	20dBm	±2dB		MCS 7	15dBm	20dBm	±2dB
	MCS 8	15dBm	20dBm	±2dB		MCS 8	15dBm	20dBm	±2dB
	MCS 9	13dBm	18dBm	±2dB		MCS 9	13dBm	18dBm	±2dB

RX SPECIFICATIONS							
	DataRate	**Sensitivity**	**Tolerance**		**DataRate**	**Sensitivity**	**Tolerance**
802.11a	6Mbps	-94dBm	±2dB	**5GHz 11n/11ac HT20**	MCS 0	-94dBm	±2dB
	9Mbps	-94dBm	±2dB		MCS 1	-94dBm	±2dB
	12Mbps	-94dBm	±2dB		MCS 2	-92dBm	±2dB
	18Mbps	-92dBm	±2dB		MCS 3	-88dBm	±2dB
	24Mbps	-89dBm	±2dB		MCS 4	-84dBm	±2dB
	36Mbps	-86dBm	±2dB		MCS 5	-81dBm	±2dB
	48Mbps	-82dBm	±2dB		MCS 6	-78dBm	±2dB
	54Mbps	-80dBm	±2dB		MCS 7	-77dBm	±2dB
					MCS 8	-74dBm	±2dB
5GHz 11n/11ac HT40	MCS 0	-93dBm	±2dB	**5GHz 11ac HT80**	MCS 0	-89dBm	±2dB
	MCS 1	-91dBm	±2dB		MCS 1	-88dBm	±2dB
	MCS 2	-90dBm	±2dB		MCS 2	-85dBm	±2dB
	MCS 3	-85dBm	±2dB		MCS 3	-81dBm	±2dB
	MCS 4	-82dBm	±2dB		MCS 4	-79dBm	±2dB
	MCS 5	-78dBm	±2dB		MCS 5	-75dBm	±2dB
	MCS 6	-77dBm	±2dB		MCS 6	-74dBm	±2dB
	MCS 7	-75dBm	±2dB		MCS 7	-72dBm	±2dB
	MCS 8	-73dBm	±2dB		MCS 8	-70dBm	±2dB
	MCS 9	-71dBm	±2dB		MCS 9	-68dBm	±2dB

Specifications

AcWave radio: WLE900V5-23

TX SPECIFICATIONS								
	DataRate	**TX Power** (per chain)	**TX Power** (3 chains)	**Tolerance**		**DataRate**	**TX Power** (per chain)	**TX Power** (3 chains)	**Tolerance**
802.11a	6Mbps	23dBm	28dBm	±2dB	**5GHz 11n/11ac HT20**	MCS 0	23dBm	28dBm	±2dB
	9Mbps	23dBm	28dBm	±2dB		MCS 1	23dBm	28dBm	±2dB
	12Mbps	23dBm	28dBm	±2dB		MCS 2	23dBm	28dBm	±2dB
	18Mbps	23dBm	28dBm	±2dB		MCS 3	23dBm	28dBm	±2dB
	24Mbps	23dBm	28dBm	±2dB		MCS 4	23dBm	28dBm	±2dB
	36Mbps	23dBm	28dBm	±2dB		MCS 5	23dBm	28dBm	±2dB
	48Mbps	21dBm	26dBm	±2dB		MCS 6	21dBm	26dBm	±2dB
	54Mbps	19dBm	24dBm	±2dB		MCS 7	19dBm	24dBm	±2dB
						MCS 8			
5GHz 11n/11ac HT40	MCS 0	23dBm	28dBm	±2dB	**5GHz 11ac HT80**	MCS 0	23dBm	28dBm	±2dB
	MCS 1	23dBm	28dBm	±2dB		MCS 1	23dBm	28dBm	±2dB
	MCS 2	23dBm	28dBm	±2dB		MCS 2	23dBm	28dBm	±2dB
	MCS 3	23dBm	28dBm	±2dB		MCS 3	23dBm	28dBm	±2dB
	MCS 4	23dBm	28dBm	±2dB		MCS 4	23dBm	28dBm	±2dB
	MCS 5	22dBm	27dBm	±2dB		MCS 5	22dBm	27dBm	±2dB
	MCS 6	21dBm	26dBm	±2dB		MCS 6	21dBm	26dBm	±2dB
	MCS 7	19dBm	24dBm	±2dB		MCS 7	19dBm	24dBm	±2dB
	MCS 8	17dBm	22dBm	±2dB		MCS 8	17dBm	22dBm	±2dB
	MCS 9	15dBm	20dBm	±2dB		MCS 9	15dBm	20dBm	±2dB

RX SPECIFICATIONS							
	DataRate	**Sensitivity**	**Tolerance**		**DataRate**	**Sensitivity**	**Tolerance**
802.11a	6Mbps	-94dBm	±2dB	**5GHz 11n/11ac HT20**	MCS 0	-94dBm	±2dB
	9Mbps	-94dBm	±2dB		MCS 1	-94dBm	±2dB
	12Mbps	-94dBm	±2dB		MCS 2	-92dBm	±2dB
	18Mbps	-92dBm	±2dB		MCS 3	-88dBm	±2dB
	24Mbps	-89dBm	±2dB		MCS 4	-84dBm	±2dB
	36Mbps	-86dBm	±2dB		MCS 5	-81dBm	±2dB
	48Mbps	-82dBm	±2dB		MCS 6	-78dBm	±2dB
	54Mbps	-80dBm	±2dB		MCS 7	-77dBm	±2dB
					MCS 8	-74dBm	±2dB
5GHz 11n/11ac HT40	MCS 0	-93dBm	±2dB	**5GHz 11ac HT80**	MCS 0	-89dBm	±2dB
	MCS 1	-91dBm	±2dB		MCS 1	-88dBm	±2dB
	MCS 2	-90dBm	±2dB		MCS 2	-85dBm	±2dB
	MCS 3	-85dBm	±2dB		MCS 3	-81dBm	±2dB
	MCS 4	-82dBm	±2dB		MCS 4	-79dBm	±2dB
	MCS 5	-78dBm	±2dB		MCS 5	-75dBm	±2dB
	MCS 6	-77dBm	±2dB		MCS 6	-74dBm	±2dB
	MCS 7	-75dBm	±2dB		MCS 7	-72dBm	±2dB
	MCS 8	-73dBm	±2dB		MCS 8	-70dBm	±2dB
	MCS 9	-71dBm	±2dB		MCS 9	-68dBm	±2dB

Specifications

AcWave radio: WLE900VX

TX SPECIFICATIONS				
	Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance
802.11 b/g	6-24Mbps	19dBm	23dBm	±2dB
	36Mbps	17dBm	22dBm	±2dB
	48Mbps	17dBm	22dBm	±2dB
	54Mbps	15dBm	20dBm	±2dB
2.4 GHz 11n HT20	MCS 0	19dBm	24dBm	±2dB
	MCS 1	19dBm	24dBm	±2dB
	MCS 2	19dBm	24dBm	±2dB
	MCS 3	18dBm	23dBm	±2dB
	MCS 4	18dBm	23dBm	±2dB
	MCS 5	18dBm	23dBm	±2dB
	MCS 6	15dBm	20dBm	±2dB
	MCS 7	13dBm	18dBm	±2dB
2.4 GHz 11n HT40	MCS 0	18dBm	23dBm	±2dB
	MCS 1	18dBm	23dBm	±2dB
	MCS 2	18dBm	23dBm	±2dB
	MCS 3	17dBm	22dBm	±2dB
	MCS 4	17dBm	22dBm	±2dB
	MCS 5	17dBm	22dBm	±2dB
	MCS 6	15dBm	20dBm	±2dB
	MCS 7	13dBm	18dBm	±2dB
802.11 a	6-24Mbps	18dBm	23dBm	±2dB
	36Mbps	17dBm	22dBm	±2dB
	48Mbps	16dBm	21dBm	±2dB
	54Mbps	15dBm	20dBm	±2dB

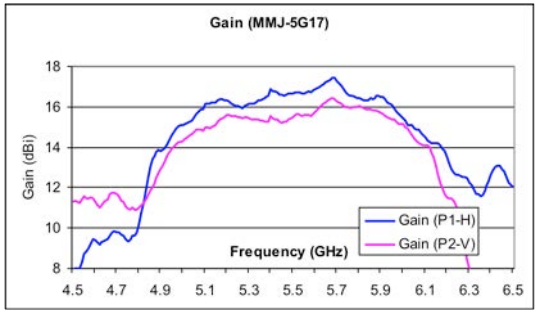
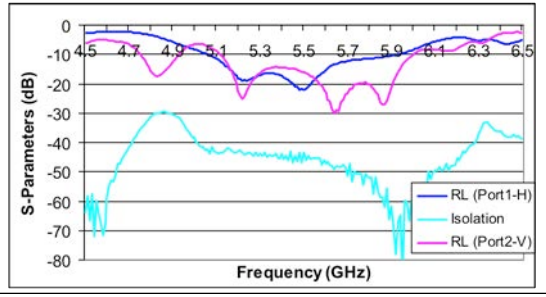
RX SPECIFICATIONS			
	Data Rate	Sensitivity	Tolerance
802.11 b/g	6Mbps	-94dBm	±2dB
	36Mbps	-86dBm	±2dB
	48Mbps	-82dBm	±2dB
	54Mbps	-80dBm	±2dB
2.4 GHz 11n HT20	MCS 0	-94dBm	±2dB
	MCS1	-94dBm	±2dB
	MCS2	-92dBm	±2dB
	MCS 3	-88dBm	±2dB
	MCS 4	-84dBm	±2dB
	MCS 5	-81dBm	±2dB
	MCS 6	-78dBm	±2dB
	MCS 7	-77dBm	±2dB
2.4 GHz 11n HT40	MCS 0	-93dBm	±2dB
	MCS1	-91dBm	±2dB
	MCS2	-90dBm	±2dB
	MCS 3	-85dBm	±2dB
	MCS 4	-82dBm	±2dB
	MCS 5	-78dBm	±2dB
	MCS 6	-77dBm	±2dB
	MCS 7	-75dBm	±2dB
802.11 a	6Mbps	-94dBm	±2dB
	36Mbps	-86dBm	±2dB
	48Mbps	-82dBm	±2dB
	54Mbps	-80dBm	±2dB

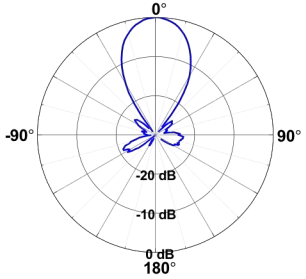
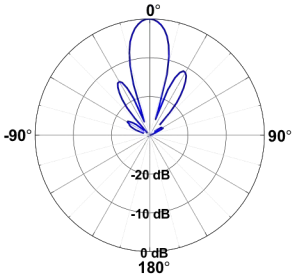
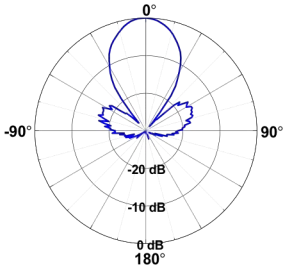
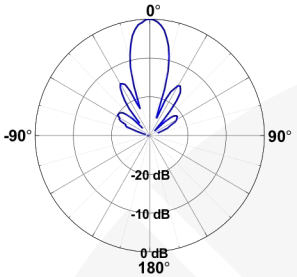
TX SPECIFICATIONS				
	Data Rate	TX Power (per chain)	TX Power (3 chains)	Tolerance
5 GHz 11n HT20	MCS0	18dBm	23dBm	±2dB
	MCS1	18dBm	23dBm	±2dB
	MCS2	18dBm	23dBm	±2dB
	MCS3	17dBm	22dBm	±2dB
	MCS4	17dBm	22dBm	±2dB
	MCS5	14dBm	19dBm	±2dB
	MCS6	13dBm	18dBm	±2dB
	MCS7	13dBm	18dBm	±2dB
	MCS8	12dBm	17dBm	±2dB
	MCS9	12dBm	17dBm	±2dB
5 GHz 11n HT40	MCS0	18dBm	23dBm	±2dB
	MCS1	18dBm	23dBm	±2dB
	MCS2	18dBm	23dBm	±2dB
	MCS3	16dBm	21dBm	±2dB
	MCS4	16dBm	21dBm	±2dB
	MCS5	13dBm	18dBm	±2dB
	MCS6	12dBm	17dBm	±2dB
	MCS7	12dBm	17dBm	±2dB
	MCS8	11dBm	16dBm	±2dB
	MCS9	11dBm	16dBm	±2dB
5 GHz 11n HT80	MCS0	18dBm	23dBm	±2dB
	MCS1	18dBm	23dBm	±2dB
	MCS2	18dBm	23dBm	±2dB
	MCS3	15dBm	20dBm	±2dB
	MCS4	15dBm	20dBm	±2dB
	MCS5	12dBm	17dBm	±2dB
	MCS6	11dBm	16dBm	±2dB
	MCS7	11dBm	16dBm	±2dB
	MCS8	10dBm	15dBm	±2dB
	MCS9	10dBm	15dBm	±2dB

RX SPECIFICATIONS			
	Data Rate	Sensitivity	Tolerance
5 GHz 11n HT20	MCS0	-93dBm	±2dB
	MCS1	-91dBm	±2dB
	MCS2	-90dBm	±2dB
	MCS3	-85dBm	±2dB
	MCS4	-82dBm	±2dB
	MCS5	-78dBm	±2dB
	MCS6	-77dBm	±2dB
	MCS7	-75dBm	±2dB
	MCS8	-73dBm	±2dB
	MCS9	-71dBm	±2dB
5 GHz 11n HT40	MCS0	-93dBm	±2dB
	MCS1	-91dBm	±2dB
	MCS2	-90dBm	±2dB
	MCS3	-85dBm	±2dB
	MCS4	-82dBm	±2dB
	MCS5	-78dBm	±2dB
	MCS6	-77dBm	±2dB
	MCS7	-75dBm	±2dB
	MCS8	-73dBm	±2dB
	MCS9	-71dBm	±2dB
5 GHz 11n HT80	MCS0	-89dBm	±2dB
	MCS1	-88dBm	±2dB
	MCS2	-85dBm	±2dB
	MCS3	-81dBm	±2dB
	MCS4	-79dBm	±2dB
	MCS5	-75dBm	±2dB
	MCS6	-74dBm	±2dB
	MCS7	-72dBm	±2dB
	MCS8	-70dBm	±2dB
	MCS9	-68dBm	±2dB

Specifications

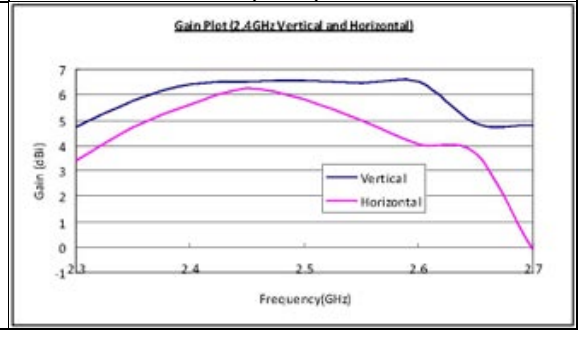
17dBi Directional Antenna

Gain	17dBi
Radiation	Directional
Frequency Range	5.1-5.9 GHz
Polarization	Dual – Polarization
Azimuth -3dB Beamwidth	Horizontal(Port 1): 30 degrees Vertical(Port 2): 33degrees
Elevation -3dB Beamwidth	Horizontal(Port 1): 17 degrees Vertical(Port 2): 17degrees
Isolation	-40dB (Max)
Front-to-Back Ratio	-30dB (Max)
VSWR	Horizontal (Port 1) : < 1: 1.87 Vertical (Port 2): < 1: 1.55
Cross Polarisation Isolation	-28dB (Max)
SideLobe	<-12dB
Gain Plot	
Return Loss & Isolation Plot	

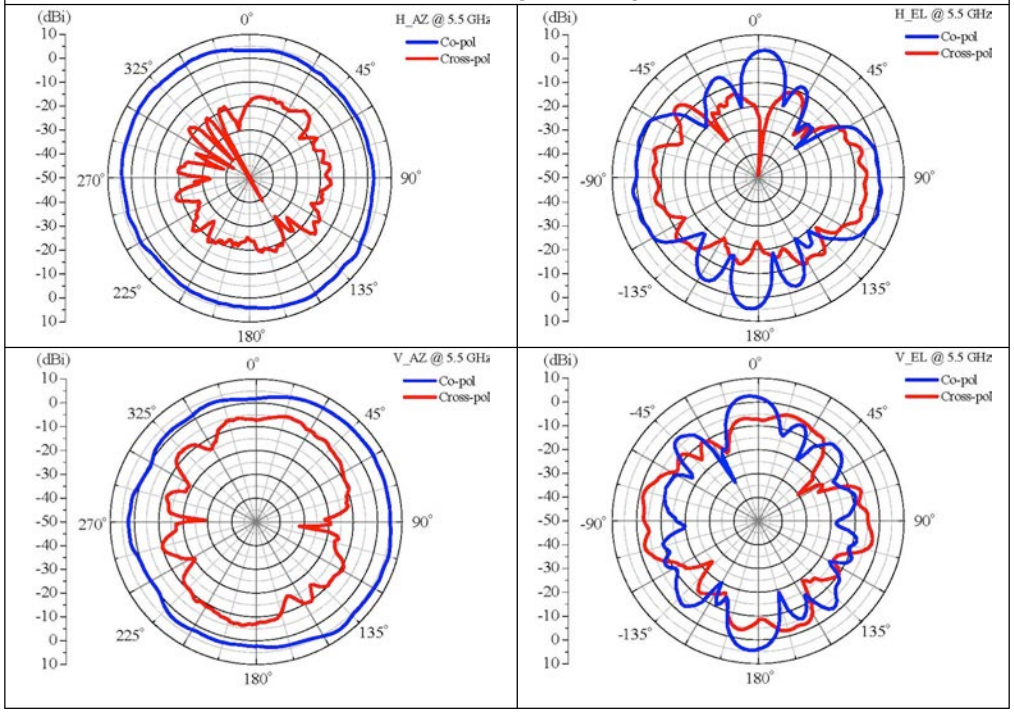
Polar Plots (At 5.6GHz)	
H-Pol Azimuth (Port 1 - H)	**H-Pol Elevation (Port 2 – V)**
	
V-Pol Azimuth (Port 2 – V)	**V- Pol Elevation (Port 1 – H)**
	

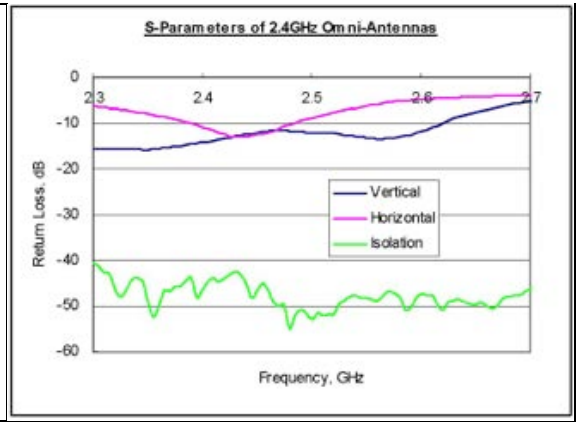
Specifications

6.5dBi Omni Antenna

Peak Gain	7dBi
Radiation	Omni
Frequency Range	5.1GHz to 5.825GHz
Polarization	Dual – Polarization
Azimuth (Horizontal) -3dB Beamwidth	360 Degrees
Elevation (Vertical) -3dB Beamwidth	Horizontal(Port 1): 26 Degrees @ 2.45GHz Vertical(Port 2): 22 Degrees @ 2.45GHz
VSWR	Horizontal(Port 1):<1.88:1 Vertical(Port 2): <1.73:1
Cross Polarization Isolation	Horizontal(Port 1): < 12dB Vertical(Port 2): < 11dB
Gain Plot	

Polar Plots (At 5.5GHz)



Return Loss	

S-Parameters of 2.4GHz Omni-Antennas
0
-10
-20
-30
-40
-50
-60
2.3
2.4
2.5
2.6
2.7
Return Loss, dB
Vertical
Horizontal
Isolation
Frequency, GHz

About

About Compex

From its inception in 1987, Compex has been specializing in product design and manufacturing and delivering superior OEM/ODM/JDM services in wireless communications. Dedicated to innovative design for RF wireless modules, host boards, and antenna, Compex also provides software design, product testing and certification, as well as fully customized design and manufacturing. Our wireless communications solution and services encompass both indoor and outdoor mesh network, hotspot, and subscriber units.

Our mission is to develop products with unparalleled features and consistent performance at highly competitive cost. With our factory strategically located in China, we have easy access to engineering resources as well as a wider selection of components – therefore reducing production cost and time, accelerating speed to market, and enhancing customer competitiveness. All these advantages enable Compex to address customers' most pressing issues with meticulous care and speed – without compromising your budget.

As an industry leading manufacturer, Compex further leverages its excellent R&D capabilities and partners with global customers to develop tailored end-to-end wireless solutions, from product concept to mass production – ensuring seamless experience for enterprises, system operators, and content service providers.

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