

Catalog



Programmable Attenuators
RF Switch Systems
Programmable Phase Shifters
Power Switches
Shielding Boxes
Fixed Attenuators
Terminations
Variable Attenuators
Power Dividers
Circulators
Duplexers
RF Cables
Antennas
RF Adaptors
Patch Panels



**RF Test Systems
& Components**

www.haojintech.com

Welcome to HJ Technologies



Founded in 2006 in Shanghai, China, HJ Technologies Co., Ltd. is a well established company in designing and manufacturing application specific test systems. These systems include attenuators, RF switches, and specialized test system for use in the wireless telecommunications, and aerospace. Innovative new designs and a focus on customer requirements have allowed HJ technologies to maintain stead growth.

Each one of our dedicated employees is committed to ensure quality assembly, on time delivery and reliable RF solutions. HJ Technologies strives for complete customer satisfaction by responding to the needs of each customer individually and providing the systems and RF components that best suit customer's application. HJ Technologies is an ISO 9001:2008 and 14001:2004 registered company.



HJ Technologies is committed to anticipating and exceeding customer's requirements and expectations through cost-competitive, quality products and services that are delivered on time.



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Radio Rack 4 - 220 Tabletop



Description:

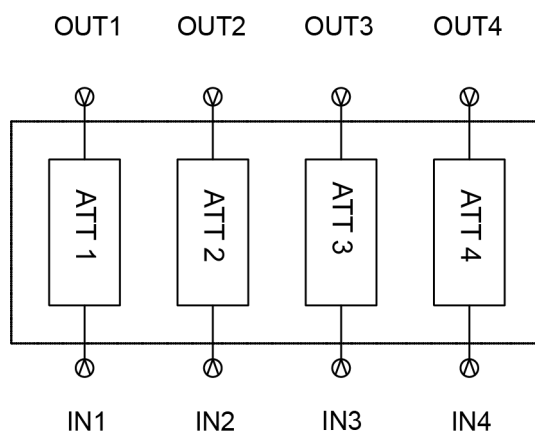
Radio Rack 4 - 220 Tabletop is suitable for lab testing by controlling 4 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

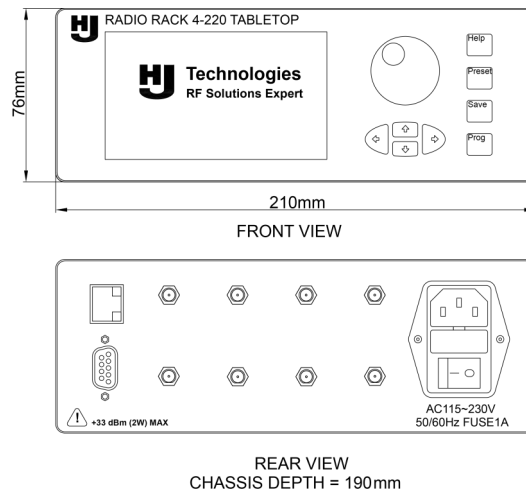


Programmable Attenuators

Specification:

Specification	Description:
Height	210 x 76 x 190 mm
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.35
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	0.7 GHz ≤ 5.3 dB, 3 GHz ≤ 6.8 dB, 6 GHz ≤ 9.8 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	SMA (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 8 - 220



Description:

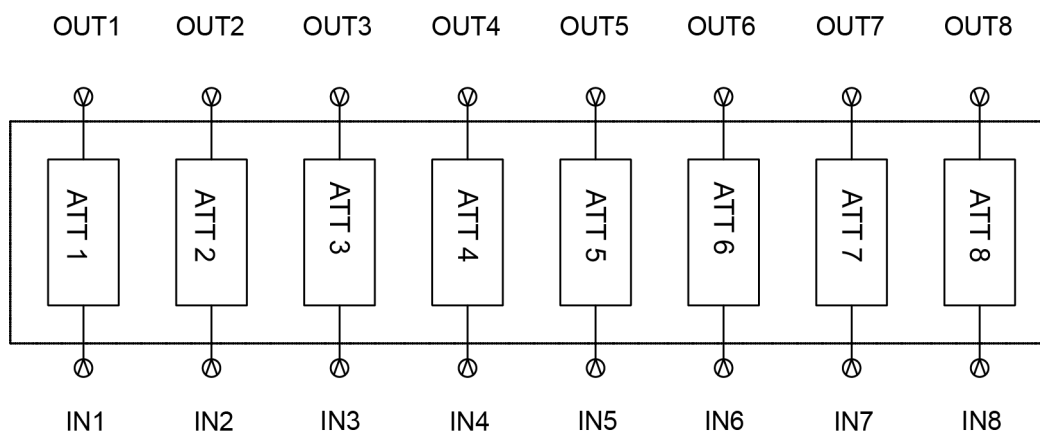
Radio Rack 8 - 220 is suitable for lab testing by controlling 8 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

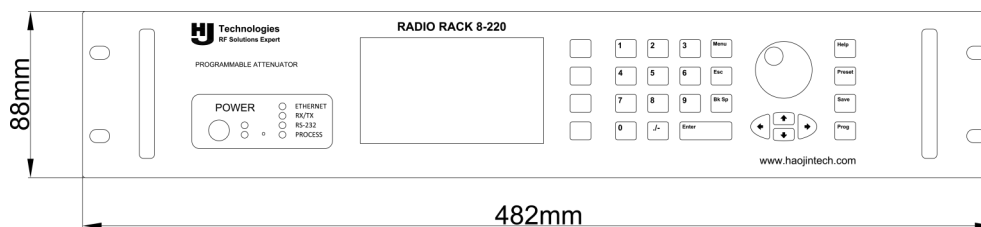


Programmable Attenuators

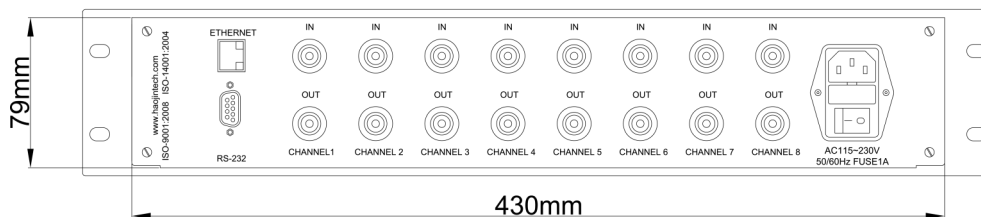
Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.35
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	0.7 GHz ≤ 5.3 dB, 3 GHz ≤ 6.8 dB, 6 GHz ≤ 9.8 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



FRONT VIEW



REAR VIEW
CHASSIS DEPTH = 350mm

Radio Rack 8 - 230



Description:

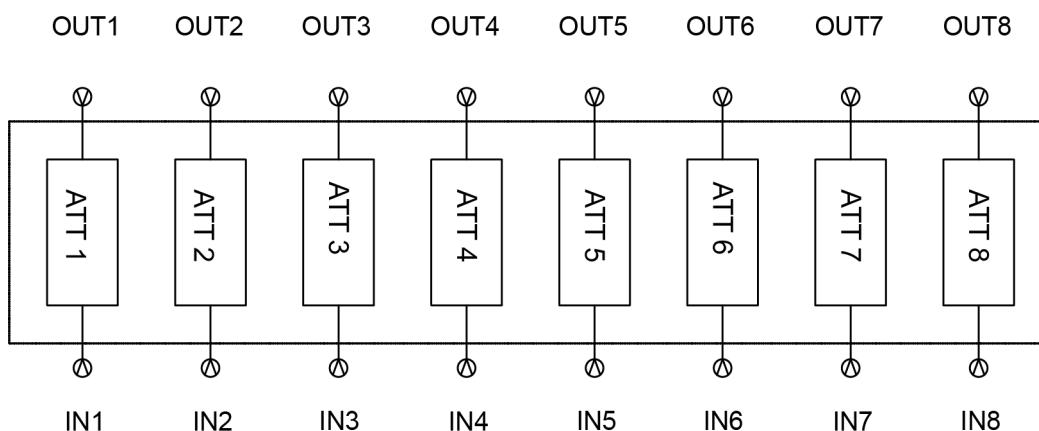
Radio Rack 8 - 230 is suitable for lab testing by controlling 8 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

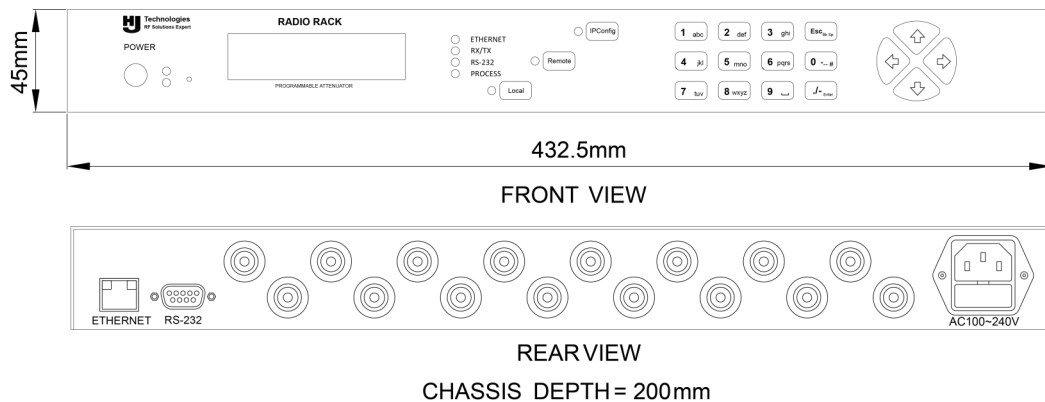


Programmable Attenuators

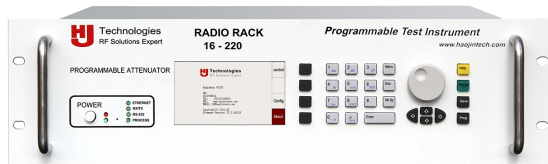
Specification:

Specification	Description:
Height	1U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.35
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	0.7 GHz ≤ 5.3 dB, 3 GHz ≤ 6.8 dB, 6 GHz ≤ 9.8 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 16 - 220



Features:

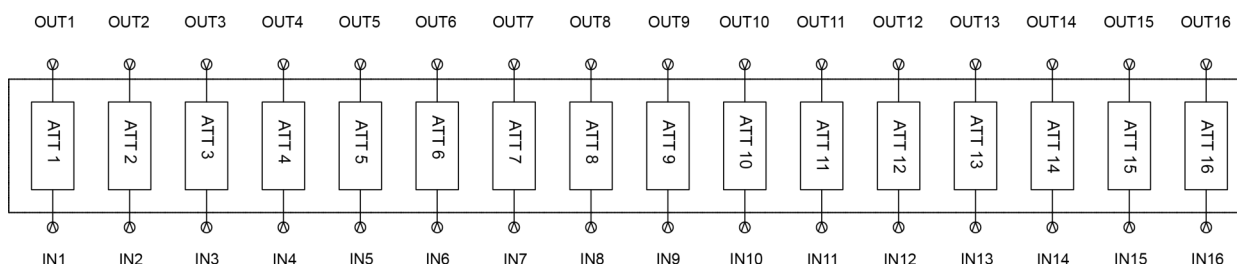
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 16 - 220 is suitable for lab testing by controlling 16 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

System Diagram

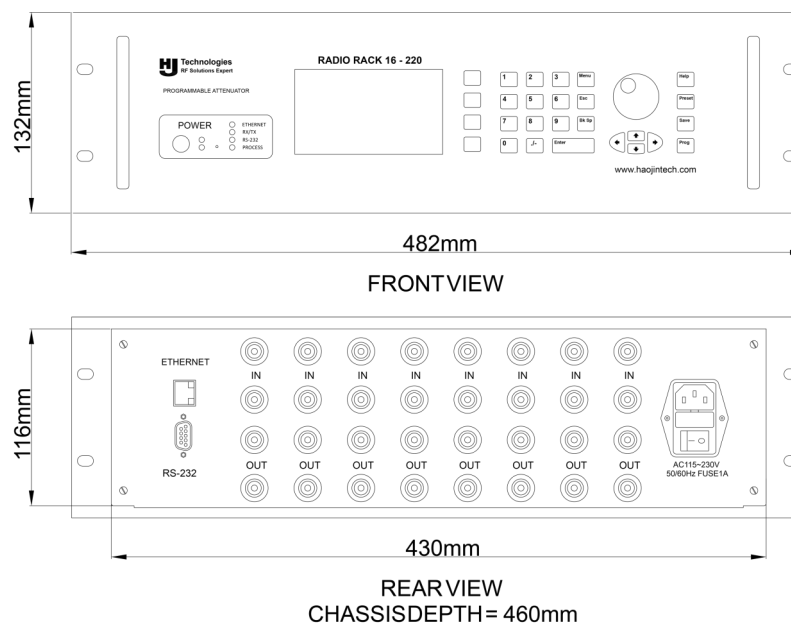


Programmable Attenuators

Specification:

Specification	Description:
Height	3U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.35
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	0.7 GHz ≤ 5.3 dB, 3 GHz ≤ 6.8 dB, 6 GHz ≤ 9.8 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 32 - 220



Description:

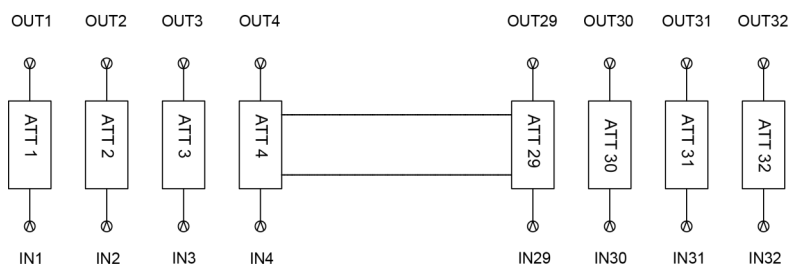
Radio Rack 32 - 220 is suitable for lab testing by controlling 32 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

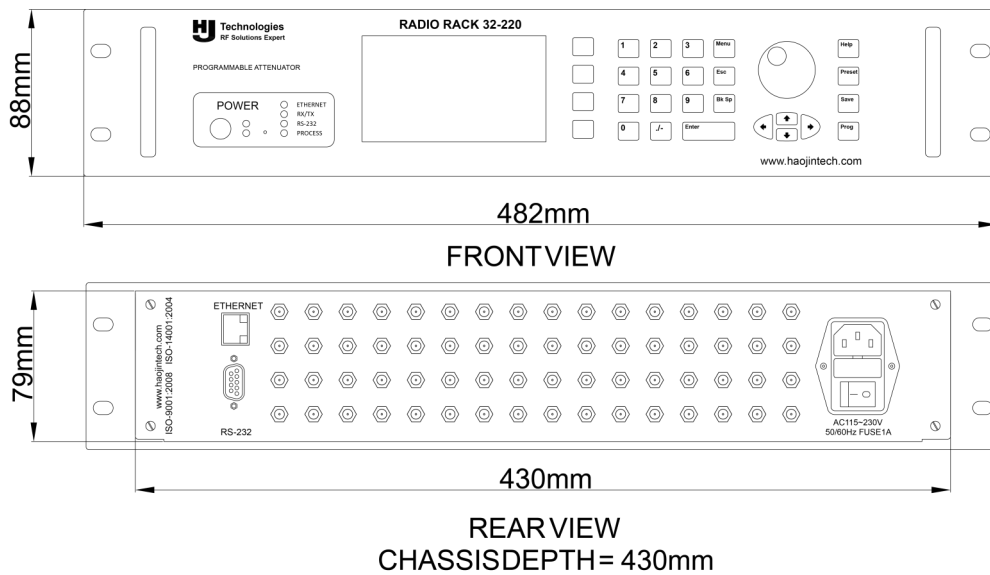


Programmable Attenuators

Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.35
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	0.7 GHz ≤ 5.3 dB, 3 GHz ≤ 6.8 dB, 6 GHz ≤ 9.8 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	SMA (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 2 x 2 - 4



Description:

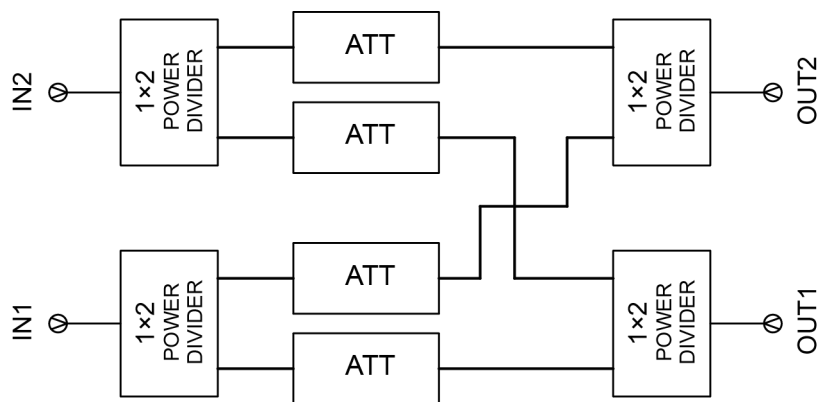
Radio Rack 2 x 2 - 4 is suitable for lab testing by controlling 4 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

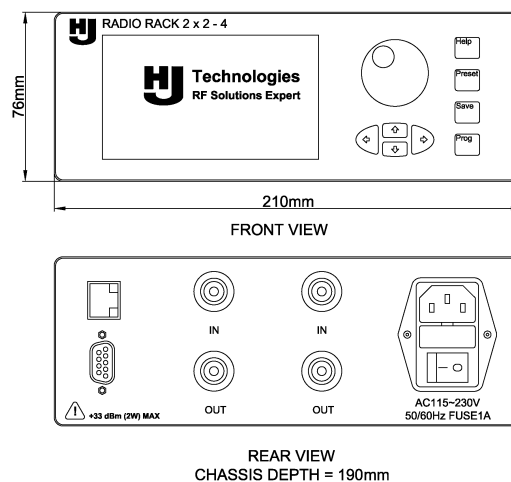


Programmable Attenuators

Specification:

Specification	Description:
Height	210 x 76 x 190mm
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 14.7 dB@4GHz; ≤ 17 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 4 x 4 - 16



Description:

Radio Rack 4 x 4 - 16 is a full 4 inputs and 4 outputs bidirectional attenuation matrix. Signals from any input to any output ports can be independently controlled on the total 16 attenuators with 0 - 110 dB range. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners.

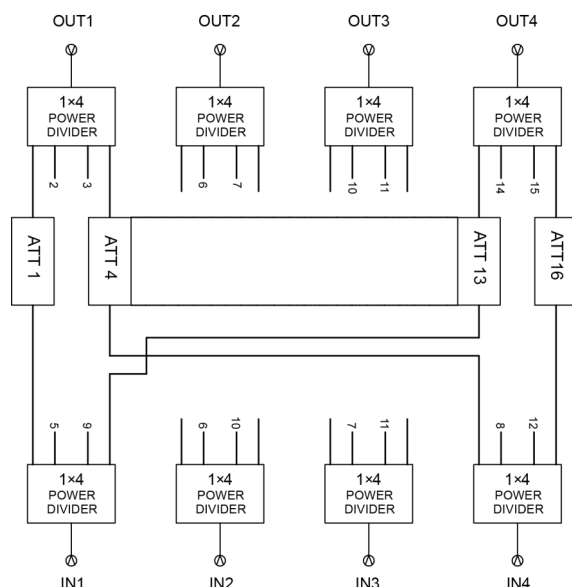
The instrument supports all the major wireless technologies the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

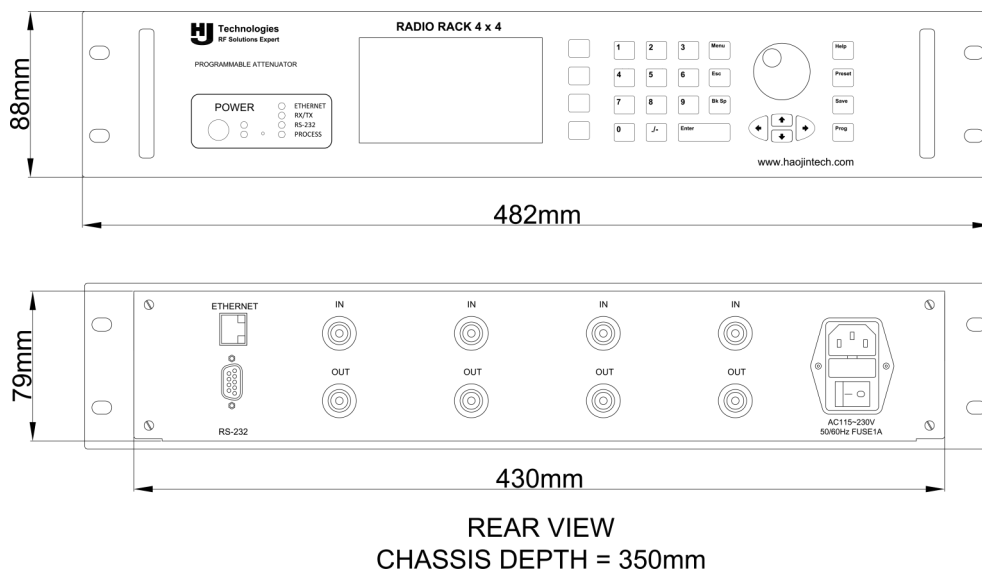


Programmable Attenuators

Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 21.5 dB@4GHz; ≤ 24 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 4 x 8 - 32



Description:

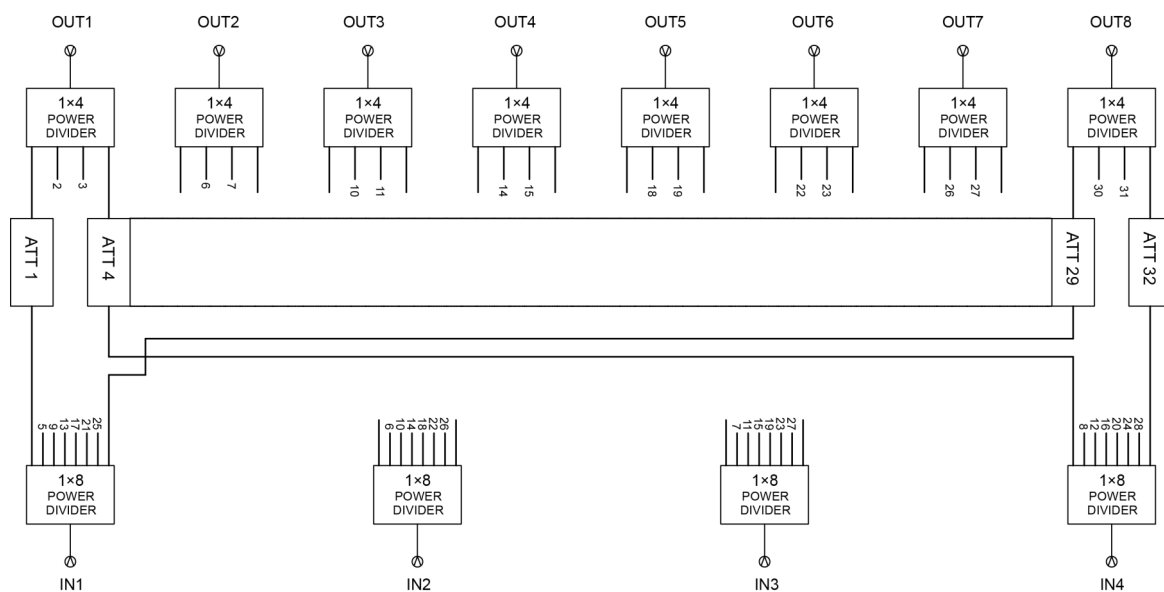
Radio Rack 4 x 8 - 32 is a full 4 inputs and 8 outputs bidirectional attenuation matrix. Signals from any input to any output ports can be independently controlled on the total 32 attenuators with 0 - 110 dB range. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

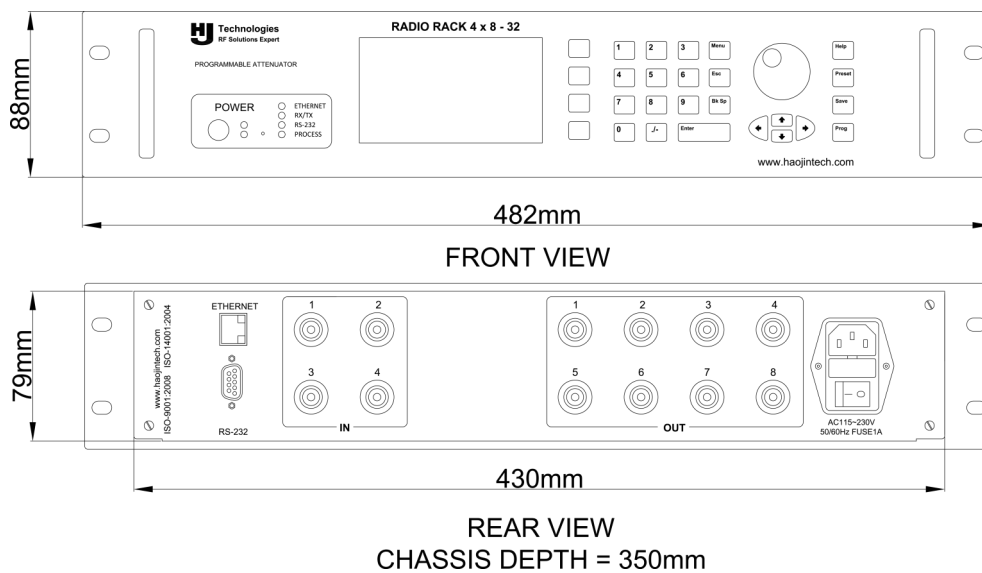


Programmable Attenuators

Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 24.1 dB@4GHz; ≤ 28.0 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 4 x 12 - 48



Description:

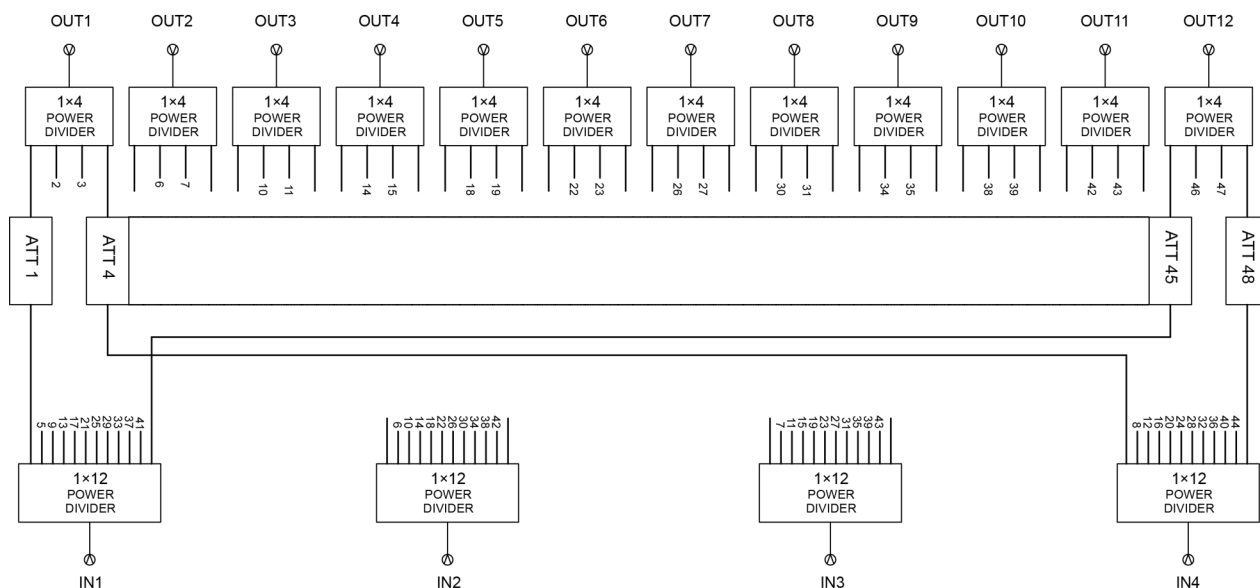
Radio Rack 4 x 12 - 48 is a full 4 inputs and 12 outputs bidirectional attenuation matrix. Signals from any input to any output ports can be independently controlled on the total 48 attenuators with 0 - 110 dB range. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

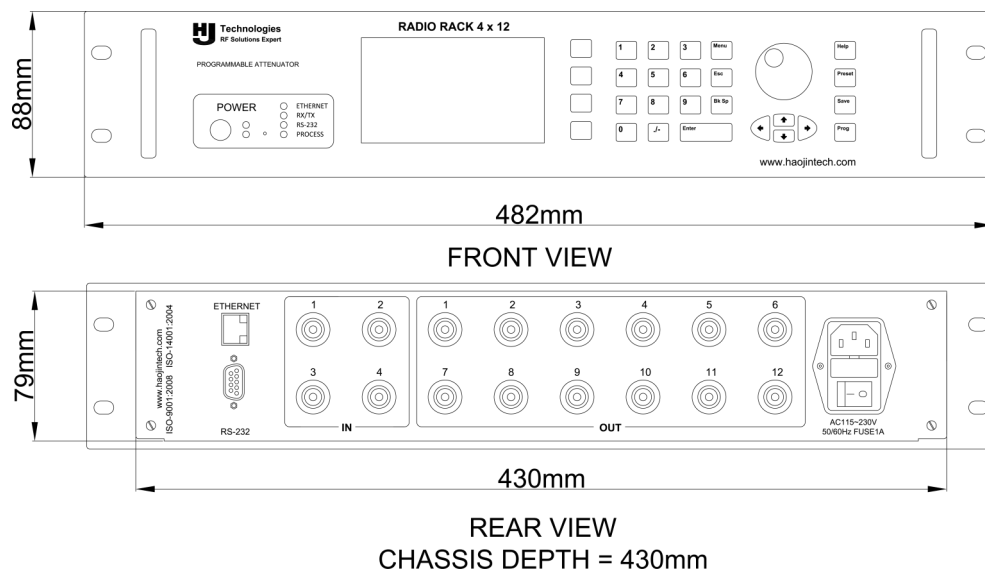


Programmable Attenuators

Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 24.7 dB@4GHz; ≤ 32 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 4 x 16 - 64



Description:

Radio Rack 4 x 16 - 64 is a full 4 inputs and 16 outputs bidirectional attenuation matrix. Signals from any input to any output ports can be independently controlled on the total 64 attenuators with 0 - 110 dB range. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners.

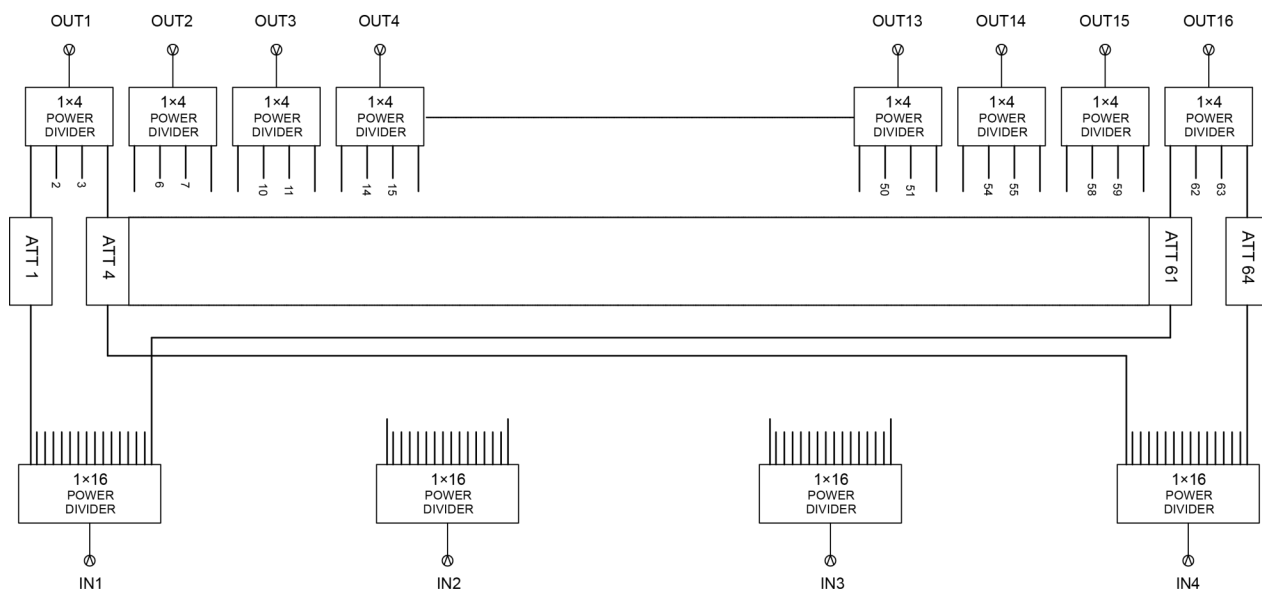
The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

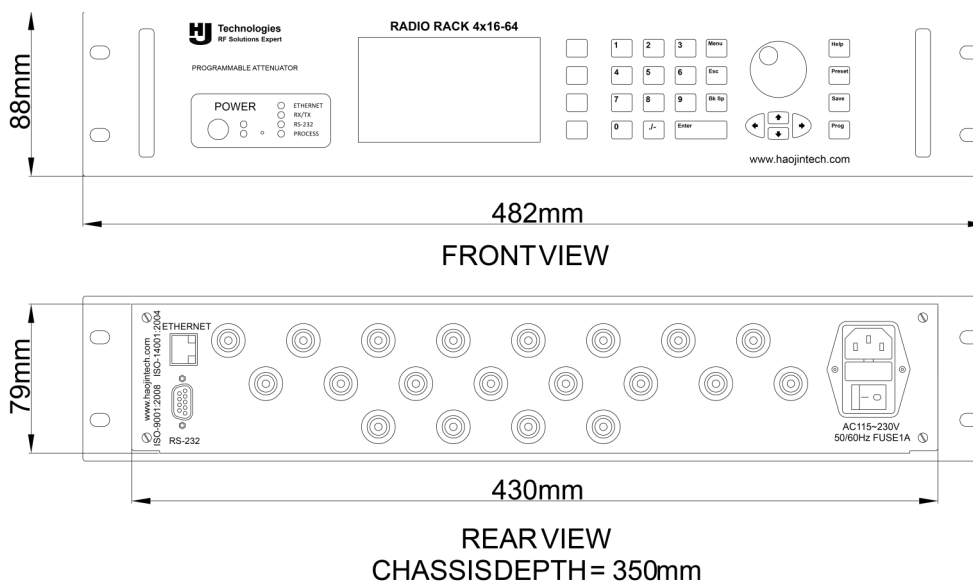


Programmable Attenuators

Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 26.2 dB@4GHz; ≤ 34.4 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 6 x 6 - 36



Features:

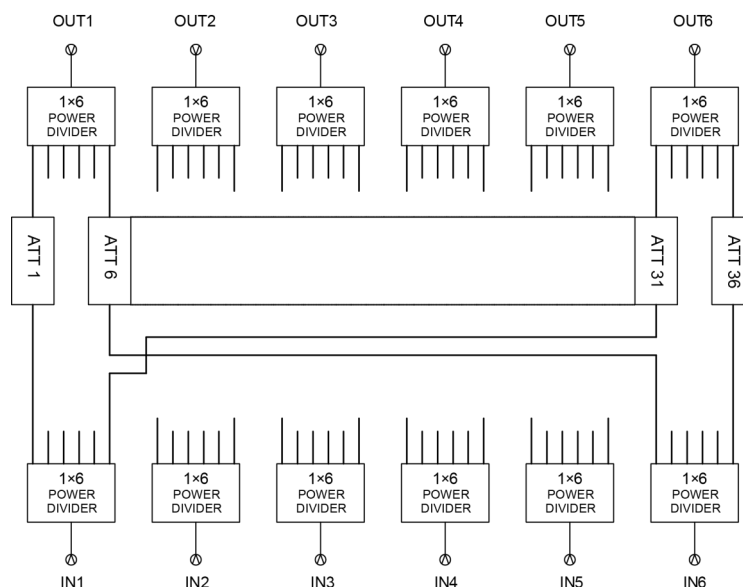
Description:

Radio Rack 6 x 6 - 36 is suitable for lab testing by controlling 36 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

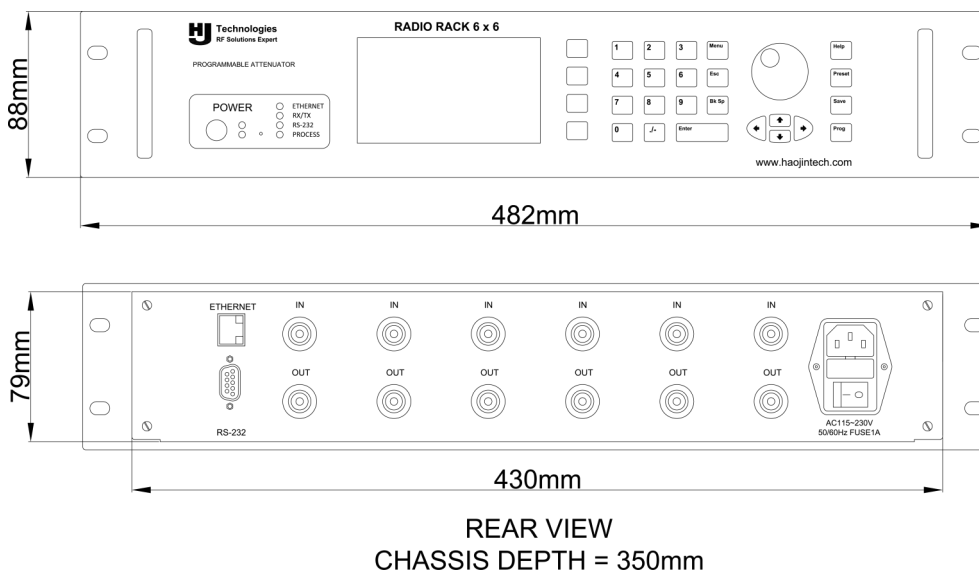


Programmable Attenuators

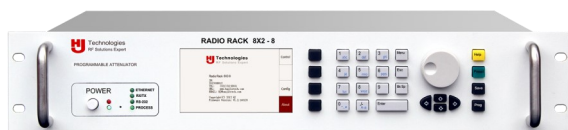
Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 24 dB@4GHz; ≤ 30 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 8 x 2 - 8



Features:

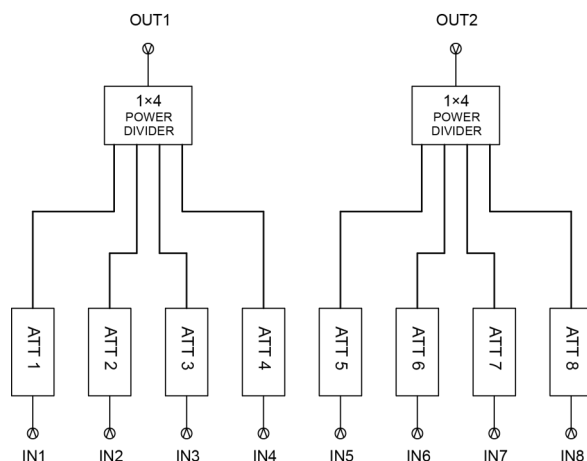
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 8 x 2 - 8 includes two independent 4x1 bidirectional attenuation sub - systems. Each sub - system can control 4 independent RF attenuation input channels and combined at one output. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

System Diagram

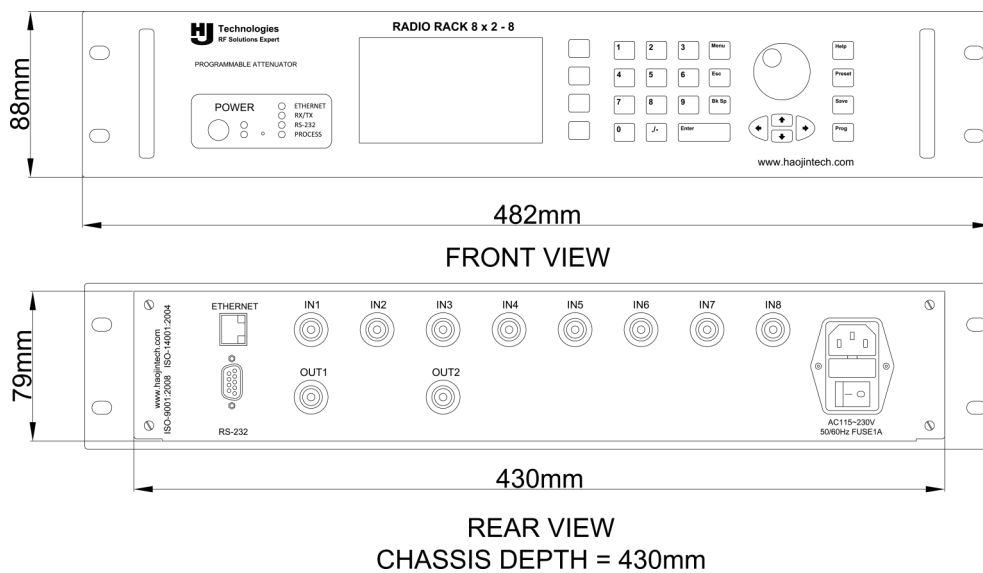


Programmable Attenuators

Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 14.8 dB@4GHz; ≤ 17 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 8 x 6 - 48



Features:

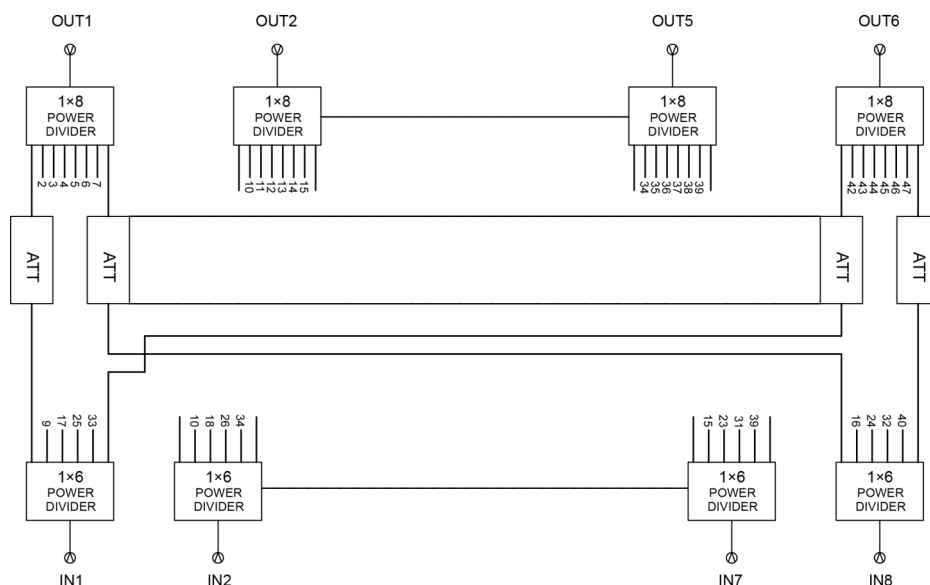
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 8 x 6 - 48 is suitable for lab testing by controlling 48 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

System Diagram

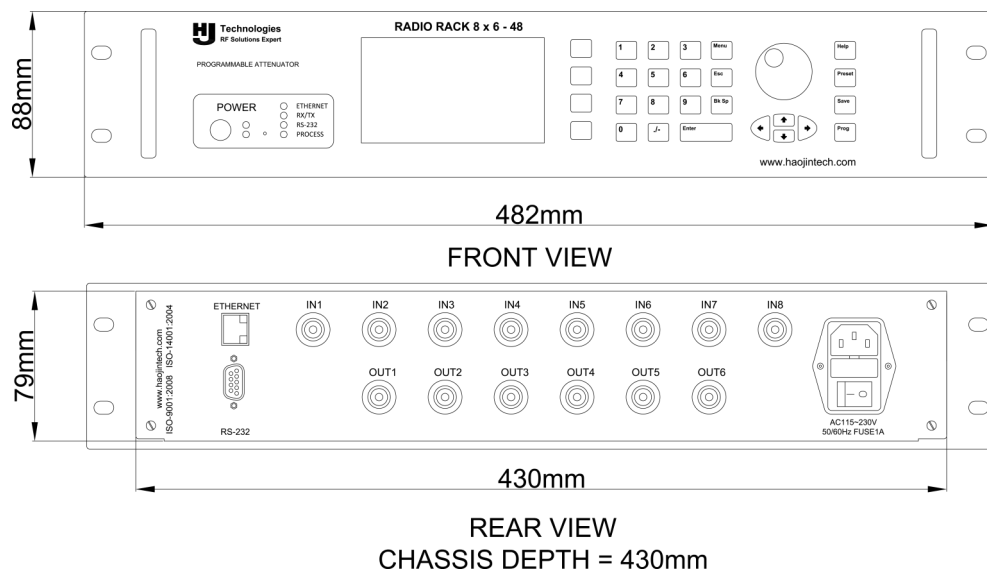


Programmable Attenuators

Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 26.6 dB@4GHz; ≤ 31.2 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 8 x 8 - 64



Features:

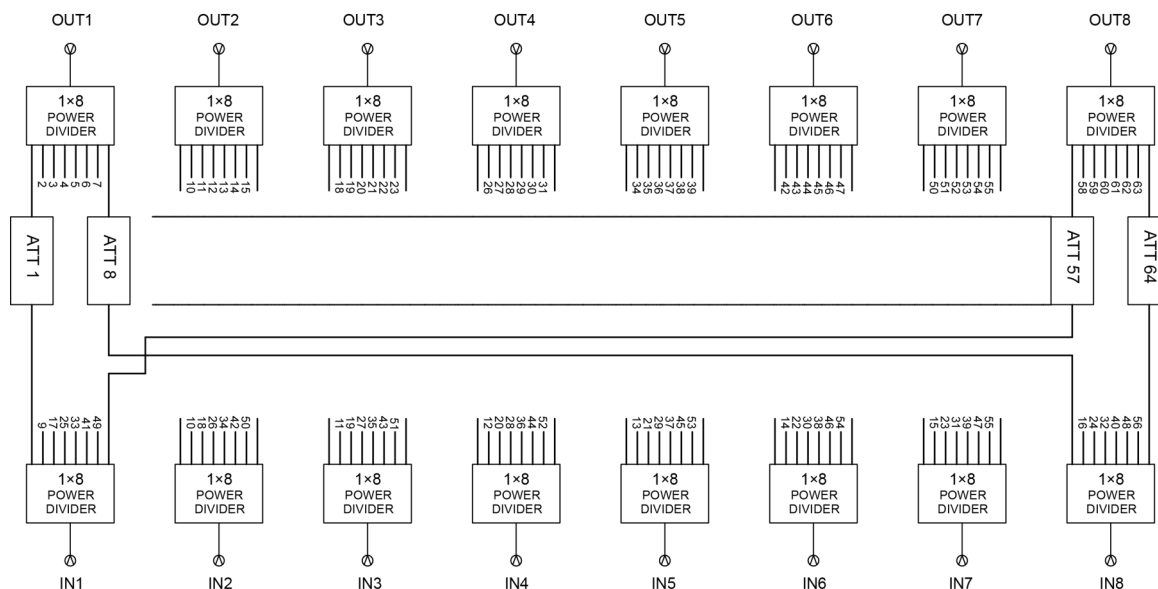
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 8 x 8 - 64 is suitable for lab testing by controlling 64 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

System Diagram

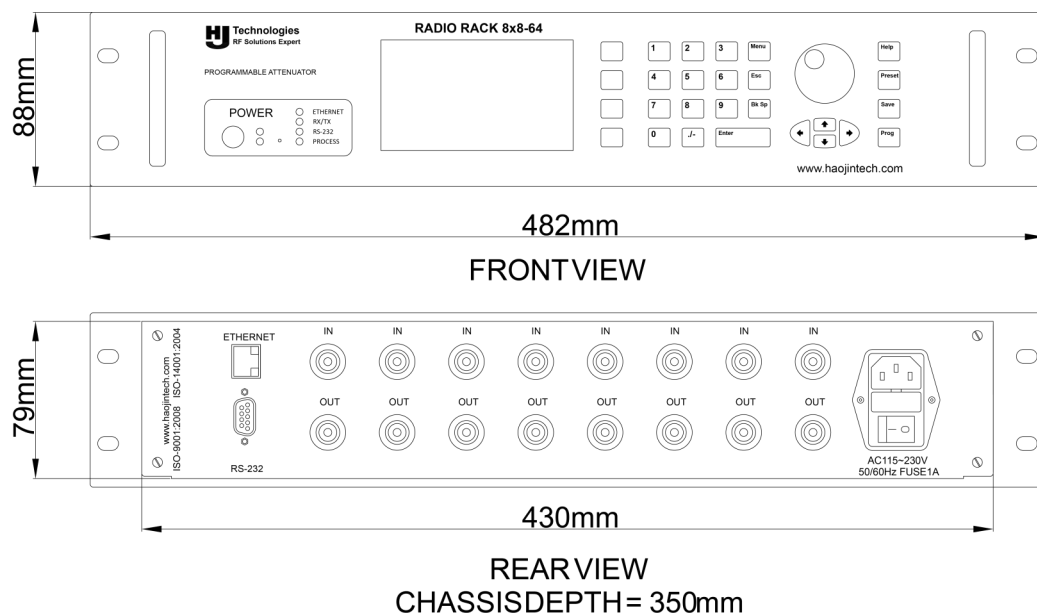


Programmable Attenuators

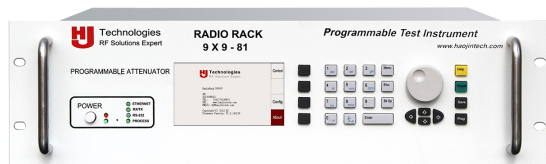
Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.35
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 28.6 dB@4GHz; ≤ 32.4 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 9 x 9 - 81



Description:

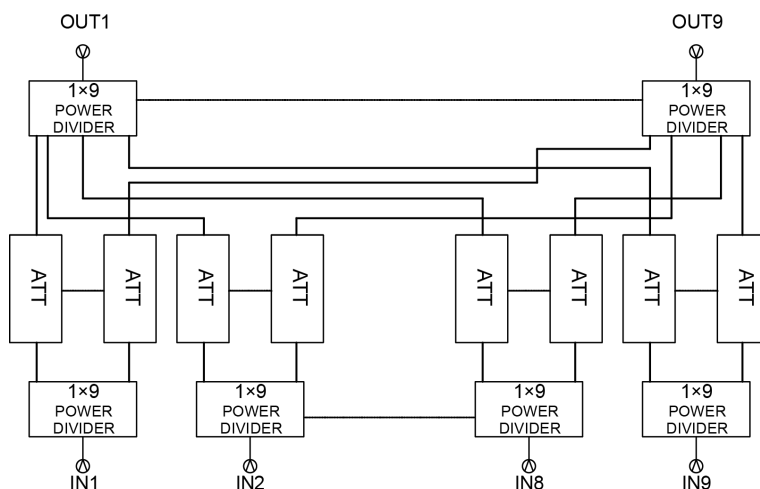
Radio Rack 9 x 9 - 81 is suitable for lab testing by controlling 81 independent bidirectional RF channels. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

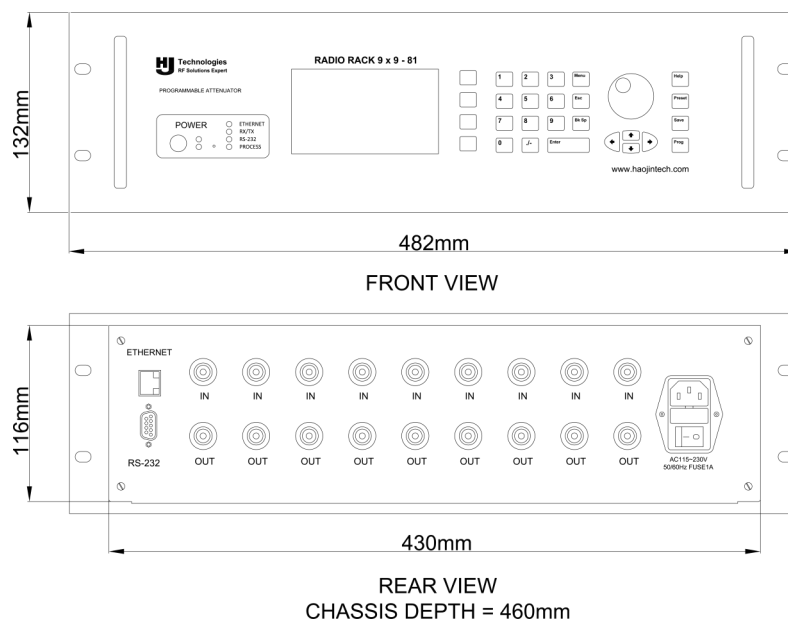


Programmable Attenuators

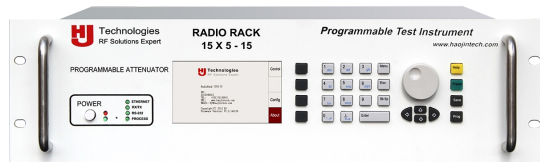
Specification:

Specification	Description:
Height	3U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	2
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 30 dB@4GHz; ≤ 37.6 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 15 x 5 - 15



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA LTE/WiMAX.

Features:

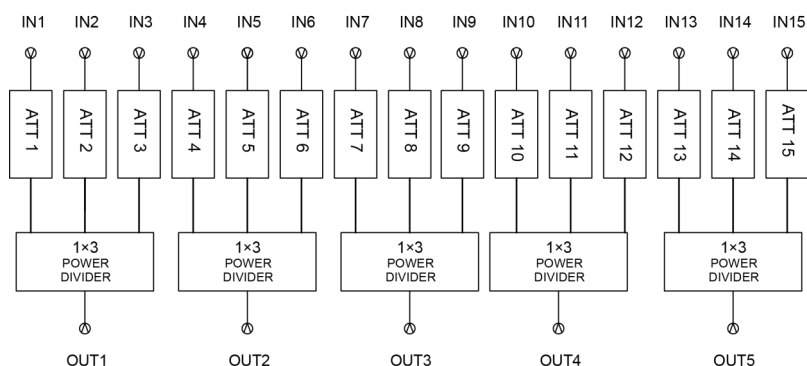
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 15 x 5 - 15 includes five independent 3x1 bidirectional attenuation sub-systems connecting to all the inputs through 15 attenuators. Each sub-system can control 3 independent RF attenuation input channels and combined at five output. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners.

System Diagram

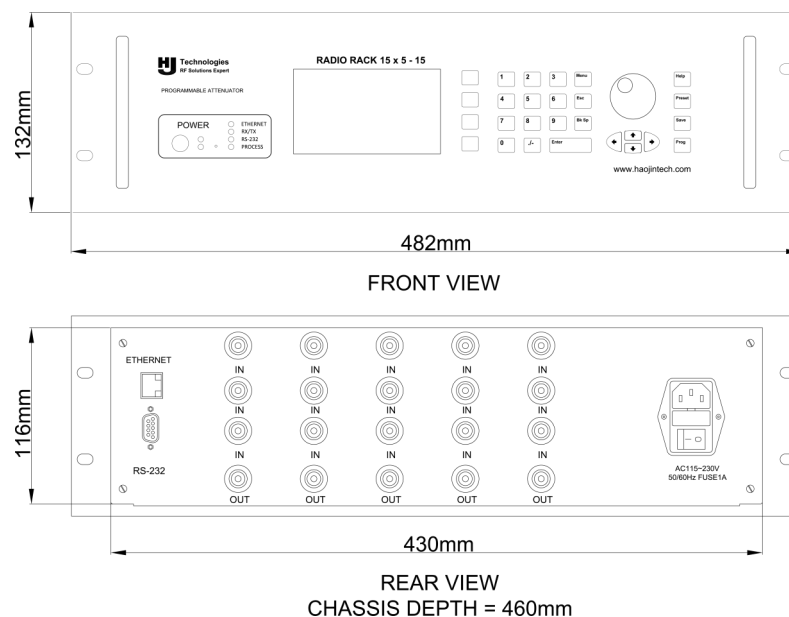


Programmable Attenuators

Specification:

Specification	Description:
Height	3U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 13.4 dB@4GHz; ≤ 16.9 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 16 x 2 - 16



Features:

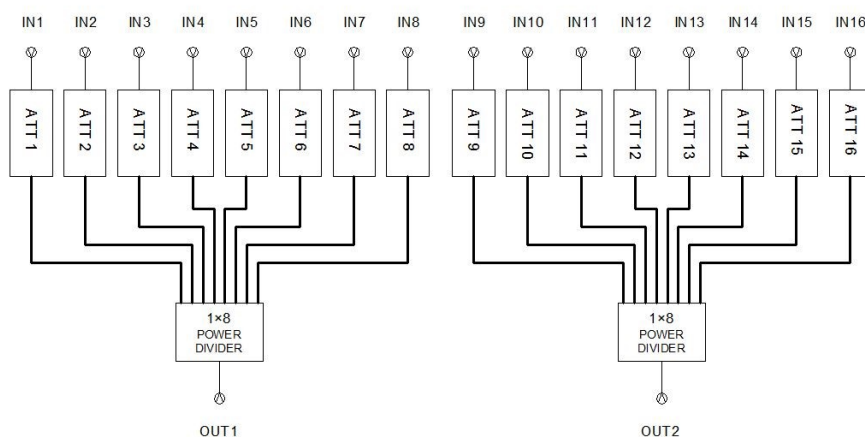
Description:

Radio Rack 16 x 2 - 16 includes two independent 8x1 bidirectional attenuation sub - systems. Each sub - system can control 8 independent RF attenuation input channels and combined at one output. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

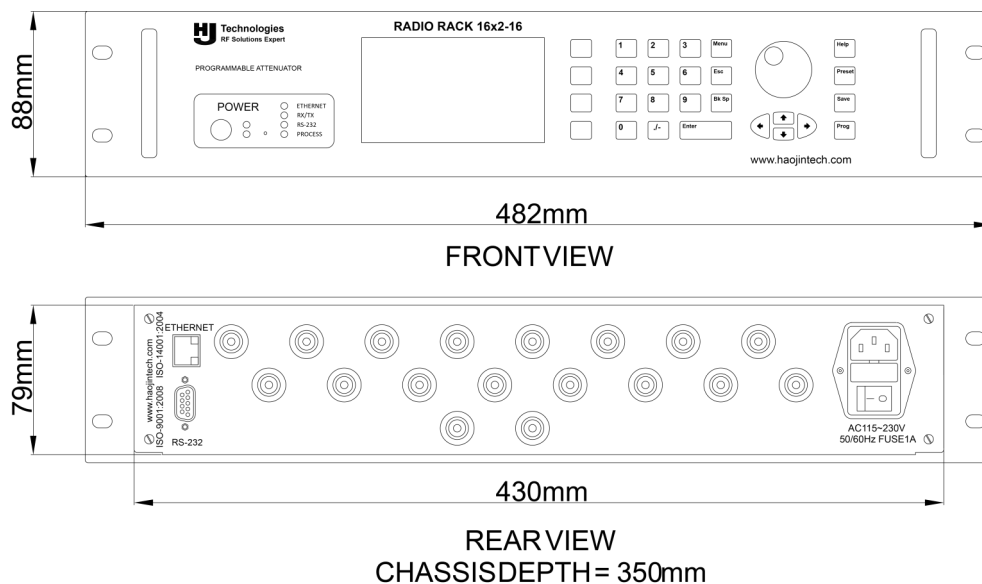


Programmable Attenuators

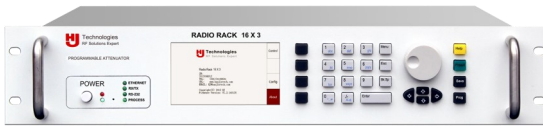
Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 18.6 dB@4GHz; ≤ 21.2 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 16 x 3 - 16



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

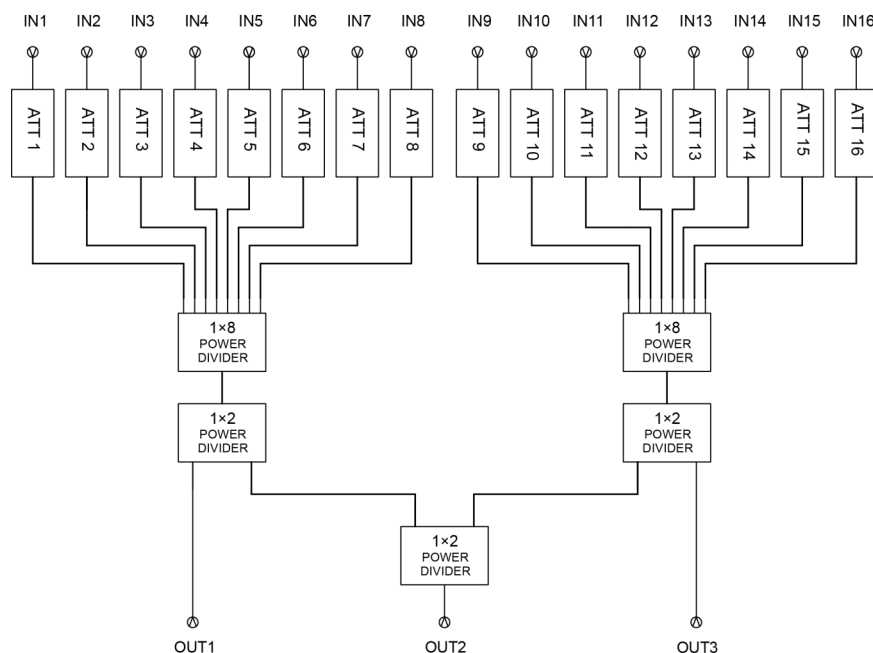
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 16 x 3 - 16 includes two independent 8x1 bidirectional attenuation sub-systems and one output connecting to all the inputs through 16 attenuators. Each sub - system can control 8 independent RF attenuation input channels and combined at one output. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners.

System Diagram

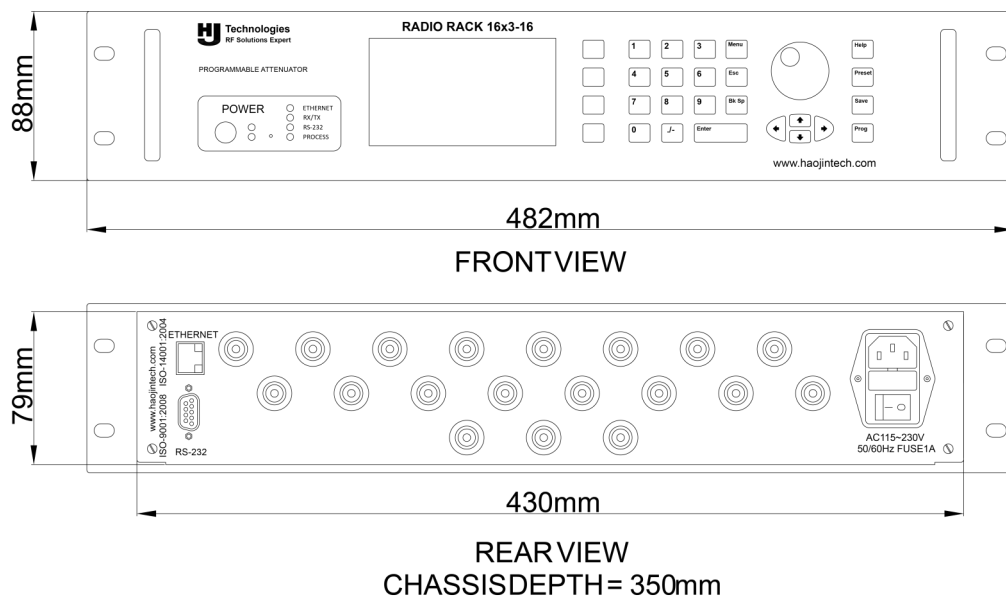


Programmable Attenuators

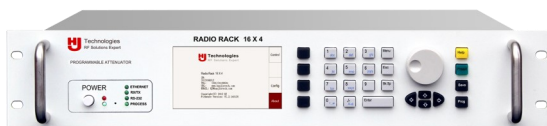
Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	Out1, Out3: ≤ 21.9 dB@4GHz; ≤ 35.6 dB@6GHz Out2: ≤ 25.2 dB@4GHz; ≤ 39 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 16 x 4 - 16



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA LTE/WiMAX.

Features:

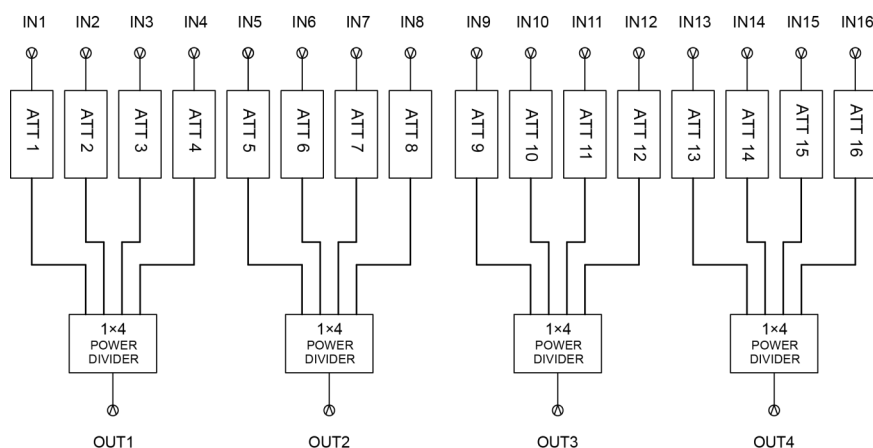
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 16 x 4 - 16 includes four independent 4x1 bidirectional attenuation sub - systems. Each sub - system can control 4 independent RF attenuation input channels and combined at one output. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners.

System Diagram

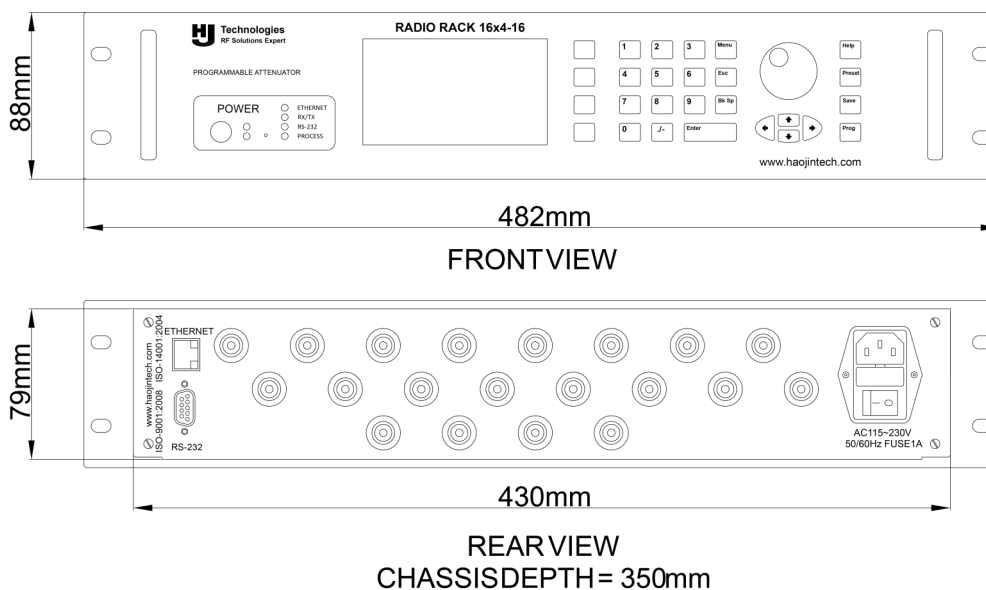


Programmable Attenuators

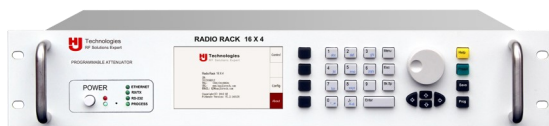
Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.35
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 14.8 dB@4GHz; ≤ 17 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 16 x 4 - 16B



the major wireless technologies including CDMA/ EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

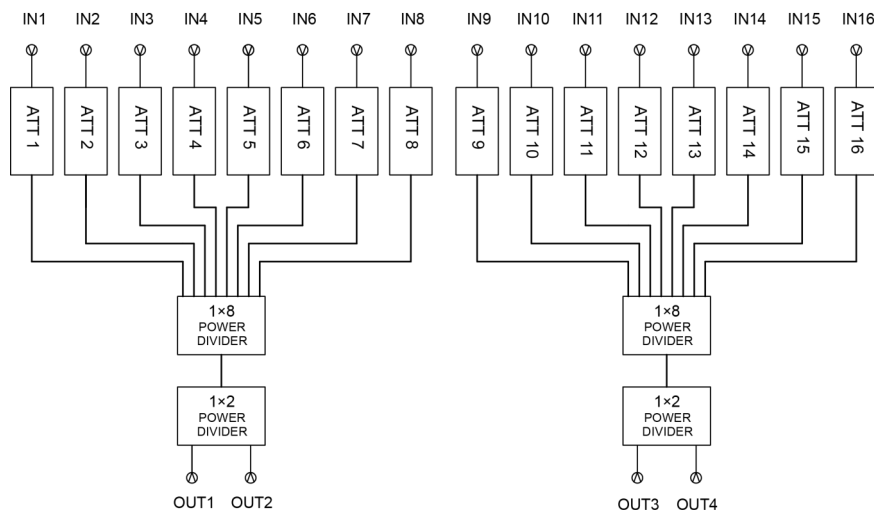
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 16 x 4 - 16B includes two independent 8 - 2 bidirectional attenuation sub - systems. Each sub - system can control 8 independent RF attenuation input channels and combined at one output. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners. The instrument supports all

System Diagram

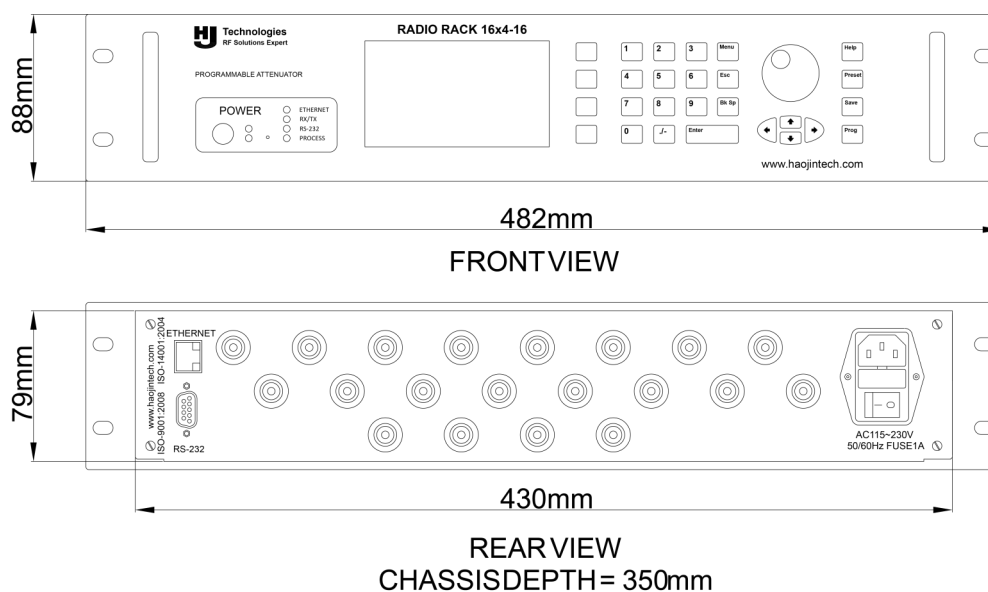


Programmable Attenuators

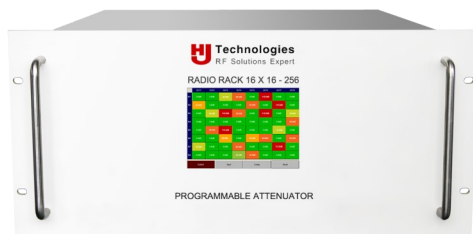
Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 21.9 dB@4GHz; ≤ 35.6 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 16 x 16 - 256



Description:

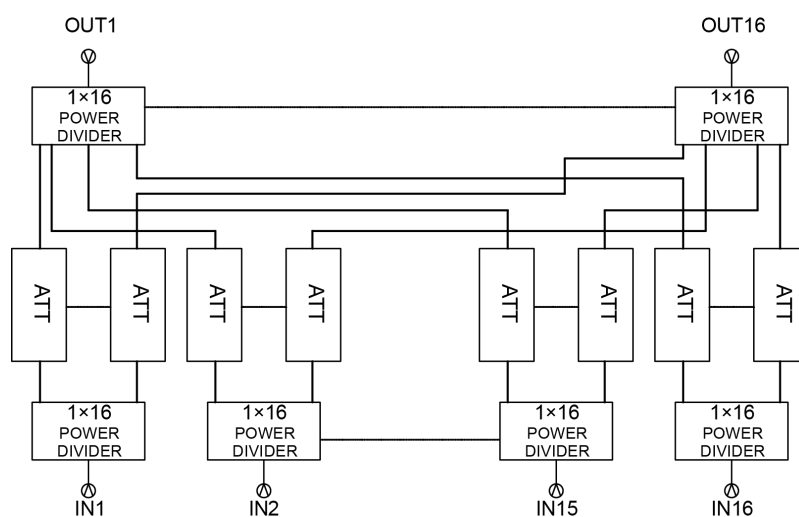
Radio Rack 16 x 16 - 256 is suitable for lab testing by controlling 256 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

System Diagram

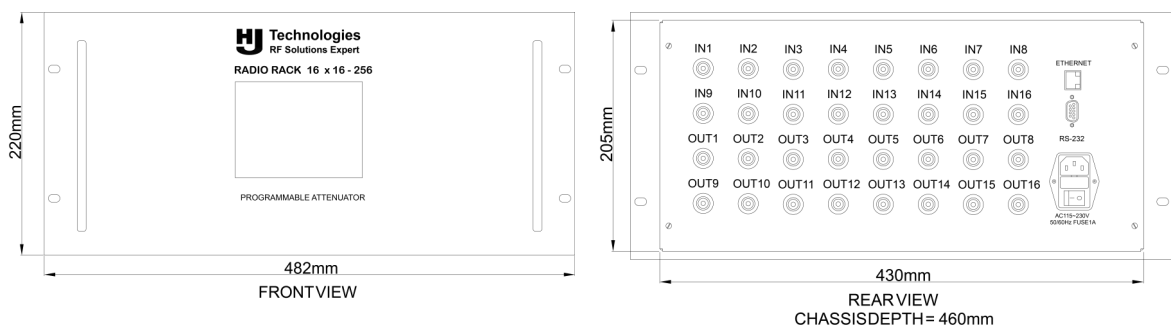


Programmable Attenuators

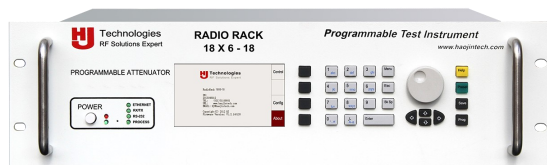
Specification:

Specification	Description:
Height	5U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 35.7 dB@4GHz; ≤ 39.9 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 18 x 6 - 18



Description:

Radio Rack 18 x 6 - 18 includes six independent 3x1 bidirectional attenuation sub-systems connecting to all the inputs through 18 attenuators. Each sub - system can control 3 independent RF attenuation input channels and combined at six output. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage

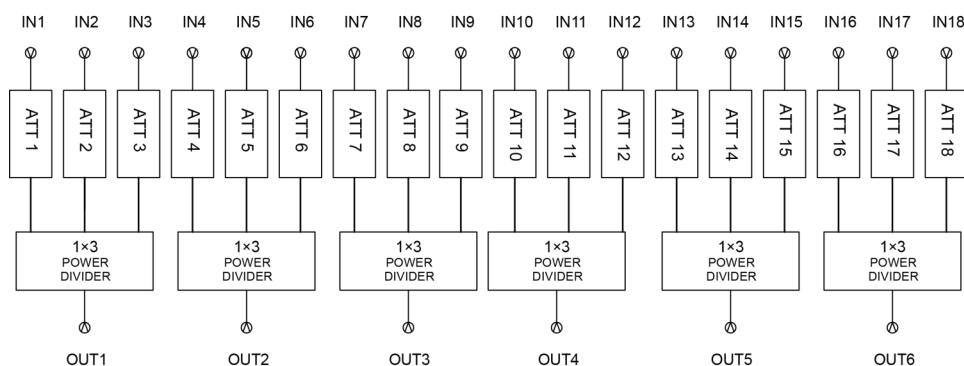
of power combiners. The instrument supports all the major wireless technologies including CDMA/ EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

System Diagram

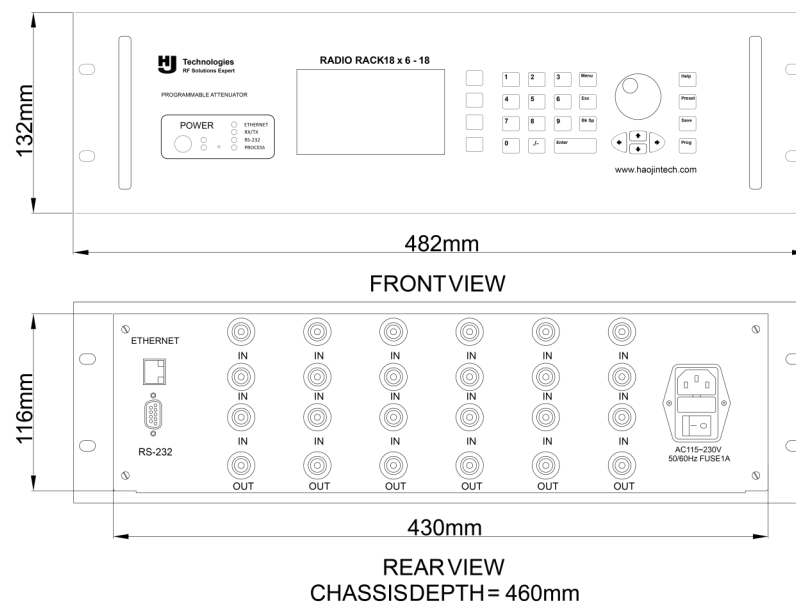


Programmable Attenuators

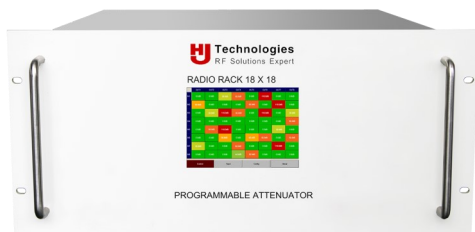
Specification:

Specification	Description:
Height	3U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.4
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 13.4 dB@4GHz; ≤ 16.9 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 18 x 18 - 324



Description:

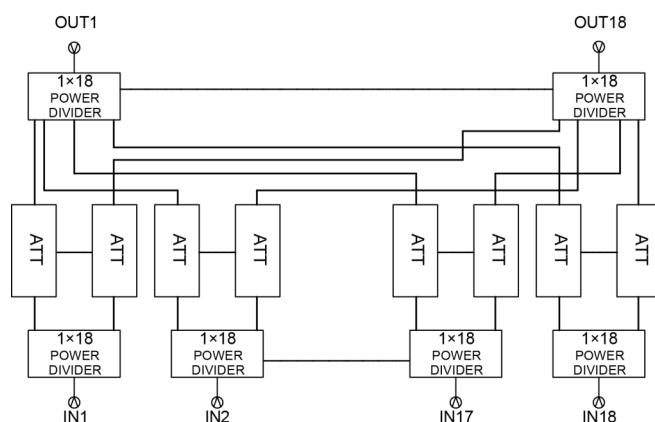
Radio Rack 18 x 18 - 324 is suitable for lab testing by controlling 324 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

System Diagram

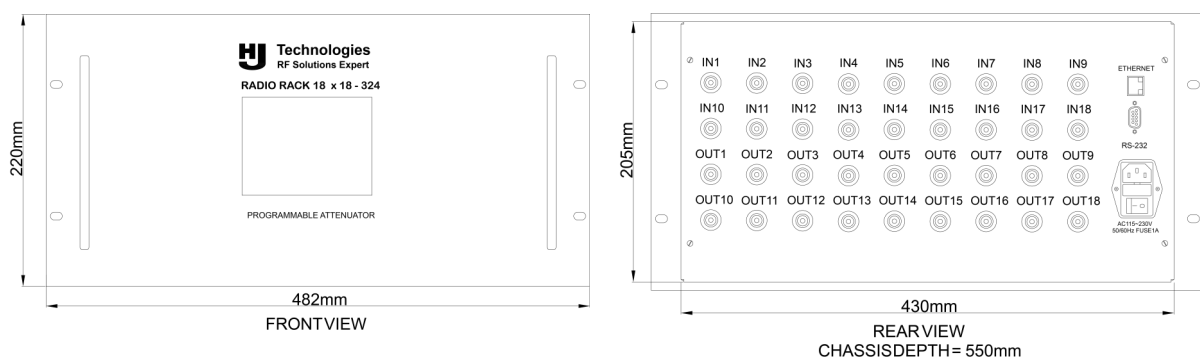


Programmable Attenuators

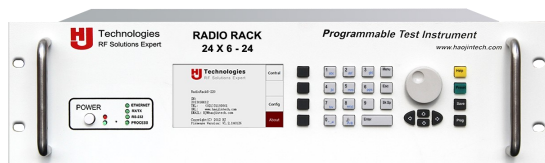
Specification:

Specification	Description:
Height	5U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 37.3 dB@4GHz; ≤ 43.3 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 24 x 6 - 24



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA LTE/WiMAX.

Features:

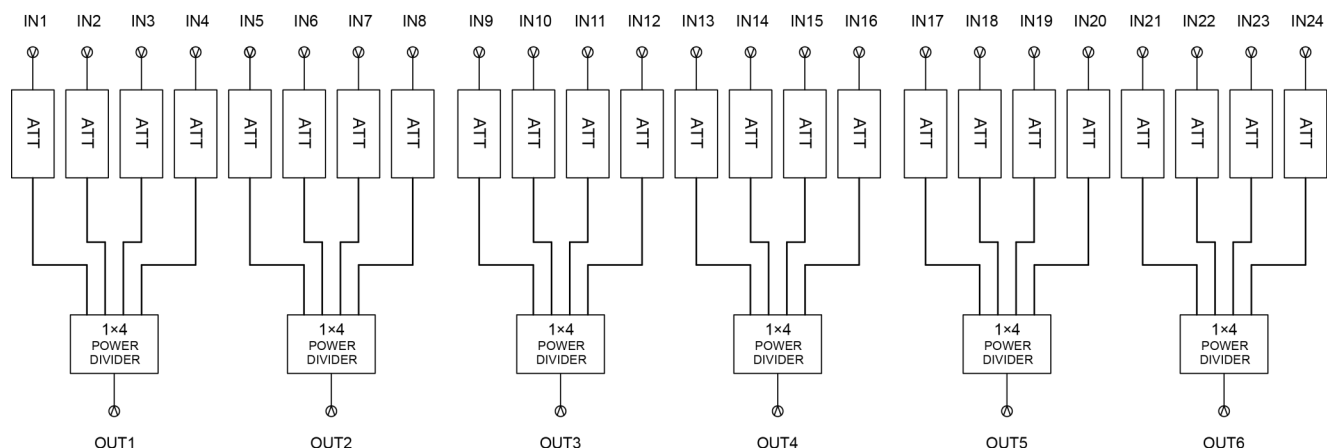
Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 127 dB attenuation values for each individual channel.

Description:

Radio Rack 24 x 6 - 24 includes four independent 4x1 bidirectional attenuation sub - systems. Each sub - system can control 4 independent RF attenuation input channels and combined at one output. Users can easily simulate path loss on each channel or simulate the mobility scenarios between the sectors with usage of power combiners.

System Diagram

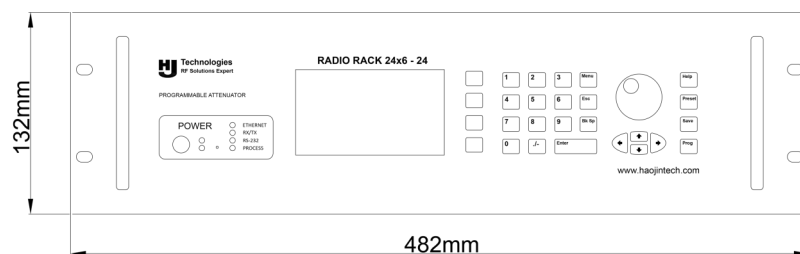


Programmable Attenuators

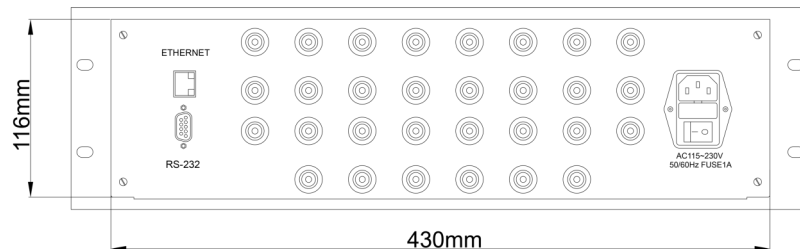
Specification:

Specification	Description:
Height	3U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 110 dB / 127 dB
Attenuation Step	1 dB / 0.5 dB / 0.25 dB per step
VSWR (Avg.)	1.35
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 95 $\leq \pm 1.5\%$; 96 - 127 $\leq \pm 3\%$
Insertion Loss	≤ 14.8 dB@4GHz; ≤ 17 dB@6GHz
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 4.3 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension

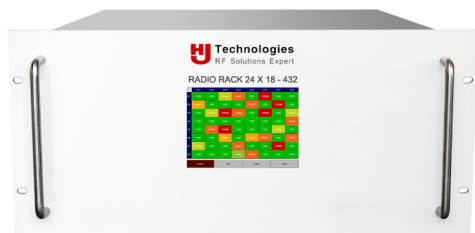


FRONT VIEW



REAR VIEW
CHASSIS DEPTH= 460mm

Radio Rack 24 x 18 - 432



Description:

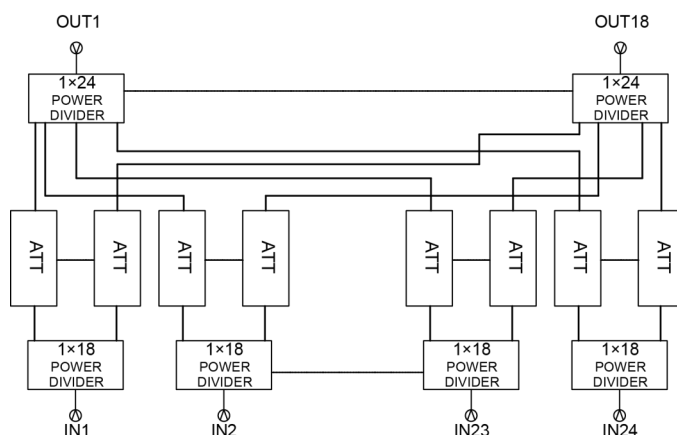
Radio Rack 24 x 18 - 432 is suitable for lab testing by controlling 432 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

System Diagram

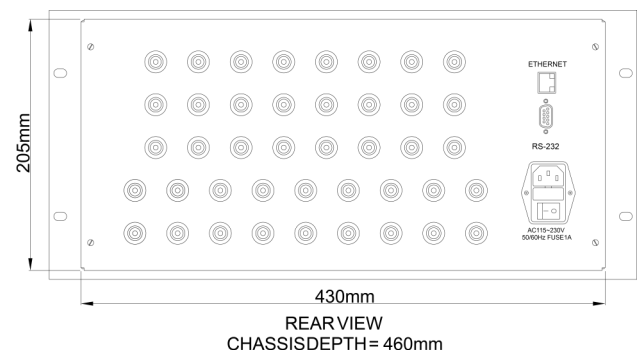
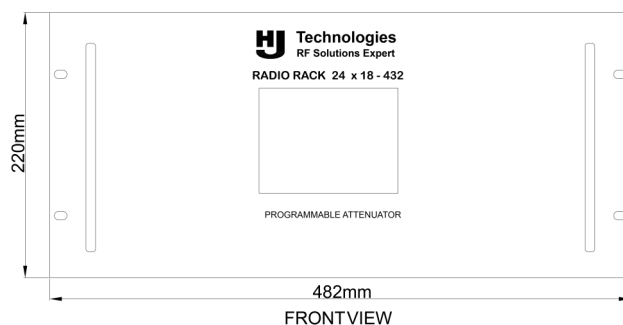


Programmable Attenuators

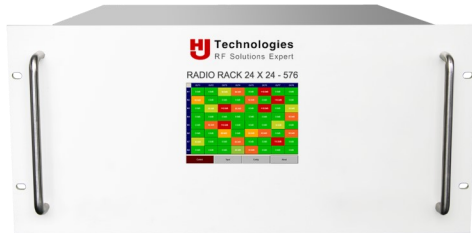
Specification:

Specification	Description:
Height	5U / 6U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 38.6 dB@4GHz; ≤ 44.6 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 24 x 24 - 576



Description:

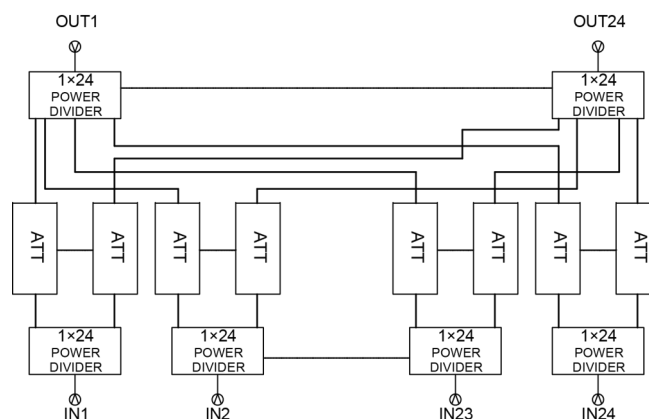
Radio Rack 24 x 24 - 576 is suitable for lab testing by controlling 576 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

System Diagram

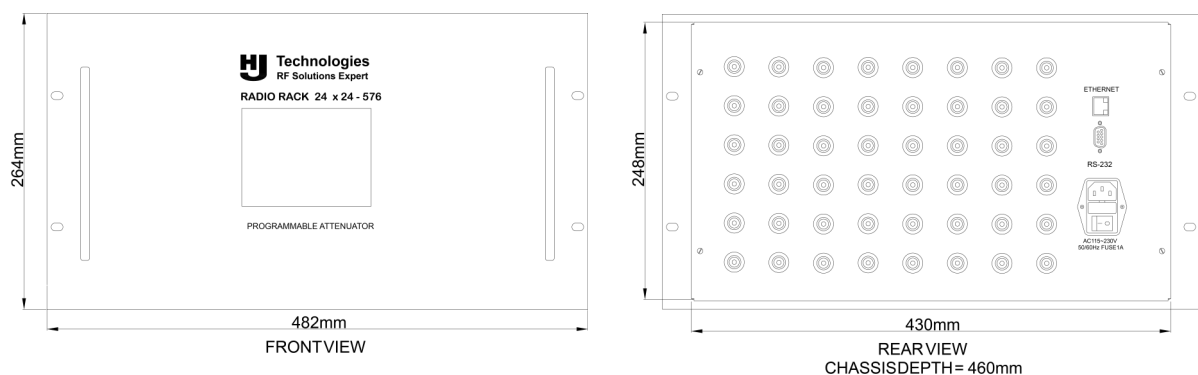


Programmable Attenuators

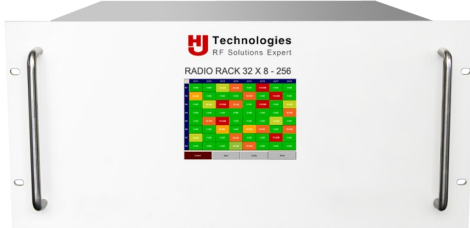
Specification:

Specification	Description:
Height	6U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 39.9 dB@4GHz; ≤ 45.9 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 32 x 8 - 256



Description:

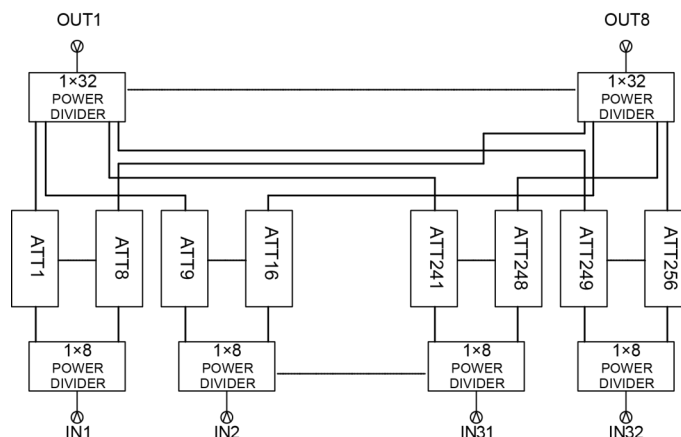
Radio Rack 32 x 8 - 256 is suitable for lab testing by controlling 256 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

System Diagram

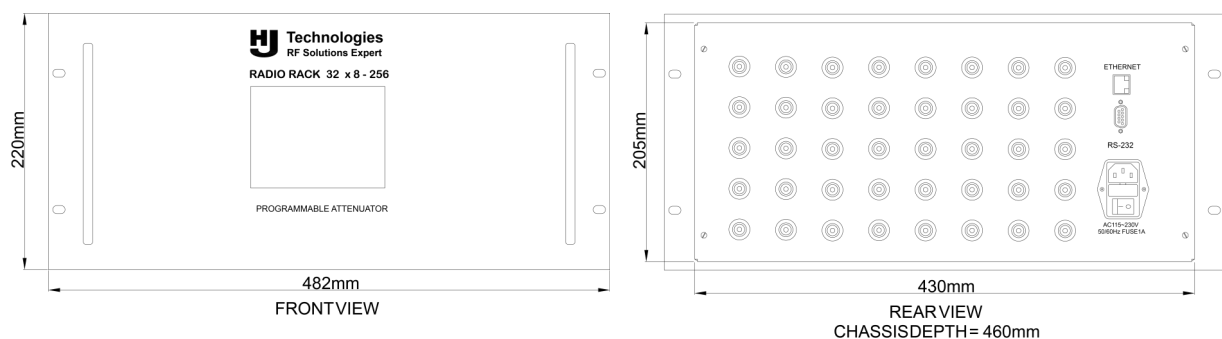


Programmable Attenuators

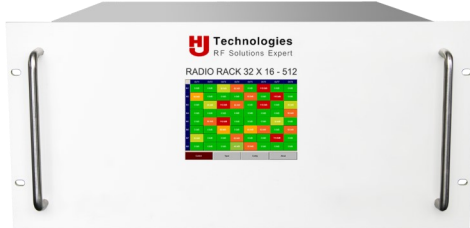
Specification:

Specification	Description:
Height	5U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 33.5 dB@4GHz; ≤ 38.1 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 32 x 16 - 512



Description:

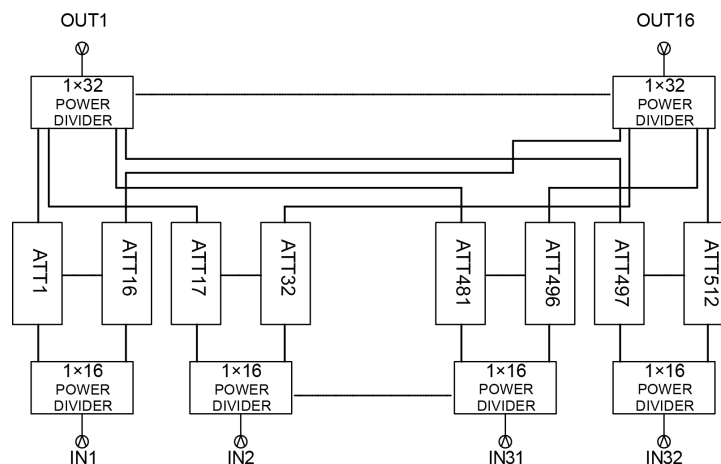
Radio Rack 32 x 16 - 512 is suitable for lab testing by controlling 256 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

System Diagram

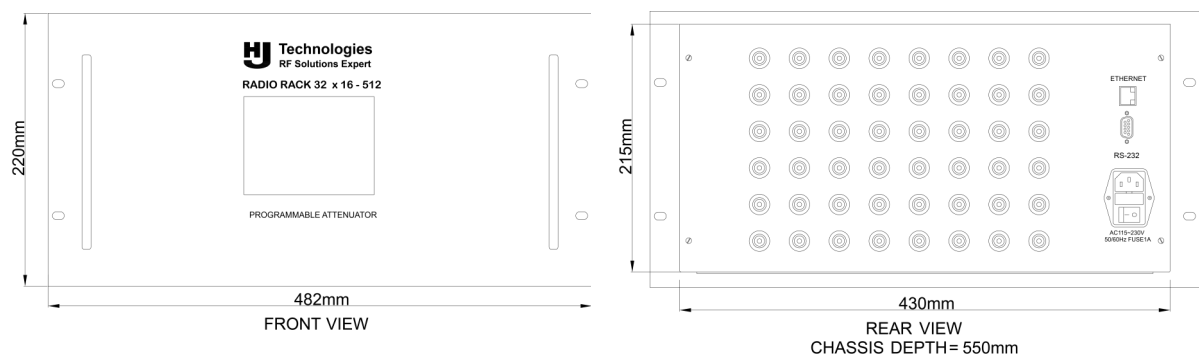


Programmable Attenuators

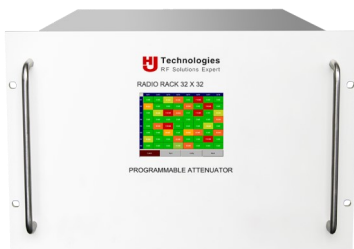
Specification:

Specification	Description:
Height	5U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 37.8 dB@4GHz; ≤ 43.1 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 32 x 32 - 1024



Description:

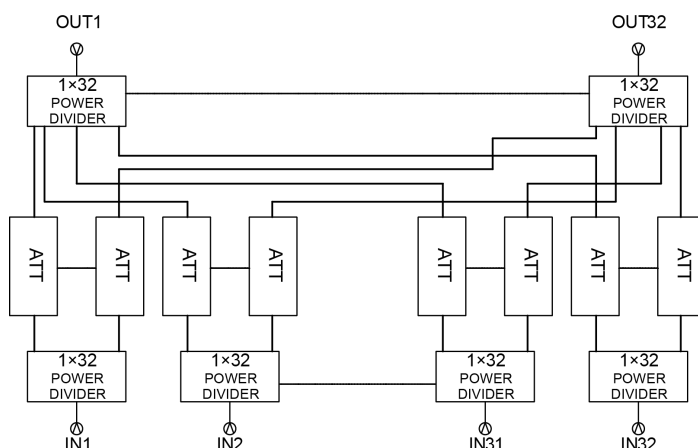
Radio Rack 32 x 32 - 1024 is suitable for lab testing by controlling 1024 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

System Diagram

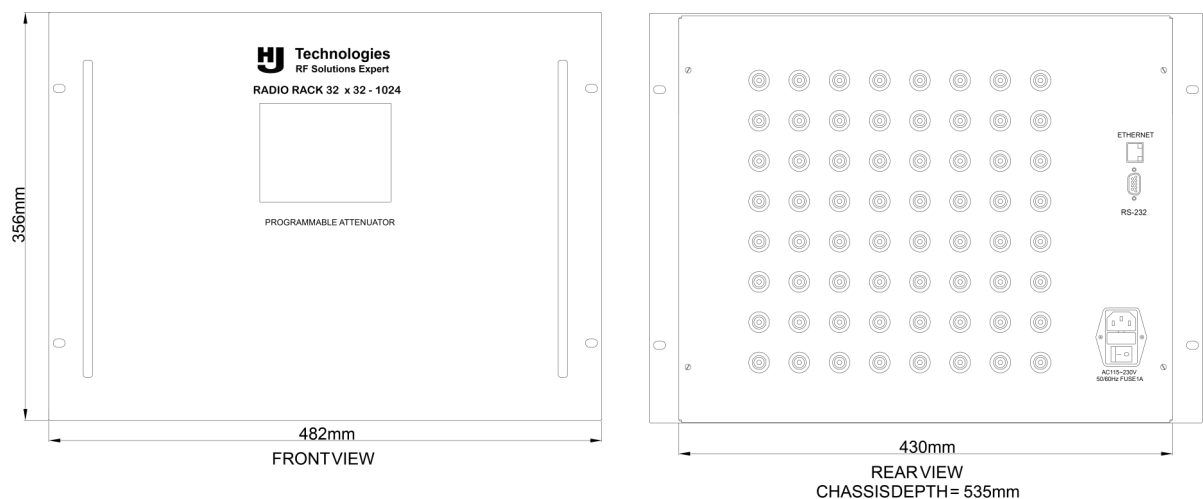


Programmable Attenuators

Specification:

Specification	Description:
Height	8U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 40.9 dB@4GHz; ≤ 46.3 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Rack 64 x 64 - 4096

Description:

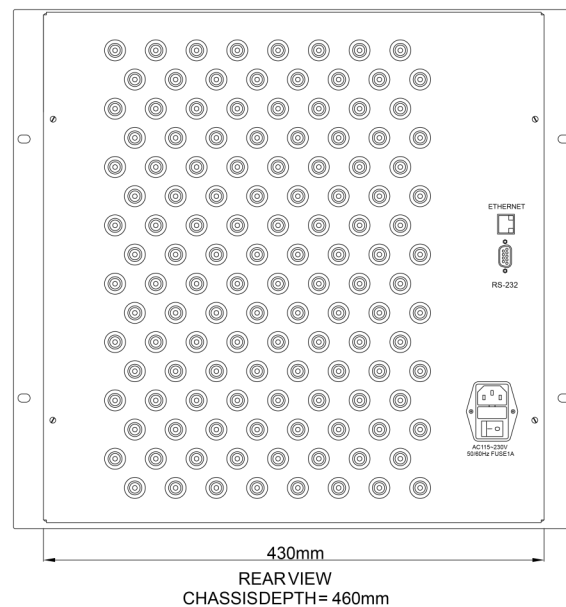
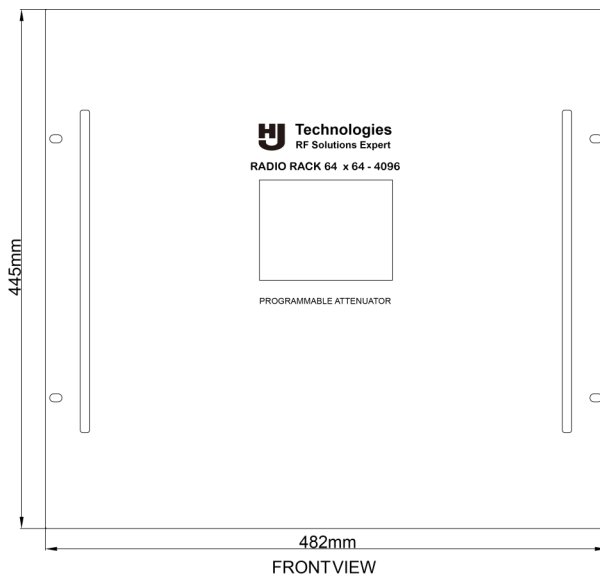
Radio Rack 64 x 64 - 4096 is suitable for lab testing by controlling 4096 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

Dimension



Programmable Attenuators

Specification:

Specification	Description:
Height	10U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 39.9 dB@4GHz; ≤ 46.3 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Radio Rack 128 x 128 - 16384

Description:

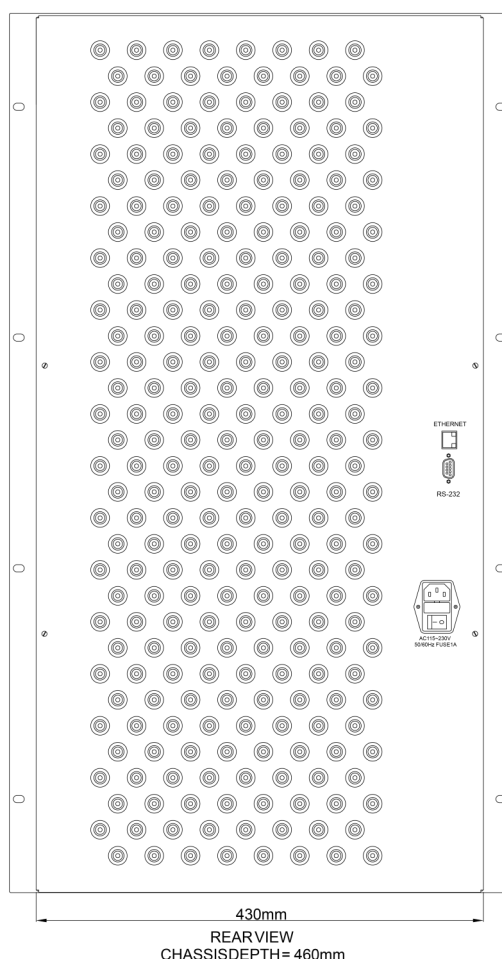
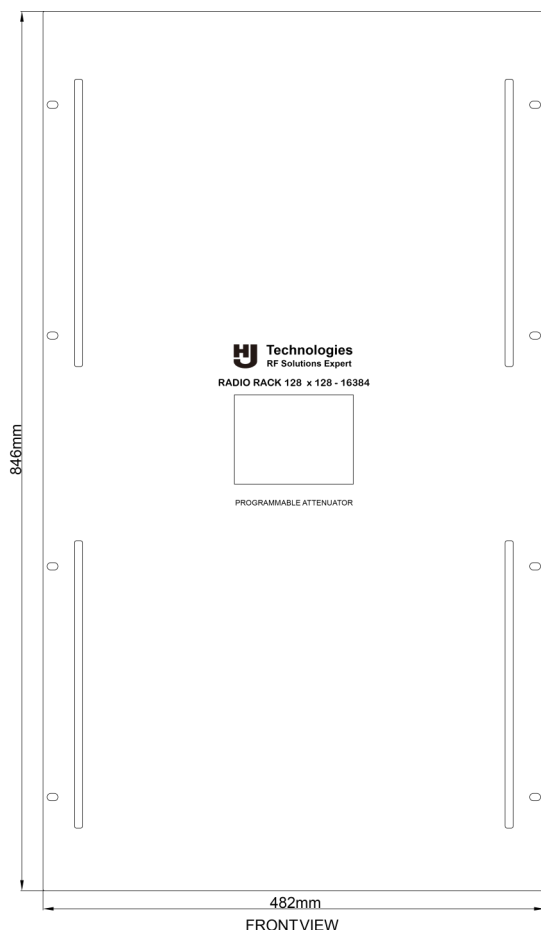
Radio Rack 128 x 128 - 16384 is suitable for lab testing by controlling 16384 individual bidirectional RF channels independently. Users can easily simulate path loss on each channel or simulate mobility scenarios between the sectors with usage of power combiners. The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

Features:

Each individual attenuator can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

The system supports sweeping range between 0 - 61 dB attenuation values for each individual channel.

Dimension



Programmable Attenuators

Specification:

Specification	Description:
Height	19U
Frequency Range	700 MHz - 4 GHz / 6 GHz (Option W600)
Impedance	50 Ω
Attenuation Range	0 - 95 dB
Attenuation Step	0.5 dB / 0.25 dB per step
VSWR (Avg.)	IN: 1.5 OUT: 1.7
Attenuation Accuracy	0 - 31 $\leq \pm 0.3$ dB; 32 - 61 $\leq \pm 0.5$ dB; 62 - 95 $\leq \pm 1.5\%$
Insertion Loss	≤ 39.9 dB@4GHz; ≤ 46.3 dB@6GHz
Total Isolation	IN/IN: ≥ 100 dB IN/OUT: ≥ 95 dB OUT/OUT: ≥ 100 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Radio Switch 2 x 2



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

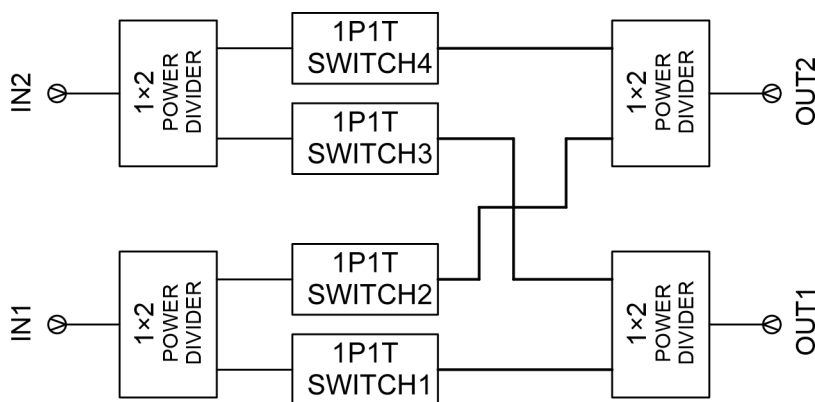
Description:

Radio Switch 2 x 2 is a full routing 2 inputs and 2 outputs RF switch matrix system. Signals from any input to any output port can be independently controlled on the switches to turn on or off that specific path. Lab staff and testing engineers can interconnect the BTS ports to the testing handsets easily and flexibly through remote control without any hassle of reconfiguration or reconnection of the physical RF cables.

Features:

Each individual switch can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

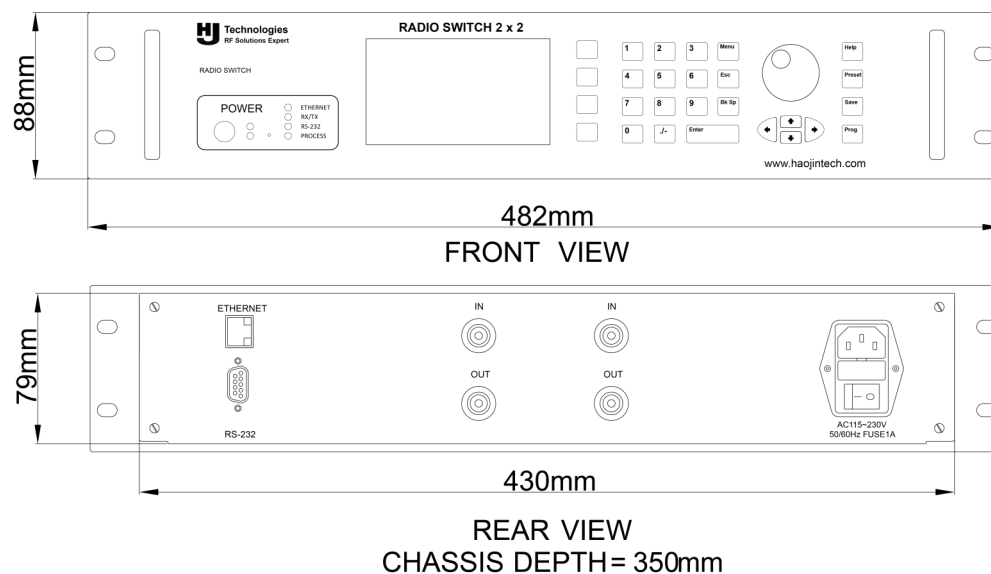
System Diagram



Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 3.5 GHz
Switch Channel Number	4
Impedance	50 Ω
Isolation	Max $\geq$ 100 dB
VSWR	$\leq$ 1.3
Insertion Loss	$\leq$ 10 dB
Switching Speed	5ms typical
Input Power (Ave.)	+33 dBm
Software Functions	Power Fail Safeguard, Custom Label, LAN Access Management, Run Support Script
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Switch 2 x 12



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

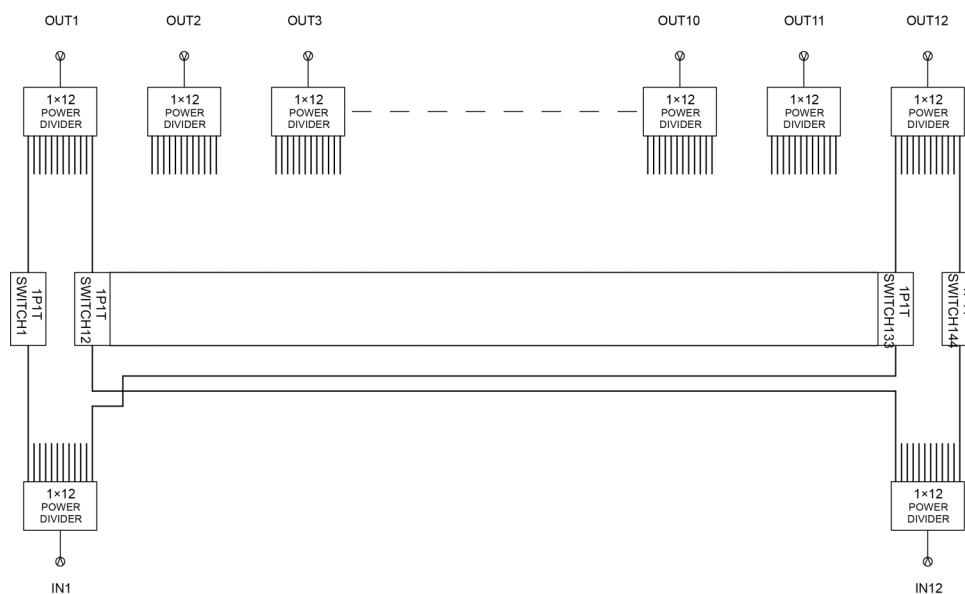
Description:

Radio Switch 2 x 12 is a full routing 2 inputs and 12 outputs RF switch matrix system. Signals from any input to any output port can be independently controlled on the switches to turn on or off that specific path. Lab staff and testing engineers can interconnect the BTS ports to the testing handsets easily and flexibly through remote control without any hassle of reconfiguration or reconnection of the physical RF cables.

Features:

Each individual switch can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

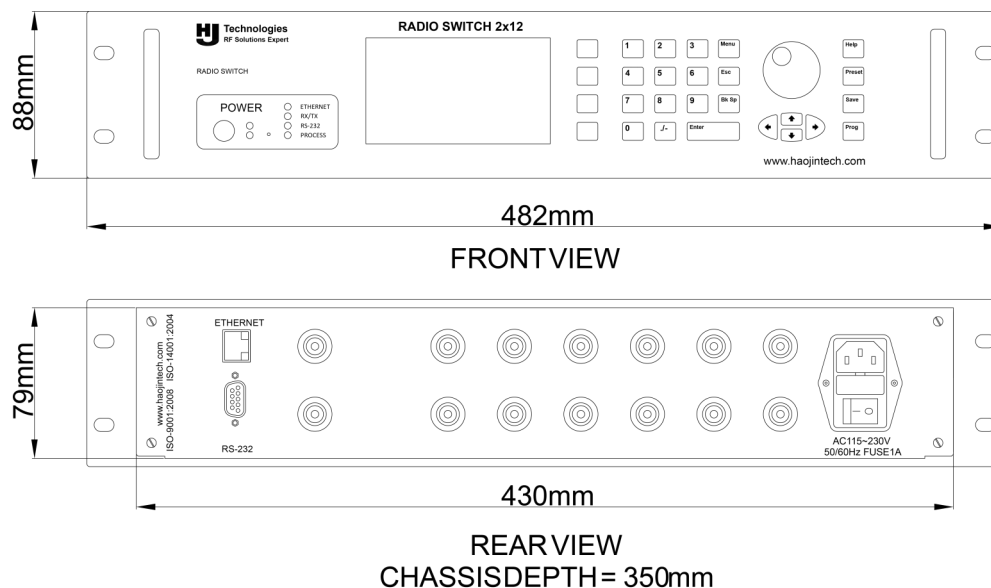
System Diagram



Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 3.5 GHz
Switch Channel Number	24
Impedance	50 Ω
Isolation	Max $\geq$ 110 dB
VSWR	$\leq$ 1.3
Insertion Loss	$\leq$ 15 dB
Switching Speed	5ms typical
Input Power (Ave.)	+33 dBm
Software Functions	Power Fail Safeguard, Custom Label, LAN Access Management, Run Support Script
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Switch 4 x 6



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

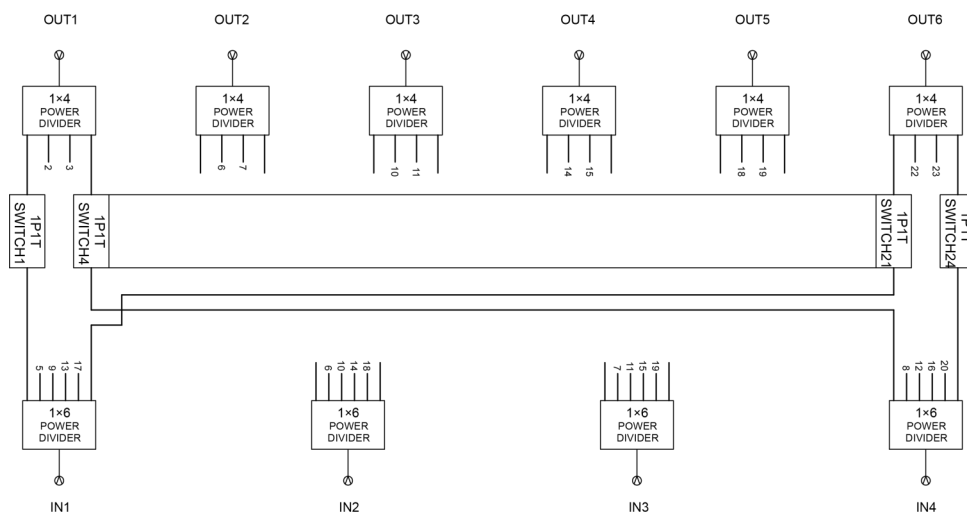
Description:

Radio Switch 4 x 6 is a full routing 4 inputs and 6 outputs RF switch matrix. Signals from any input to any output port can be independently controlled on the switches to turn on or off that specific path. Lab staff and testing engineers can interconnect the BTS ports to the testing handsets easily and flexibly through remote control without any hassle of reconfiguration or reconnection of the physical RF cables.

Features:

Each individual switch can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

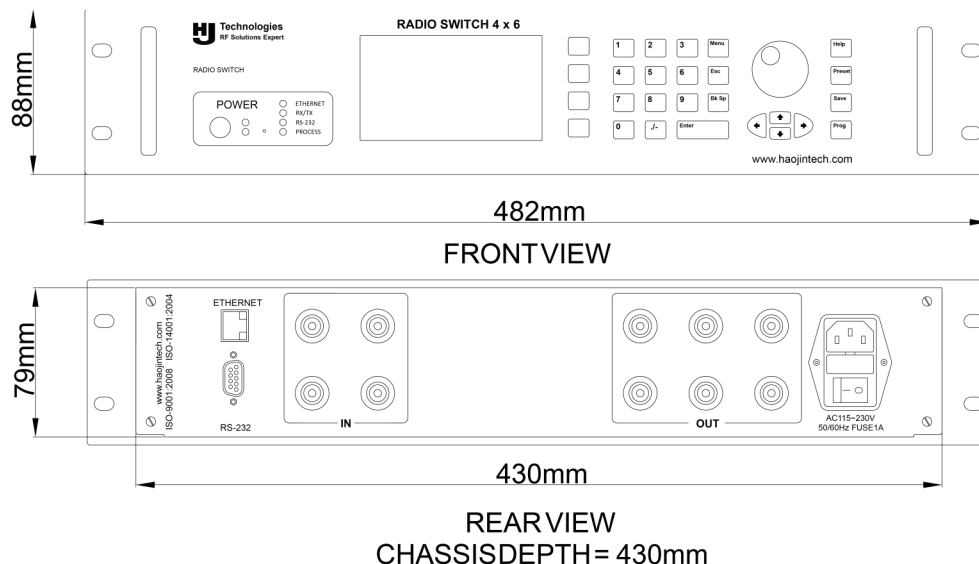
System Diagram



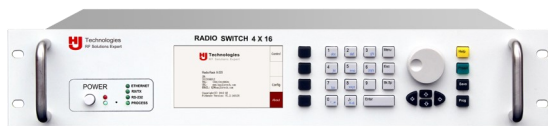
Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 3.5 GHz
Switch Channel Number	24
Impedance	50 Ω
Isolation	Max $\geq$ 95 dB
VSWR	$\leq$ 1.4
Insertion Loss	$\leq$ 17 dB
Switching Speed	5ms typical
Input Power (Ave.)	+33 dBm
Software Functions	Power Fail Safeguard, Custom Label, LAN Access Management, Run Support Script
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Switch 4 x 16



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

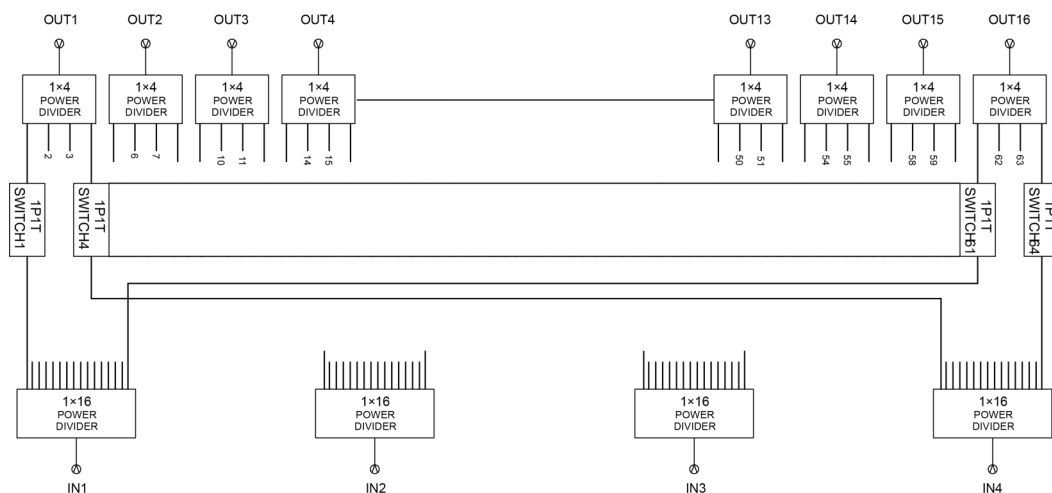
Description:

Radio Switch 4 x 16 is a full routing 4 inputs and 16 outputs RF switch matrix. Signals from any input to any output port can be independently controlled on the switches to turn on or off that specific path. Lab staff and testing engineers can interconnect the BTS ports to the testing handsets easily and flexibly through remote control without any hassle of reconfiguration or reconnection of the physical RF cables.

Features:

Each individual switch can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

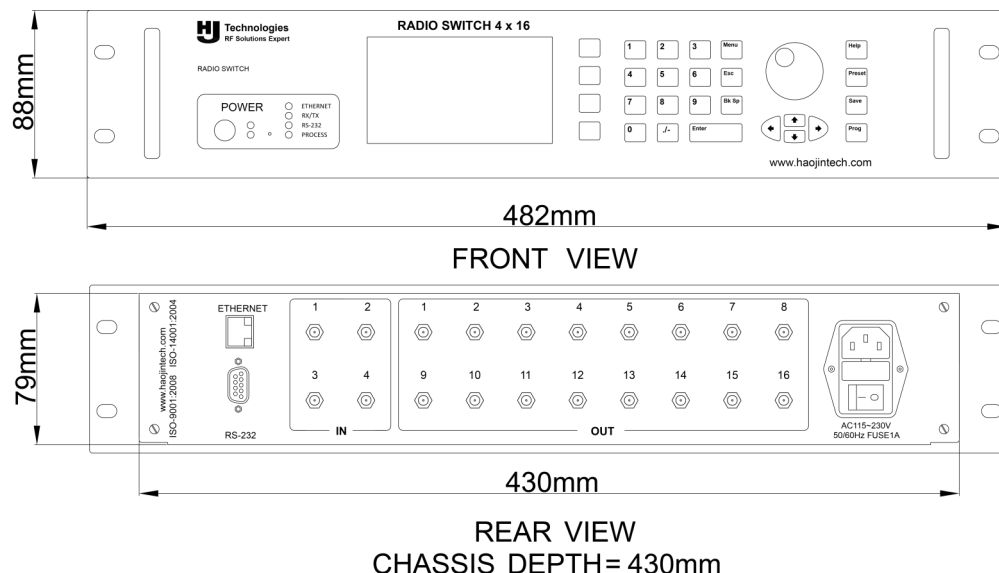
System Diagram



Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 3.5 GHz
Switch Channel Number	64
Impedance	50 Ω
Isolation	Max $\geq$ 100 dB
VSWR	$\leq$ 1.5
Insertion Loss	$\leq$ 22 dB
Switching Speed	5ms typical
Input Power (Ave.)	+33 dBm
Software Functions	Power Fail Safeguard, Custom Label, LAN Access Management, Run Support Script
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	SMA (F)
Temperature Range	-10 to +50°C

Dimension



Radio Switch 8 x 4



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

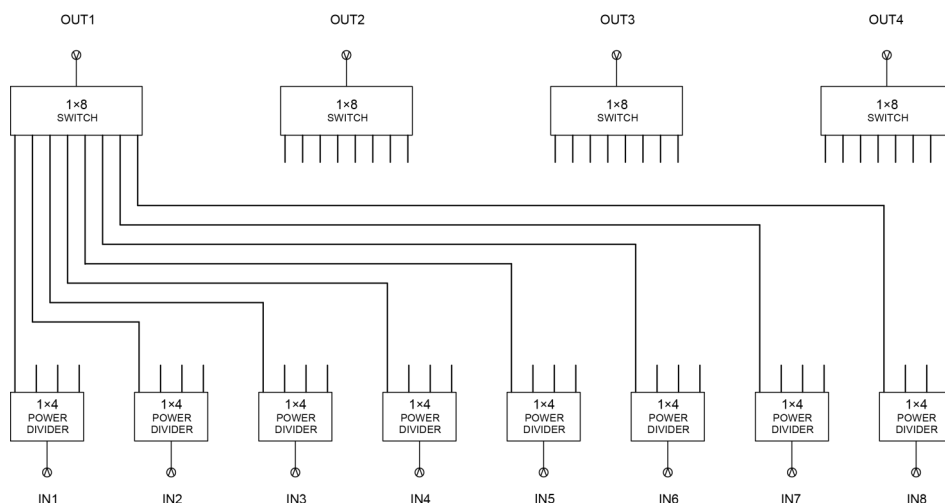
Description:

Radio Switch 8 x 4 is a full routing 8 inputs and 4 outputs RF switch matrix. Signals from any input to any output port can be independently controlled on the switches to turn on or off that specific path. Lab staff and testing engineers can interconnect the BTS ports to the testing handsets easily and flexibly through remote control without any hassle of reconfiguration or reconnection of the physical RF cables.

Features:

Each individual switch can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

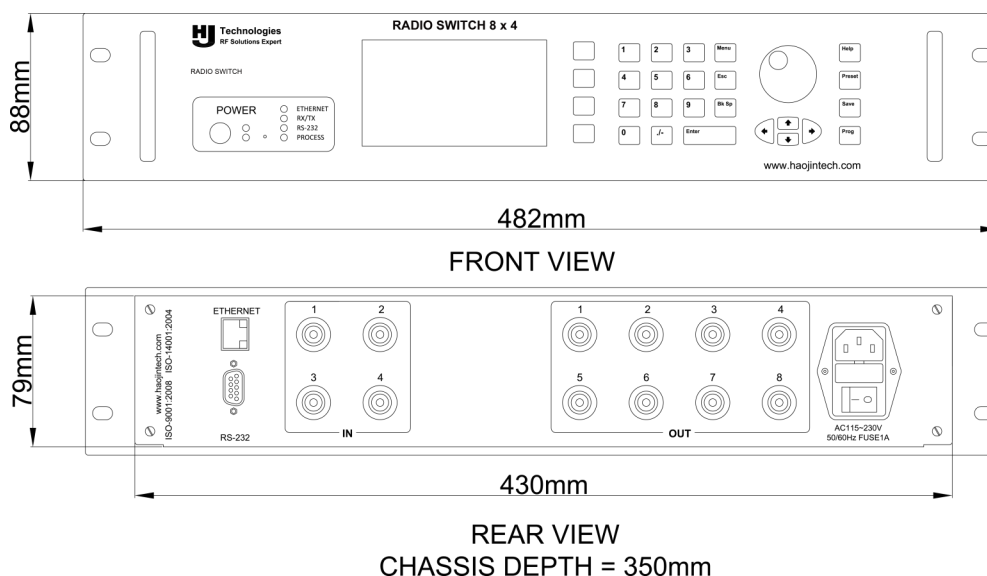
System Diagram



Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 3.5 GHz
Switch Channel Number	32
Impedance	50 Ω
Isolation	Max ≥ 120 dB
VSWR	≤ 1.5
Insertion Loss	≤ 21 dB
Switching Speed	2ms typical
Input Power (Ave.)	+33 dBm
Software Functions	Power Fail Safeguard, Custom Label, LAN Access Management, Run Support Script
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Switch 8 x 6



The instrument supports all the major wireless technologies including CDMA/EVDO/GSM/UMTS/HSPA/LTE/WiMAX.

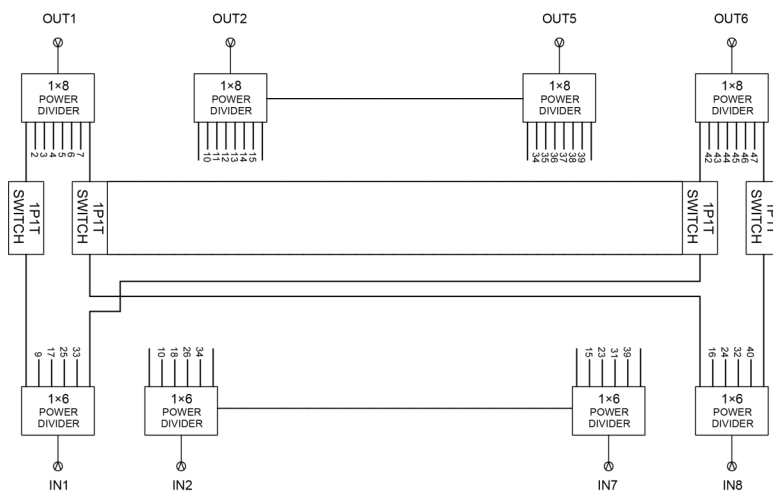
Description:

Radio Switch 8 x 6 is a full routing 8 inputs and 6 outputs RF switch matrix. Signals from any input to any output port can be independently controlled on the switches to turn on or off that specific path. Lab staff and testing engineers can interconnect the BTS ports to the testing handsets easily and flexibly through remote control without any hassle of reconfiguration or reconnection of the physical RF cables.

Features:

Each individual switch can be controlled manually from the front panel, by Radio Rack's or customer own applications through RS232, or Ethernet with API commands.

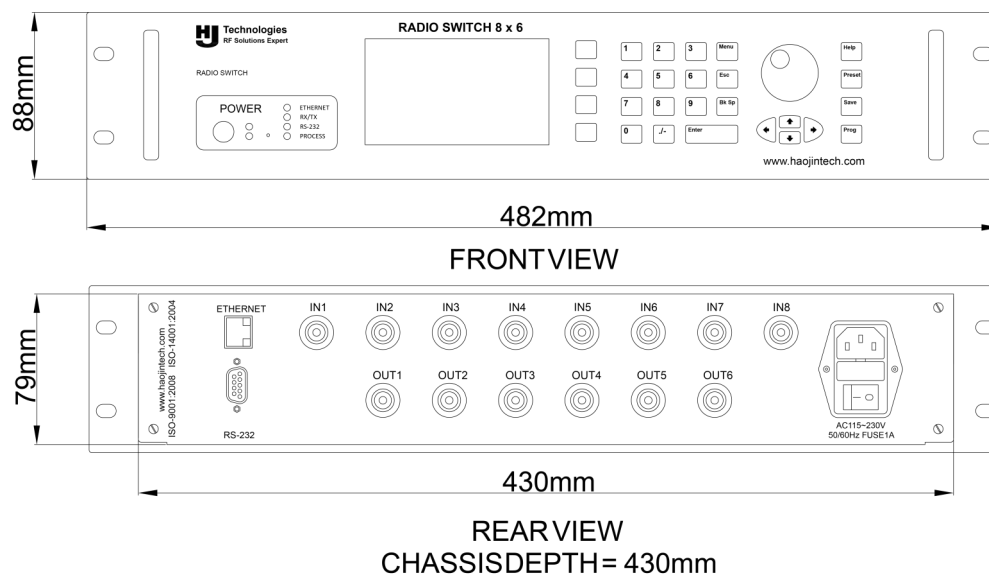
System Diagram



Specification:

Specification	Description:
Height	2U
Frequency Range	700 MHz - 3.5 GHz
Switch Channel Number	48
Impedance	50 Ω
Isolation	Max $\geq$ 120 dB
VSWR	$\leq$ 1.5
Insertion Loss	$\leq$ 23 dB
Switching Speed	2ms typical
Input Power (Ave.)	+33 dBm
Software Functions	Power Fail Safeguard, Custom Label, LAN Access Management, Run Support Script
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
Display	Color 5.6 - inch HD Touch Display
RF Input Connector	N (F)
Temperature Range	-10 to +50°C

Dimension



Radio Shifter 16 x 4 - 64



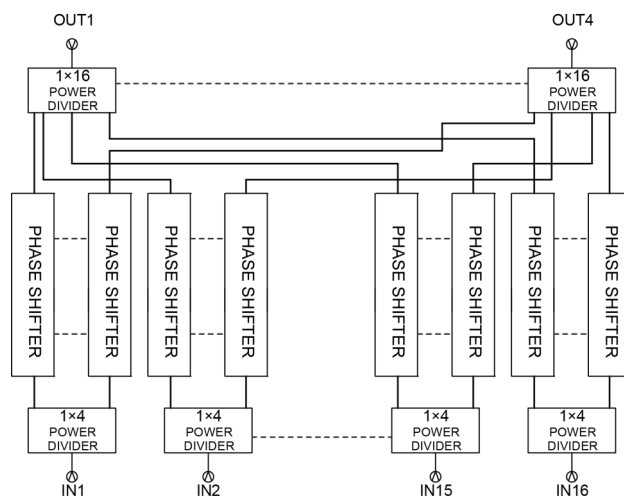
Description:

Radio Shifter 16 x 4 - 64 is suitable for lab testing by controlling 64 independent bidirectional RF channels. Users can easily simulate path phase shifter of the mobility scenarios between the sectors. The instrument supports a wide frequency range.

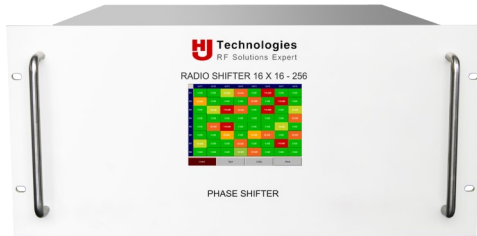
Specification:

Specification	Description:
Height	2U
Frequency Range	2.5 GHz - 3.1 GHz
Impedance	50 Ω
Phase Shift Range	360 degree, 5.625 degree per step
Phase Shift Accuracy	$\pm 1.5\%$ degree, RMS ± 1 degree
VSWR (Avg.)	1.4
Insertion Loss	≤ 24 dB
Insertion Loss Accuracy	± 1.5 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
RF Connector	N (F)
Temperature Range	-10 to +50°C

System Diagram



Radio Shifter 16 x 16 - 256



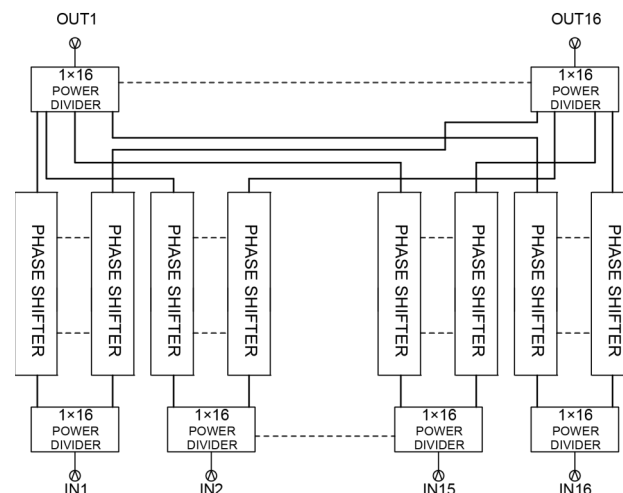
Description:

Radio Shifter 16 x 16 - 256 is suitable for lab testing by controlling 256 independent bidirectional RF channels. Users can easily simulate path phase shifter of the mobility scenarios between the sectors. The instrument supports a wide frequency range.

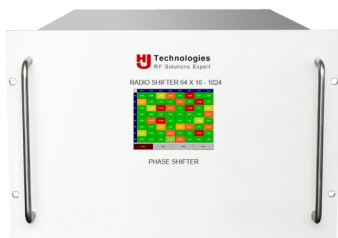
Specification:

Specification	Description:
Height	5U
Frequency Range	2.5 GHz - 3.1 GHz
Impedance	50 Ω
Phase Shift Range	360 degree, 5.625 degree per step
Phase Shift Accuracy	$\pm 1.5\%$ degree, RMS ± 1 degree
VSWR (Avg.)	1.4
Insertion Loss	≤ 30 dB
Insertion Loss Accuracy	± 1.5 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
RF Connector	N (F)
Temperature Range	-10 to +50°C

System Diagram



Radio Shifter 64 x 16 - 1024



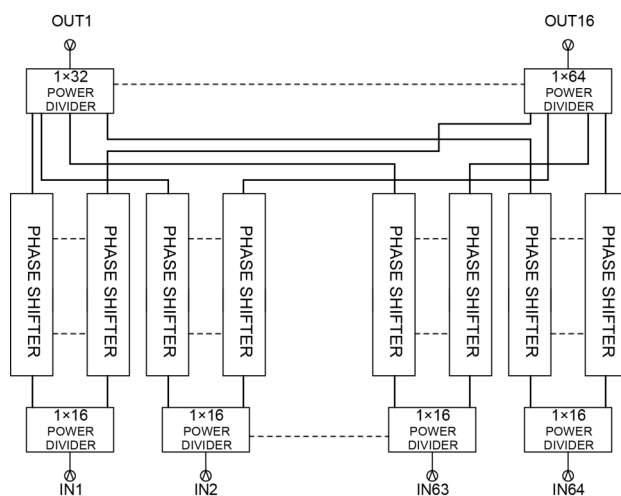
Description:

Radio Shifter 64 x 16 - 1024 is suitable for lab testing by controlling 1024 independent bidirectional RF channels. Users can easily simulate path phase shifter of the mobility scenarios between the sectors. The instrument supports a wide frequency range.

Specification:

Specification	Description:
Height	8U
Frequency Range	2.3 GHz - 3.8 GHz
Impedance	50 Ω
Phase Shift Range	360 degree, 5.625 degree per step
Phase Shift Accuracy	$\pm 1.5\%$ degree, RMS ± 1 degree
VSWR (Avg.)	1.4
Insertion Loss	≤ 38 dB
Insertion Loss Accuracy	± 1.5 dB
Input Power (Avg.)	+33 dBm
Power Supply	100 - 240 V _{AC} 50 - 60 Hz
Control Interface	RS - 232 and Ethernet
RF Connector	N (F)
Temperature Range	-10 to +50°C

System Diagram



Model Number

Radio Shifters are customized according to customer needs.

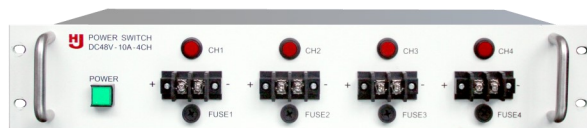
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Model	Description:
Radio Shifter 4 - 220	4 independent phase shifters
Radio Shifter 8 - 220	8 independent phase shifters
Radio Shifter 2 x 2 - 4	2 x 2 matrix system containing 4 independent phase shifters
Radio Shifter 4 x 4 - 16	4 x 4 matrix system containing 16 independent phase shifters
Radio Shifter 4 x 8 - 32	4 x 8 matrix system containing 32 independent phase shifters
Radio Shifter 4 x 12 - 48	4 x 12 matrix system containing 48 independent phase shifters
Radio Shifter 6 x 6 - 36	6 x 6 matrix system containing 36 independent phase shifters
Radio Shifter 8 x 6 - 48	8 x 6 matrix system containing 48 independent phase shifters
Radio Shifter 8 x 8 - 64	8 x 8 matrix system containing 64 independent phase shifters
Radio Shifter 9 x 9 - 81	9 x 9 matrix system containing 81 independent phase shifters
Radio Shifter 16 x 4 - 64	16 x 4 matrix system containing 64 independent phase shifters
Radio Shifter 16 x 16 - 256	16 x 16 matrix system containing 256 independent phase shifters
Radio Shifter 32 x 8 - 256	32 x 8 matrix system containing 256 independent phase shifters
Radio Shifter 64 x 16 - 1024	64 x 16 matrix system containing 1024 independent phase shifters

Features:

Radio Shifters are multi - channel digital phase shifters with high phase accuracy, low - phase - loss. Users may adjust phase shift with panel and LAN Ethernet ports on each channel. Radio Shifters are mainly used in the communications antenna and phase - controlled radar and other communication equipment.

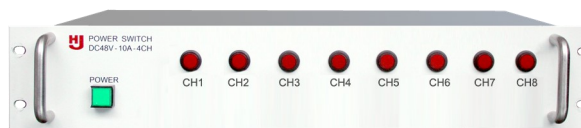
Power Switch DC Series



Features:

Power switch box is mainly used for power supply access, integration and remote control. We provide 12V, 24V, 48V DC power switch. And we have bus access mode and multi access mode to meet most of the power supply requirements. Our switch box can be controlled by applications through RS232, or Ethernet, which can be a simple and efficient remote control from the entire cabinet of the power supply.

Model DC48V - 20A - 4CH	
Dimensions	2U
Input Connector	M10 - 50A
Rated Input Voltage	36 - 55V
Max Input Current	80A
Rated Output Voltage	36 - 55V
Max Output Current	20A
Output Connector	M8 - 30A
Insulation Strength	200MΩ
Grounding Port	Positive Electrode
Max Grounding Resistance	0.1Ω
Temperature	-5°C to +45°C
Humidity (non - condensing)	5 - 95%



Model DC12V - 12A - 12CH	
Dimensions	2U
Input Connector	M12 - 150A
Rated Input Voltage	0 - 24V
Max Input Current	144A
Rated Output Voltage	0 - 24V
Max Output Current	12A
Output Connector	F87-9-7.62/F77-5-7.62
Insulation Strength	200MΩ
Grounding Port	Negative Electrode
Max Grounding Resistance	0.1Ω
Temperature	-5°C to +45°C
Humidity (non - condensing)	5 - 95%

Model DC48V - 10A - 8CH	
Dimensions	2U
Input Connector	M10 - 80A
Rated Input Voltage	36 - 55V
Max Input Current	80A
Rated Output Voltage	36 - 55V
Max Output Current	10A
Output Connector	M8 - 30A
Insulation Strength	200MΩ
Grounding Port	Positive Electrode
Max Grounding Resistance	0.1Ω
Temperature	-5°C to +45°C
Humidity (non - condensing)	5 - 95%

Power Switch AC Series

Model DC48V - 20A - 8CH	
Dimensions	2U
Input Connector	M12 - 160A
Rated Input Voltage	36 - 55V
Max Input Current	160A
Rated Output Voltage	36 - 55V
Max Output Current	20A
Output Connector	M8 - 30A
Insulation Strength	200MΩ
Grounding Port	Positive Electrode
Max Grounding Resistance	0.1Ω
Temperature	-5°C to +45°C
Humidity (non - condensing)	5 - 95%

Model DC48V - 40A - 2CH	
Dimensions	2U
Input Connector	M10 - 80A
Rated Input Voltage	36 - 55V
Max Input Current	80A
Rated Output Voltage	36 - 55V
Max Output Current	40A
Output Connector	M8 - 40A
Insulation Strength	200MΩ
Grounding Port	Positive Electrode
Max Grounding Resistance	0.1Ω
Temperature	-5°C to +45°C
Humidity (non - condensing)	5 - 95%



Features:

Power switch box is mainly used for power supply access, integration and remote control. We provide 220V access to the power switch box. And we have bus access mode and multi access mode to meet most of the power supply requirements. Our switch box can be controlled by applications through RS232, or Ethernet, which can be a simple and efficient remote control from the entire cabinet of the power supply.

Model AC220V - 12A - 8CH	
Dimensions	1U
Input Connector	IEC - C14
Rated Input Voltage	100 - 240V
Input Freq.	50 - 60 Hz
Input Voltage	±10% rated
Rated Input Power	3000W
Input Current	12A
Max Output Current	12A
Rated Output Voltage	200 - 240V
Rated Output Power	500W / Port
Temperature	-5°C to +45°C
Humidity (non - condensing)	5 - 95%

Model HJP - CD01

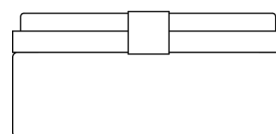
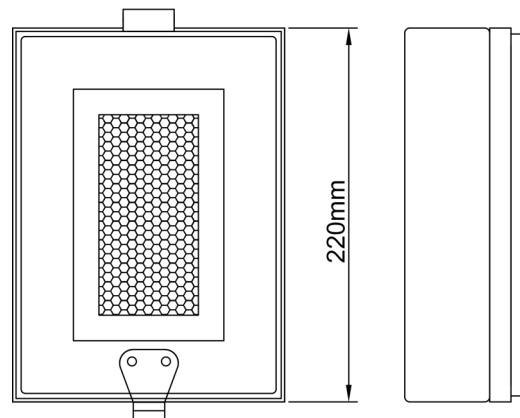
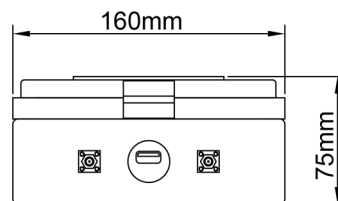
up to 6 GHz > 80 dB



Features:

- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery
- ◆ With perspective glass

Dimension:



Specification:

Operation Mode: Manual

Material: Aluminum

Size: 160 x 220 x 75(mm)

Number of Ports: USB3.0 x 1, SMA - SMA x 2

Options: Visual window x 1,

Temperature Range: -10°C to +50°C

Shielding Effectiveness

up to 6 GHz	>80 dB
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Shielding Boxes

Model HJP - CD03

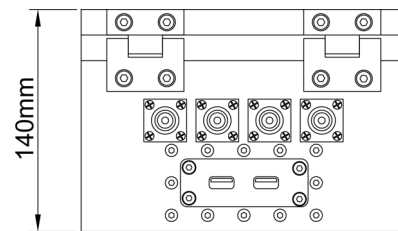
up to 6 GHz > 80 dB



Features:

- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Dimension:



Specification:

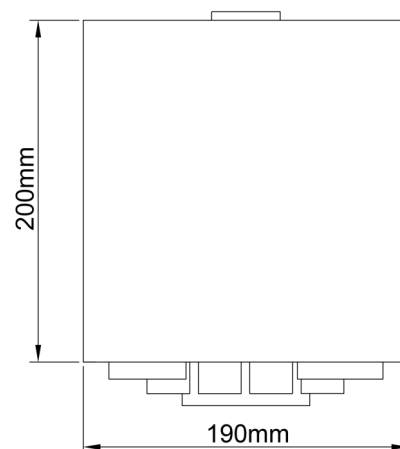
Operation Mode: Manual

Material: Aluminum

Size: 190 x 200 x 140(mm)

Number of Ports: USB3.0 x 2, 4 N - SMA x 4

Temperature Range: -10°C to +50°C



Shielding Effectiveness

up to 6 GHz	>80 dB
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Model HJP - CD05

up to 6 GHz > 80 dB



Features:

- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Specification:

Operation Mode: Manual

Material: Aluminum

Size: 250 x 300 x 170(mm)

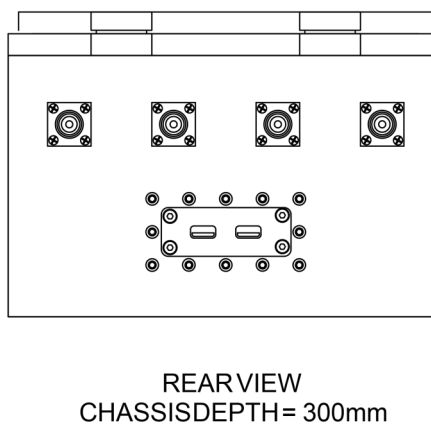
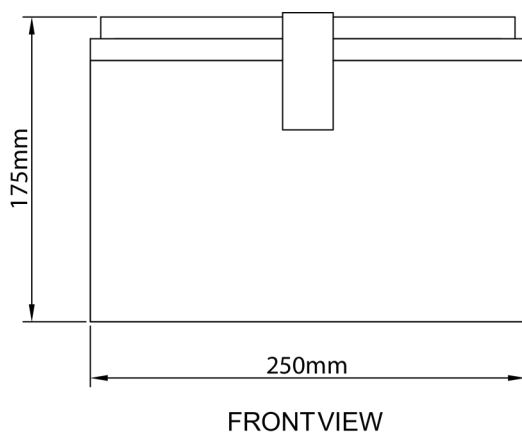
Number of Ports: USB3.0 x 2, N - SMA x 4

Temperature Range: -10°C to +50°C

Shielding Effectiveness

up to 6 GHz	>80 dB
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Dimension:



Shielding Boxes

Model HJP - CD07

up to 6 GHz > 80 dB



Features:

- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Specification:

Operation Mode: Manual

Material: Aluminum

Size: 460 x 305 x 245(mm)

Number of Ports: USB3.0 x 4, SMA - SMA x 4,
N - N x 2

Options: AC power strip x 1

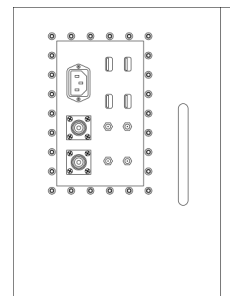
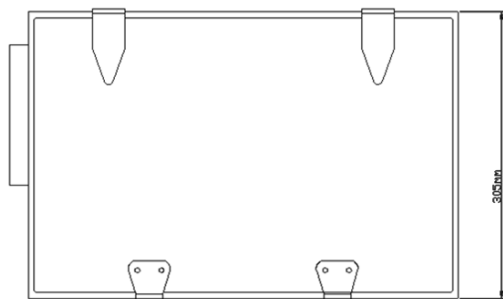
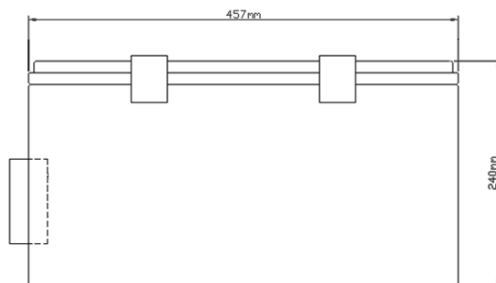
Temperature Range: -10°C to +50°C

Shielding Effectiveness

up to 6 GHz

>80 dB

Dimension:



Model HJP - CD08

up to 6 GHz > 80 dB



Features:

- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Specification:

Operation Mode: Manual

Material: Aluminum

Size: 457 x 305 x 240(mm)

Number of Ports: USB3.0 x 4, SMA - SMA x 4,

N - N x 2

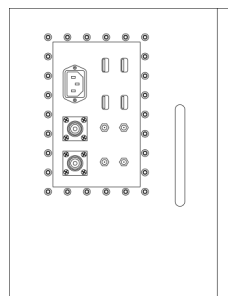
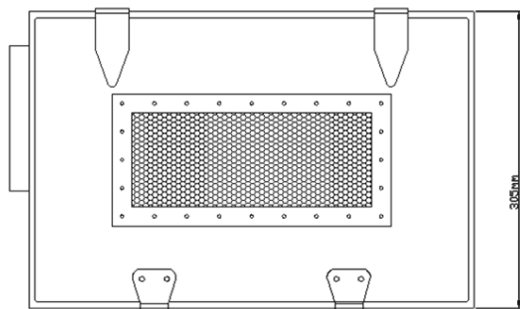
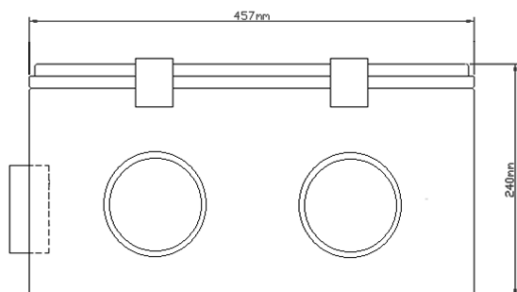
Options: AC power strip x 1, Visual window x 1, Glove x 2

Temperature Range: -10°C to +50°C

Shielding Effectiveness (Avg.)

up to 6 GHz	>80 dB
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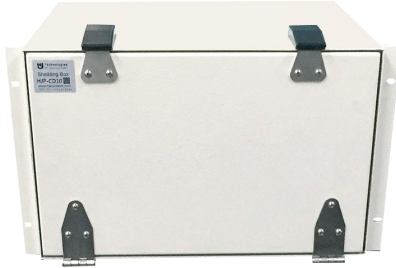
Dimension:



Shielding Boxes

Model HJP - CD10

up to 6 GHz > 80 dB



Features:

- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Specification:

Operation Mode: Manual

Material: Aluminum

Size: 436 x 280 x 350(mm)

Number of Ports: USB3.0 x 16, SMA - SMA x 2,

Options: Fan x 1

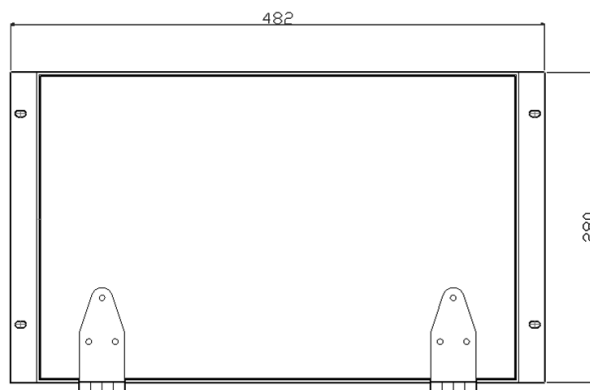
Temperature Range: -10°C to +50°C

Shielding Effectiveness

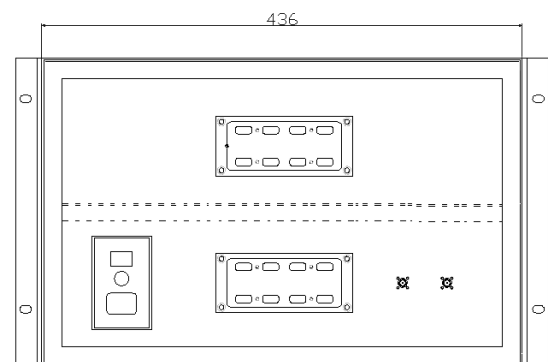
up to 6 GHz

>80 dB

Dimension:



FRONT VIEW

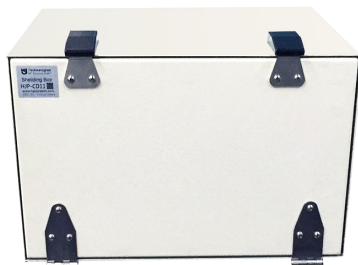


BACK VIEW

CHASSIS DEPTH = 350mm

Model HJP - CD11

up to 6 GHz > 80 dB



Specification:

Operation Mode: Manual

Material: Aluminum

Size: 435 x 300 x 345(mm)

Number of Ports: USB3.0 x 6, N - SMA x 12

Temperature Range: - 10°C to +50°C

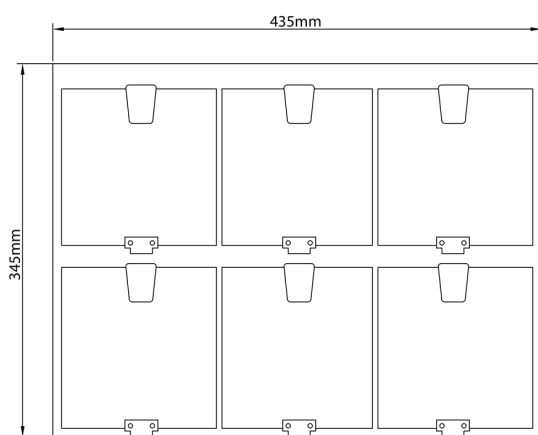
Features:

- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

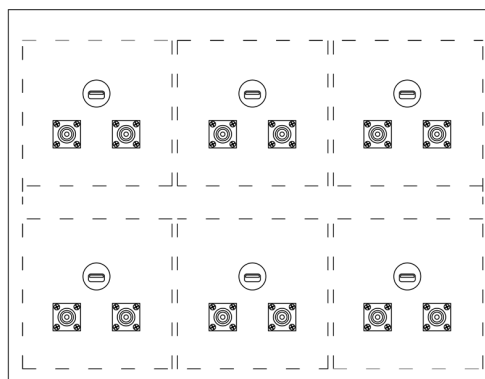
Shielding Effectiveness

up to 6 GHz	>80 dB
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Dimension:



FRONTVIEW



REAR VIEW
CHASSISDEPTH=300mm

Shielding Boxes

Model HJP - CD12

up to 6 GHz > 80 dB



Specification:

Operation Mode: Manual

Material: Aluminum

Size: 436 x 220 x 350(mm)

Number of Ports: USB3.0 x 2, N - SMA x 4

Options: AC power strip x 1, Visual window x 1,

Temperature Range: -10°C to +50°C

Features:

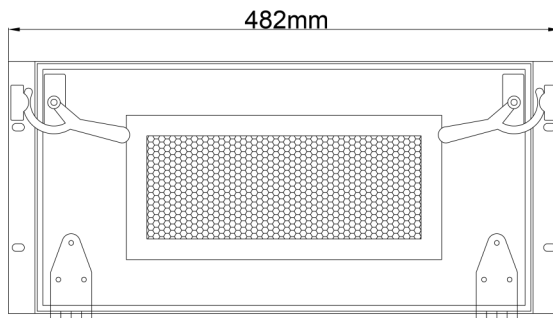
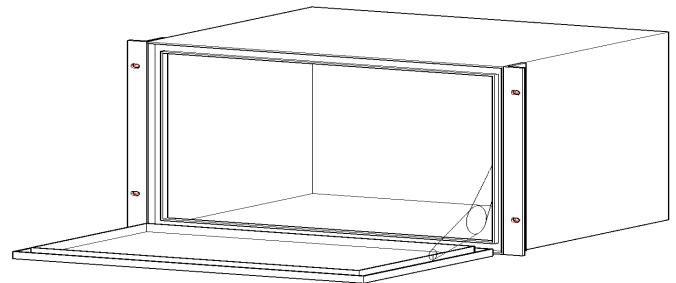
- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Shielding Effectiveness

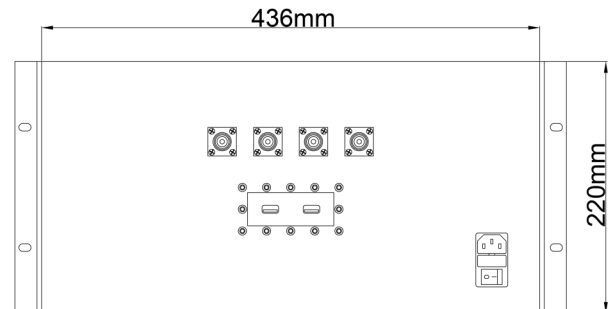
up to 6 GHz

>80 dB

Dimension:



FRONT VIEW



REAR VIEW
CHASSIS DEPTH= 350mm

Model HJP - CD12B

up to 6 GHz > 80 dB



Number of Ports: USB3.0 x 4, N - SMA x 4,

Options: AC power strip x 1, Visual window x 1,
diamond white ambient lighting

Temperature Range: -10°C to +50°C

Features:

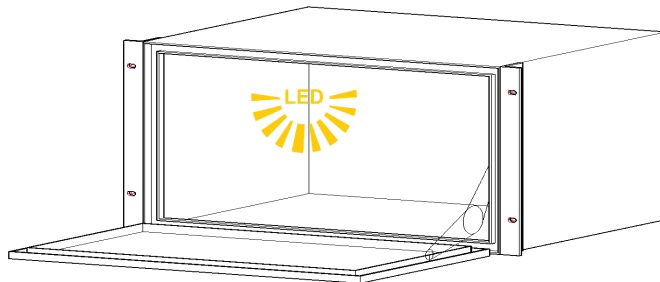
- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Specification:

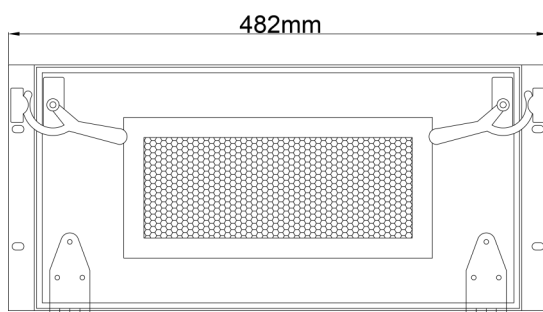
Operation Mode: Manual

Material: Aluminum

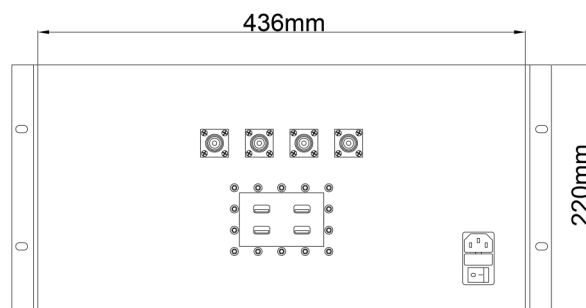
Size: 436 x 220 x 350(mm)



Dimension:



FRONT VIEW



REAR VIEW
CHASSIS DEPTH= 350mm

Shielding Boxes

Model HJP - CD30

up to 6 GHz > 80 dB



Number of Ports: USB3.0 x 4, N - SMA x 4,
USB charging port x 30

Options: AC power strip x 1, Visual window x 1,
Fan x 2, Diamond white ambient lighting, Cellphone
holder x 30

Temperature Range: -10°C to +50°C

Features:

- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Specification:

Operation Mode: Manual

Material: Aluminum

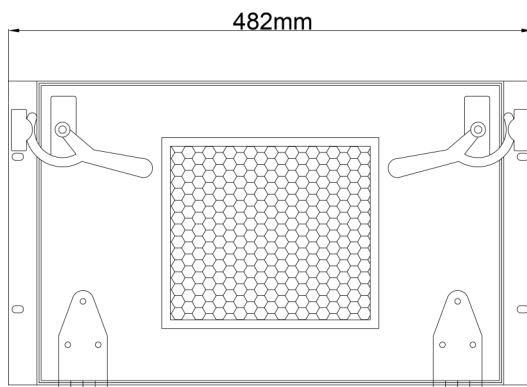
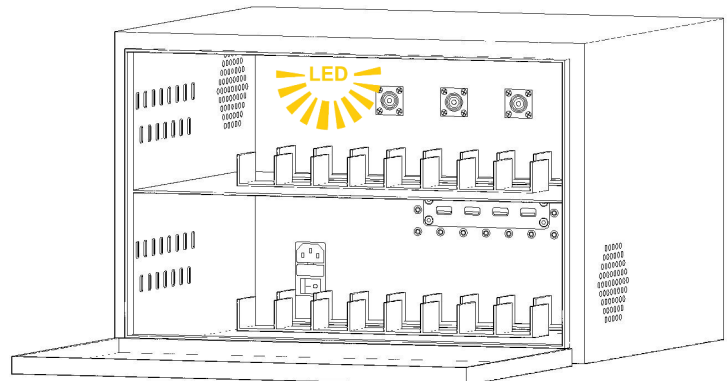
Size: 436 x 280 x 350(mm)

Dimension:

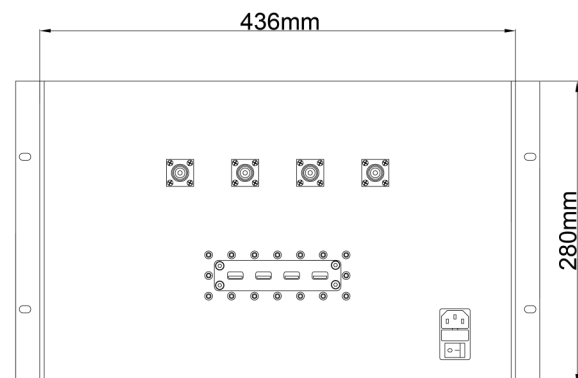
Shielding Effectiveness

up to 6 GHz

>80 dB



FRONT VIEW



REAR VIEW
CHASSIS DEPTH= 350mm

Model HJP - CD22

up to 6 GHz > 80 dB



Number of Ports: 64 USB, 16 N - SMA

Options: AC power strip x 8, Visual window x 1,
Diamond white ambient lighting

Temperature Range: -10°C to +50°C

Shielding Effectiveness

up to 6 GHz	>80 dB
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Features:

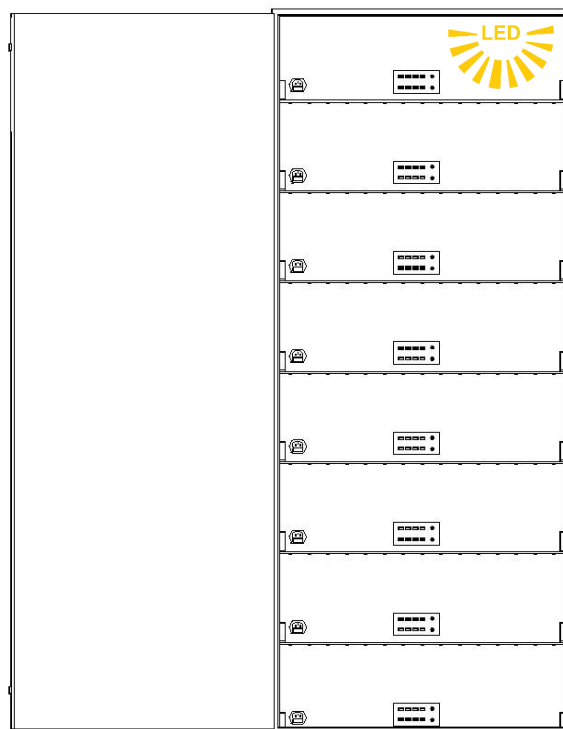
- ◆ Wireless Communication Test, EMI Test, Coupling Test, RF Function Test
- ◆ High quality, cost effective and fast delivery

Specification:

Operation Mode: Manual

Material: Aluminum

Size: 800 x 600 x 2000(mm)



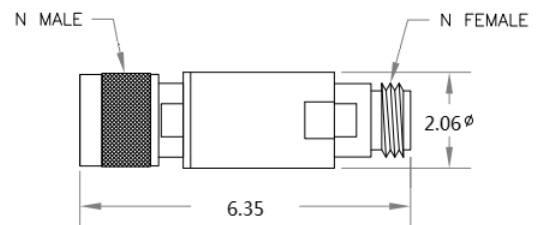
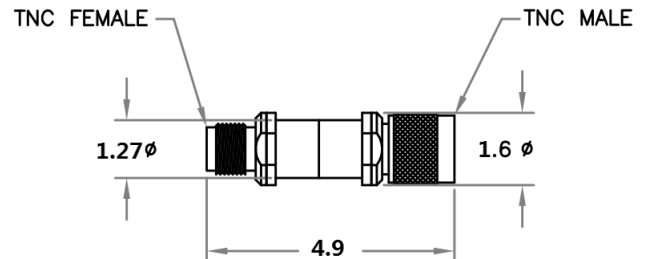
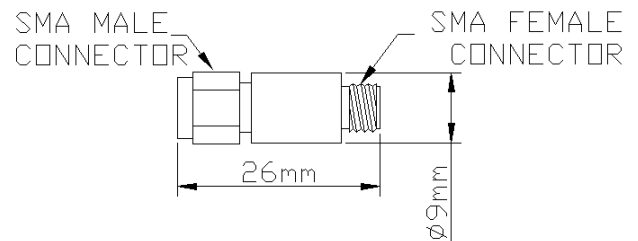
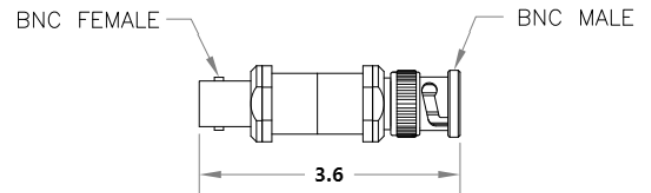
Fixed Attenuators

Model HJA2 BNC, N, SMA or TNC Connectors

dc to 6, 8, 12 GHz
2 Watts



Dimension:



Specification:

MAXIMUM DEVIATION			
Nominal ATT	6G	8G	12G
1 - 10 dB	±0.5	±0.5	±0.5
11 - 20 dB	±0.5	±0.5	±0.5
21 - 30 dB	±0.5	±0.5	±0.5
31 - 40 dB	±0.7	±0.7	±0.7

MAXIMUM VSWR			
Model	6G	8G	12G
VSWR	1.3	1.3	1.35

Nominal Impedance: 50Ω

Power Rating: 2 watts average

Temperature Range: -55°C to +125°C

Connectors: BNC, N, SMA or TNC

Construction: Stainless steel / aluminum alloy body

Model Number Description:

Example:

HJA2 - SMA - XXDB - XG

Basic Model Number Connector Attenuation Freq.

Model HJA30
BNC, N, SMA or TNC Connectors

dc to 3, 4, 6 GHz
30 Watts



Nominal Impedance: 50Ω

Power Rating: 30 watts average

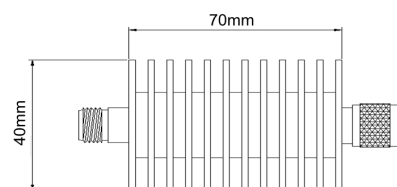
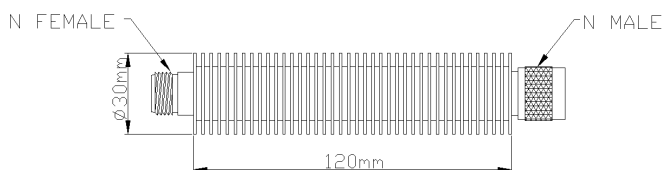
Temperature Range: -55°C to +125°C

Connectors: BNC, N, SMA, TNC or 7/16

Construction: Stainless steel / aluminum alloy body

Dimension:

Dimension:



Specification:

MAXIMUM DEVIATION			
Nominal ATT	3G	4G	6G
1 - 10 dB	±0.5	±0.5	±0.5
11 - 20 dB	±0.7	±0.7	±0.7
21 - 30 dB	±1.0	±1.0	±1.0
31 - 40 dB	±1.2	±1.2	±1.2

MAXIMUM VSWR			
Model	3G	4G	6G
VSWR	1.2	1.25	1.35

Model Number Description:

Example:

HJA30 - N - XXDB - XG

Basic Model Number Connector Attenuation Freq.

Fixed Attenuators

Model HJA50 BNC, N, SMA or TNC Connectors

dc to 2.5, 4, 6 GHz
50 Watts



Nominal Impedance: 50Ω

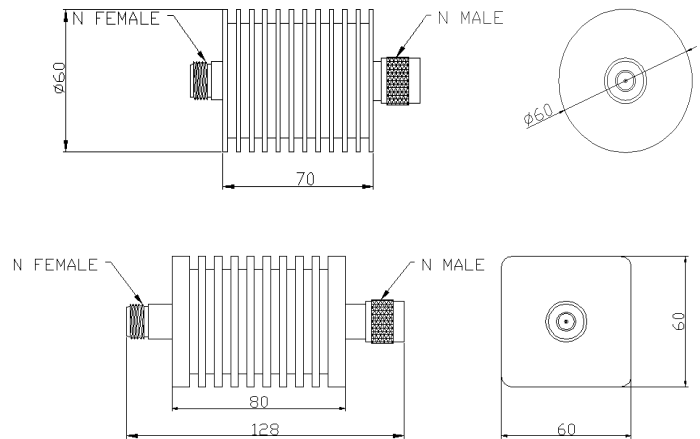
Power Rating: 50 watts average

Temperature Range: -55°C to +125°C

Connectors: BNC, N, SMA, TNC or 7/16

Construction: Stainless steel / aluminum alloy body

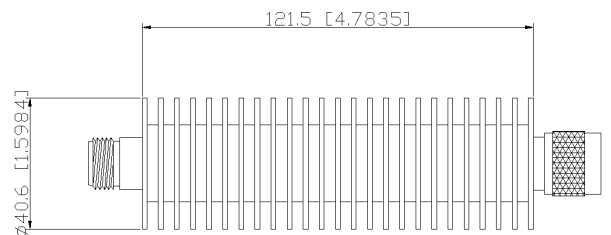
Dimension:



Specification:

MAXIMUM DEVIATION			
Nominal ATT	2.5G	4G	6G
1 - 10 dB	±0.5	±0.5	±0.5
11 - 20 dB	±0.7	±0.7	±0.7
21 - 30 dB	±1.0	±1.0	±1.0
31 - 40 dB	±1.2	±1.2	±1.2

MAXIMUM VSWR			
Model	2.5G	4G	6G
VSWR	1.2	1.25	1.35



Model Number Description:

Example:

HJA50 - N - XXDB - XG

Basic Model Number Connector Attenuation Freq.

Model HJA60
BNC, N, SMA or TNC Connectors

dc to 4, 6 GHz
60 Watts



Nominal

Impedance: 50Ω

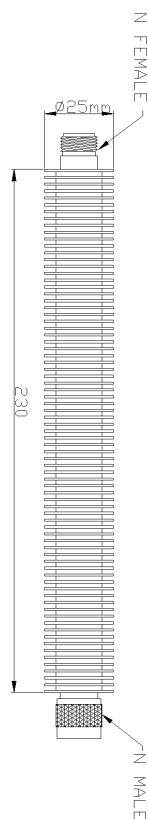
Power Rating: 60 watts average

Temperature Range: -55°C to +125°C

Connectors: BNC, N, SMA, TNC or 7/16

Construction: Stainless steel / aluminum alloy

Dimension:



Specification:

MAXIMUM DEVIATION		
Nominal ATT	4G	6G
1 - 10 dB	±0.5	±0.5
11 - 20 dB	±0.7	±0.7
21 - 30 dB	±1.0	±1.0
31 - 40 dB	±1.2	±1.2

MAXIMUM VSWR		
Model	4G	6G
VSWR	1.25	1.35

Model Number Description:

Example:

HJA60 - N - XXDB - XG

Basic Model Number Connector Attenuation Freq.

Fixed Attenuators

Model HJA100 BNC, N, SMA or TNC Connectors

dc to 3, 4, 12 GHz
100 Watts



Nominal Impedance: 50Ω

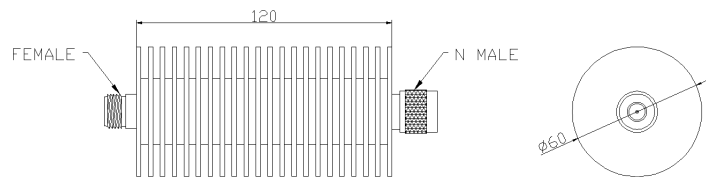
Power Rating: 100 watts average

Temperature Range: -55°C to +125°C

Connectors: BNC, N, SMA, TNC or 7/16

Construction: Stainless steel / aluminum alloy

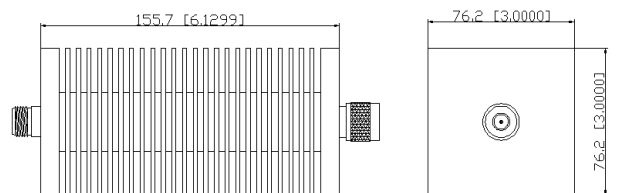
Dimension:



Specification:

MAXIMUM DEVIATION			
Nominal ATT	3G	4G	12G
1 - 10 dB	±0.5	±0.5	±0.5
11 - 20 dB	±0.7	±0.7	±0.7
21 - 30 dB	±1.0	±1.0	±1.0
31 - 40 dB	±1.2	±1.2	±1.2

MAXIMUM VSWR			
Model	3G	4G	12G
VSWR	1.2	1.25	1.35



Model Number Description:

Example:

HJA100 - N - XXDB - XG

Basic Model Number Connector Attenuation Freq.

Model HJA150
BNC, N, SMA or TNC Connectors

dc to 4, 10, 18 GHz
150 Watts



Nominal Impedance: 50Ω

Power Rating: 150 watts average

Temperature Range: -55°C to +125°C

Connectors: BNC, N, SMA, TNC or 7/16

Construction: Stainless steel / aluminum alloy body

Dimension:



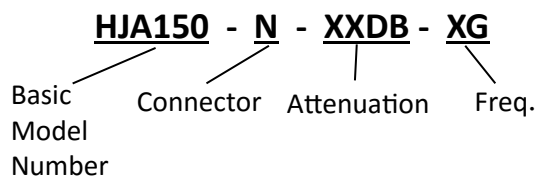
Specification:

MAXIMUM DEVIATION

Nominal ATT	4G	10G	18G
1 - 10 dB	±0.5	±0.5	±0.5
11 - 20 dB	±0.7	±0.7	±0.7
21 - 30 dB	±1.0	±1.0	±1.0
31 - 40 dB	±1.2	±1.2	±1.2

Model Number Description:

Example:



MAXIMUM VSWR

Model	4G	10G	18G
VSWR	1.2	1.25	1.35

Fixed Attenuators

Model HJA200 BNC, N, SMA or TNC Connectors

dc to 4, 6, 8 GHz
200 Watts



Nominal Impedance: 50Ω

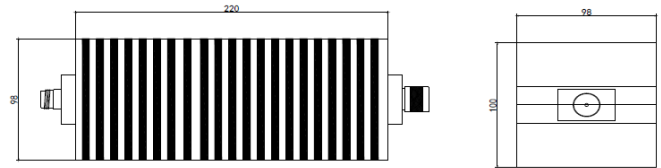
Power Rating: 200 watts average

Temperature Range: -55°C to +125°C

Connectors: BNC, N, SMA, TNC or 7/16

Construction: Stainless steel / aluminum alloy body

Dimension:



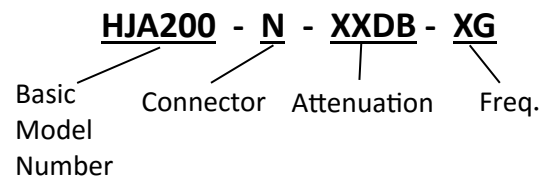
Specification:

MAXIMUM DEVIATION			
Nominal ATT	4G	6G	8G
1 - 10 dB	±0.5	±0.5	±0.5
11 - 20 dB	±0.7	±0.7	±0.7
21 - 30 dB	±1.0	±1.0	±1.0
31 - 40 dB	±1.2	±1.2	±1.2

MAXIMUM VSWR			
Model	4G	6G	8G
VSWR	1.2	1.25	1.35

Model Number Description:

Example:



Model HJL - S - 2W
SMA Connector

dc to 6 GHz
2 Watts



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

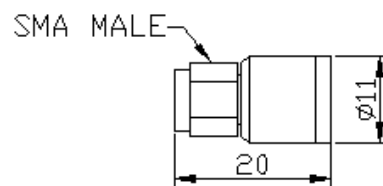
Power Rating: 2 watts average

Temperature Range: -55°C to +125°C

Connectors: SMA connector

Construction: Stainless steel / aluminum alloy
body

Dimension:



Specification:

Nominal Impedance: 50Ω

Frequency Range: dc to 6 GHz

MAXIMUM VSWR	
Model	HJL - S - 2W
VSWR	1.15

Terminations

Model HJL - N - 5W N Connector

dc to 6 GHz
5 Watts



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Power Rating: 5 watts average

Temperature Range: -55°C to +125°C

Connectors: N connector

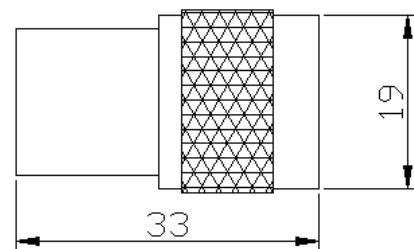
Construction: Stainless steel / aluminum alloy
body

Dimension:

Specification:

Nominal Impedance: 50Ω

Frequency Range: dc to 6 GHz



MAXIMUM VSWR	
Model	HJL - N - 5W
VSWR	1.25

Model HJL - N - 20W
N Connector

dc to 3 GHz
20 Watts



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Power Rating: 20 watts average

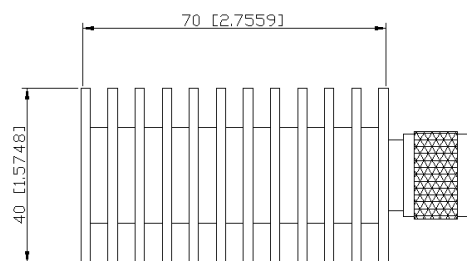
Peak Power: 1000 watts average

Temperature Range: -55°C to +125°C

Connectors: N connector

Construction: Stainless steel / aluminum alloy body

Dimension:



Specification:

Nominal Impedance: 50Ω

Frequency Range: dc to 3 GHz

MAXIMUM VSWR	
Model	HJL - N - 20W
VSWR	1.15

Terminations

Model HJL - N - 30W N Connector

dc to 3 GHz
30 Watts



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Power Rating: 30 watts average

Peak Power: 1000 watts average

Temperature Range: -55°C to +125°C

Connectors: N connector

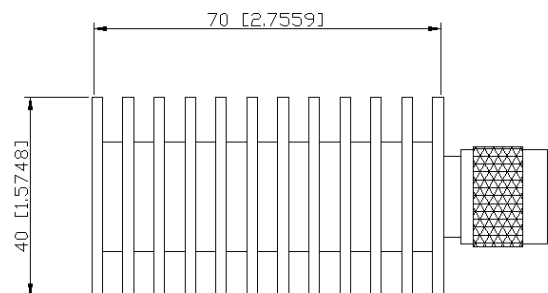
Construction: Stainless steel / aluminum alloy
body

Dimension:

Specification:

Nominal Impedance: 50Ω

Frequency Range: dc to 3 GHz



MAXIMUM VSWR

Model	HJL - N - 30W
VSWR	1.12

Model HJL - N - 200W
N Connector

dc to 3 GHz
200 Watts



Power Rating: 200 watts average

Peak Power: 1200 watts average

Temperature Range: -55°C to +125°C

Connectors: N connector

Construction: Stainless steel / aluminum alloy
body

Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

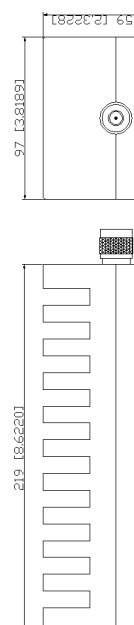
Dimension:

Specification:

Nominal Impedance: 50Ω

Frequency Range: dc to 3 GHz

MAXIMUM VSWR	
Model	HJL - N - 200W
VSWR	1.15



Variable Attenuators

Model MVA - N - XX - 1/MVA - S - XX - 1

DC to 4 GHz

Manual Variable Attenuator

2 Watts



Features:

- ◆ **Widest Selection of Attenuation Ranges & Step Sizes**
- ◆ **Available Models:**
- ◆ **High quality, cost effective and fast delivery**

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 4 GHz

Insertion Loss: 0.8 dB maximum

Maximum Input Power: 2W

VSWR: 1.3

Isolation: 20 dB minimum

ATTENUATION ACCURACY

Attenuation Range	Accuracy
0 - 10 dB	$\leq \pm 0.2$ dB
11 - 60 dB	$\leq \pm 0.5$ dB
61 - 70 dB	$\leq \pm 1.2$ dB
71 - 100 dB	$\leq \pm 3$ dB

Number

of Ports: 1 input and 1 output

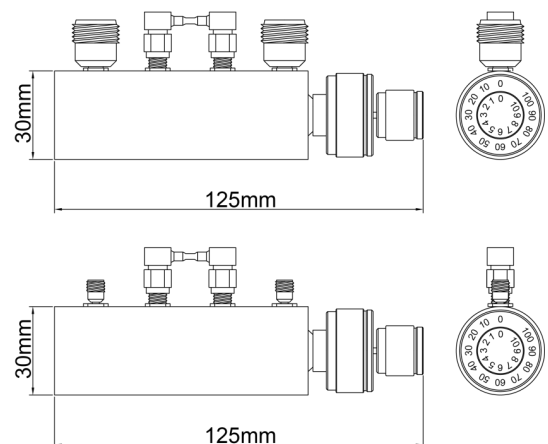
Temperature Range: -20°C to +90°C

Connectors: N or SMA

CONFIGURATIONS

Model	Attenuation Range (dB)	Steps (dB)
MVA - N - 30 - 1	0 - 30	1
MVA - N - 60 - 1	0 - 60	1
MVA - N - 90 - 1	0 - 90	1
MVA - N - 100 - 1	0 - 100	1
MVA - S - 30 - 1	0 - 30	1
MVA - S - 60 - 1	0 - 60	1
MVA - S - 90 - 1	0 - 90	1
MVA - S - 100 - 1	0 - 100	1

Dimension:



Model MVA - X - 100 - 10
Manual Variable Attenuator

DC to 4 GHz
2 Watts



Number of Ports: 1 input and 1 output

Temperature Range: -20°C to +90°C

Connectors: N or SMA

Features:

- ◆ **Widest Selection of Attenuation Ranges & Step Sizes**
- ◆ **Available Models:**
- ◆ **High quality, cost effective and fast delivery**

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 4 GHz

Insertion Loss: 0.8 dB maximum

Maximum Input Power: 2W

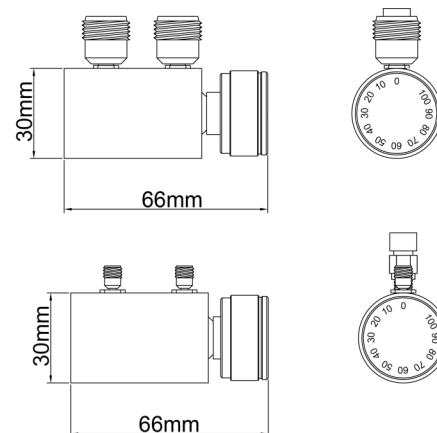
VSWR: 1.3

Isolation: 20 dB minimum

CONFIGURATIONS

Model	Attenuation Range (dB)	Steps (dB)
MVA - N - 60 - 10	0 - 60	10
MVA - N - 90 - 10	0 - 90	10
MVA - N - 100 - 10	0 - 100	10
MVA - S - 60 - 10	0 - 60	10
MVA - S - 90 - 10	0 - 90	10
MVA - S - 100 - 10	0 - 100	10

Dimension:



ATTENUATION ACCURACY

Attenuation Range	Accuracy
0 - 10 dB	$\leq \pm 0.2$ dB
11 - 60 dB	$\leq \pm 0.5$ dB
61 - 70 dB	$\leq \pm 1.2$ dB
71 - 100 dB	$\leq \pm 3$ dB

Variable Attenuators

Model PBVA - N - 90 - 1 Push Button Variable Attenuator

700 MHz to 2.5 GHz
5 Watts



Number of Ports: 1 input and 1 output

Temperature Range: - 10°C to +50°C

Connectors: N female connectors all ports

Features:

- ◆ Widest Selection of Attenuation Ranges & Step Sizes
- ◆ Available Models:
- ◆ High quality, cost effective and fast delivery

CELL CONFIGURATIONS

Model	Attenuation Range (dB)	Steps (dB)
PBVA-N-90-1	0 - 90	1,2,4,8,16,20,20,20 dB

Dimension:

Specification:

Nominal Impedance: 50Ω

Frequency Range: 700 MHz to 2.5 GHz

Insertion Loss: 3.5 dB maximum

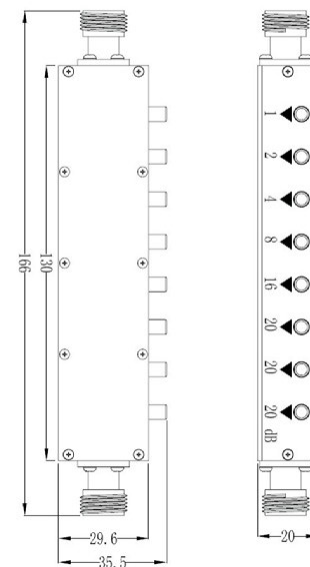
Maximum Input Power: 5W

VSWR: 1.4

Isolation: 20 dB minimum

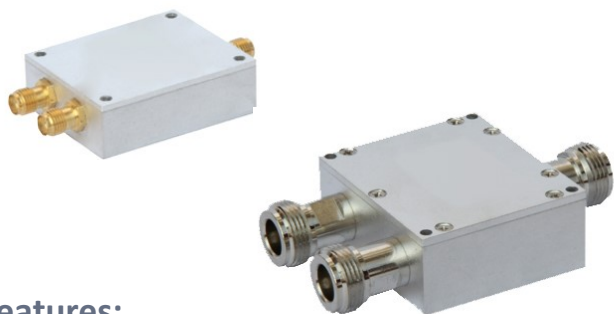
ATTENUATION ACCURACY (SINGLE KEY)

0 - 8	$\leq \pm 0.9$ dB
10 - 20 dB	$\leq \pm 2$ dB



Model HJPD - 2X - 1X

2 - Way



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Isolation: ≥ 20 dB

Number of Ports: 1 input and 2 outputs

Connectors: SMA Female or N Female

Temperature Range: -40°C to +70°C

700 MHz to 3 GHz

700 MHz to 4 GHz

600 MHz to 6 GHz

Model HJPD - 2S - 1S - 0.7/4

Freq. GHz	0.7 - 4
Insertion Loss	≤ 3.6 dB
Amplitude Balance	±0.3 dB
Phase Balance	±3°
VSWR	1.25
Max. power	10W

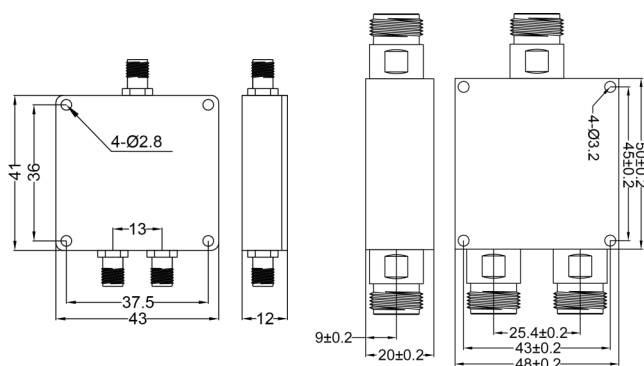
Model HJPD - 2X - 1X - 0.6/6

Freq. GHz	0.6 - 6
Insertion Loss	≤ 4 dB
Amplitude Balance	±0.4 dB
Phase Balance	±4°
VSWR	1.4
Max. power	10W

Model HJPD - 2X - 1X - 0.7/3

Freq. GHz	0.7 - 3
Insertion Loss	≤ 3.6 dB
Amplitude Balance	±0.3 dB
Phase Balance	±3°
VSWR	1.25
Max. power	10W

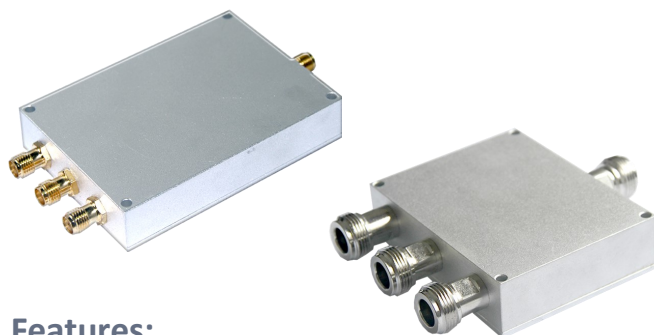
Dimension:



Power Dividers

Model HJPD - 3X - 1X

3 - Way



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Number of Ports: 1 input and 3 outputs

Connectors: SMA Female or N Female

Temperature Range: -40°C to +70°C

Model HJPD - 3X - 1X - 0.7/3

Freq. GHz	0.7 - 3
Insertion Loss	≤ 5.6 dB
Amplitude Balance	±0.8 dB
Phase Balance	±8°
VSWR	1.5
Max. power	10W
Isolation	≥ 20 dB

700 MHz to 3 GHz

700 MHz to 4 GHz

600 MHz to 6 GHz

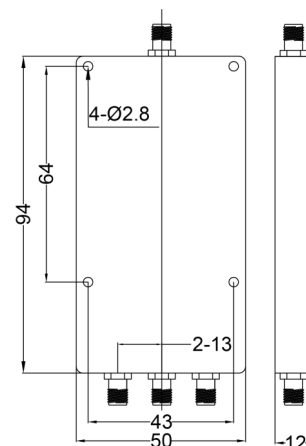
Model HJPD - 3S - 1S - 0.7/4

Freq. GHz	0.7 - 4
Insertion Loss	≤ 5.6 dB
Amplitude Balance	±0.8 dB
Phase Balance	±8°
VSWR	1.5
Max. power	10W
Isolation	≥ 20 dB

Model HJPD - 3N- 1N - 0.6/6

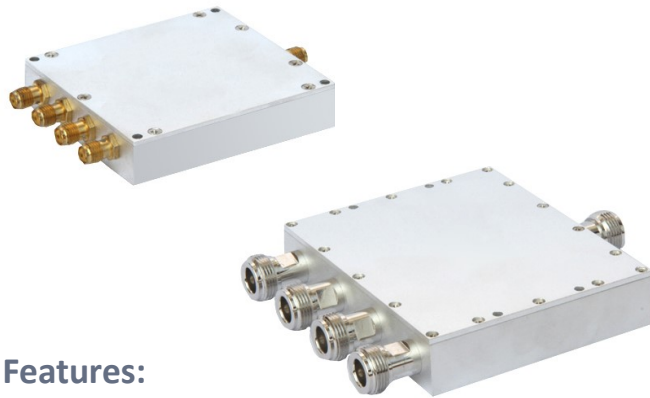
Freq. GHz	0.6 - 6
Insertion Loss	≤ 8 dB
Amplitude Balance	±0.6 dB
Phase Balance	±10°
VSWR	1.5
Max. power	10W
Isolation	≥ 16 dB

Dimension:



Model HJPD - 4X - 1X

4 - Way



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Number of Ports: 1 input and 4 outputs

Connectors: SMA Female or N Female

Temperature Range: -40°C to +70°C

Model HJPD - 4X - 1X - 0.7/3

Freq. GHz	0.7 - 3
Insertion Loss	≤ 6.8 dB
Amplitude Balance	±0.4 dB
Phase Balance	±4°
VSWR	1.25
Max. power	10W
Isolation	≥ 20 dB

700 MHz to 3 GHz

700 MHz to 4 GHz

600 MHz to 6 GHz

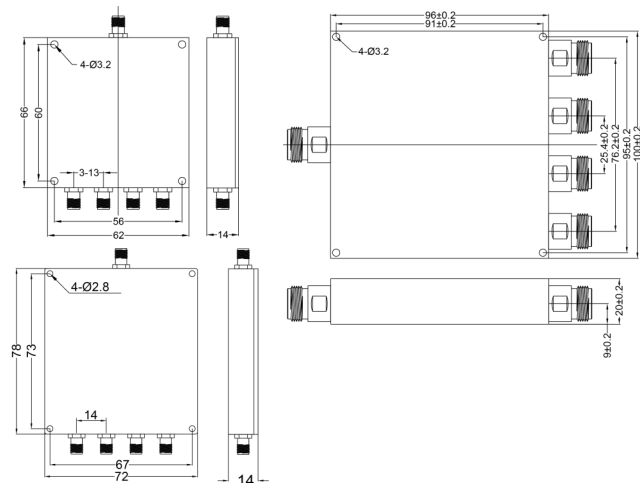
Model HJPD - 4S - 1S - 0.7/4

Freq. GHz	0.7 - 4
Insertion Loss	≤ 7.4 dB
Amplitude Balance	±0.5 dB
Phase Balance	±5°
VSWR	1.3
Max. power	10W
Isolation	≥ 20 dB

Model HJPD - 4N - 1N - 0.6/6

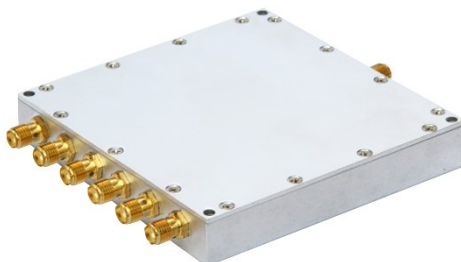
Freq. GHz	0.6 - 6
Insertion Loss	≤ 8.2 dB
Amplitude Balance	±0.5 dB
Phase Balance	±5°
VSWR	1.4
Max. power	20W
Isolation	≥ 20 dB

Dimension:



Power Dividers

Model HJPD - 6X - 1X 6 - Way



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Number of Ports: 1 input and 6 outputs

Connectors: SMA Female or N Female

Temperature Range: -40°C to +70°C

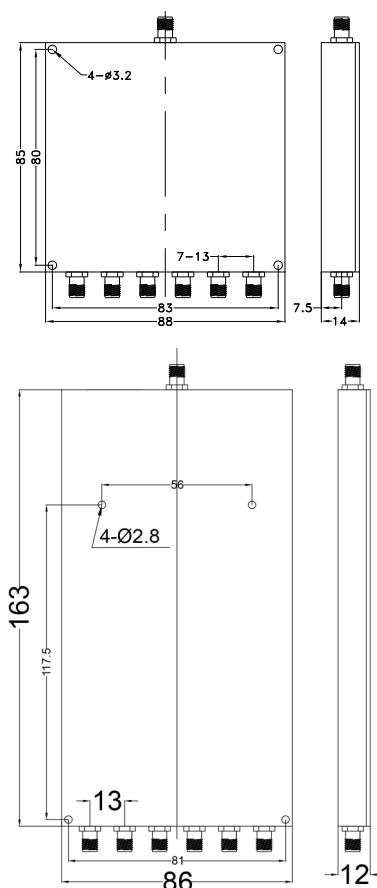
Model HJPD - 6X - 1X - 0.7/3	
Freq. GHz	0.7 - 3
Insertion Loss	≤ 9 dB
Amplitude Balance	±0.8 dB
Phase Balance	±10°
VSWR	1.4
Max. power	10W
Isolation	≥ 20 dB

700 MHz to 3 GHz
700 MHz to 4 GHz

Model HJPD - 6S - 1S - 0.7/4

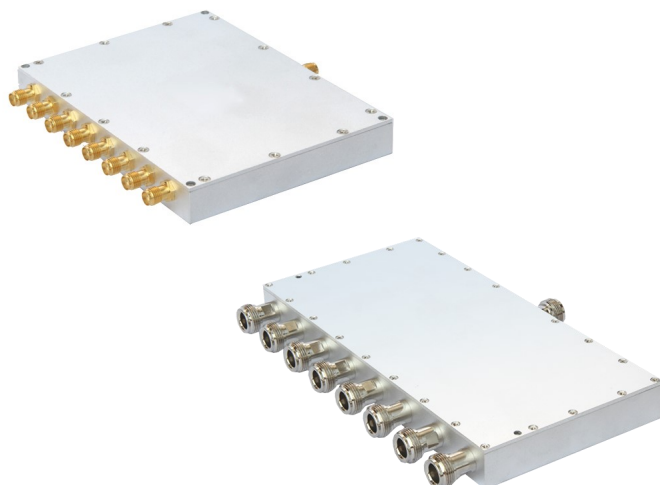
Freq. GHz	0.7 - 4
Insertion Loss	≤ 9.4 dB
Amplitude Balance	±0.8 dB
Phase Balance	±10°
VSWR	1.5
Max. power	10W
Isolation	≥ 20 dB

Dimension:



Model HJPD - 8X - 1X
8 - Way

700 MHz to 3 GHz
700 MHz to 4 GHz
600 MHz to 6 GHz



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Number of Ports: 1 input and 8 outputs

Connectors: SMA Female or N Female

Temperature Range: -40°C to +70°C

Model HJPD - 8X - 1X - 0.7/3

Freq. GHz	0.7 - 3
Insertion Loss	≤ 10.4 dB
Amplitude Balance	±0.5 dB
Phase Balance	±4°
VSWR	1.25
Max. power	10W
Isolation	≥ 20 dB

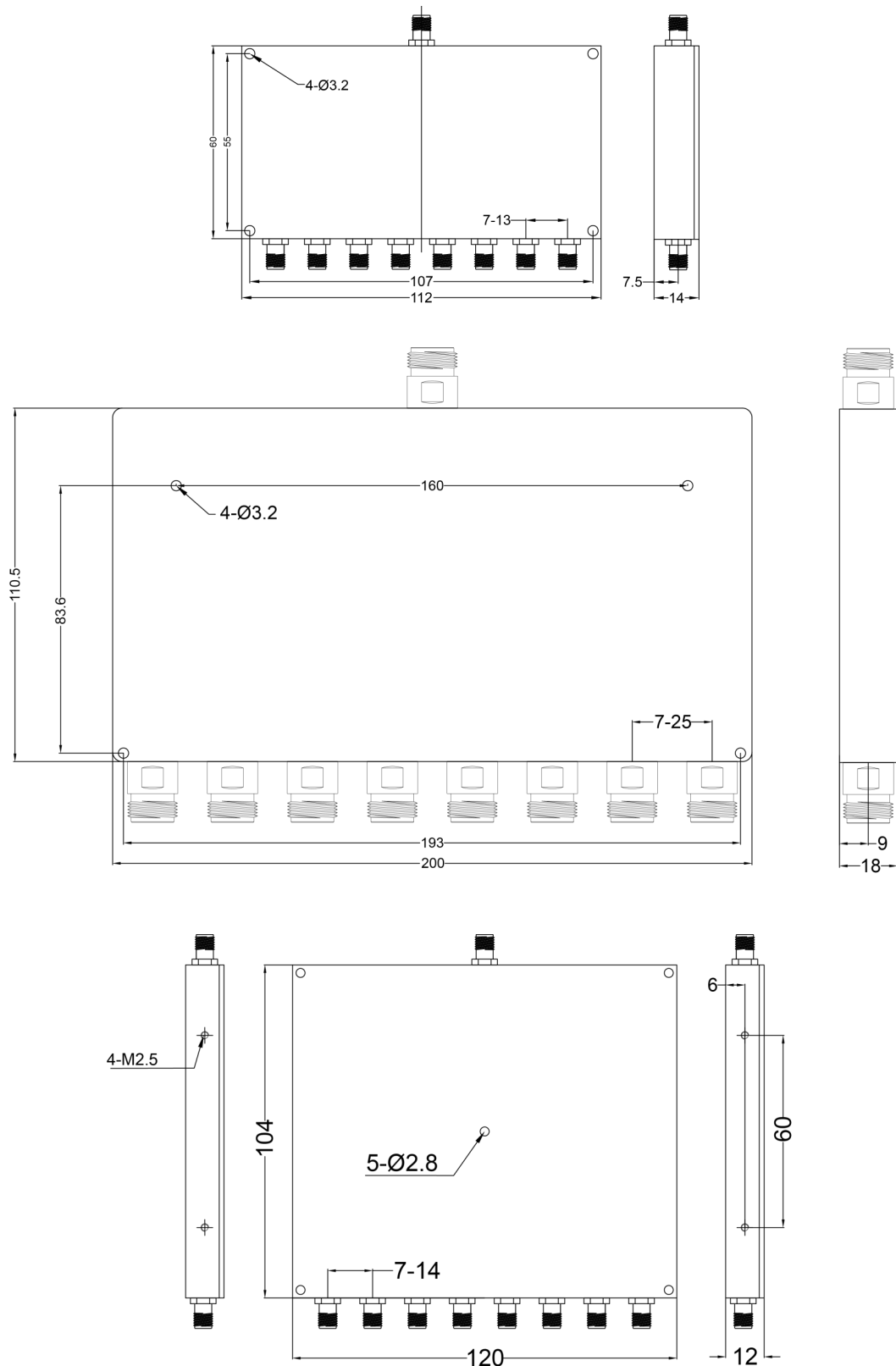
Model HJPD - 8S - 1S - 0.7/4

Freq. GHz	0.7 - 4
Insertion Loss	≤ 10.6 dB
Amplitude Balance	±0.5 dB
Phase Balance	±6°
VSWR	1.4
Max. power	10W
Isolation	≥ 20 dB

Model HJPD - 8N - 1N - 0.6/6

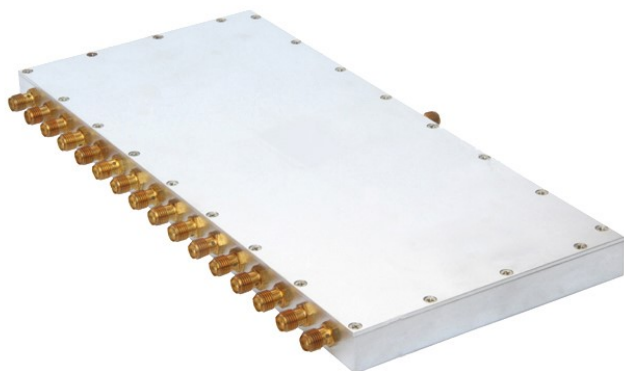
Freq. GHz	0.6 - 6
Insertion Loss	≤ 11.8 dB
Amplitude Balance	±0.5 dB
Phase Balance	±5°
VSWR	1.5
Max. power	10W
Isolation	≥ 18 dB

Dimension:



Model HJPD - 16X - 1X
16 - Way

700 MHz to 3 GHz
700 MHz to 4 GHz
2 GHz to 6 GHz



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Number of Ports: 1 input and 16 outputs

Connectors: SMA Female or N Female

Temperature Range: -40°C to +70°C

Model HJPD - 16X - 1X - 0.7/3

Freq. GHz	0.7 - 3
Insertion Loss	≤ 14.3 dB
Amplitude Balance	±0.5 dB
Phase Balance	±12°
VSWR	1.4
Max. power	10W
Isolation	≥ 20 dB

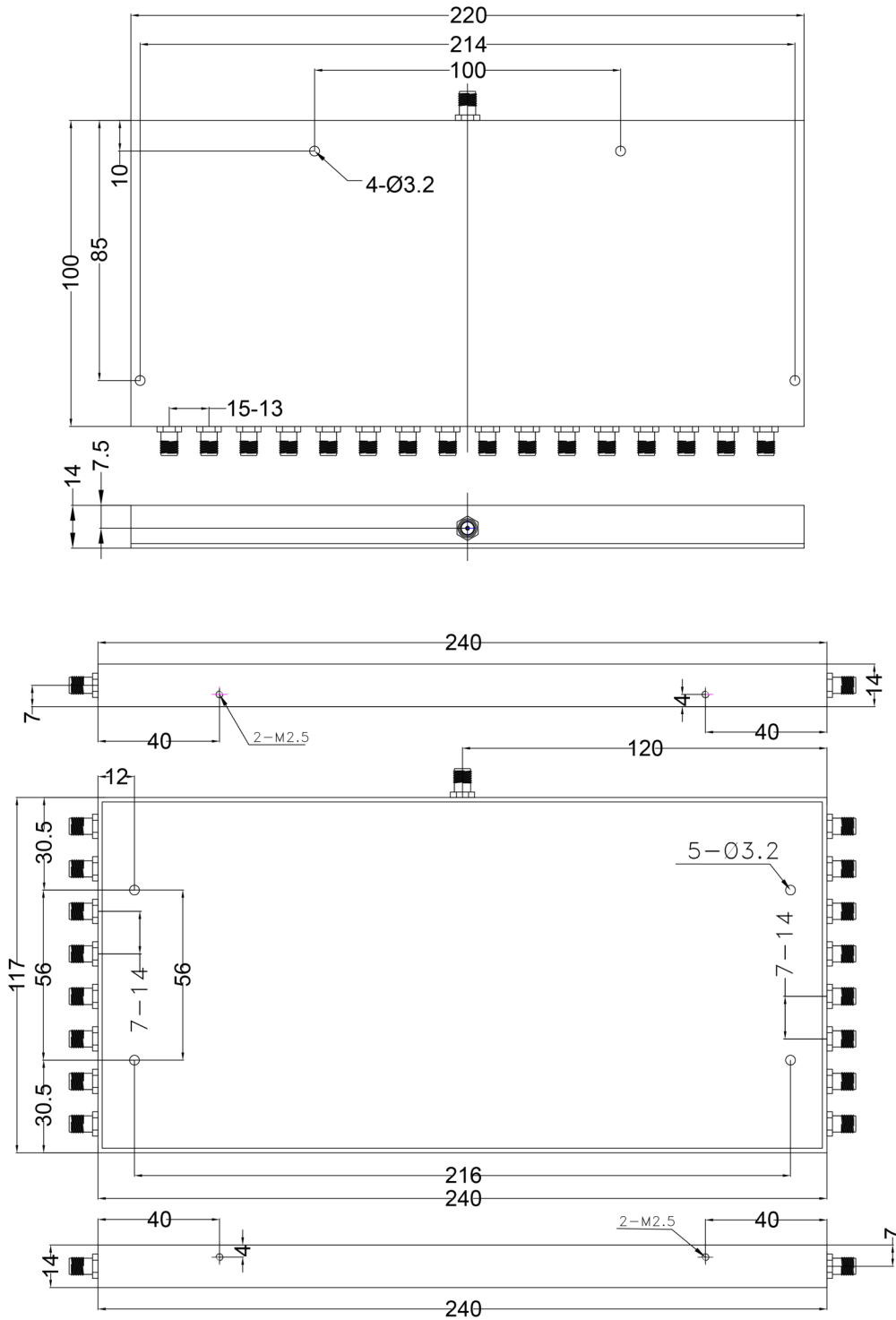
Model HJPD - 16S - 1S - 0.7/4

Freq. GHz	0.7 - 4
Insertion Loss	≤ 14.5 dB
Amplitude Balance	±0.6 dB
Phase Balance	±10°
VSWR	1.5
Max. power	10W
Isolation	≥ 18 dB

Model HJPD - 16X - 1X - 2/6

Freq. GHz	2 - 6
Insertion Loss	≤ 15.8 dB
Amplitude Balance	±0.5 dB
Phase Balance	±10°
VSWR	1.5
Max. power	10W
Isolation	≥ 18 dB

Dimension:



Model HJPD - 32X - 1X 32 - Way

700 MHz to 4 GHz

Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Specification:

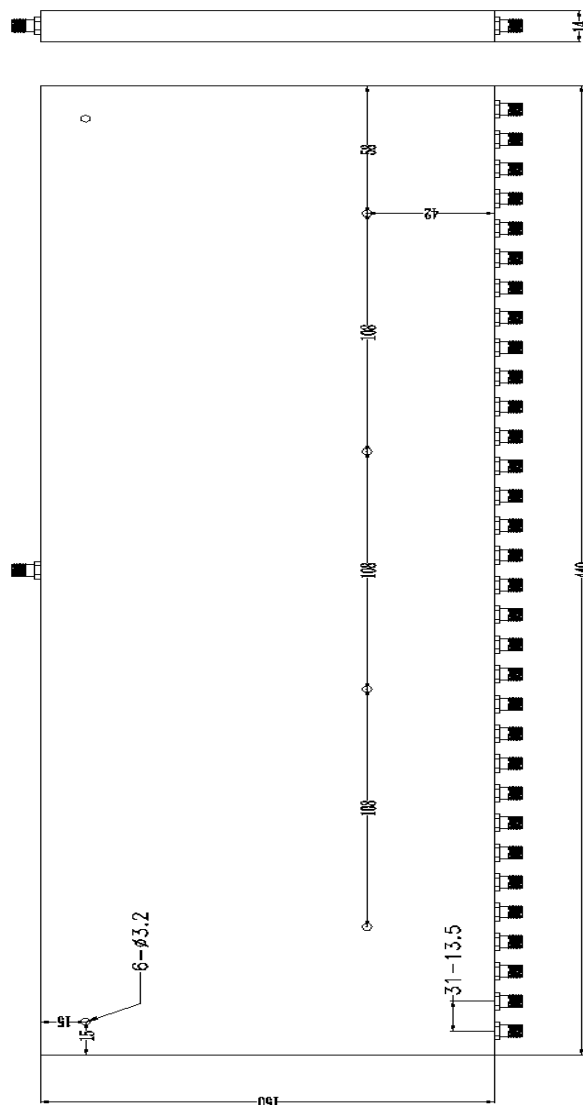
Nominal Impedance: 50Ω

Number of Ports: 1 input and 32 outputs

Connectors: SMA Female or N Female

Temperature Range: -40°C to +70°C

Dimension:



Model HJPD - 32X - 1X - B

Freq. GHz	0.7 - 4
Insertion Loss	≤ 20 dB
Amplitude Balance	±0.8 dB
Phase Balance	±15°
VSWR	1.6
Max. power	10W
Isolation	≥ 16 dB

Model HJC - XX - XX



Features:

- ◆ Subminiature size and lightweight
- ◆ High quality, cost effective and fast delivery

Model HJC - 700 - 800

Freq. GHz	0.7 - 0.8
Insertion Loss	≤ 0.5 dB
VSWR	≤ 1.27
Isolation	≥ 18 dB
Forward Power	30W
Port Connectors	SMA - Female
Direction	Clockwise
Temperature Range	-20°C to +75°C
Cavity Dimensions	30 x 33 x 20mm

Model HJC - 689 - 1000

Freq. GHz	0.698 - 1
Insertion Loss	≤ 0.5 dB
VSWR	≤ 1.35
Isolation	≥ 18 dB
Forward Power	20W
Port Connectors	N - Female
Direction	Clockwise
Temperature Range	-40°C to +85°C
Cavity Dimensions	48 x 48.2 x 24mm

Model HJC - 1700 - 2100

Freq. GHz	1.7 - 2.1
Insertion Loss	≤ 0.5 dB
VSWR	≤ 1.3
Isolation	≥ 18 dB
Forward Power	30W
Port Connectors	N - Female
Direction	Clockwise
Temperature Range	-30°C to +75°C
Cavity Dimensions	25.4 x 28.5 x 20mm

Model HJC - 1700 - 2300

Freq. GHz	1.7 - 2.3
Insertion Loss	≤ 0.4 dB
VSWR	≤ 1.2
Isolation	≥ 23 dB
Forward Power	20W
Port Connectors	SMA - Female
Direction	Clockwise
Temperature Range	-10°C to +50°C
Cavity Dimensions	45 x 45 x 19mm

Model HJC - 2000 - 3000

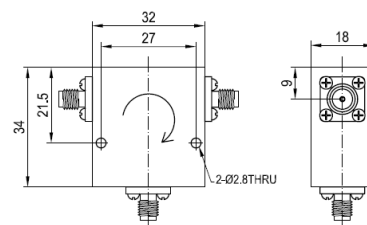
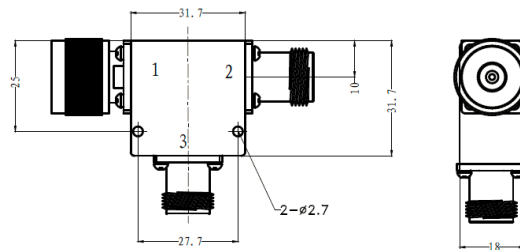
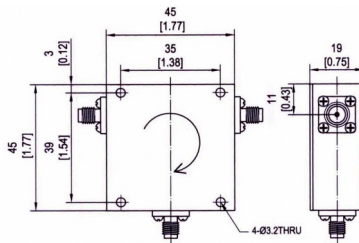
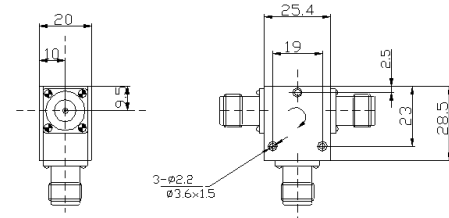
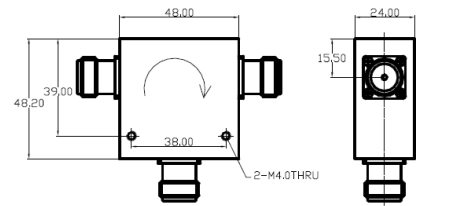
Freq. GHz	2 - 3
Insertion Loss	≤ 0.45 dB
VSWR	≤ 1.25
Isolation	≥ 20 dB
Forward Power	20W
Port Connectors	N - Female, N - Male
Direction	Clockwise
Temperature Range	-40°C to +85°C
Cavity Dimensions	31.7 x 25 x 18mm

Model HJC - 2000 - 4000

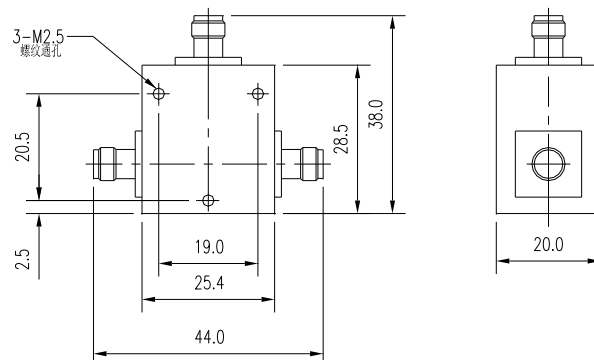
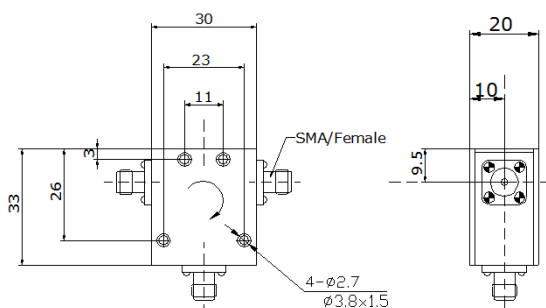
Freq. GHz	2 - 4
Insertion Loss	≤ 0.6 dB
VSWR	≤ 1.35
Isolation	≥ 17 dB
Forward Power	20W
Port Connectors	SMA - Female
Direction	Clockwise
Temperature Range	-10°C to +50°C
Cavity Dimensions	34 x 32 x 18mm

Model HJC - 2400 - 2600

Freq. GHz	2.4 - 2.6
Insertion Loss	≤ 0.45 dB
VSWR	≤ 1.3
Isolation	≥ 20 dB
Forward Power	20W
Port Connectors	SMA - Female
Direction	Clockwise
Temperature Range	-40°C to +85°C
Cavity Dimensions	25.4 x 28.5 x 20mm



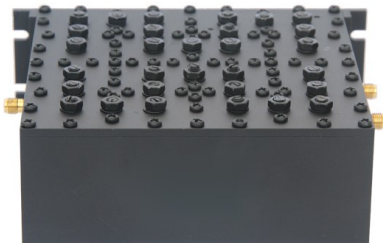
Dimension:



Model HJDX - 710/740 - A

Specification:

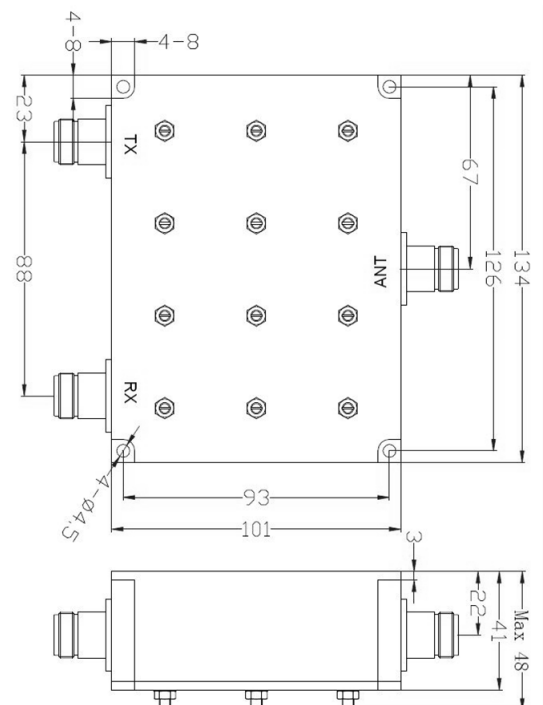
Model HJDX - 710/740 - A		
	RX	TX
Freq. MHz	734 - 746	704 - 716
Insertion Loss	≤ 1.5 dB	≤ 1.5 dB
Ripple	≤ 1 dB	≤ 1 dB
Return Loss	≥ 20 dB	≥ 20 dB
Isolation	≥ 70 dB	
Connectors	N Female	
Power	10W	
Dimensions	134 x 101 x 41mm	
Temperature	-25°C to +50°C	



Features:

- ◆ Subminiature size and lightweight
- ◆ Low cost
- ◆ High quality, cost effective and fast delivery

Dimension:

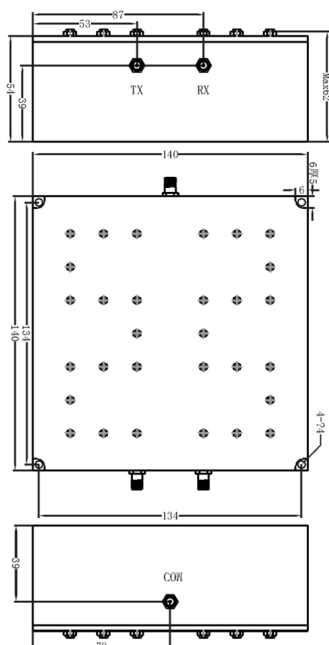


Model HJDX - GSM - 3G - A

Specification:

Model HJDX - GSM - 3G - A		
	RX	TX
Freq. MHz	800 - 960	1710 - 2170
Insertion Loss	≤ 1 dB	≤ 1 dB
Ripple in Band	≤ 0.6 dB	≤ 0.6 dB
Return Loss	≥ 18 dB	≥ 18 dB
Rejection	≥ 60 dB	
Connectors	DIN/N/SMA Female	
Power Handling	50W	
Dimensions	140 x 140 x 54mm	
Temperature	-10°C to +50°C	

Dimension:

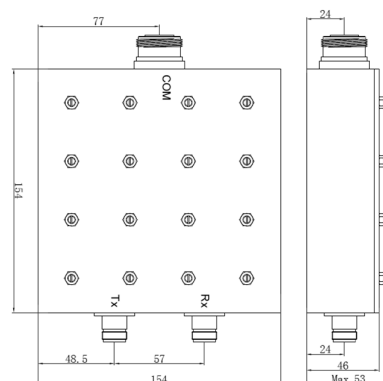


Model HJDX - 850M - A

Specification:

Model HJDX - 850M - A		
	RX	TX
Freq. MHz	824 - 849	869 - 894
Insertion Loss	≤ 1 dB	≤ 1 dB
Ripple in Band	≤ 0.6 dB	≤ 0.6 dB
VSWR	≤ 1.3	≤ 1.3
Rejection	≥ 90 dB	
Connectors	DIN/N Female	
Power Handling	200W	
Dimensions	154 x 154 x 46mm	
Temperature	-10°C to +50°C	

Dimension:

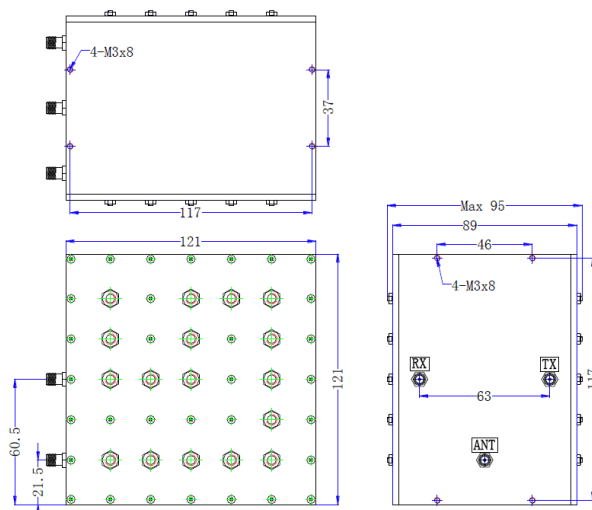


Model HJDX - 900M - A

Specification:

Model HJDX - 900M - A		
	RX	TX
Freq. MHz	880 - 915	925 - 960
Insertion Loss	≤ 1 dB	≤ 1 dB
Return Loss	≥ 18 dB	≥ 18 dB
Isolation	≥ 60 dB	
Connectors	N/SMA Female	
Power	50W	
Dimensions	121 x 121 x 89mm	
Temperature	-10°C to +50°C	

Dimension:

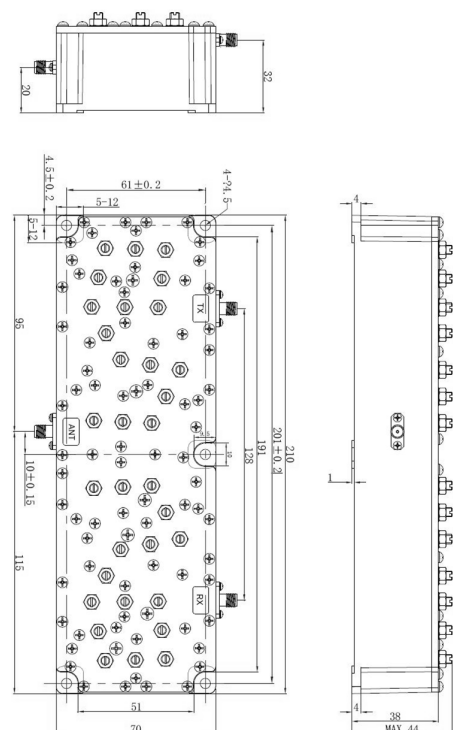


Model HJDX - G25 - 3

Specification:

Model HJDX - G25 - 03		
	RX	TX
Freq. MHz	890 - 915	935 - 960
Insertion Loss	≤ 1.6 dB	≤ 1.6 dB
Ripple	≤ 1 dB	≤ 1 dB
Return Loss	≥ 18 dB	≥ 18 dB
Isolation	≥ 90 dB	
Connectors	SMA Female	
Power	50W	
Dimensions	210 x 70 x 38mm	
Temperature	-10°C to +50°C	

Dimension:

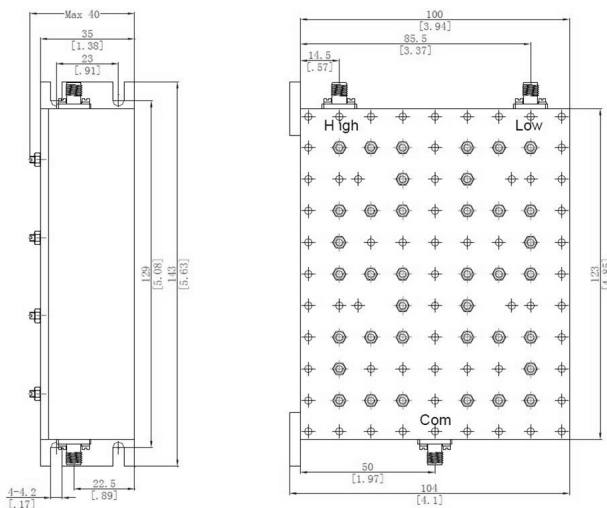


Model HJDX - DCS - 06

Specification:

Model HJDX - DCS - 06		
	RX	TX
Freq. MHz	1710 - 1785	1805 - 1880
Insertion Loss	≤ 2.2 dB	≤ 2.2 dB
Ripple in Band	≤ 1.5 dB	≤ 1.5 dB
Return Loss	≥ 18 dB	≥ 18 dB
Rejection	≥ 80 dB	
Connectors	SMA Female	
Power Handling	50W	
Dimensions	123 x 100 x 35mm	
Temperature	-10°C to +50°C	

Dimension:

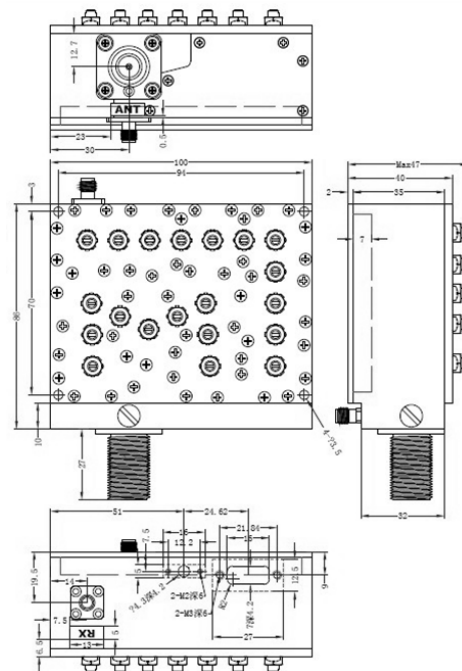


Model HJDX - 1800M - A

Specification:

Model HJDX - 1800M - A		
	RX	TX
Freq. MHz	1710 - 1755	2110 - 2155
Insertion Loss	≤ 1 dB	≤ 1 dB
Ripple in Band	≤ 0.6 dB	≤ 0.6 dB
Return Loss	≥ 18 dB (ANT, TX, RX) ≥ 10 dB (TEST)	
Isolation	≥ 90 dB	
Power Handling	50W	
Connectors	ANT: N - F, RX/TEST: SMA - F	
Dimensions	100 x 86 x 40mm	
Temperature	-10°C to +50°C	

Dimension:

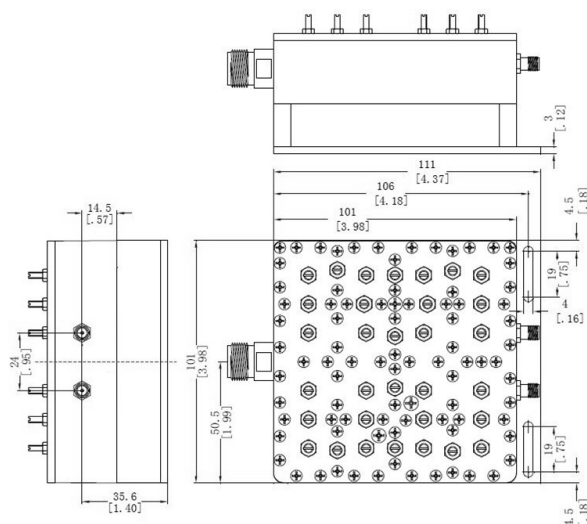


Model HJDX - PCS - 01

Specification:

Model HJDX - PCS - 01		
	RX	TX
Freq. MHz	1850 - 1910	1930 - 1990
Insertion Loss	≤ 3 dB	≤ 3 dB
Ripple	≤ 1.5 dB	≤ 1.5 dB
VSWR	≤ 1.3	≤ 1.3
Rejection	≥ 70 dB	
Connectors	SMA Female	
Power	15CW	
Dimensions	101 x 101 x 50mm	
Temperature	0°C to +40°C	

Dimension:

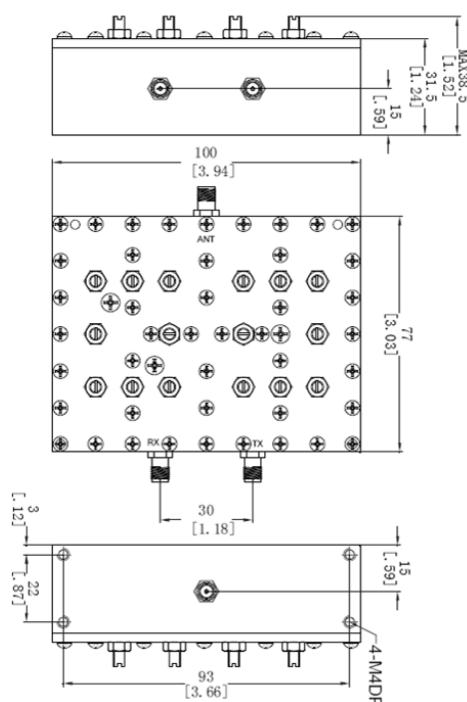


Model HJDX - UMTS - 03

Specification:

Model HJDX - UMTS - 03		
	RX	TX
Freq. MHz	1920 - 1980	2110 - 2170
Insertion Loss	≤ 0.5 dB	≤ 0.5 dB
VSWR	≤ 1.3	≤ 1.3
Rejection	≥ 75 dB	
Connectors	SMA Female	
Power	15CW	
Dimensions	100 x 77 x 31mm	
Temperature	-20°C to +60°C	

Dimension:

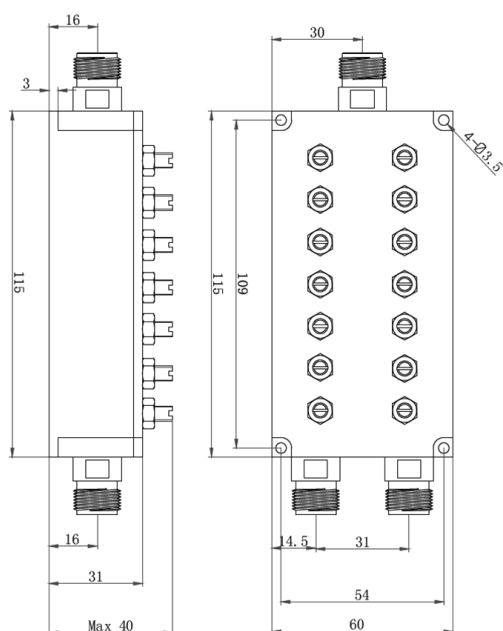


Model HJDX - 2111/2130 - 01

Specification:

Model HJDX - 2111/2130 - 01		
Freq. MHz	2108 - 2114	2127 - 2130
Insertion Loss	≤ 3 dB	≤ 3 dB
VSWR	≤ 1.3	≤ 1.3
Isolation	≥ 30 dB@2127 - 2130 MHz	≥ 30 dB@2108 - 2114 MHz
Connectors	N Female	
Power	200W	
Dimensions	115 x 60 x 31mm	
Temperature	-10°C to +50°C	

Dimension:

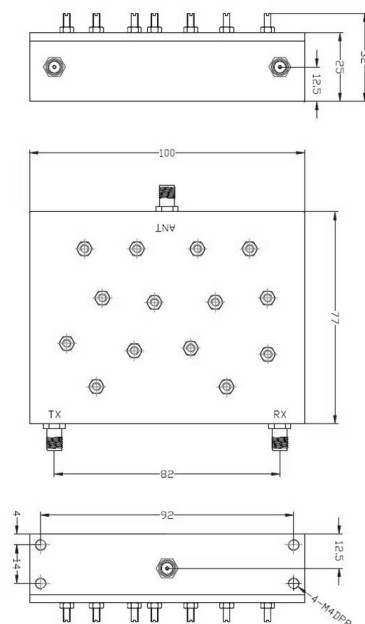


Model HJDX - LTE - 01

Specification:

Model HJDX - LTE - 01		
	RX	TX
Freq. MHz	2500 - 2570	2620 - 2690
Insertion Loss	≤ 0.8 dB	≤ 0.8 dB
VSWR	≤ 1.3	≤ 1.3
Rejection	≥ 75 dB	
Power	≤ 50 CW	
Connectors	SMA Female	
Dimensions	100 x 77 x 25mm	
Temperature	-25°C to +60°C	

Dimension:



RG 223 Series

DC to 6 GHz



Features:

- ◆ Rugged construction
- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 6 GHz

Velocity of Propagation: 66%

Power Handling: 900 W

CABLE STRUCTURE

Inner Conductor	CU-silver
Dielectric	PE
Outer Conductor	CU-silver
Outer Jacket	PVC

MECHANICAL DATA

Jacket Diameter, nominal	5.35mm
Static Bend Radius, min.	30mm
Temperature Range	-30°C to +100°C
Weight, nominal	65g/m

ATTENUATION

Freq. MHz	Attenuation dB/100m
1	1.1
10	3.9
50	9.2
200	19.7
400	28.9
900	45.3
1000	47.6

RG 142 Series

DC to 12.4 GHz



Features:

- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 12.4 GHz

Velocity of propagation: 69.5%

Maximum Voltage: 1900 V

CABLE STRUCTURE

Inner Conductor	Silver Plated Copper Clad Steel
Dielectric	PTFE
Outer Conductor	Silver Plated Copper Braid
Outer Jacket	FEP

MECHANICAL DATA

Jacket Diameter, nominal	4.95mm
Static Bend Radius, min.	25mm
Temperature Range	-55°C to +200°C
Weight, nominal	46g/m

ATTENUATION

Freq. MHz	Attenuation dB/m
10	3.6
50	8.5
100	12.5
400	25.9
900	40.4
1000	43
3000	79.4
5000	107
8000	166.7
12400	263.8

RG 316 Series

DC to 3 GHz



Features:

- ◆ Customized design available
- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 3 GHz

Velocity of propagation: 69.5%

Maximum Voltage: 1200 V

CABLE STRUCTURE

Inner Conductor	CU-silver
Dielectric	FEP
Outer Conductor	CU-silver
Outer Jacket	FEP

MECHANICAL DATA

Jacket Diameter, nominal	2.5mm
Static Bend Radius, min.	15mm
Temperature Range	-55°C to +200°C
Weight, nominal	17g/m

ATTENUATION

Freq. MHz	Attenuation dB/100m
1	8.9
10	18.4
50	27.2
200	36.1
400	54.8
700	74.8
900	86.3
1000	90.2
3000	155.2

Super - Flexible Series

DC to 26.5 GHz



CABLE STRUCTURE

Inner Conductor	Solid Silver
Dielectric	Expanded PTFE
Outer Conductor	Silver
Outer Jacket	FEP

MECHANICAL DATA

Average VSWR	1.05 - 1.35
Temperature Range	-55°C to +125°C

Features:

- ◆ Rugged construction
- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

ATTENUATION

Freq. GHz	Attenuation dB/m
1	0.32
5	0.73
10	1.01
18	1.38
26.5	1.68

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 26.5 GHz

Shielding Effectiveness: >90 dB

VSWR: 1.27@18 GHz

Power Handling: 180 W

Super Reliable Series

DC to 26.5 GHz



Features:

- ◆ Rugged construction
- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 26.5 GHz

Shielding Effectiveness: >100 dB

VSWR: 1.27@18 GHz

Power Handling: 129 W

CABLE STRUCTURE

Inner Conductor	Solid Silver
Dielectric	Solid PTFE
Outer Conductor	Silver
Outer Jacket	FEP

MECHANICAL DATA

Jacket Diameter, nominal	4.95mm
Static Bend Radius, min.	25.4mm
Temperature Range	-55°C to +130°C
Weight, nominal	71g/m

ATTENUATION

Freq. GHz	Attenuation dB/m
1	0.4
5	1.01
10	1.54
18	2.16
26.5	2.91

Superior Series

DC to 18 GHz



Features:

- ◆ Precision stainless steel connectors
- ◆ Low loss PTFE tape Dielectric
- ◆ Triple shielded for ≥ 90 dB leakage at 18 GHz

Specification:

Nominal Impedance: 50 Ω

Frequency Range: DC to 18 GHz

Velocity of Propagation: 76.5%

VSWR: 1.15@18 GHz

Breakdown Voltage: 10 KV

CABLE STRUCTURE

Inner Conductor	Silver Copper
Dielectric	Micro-porous PTFE
Outer Conductor	Silver Copper
Outer Jacket	FEP

MECHANICAL DATA

Jacket Diameter, nominal	5.21mm
Static Bend Radius, min.	25.4mm
Temperature Range	-65°C to +200°C
Weight, nominal	0.074g/m

ATTENUATION

Freq. GHz	Attenuation dB/m
0.5	0.18
2	0.37
12	0.98
18	1.21

S Series

DC to 40 GHz



Features:

- ◆ Precision stainless steel connectors
- ◆ Low loss PTFE tape Dielectric
- ◆ Triple shielded for ≥ 90 dB leakage at 18 GHz

Specification:

Nominal Impedance: 50 Ω

Frequency Range: DC to 40 GHz

Shielding Effectiveness: >100 dB

VSWR: 1.27@18 GHz

Power Handling: 55 W

CABLE STRUCTURE

Inner Conductor	Solid Silver
Dielectric	Solid PTFE
Outer Conductor	Silver
Outer Jacket	FEP

MECHANICAL DATA

Jacket Diameter, nominal	2.64mm
Static Bend Radius, min.	12.5mm
Temperature Range	-55°C to +125°C
Weight, nominal	22.3g/m

ATTENUATION

Freq. GHz	Attenuation dB/m
1	0.67
5	1.61
10	2.93
18	3.39
26.5	4.60
40	5.90

Low - Loss Series

DC to 40 GHz



CABLE STRUCTURE

Inner Conductor	Solid Silver
Dielectric	Ultra Low Density PTFE
Outer Conductor	Silver
Outer Jacket	FEP

MECHANICAL DATA

Jacket Diameter, nominal	3.6mm
Static Bend Radius, min.	9.65mm
Temperature Range	-65°C to +165°C
Weight, nominal	32.8g/m

Features:

- ◆ Precision stainless steel connectors
- ◆ Low loss PTFE tape Dielectric
- ◆ Triple shielded for ≥ 90 dB leakage at 18 GHz

Specification:

Nominal Impedance: 50 Ω

Frequency Range: DC to 40 GHz

Shielding Effectiveness: >100 dB

VSWR: 1.27@18 GHz

Power Handling: 172 W@10 GHz

ATTENUATION

Freq. GHz	Attenuation dB/m
1	0.39
5	0.85
10	1.21
18	1.66
26.5	2.01
40	2.48

HMR - 400 Series

DC to 6 GHz



Features:

- ◆ Low Insertion Loss. Rugged construction
- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 6 GHz

Shielding Effectiveness: >90 dB

Average VSWR: 1.15 - 1.25

Peak Power: 16KW

Temperature Range: -40°C to +85°C

CABLE STRUCTURE

Inner Conductor	Solid BCCAl
Dielectric	Foam PE
Outer Conductor	Aluminum Tape
Outer Jacket	TPE

MECHANICAL DATA

Jacket Diameter, nominal	10.29mm
Static Bend Radius, min.	30mm
Temperature Range	-40°C to +85°C
Weight, nominal	210g/m

ATTENUATION

Freq. MHz	Attenuation dB/100m
30	2.7
50	3.5
150	6.1.
220	7.4
450	10.7
900	15.4
1500	20.2
1800	22.3
2500	26.6
5800	42.6

1/2 Series

DC to 6 GHz



CABLE STRUCTURE

Inner Conductor	Copper-clad Aluminum
Dielectric	Foam PE
Outer Conductor	Corrugated Copper
Outer Jacket	PE

MECHANICAL DATA

Jacket Diameter, nominal	13.3mm
Static Bend Radius, min.	30mm
Temperature Range	-55°C to +85°C
Weight, nominal	210g/m

Features:

- ◆ Rugged construction
- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 6 GHz

Shielding Effectiveness: >120 dB

Peak Power: 16KW

ATTENUATION

Freq. MHz	Attenuation dB/100m
100	3.22
150	4.05
200	4.65
450	7.2
900	10.56
1500	13.8
1800	15.5
2500	18.5
3000	20.9
6000	34.4

Transparent Series

DC to 26.5 GHz



Features:

- ◆ Rugged construction
- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 26.5 GHz

Shielding Effectiveness: >90 dB

CABLE STRUCTURE

Inner Conductor	Solid Silver
Dielectric	Tape Wrapped PTFE
Outer Conductor	Silver Plated Copper
Outer Jacket	PVC

MECHANICAL DATA

Jacket Diameter, nominal	10.8mm
Static Bend Radius, min.	20mm
Temperature Range	-55°C to +85°C
Weight, nominal	71g/m

ATTENUATION

Freq. MHz	Attenuation dB/100m
300	20.45
500	26.68
1000	38.47
3000	69.84
6000	103.22
10000	138.96
12400	157.94
18000	198.03
265000	252.07

F Series

DC to 28 GHz



Features:

- ◆ Rugged construction
- ◆ Any RF connector combination
- ◆ High quality, cost effective and fast delivery

Specification:

Frequency Range: DC to 28 GHz

Nominal Impedance: 50Ω

Shielding Effectiveness: >92 dB

CABLE STRUCTURE

Inner Conductor	Solid Silver
Dielectric	Tape Wrapped PTFE
Outer Conductor	Silver Plated Copper
Outer Jacket	FEP/PUR

MECHANICAL DATA

Jacket Diameter, nominal	7.5mm
Static Bend Radius, min.	20mm
Temperature Range	-55°C to +130°C
Weight, nominal	71g/m

ATTENUATION

Freq. MHz	Attenuation dB/100m
300	20.45
500	26.68
1000	38.47
3000	69.84
6000	103.22
10000	138.96
12400	157.94
18000	198.03
265000	252.07

Model HJ - ANTENNA - WIFI

**2400 to 2500 MHz,
5800MHz**



Nominal Impedance: 50Ω

Frequency Range: 2.4GHz to 2.5GHz, 5.8GHz

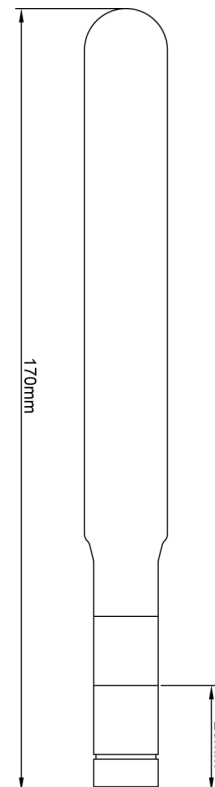
Features:

- ◆ Support 2.4GHz - 2.5GHz, 5.8GHz
- ◆ High quality, cost effective and fast delivery

Dimension:

Specification:

Antenna 4G	
Gain	5dBi±0.7dBi
VSWR	≤2
Temperature Range	- 40°C - 60°C
Connector	SMA
Color	Black



Model HJ - ANTENNA - 4G

700 to 2700 MHz



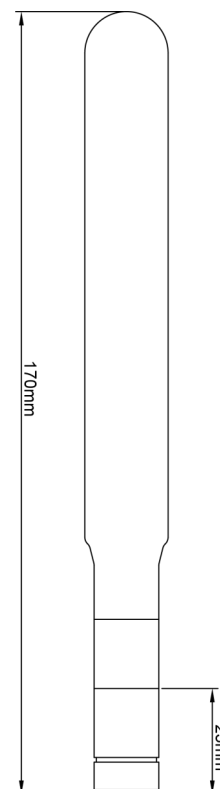
Nominal Impedance: 50Ω

Frequency Range: 700MHz to 2.7GHz

Features:

- ◆ Support 700Mhz –2.7GHz
- ◆ High quality, cost effective and fast delivery

Dimension:



Specification:

Antenna 4G	
Gain	5dBi±0.7dBi
VSWR	≤2
Temperature Range	- 40°C - 60°C
Connector	SMA
Color	Black

Model HJAD

DC to 18 GHz



Features:

- ◆ Rugged Injection Molded Connectors
- ◆ High Repeatability

Specification:

Nominal Impedance: 50Ω

Frequency Range: DC to 18 GHz

Temperature Range: -65°C to +105°C

Weight: 56.7g maximum

SMA SERIES

Model	VSWR
SMA M - SMA M	1.2
SMA M - SMA F	1.2
SMA F - SMA F	1.2

N SERIES

Model	VSWR
N M - N M	1.2
N M - N F	1.2
N F - N F	1.25

7/16 SERIES

Model	VSWR
7/16 M - 7/16 M	1.25
7/16 M - 7/16 F	1.25
7/16 F - 7/16 F	1.25

N - SMA SERIES

Model	VSWR
N M - SMA M	1.25
N M - SMA F	1.25
N F - SMA M	1.25
N F - SMA F	1.3

7/16 - N SERIES

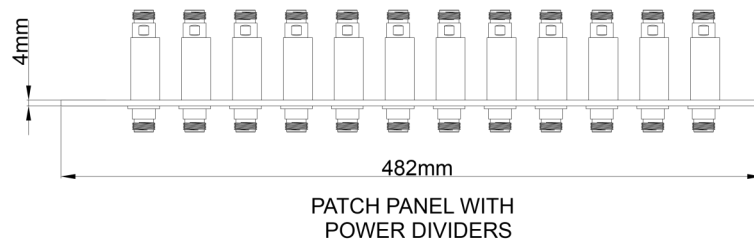
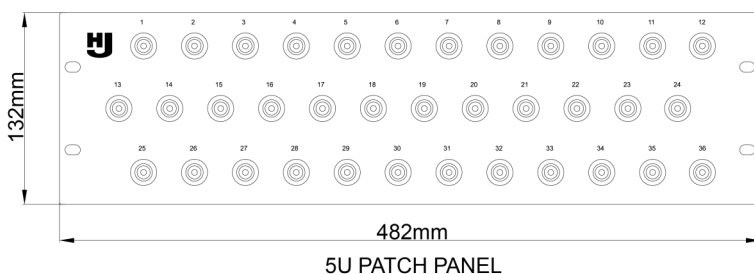
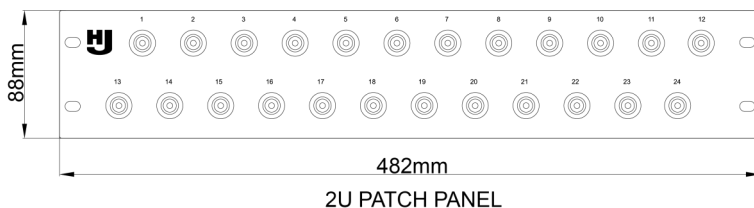
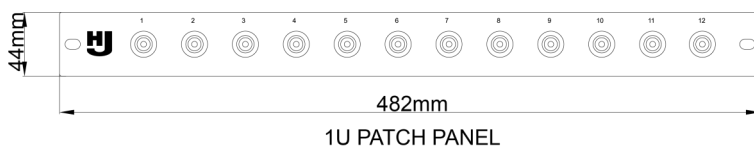
Model	VSWR
7/16 M - N M	1.25
7/16 M - N F	1.25
7/16 F - N M	1.25
7/16 F - N F	1.25



Features:

- ◆ Any RF connector combination
- ◆ Any power divider combination
- ◆ Customized dimension

Dimension:



Contact:

Patch Panels are customized according to customer needs.

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