

JAHH-65B-R3B



8-port sector antenna, 2x 698–787, 2x 824–894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have diplexers. Internal SBT's on first LB(Port 1) and first HB(Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Effective Projective Area (EPA), frontal	0.28 m ² 3.014 ft ²
Effective Projective Area (EPA), lateral	0.24 m ² 2.583 ft ²
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Aluminum Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information, General

RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	2 female 2 male

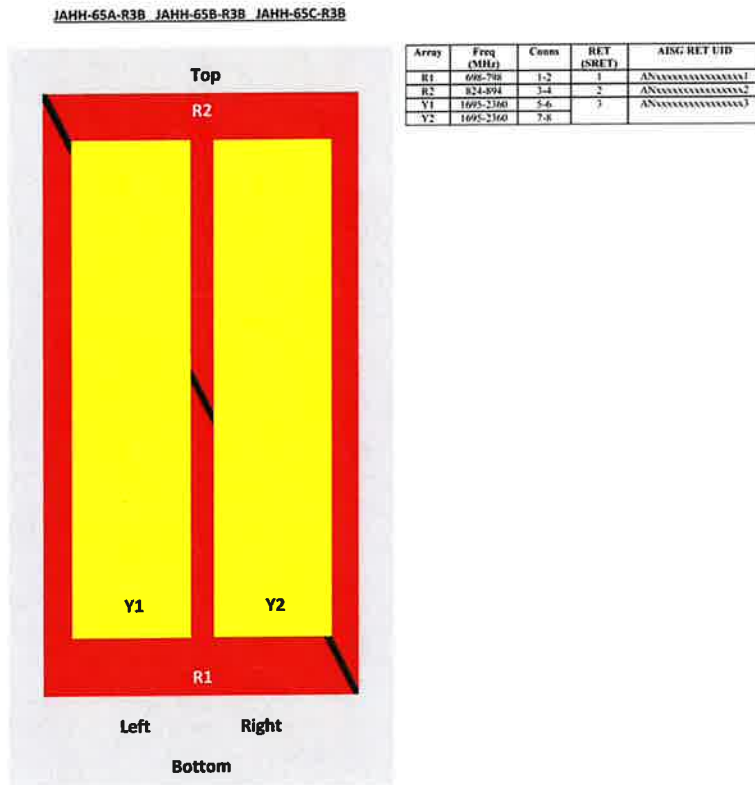
Dimensions

Width	350 mm 13.78 in
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JAHH-65B-R3B

Length 1828 mm | 71.969 in
Depth 208 mm | 8.189 in

Array Layout



View from the front of the antenna
 (Sizes of colored boxes are not true depictions of array sizes)

Electrical Specifications

Impedance 50 ohm
Operating Frequency Band 1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz
Polarization ±45°

Remote Electrical Tilt (RET) Information, Electrical

Protocol 3GPP/AISG 2.0 (Single RET)
Power Consumption, idle state, maximum 2 W

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Power Consumption, normal conditions, maximum	13 W
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 Port 5
Internal RET	High band (1) Low band (2)

Electrical Specifications

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.5	15.8	18	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR Return loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50° C, maximum, watts	200	200	300	300	300	250

Electrical Specifications, BASTA

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
Gain by Beam Tilt, average, dBi	2° 14.3 8° 14.3 14° 14.3	2° 15.0 8° 14.9 14° 15.4	0° 17.2 5° 17.6 10° 17.6	0° 17.6 5° 18.2 10° 18.2	0° 17.7 5° 18.3 10° 18.3	0° 17.9 5° 18.7 10° 18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24

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CPR at Sector, dB	11	12	11	11	11	8
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Mechanical Specifications

Wind Loading at Velocity, frontal	301.0 N @ 150 km/h 67.7 lbf @ 150 km/h
Wind Loading at Velocity, lateral	254.0 N @ 150 km/h 57.1 lbf @ 150 km/h
Wind Loading at Velocity, maximum	143.4 lbf @ 150 km/h 638.0 N @ 150 km/h
Wind Speed, maximum	241 km/h 149.75 mph

Packaging and Weights

Width, packed	456 mm 17.953 in
Depth, packed	357 mm 14.055 in
Length, packed	1975 mm 77.756 in
Net Weight, without mounting kit	29.2 kg 64.375 lb
Weight, gross	42.5 kg 93.696 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted



Included Products

BSAMNT-₃ — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance

C-band 64T64R

Gen 2

SAMSUNG

Gen 2 : Higher conducted power ratio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features



* Preliminary Design: External appearance and mechanical design can be subject to change

Gen 2. 64T64R C-band MMU Dimensions	
Size (WxHxD)	400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)
Weight	26kg (57.3 lb)

Item	Gen 2. 64T64R (MT6413-77A)
Air Technology	NR n77/FDD
Frequency	3700 – 3980 MHz
IBW	200 MHz
OBW	200 MHz
Carrier Bandwidth	200MHz ready/400/60/80/100 MHz
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dB)
Conductive Power Spectrum Analyzer	320W
RX Sensitivity	TX/RX support
Modulation	Typical -97.8dBm @1Rx, 18.36MHz with 30kHz,51RBG
Function Split	DL 256QAM support, DL 1024QAM with 1--2dB power back-off
Input Power	DL/UL option 7-2x
Power Consumption	-48 VDC (-38 VDC to -57 VDC)
Size (WHD)	1.287W (100% load, room temp.)
Volume	400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)
Weight	41.1L
Operating Temperature	26kg (57.3 lb)
Cooling	-40°C - 55°C (w/o solar load)
Unwanted Emission	Natural convection
Optic Interface	3GPP 38.104
Mounting Options	FCC 47 CFR 27.53 : < -13dBm/MHz
NB-IoT	< -40 dBm/MHz @ above 4 GHz
External Alarm	< -50 dBm /MHz @ 4.040 ~ 4.050 MHz
Fronthaul Interface	< -60 dBm /MHz @ above 4.050 MHz
	15km, 4 ports (25Gbps x 4), 5FP2B, single mode, Bi-di (Option: Duplex)
	Pole, wall
	Not support
	4RX
	eCPRI



MX06FHG665-HG

NWAV™ X-Pol Hex-Port Antenna

X-Pol Hex-Port 6 ft 65° Form in Tighter High Gain (FHG) with Smart Bias Ts, 698-2180 MHz:

2 ports 698-894 MHz and 4 ports 1695-2180 MHz

- Industry-leading high gain for MB and LB for extended cell coverage
- Excellent passive intermodulation (PIM) performance reduces harmful interference.
- Fully integrated (iRETs) with independent RET control for low and high bands for ease of network optimization
- Suitable for LTE/CDMA/PCS/UMTS/GSM air interface technologies
- Integrated Smart Bias-Ts reduce leasing costs
- Optimized width for reduced wind loading



Electrical specification (minimum/maximum)	Ports 1, 2		Ports 3, 4, 5, 6		
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180
Polarization	± 45°		± 45°		
Max gain over all tilts, dBi	15.5	16.0	18.9	19.0	19.6
Average gain, dBi	15.3 ± 0.2	15.8 ± 0.2	18.8 ± 0.1	18.8 ± 0.2	19.3 ± 0.3
Horizontal beamwidth (HBW), degrees	67.0	64.0	63.0	64.0	64.0
Front-to-back ratio, co-polar power @180°± 30°, dB	>25.0	>25.0	>28.0	>26.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>20.0	>18.0	>25	>20	>18
Sector power ratio, percent ¹	<4.0	<3.6	<5.0	<3.8	<3.6
Vertical beamwidth (VBW), degrees ¹	14.0	12.5	5.8	5.5	5.2
Electrical downtilt (EDT) range, degrees	0-12		0-9		
First upper side lobe (USLS) suppression, dB ¹	≤-16.0	≤-15.0	≤-16.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB ¹	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

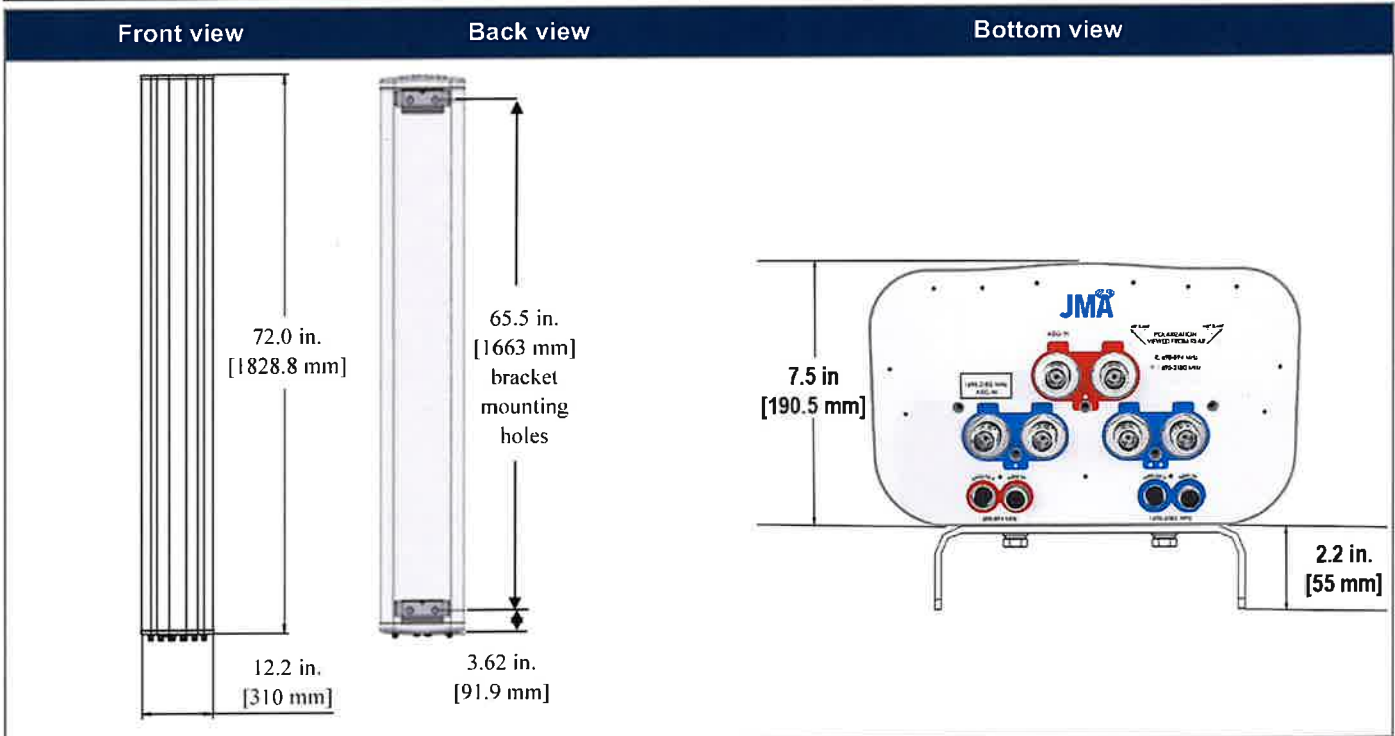
¹ Typical value over frequency and tilt



MX06FHG665-HG

NWAV™ X-Pol Hex-Port Antenna

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	72.0/ 12.2/ 7.5 (1828.8/ 310/ 191)
Shipping dimensions length/width/height, inches (mm)	76/ 20/ 14.5 (1930/ 508/ 368)
No. of RF input ports, connector type, and location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf-in (10.85 N·m or 8 lbf-ft)
Net antenna weight, lb (kg)	41 (18.6)
Shipping weight, lb (kg)	86 (39.0)
Antenna mounting and downtilt kit included with antenna	91900318
Net weight of the mounting and downtilt kit, lb (kg)	26 (11.82)
Range of mechanical up/down tilt	-2° to 12°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal and lateral wind loading @ 150 km/h, lbf (N)	66.9 (292.6), 60.0 (266.9)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	1.41
EPA frontal and lateral, ft ² , (m ²)	2.0 (0.28), 3.6 (0.33)



Ordering information	
Antenna model	Description
MX06FHG665-HG	6F X-Pol HEX FHG 65°, 0-12° / 0-9° RET, 4.3-10 & SBT
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations



MX06FHG665-HG

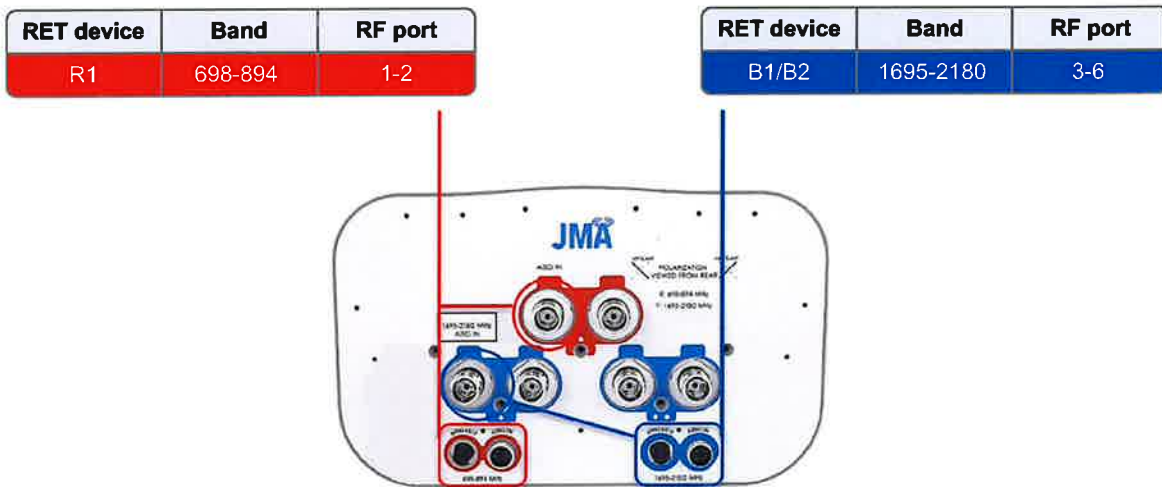
NWAV™ X-Pol Hex-Port Antenna

Remote electrical tilt (RET 1000) information

RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors
RET interface connector location	Bottom of the antenna
Total no. of internal RETs (low bands)	1
Total no. of internal RETs (high bands)	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below:

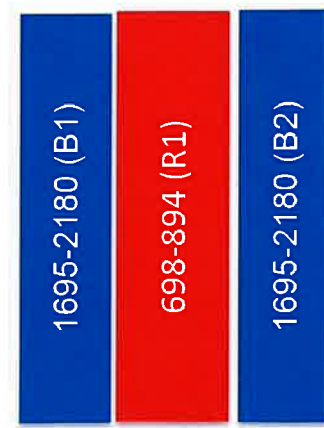


Array topology

3 sets of radiating arrays

R1: 698-894 MHz
 B1: 1695-2180 MHz
 B2: 1695-2180 MHz

Band	RF port
1695-2180	3-4
698-894	1-2
1695-2180	5-6



SAMSUNG

AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER
FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code RF4439d-25A



Homepage
samsungnetworks.com

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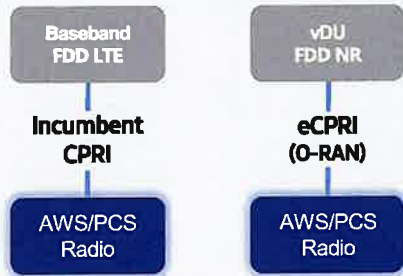


Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

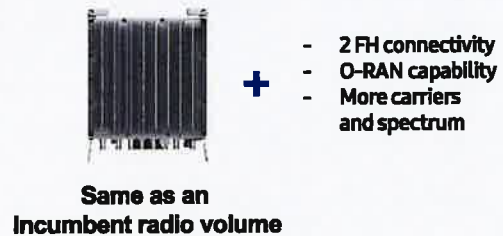
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

SAMSUNG

Specifications



Item	Specification
Air Interface	LTE, NR(HW resource ready)
Band	Band13 (700MHz) Band5 (850MHz)
Frequency	DL: 746~756MHz UL: 869~894MHz
IBW	UL: 777~787MHz 10MHz
OBW	10MHz
Carrier Bandwidth	LTE/NR 5*10MHz
# of carriers	2C*
Total # of carriers	4C + B13 (SDL) 1C 4T4R/2T4R/2T2R/1T2R 2T2R+2T2R bi-sector Total : 320W
RF Chain	4 x 40W or 2 x 60W
RF Output Power	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support
RX Sensitivity	Typ. -104.5dBm @1Rx (25RRS 5MHz)
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)
Input Power	-48VDC (-38VDC to -57VDC)
Power Consumption	1.165 Watt @ 100% RF load, room temperature
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)
Volume	37.5 L
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 FCC 47 CFR 27.53 c), f)
CPRI Cascade	3GPP 36.104 FCC 47 CFR 23.917
Optic Interface	-69 dBm/100 kHz per path @ 896 ~901MHz
RET & TMA Interface	Not supported
Bias-T	Not supported
Mounting Options	20km, 2 ports (9.8Gbps x 2), SFP+, single mode Duplex (Option: BI-d)
NB-IOT	4 ports (2 ports per band)
PIM Cancellation	AISG 3.0
# of antenna port	Pole, wall
External Alarm	2GB+2IB or 4IB
Fronthaul Interface	Support
CPRI compression	4 4 Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support) Not Support

* 5MHz supporting in B13(700MHz) depends on 3Gpp std. and UE capability.
External filters in interlifer and victim sides for Mexican boarder to support 5MHz service need to be considered
** Finger guard is not needed.

HYBRID CABLE



HUBER+SÜHNER's hybrid cable combine optical fiber and DC power, are highly flexible and easy-to-route. Two rip cords between the shielding and the jacket allows a quick stripping of the jacket. The shielding, a copper foil under the jacket and the drain wire maintain contact throughout the cable run and allow potential equalisation and a safe installation with regard to lightning strikes.

HYBRID CABLE SPECIFICATIONS

		LSFH(TM) hybrid cable, global market	UL listed hybrid cable, US market
Jacket material		thermoplastic, low smoke, halogen free (LSFH(TM))	PVC
Standard		IEC 60502-1:2004-04	UL 1277, TC-OF-ER
Temperature range	in service installation	-40 to +75 °C -10 to +50 °C	-40 to +75 °C -10 to +50 °C
Operating voltage		48 Vdc	48 Vdc
Rated voltage		10 × cable Ø 8 × cable Ø	12 × cable Ø 10 × cable Ø
Conductors		6 mm ² , 10 mm ² 16 mm ²	AWG 10, 8, 6
Drain wire		6 mm ² , 10 mm ² class 2	AWG 6 class B
Cable shielding		copper foil 100 % coverage (contacted with drain wire)	copper foil 100 % coverage (contacted with drain wire)



Fiber optic	5 mm loose-tube cable with up to 36 single mode fibers	5 mm loose-tube cable with up to 36 single mode fibers
Halogen free	yes	no
Flame retardant	IEC 60332-1-2:2004	UL 1685 (UL 1581) vertical tray flame test (70 000 BTU/hr)
UV resistant	IEC 60068-2-5	UL1581

DO YOU HAVE A QUESTION?



CONTACT US

SG050NA | 4.5L | 50 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
 EPA Certified Stationary Emergency



Standby Power Rating
 50 kW, 63 kVA, 60 Hz

Prime Power Rating
 45 kW, 56 kVA, 60 Hz

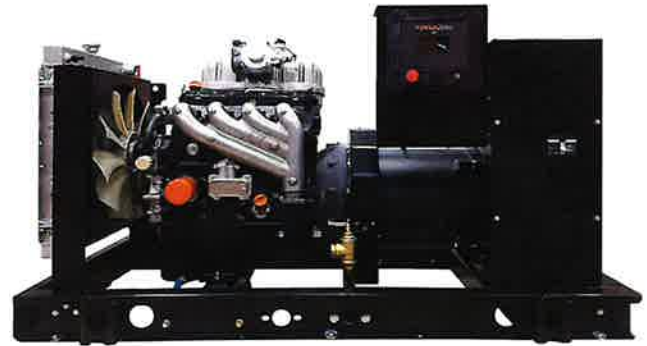



Image used for illustration purposes only




*Assembled in the USA using domestic and foreign parts

Codes and Standards


Generac products are designed to the following standards:


 UL2200, UL6200, UL1236, UL489


 CSA C22.2, ULC S601

 BS5514 and DIN 6271


 SAE J1349

 NFPA 37, 70, 99, 110

 NEC700, 701, 702, 708

 NEMA ICS10, MG1, 250, ICS6, AB1

 ANSI C62.41

 IBC 2009, CBC 2010, IBC 2012, ASCE 7-05, ASCE 7-10, ICC-ES AC-156 (2012)

Powering Ahead

Generac ensures superior quality by designing and manufacturing most of its generator components, such as alternators, enclosures, control systems and communications software. Generac also makes its own spark-ignited engines, and you'll find them on every Generac gaseous-fueled generator. We engineer and manufacture them from the block up — all at our facilities throughout Wisconsin. Applying natural gas and LP-fueled engines to generators requires advanced engineering expertise to ensure reliability, durability and necessary performance. By designing specifically for these dry, hotter-burning fuels, the engines last longer and require less maintenance. Building our own engines also means we control every step of the supply chain and delivery process, so you benefit from single-source responsibility.

Plus, Generac Industrial Power's distribution network provides all parts and service so you don't have to deal with third-party suppliers. It all leads to a positive owner experience and higher confidence level. Generac spark-ignited engines give you more options in commercial and industrial generator applications as well as extended run time from utility-supplied natural gas.

SG050NA | 4.5L | 50 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency



STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Heavy Duty Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Critical Silencer
- Oil Temperature Sender with Alarm
- Air Filter Restriction Indicator

FUEL SYSTEM

- NPT Fuel Connection on Frame
- Primary and Secondary Fuel Shutoff

COOLING SYSTEM

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

ELECTRICAL SYSTEM

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Full Load Capacity Alternator

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby and Demand Response Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)

ENCLOSURE (IF SELECTED)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM



Power Zone® Pro Controller

- NFPA 110 Level 1 Compliant
- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Multiple Programmable Inputs and Outputs
- Remote Display Capability

Power Zone® Pro Controller Continued

- Remote Communication via Modbus® RTU, Modbus TCP/IP, and Ethernet 10/100, SNMP
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Remote Wireless Software Update Capable
- Built-In Programmable Logic Eliminates the Need for External Controllers Under Most Conditions
- Programmable I/O Channel Properties
- Built-In Diagnostics

Alarms and Warnings

- High/Low Oil Pressure
- High/Low Coolant Level
- High/Low Coolant Temperature
- Sender/Sensor Failure
- High/Low Oil Temperature
- Over Total kW
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over Current
- High/Low Battery Voltage

Alarms and Warnings Continued

- Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I²T Algorithm)

4.3 Inch Color Touch Screen Display

- Resistive Color Touch Screen
- Easily Identifiable Icons
- Multi-Lingual
- On Screen Editable Parameters

Key Function Monitoring

- Three Phase Voltage, Amperage, kW, kVA, and kVAR
- Selectable Line to Line or Line to Neutral Measurements
- Frequency
- Engine Speed
- Engine Coolant Temperature
- Engine Oil Temperature
- Battery Voltage
- Hourmeter
- Warning and Alarm Indication
- Diagnostics
- Maintenance Events/Information

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Heater with Shutoff Valves
- Engine Coolant Heater
- Oil Heater
- Level 1 Fan and Belt Guards (Enclosed Units Only)
- Radiator Duct Adapter (Open Set Only)

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- 10A UL Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- 3rd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

ENGINEERED OPTIONS

CONTROL SYSTEM

- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch

GENERATOR SET

- Extended Factory Testing (3-Phase Only)
- 8 Position Load Center

ENCLOSURE

- Level 0 Sound Attenuated
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Enclosure Heaters (with Motorized Dampers Only)
- Door Alarm Switch

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 10A Engine Run Relay
- Ground Fault Annunciator
- 120 V GFCI and 240 V Outlets
- 100 dB Alarm Horn
- Damper Alarm Contacts (with Motorized Dampers Only)

WARRANTY (STANDBY GENSETS ONLY)

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

GENERATOR SET

- Special Testing
- Battery Box

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	4
Type	In-Line
Displacement - in3 (L)	275.0 (4.5)
Bore: in (mm)	4.5 (114.3)
Stroke: in (mm)	4.25 (107.95)
Compression Ratio	9.94:1
Intake Air Method	Naturally Aspirated
Number of Main Bearings	5
Connecting Rods	Forged Steel, Fractured Split, Bushingless
Cylinder Head	Cast Iron
Cylinder Liners	Cast Iron
Ignition	Coil Near Plug Solid State Inductive
Piston Type	Cast Aluminum Flat Top
Crankshaft Type	Forged Steel
Lifter Type	Hydraulic Roller
Intake Valve Material	Stainless Steel
Exhaust Valve Material	Stainless Steel
Hardened Valve Seats	High Steel Iron Alloy

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	0.25

Lubrication System

Oil Pump	Gear Driven
Oil Filter Type	Full Flow Spin-On Cartridge
Engine Oil Capacity: qt (L)	21 (20)

Cooling System

Cooling System Type	Pressurized Closed
Fan Type	Pusher
Fan Speed (rpm)	2,100
Fan Diameter - in (mm)	20 (508)

Fuel System

Fuel Type	Natural Gas, Propane
Fuel Injection	Electronic
Fuel Shutoff	Dual
Operating Fuel Pressure (NG) - in H ₂ O (kPa)	5 - 14 (1.2 - 3.5)
Operating Fuel Pressure (LP) - in H ₂ O (kPa)	7 - 14 (1.7 - 3.5)

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970S8Y
Battery Voltage	12 VDC
Ground Polarity	Negative (-)

ALTERNATOR SPECIFICATIONS

Standard Model	K0080124Y21
Poles	4
Field Type	Revolving
Insulation Class — Rotor	H
Insulation Class — Stator	H
Total Harmonic Distortion (THD)	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Synchronous Brushless
Bearings	Sealed Ball
Coupling	Direct via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

OPERATING DATA

POWER RATINGS NATURAL GAS/PROPANE VAPOR

Alternator	Voltage	Natural Gas				Propane			
		Standby/Demand Response		Prime		Standby/Demand Response		Prime	
		Power	Amps	Power	Amps	Power	Amps	Power	Amps
A0050044N21	Single-Phase 120/240 VAC @1.0pf	48 kW/48 kVA	200	45 kW/45 kVA	188	50 kW/50 kVA	208	45 kW/45 kVA	188
A0060044N21	Single-Phase 120/240 VAC @1.0pf	50 kW/50 kVA	208	45 kW/45 kVA	188	50 kW/50 kVA	208	45 kW/45 kVA	188
K0050124Y21	Three-Phase 120/208 VAC @0.8pf	48 kW/48 kVA	167	45 kW/56 kVA	156	50 kW/63 kVA	174	45 kW/56 kVA	156
K0060124Y21	Three-Phase 120/208 VAC @0.8pf	50 kW/50 kVA	174	45 kW/56 kVA	156	50 kW/63 kVA	174	45 kW/56 kVA	156
K0050124Y21	Three-Phase 120/240 VAC @0.8pf	48 kW/48 kVA	144	45 kW/56 kVA	135	50 kW/63 kVA	150	45 kW/56 kVA	135
K0060124Y21	Three-Phase 120/240 VAC @0.8pf	50 kW/50 kVA	150	45 kW/56 kVA	135	50 kW/63 kVA	150	45 kW/56 kVA	135
K0050124Y21	Three-Phase 277/480 VAC @0.8pf	50 kW/50 kVA	75	45 kW/56 kVA	68	50 kW/63 kVA	75	45 kW/56 kVA	68
K0060124Y21	Three-Phase 277/480 VAC @0.8pf	50 kW/50 kVA	75	45 kW/56 kVA	68	50 kW/63 kVA	75	45 kW/56 kVA	68
L008006N21	Three-Phase 346/600 VAC @0.8pf	50 kW/50 kVA	60	45 kW/56 kVA	54	50 kW/63 kVA	60	45 kW/56 kVA	54
L010006N21	Three-Phase 346/600 VAC @0.8pf	50 kW/50 kVA	60	45 kW/56 kVA	54	50 kW/63 kVA	60	45 kW/56 kVA	54

STARTING CAPABILITIES (SKVA)

sKVA vs. Voltage Dip			
277/480 VAC	30%	208/240 VAC	30%
K0080124Y21	98	K0080124Y21	75
K0080124Y21	124	K0100124Y21	95

SG050NA | 4.5L | 50 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency



OPERATING DATA

FUEL CONSUMPTION RATES*

Percent Load	Natural Gas – scfh (m3/hr)		Percent Load	Propane – scfh (m3/hr)	
	Standby	Prime		Standby	Prime
25%	204 (5.8)	201 (5.7)	25%	107 (3.0)	105 (3.0)
50%	343 (9.7)	298 (8.4)	50%	155 (4.4)	138 (3.9)
75%	456 (12.9)	394 (11.2)	75%	198 (5.6)	172 (4.9)
100%	621 (17.6)	495 (14.0)	100%	249 (7.1)	209 (5.9)

*Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby	Prime
Air Flow (Fan Air Flow Across Radiator) - Open Set	cfm (m3/min)	3,511 (99.4)	
Coolant Flow	gpm (Lpm)	38 (142.7)	
Coolant System Capacity	gal (L)	3 (11.4)	
Maximum Operating Ambient Temperature	°F (°C)	122 (50)	
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin No. 0199270SSD	
Maximum Radiator Backpressure	in H2O (kPa)	0.5 (0.12)	

COMBUSTION AIR REQUIREMENTS

	Standby	Prime
Flow at Rated Power cfm (m ³ /min)	99.7 (2.8)	90.3 (2.6)

ENGINE

		Standby	Prime
Rated Engine Speed: RPM	rpm	1,800	1,800
Horsepower at Rated kW**	hp	77	69
Piston Speed	ft/min (m/min)	1,275 (389)	1,275 (389)
BMEP	psi (kPa)	126 (865)	113 (779)

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

EXHAUST

		Standby	Prime
Exhaust Flow (Rated Output)	cfm (m3/min)	279 (7.9)	256 (7.2)
Maximum Exhaust Back pressure	in Hg (Kpa)	0.75 (2.54)	0.75 (2.54)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,361 (738.3)	1,361 (738.3)

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

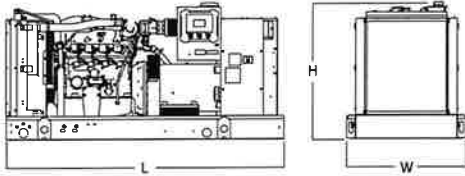
Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards.

Standby - See Bulletin 0187500SSB Prime - See Bulletin 0187510SSB

SG050NA | 4.5L | 50 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
 EPA Certified Stationary Emergency

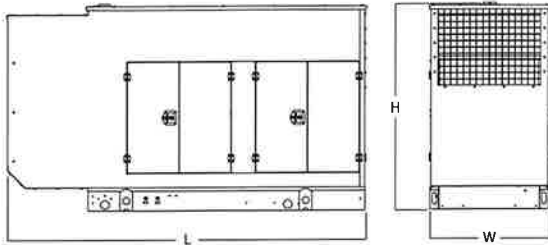


DIMENSIONS AND WEIGHTS*



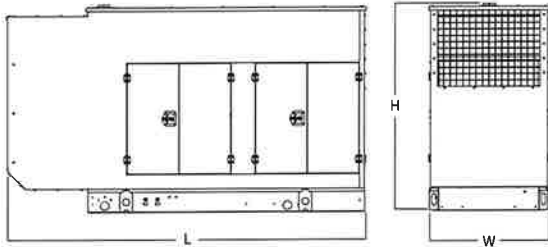
OPEN SET (Includes Exhaust Flex)

L x W x H - in (mm)	78.1 (1,984) x 37.3 (947) x 44.4 (1,128)
Weight lbs (kg)	1,675 - 1,748 (760 - 793)



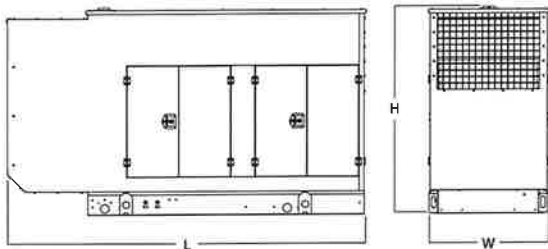
WEATHER PROTECTED ENCLOSURE

L x W x H - in (mm)	94.8 (2,408) x 38.0 (965) x 57.5 (1,461)
Weight lbs (kg)	Steel: 2,160 - 2,233 (980 - 1,013) Aluminum: 1,894 - 1,965 (859 - 891)



LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H - in (mm)	94.8 (2,408) x 38.0 (965) x 57.5 (1,461)
Weight lbs (kg)	Steel: 2,258 - 2,329 (1,024 - 1,056) Aluminum: 1,987 - 2,061 (901 - 935)



LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H - in (mm)	94.8 (2,408) x 38.0 (965) x 57.5 (1,461)
Weight lbs (kg)	Steel: 2,341 - 2,414 (1,062 - 1,095) Aluminum: 2,071 - 2,144 (939 - 972)

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings