aas.tech GmbH & Co. KG
Gutenbergring 53 - 22848 Norderstedt - Germany
Tel. +49 8836 422 00 – E-Mail sales@aastech.de

Antenna Distribution System
AVS Series
0.01 – 30 MHz / 1.5 – 30 MHz

The AVS is a very flexible antenna distribution solution for short wave communication applications. The standard version furnished into a single 19-inch 4 HU slide-in unit provides up to 8 antenna inputs and up to 40 receiver outputs.

The system can be extended to provide the distribution of up to 16 antennas to 120 receivers. Such system consists of a master unit (8 inputs and 40 outputs), to which slave units, pre-distributors and/or relay matrices are added dependent on the extension stage.
The master unit controls all equipment connected and sets up the connection with the computer via LAN or RS232/RS422 interface.

Relay matrices are added if more than 8 inputs are required.

Active pre-distributors are applied if more than 40 outputs are required. They distribute in each case 8 inputs to 3x8 outputs so that further antenna distributors can be connected in parallel.

The system will be configured according to customer needs.

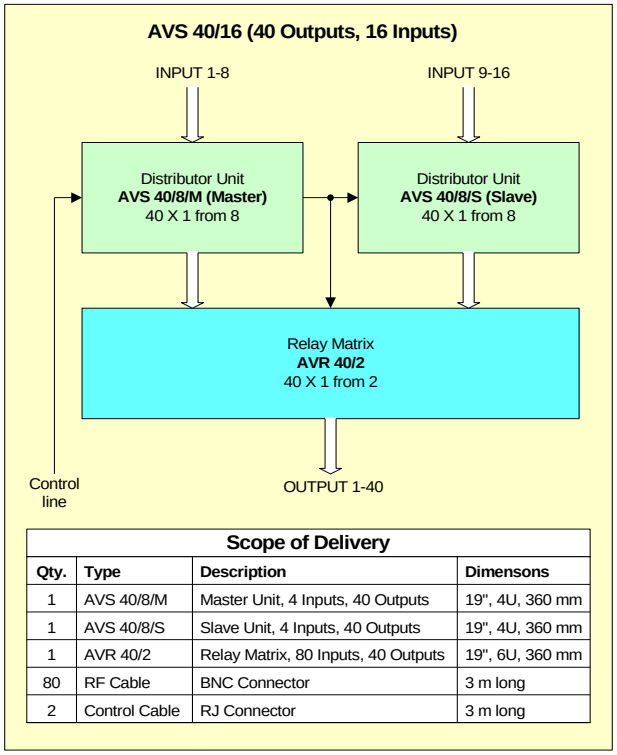
Specific Features:

- The operating/control unit integrated in the master monitors all functions of the system and provides the local operation of the antenna distributor system. An acoustic signal is audible if a sub-unit fails.
- Owing to the high flexibility of the master-slave units the user has the possibility to determine the numbers of inputs between 4 and 16 (in steps of 4) and the number of outputs between 10 and 120 (in steps of 10).
- Switch conditions- are stored so that after a mains failure or after the switching off of the system the previous switching conditions are automatically restored.

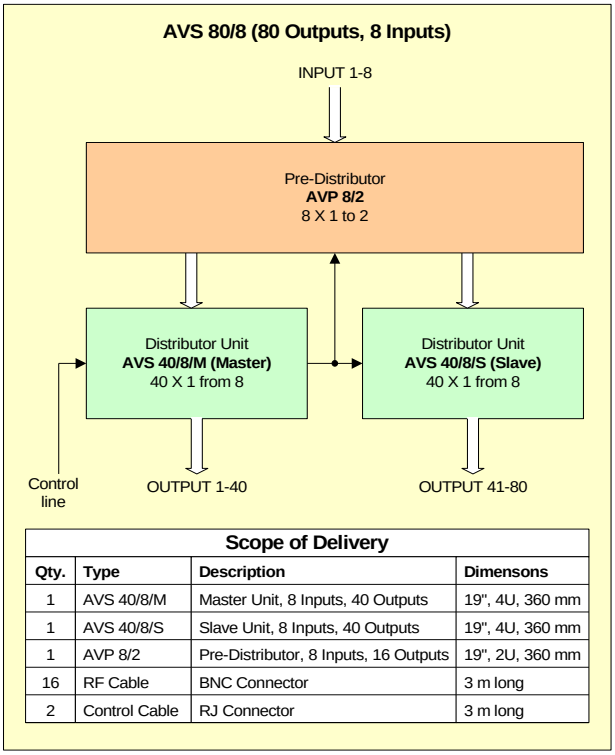
Start Screen Antenna Distribution System AVS 40/16/B

Application Examples

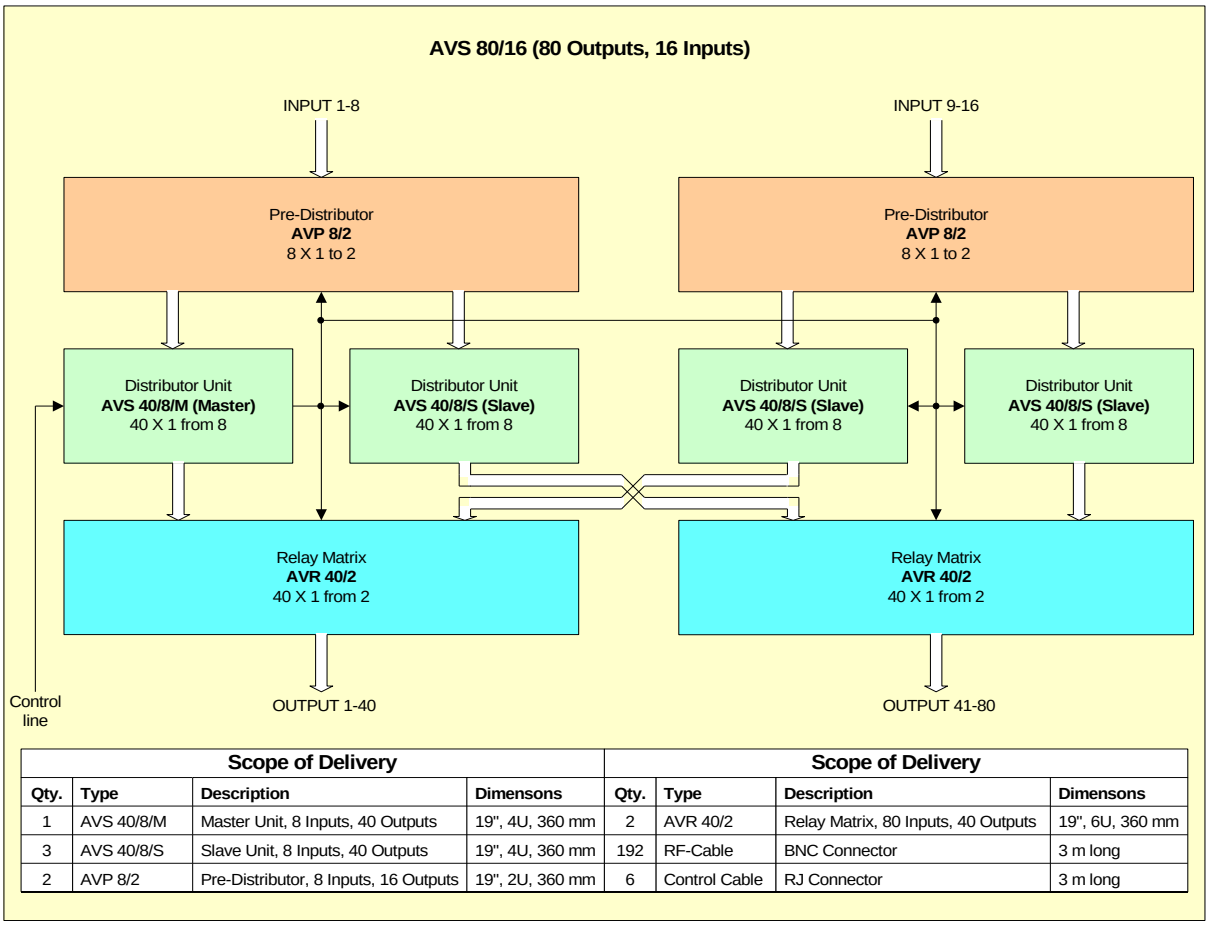
The following block diagrams show typical configurations of the antenna distributor system AVS:



Scope of Delivery			
Qty.	**Type**	**Description**	**Dimensons**
1	AVS 40/8/M	Master Unit, 4 Inputs, 40 Outputs	19", 4U, 360 mm
1	AVS 40/8/S	Slave Unit, 4 Inputs, 40 Outputs	19", 4U, 360 mm
1	AVR 40/2	Relay Matrix, 80 Inputs, 40 Outputs	19", 6U, 360 mm
80	RF Cable	BNC Connector	3 m long
2	Control Cable	RJ Connector	3 m long



Scope of Delivery			
Qty.	**Type**	**Description**	**Dimensons**
1	AVS 40/8/M	Master Unit, 8 Inputs, 40 Outputs	19", 4U, 360 mm
1	AVS 40/8/S	Slave Unit, 8 Inputs, 40 Outputs	19", 4U, 360 mm
1	AVP 8/2	Pre-Distributor, 8 Inputs, 16 Outputs	19", 2U, 360 mm
16	RF Cable	BNC Connector	3 m long
2	Control Cable	RJ Connector	3 m long



Scope of Delivery				Scope of Delivery			
Qty.	**Type**	**Description**	**Dimensons**	**Qty.**	**Type**	**Description**	**Dimensons**
1	AVS 40/8/M	Master Unit, 8 Inputs, 40 Outputs	19", 4U, 360 mm	2	AVR 40/2	Relay Matrix, 80 Inputs, 40 Outputs	19", 6U, 360 mm
3	AVS 40/8/S	Slave Unit, 8 Inputs, 40 Outputs	19", 4U, 360 mm	192	RF-Cable	BNC Connector	3 m long
2	AVP 8/2	Pre-Distributor, 8 Inputs, 16 Outputs	19", 2U, 360 mm	6	Control Cable	RJ Connector	3 m long

Options

- The frequency range of the antenna distributor system is usually 1,5 – 30 MHz (low pass filter 32 MHz). However, it is possible to extend some or all inputs to the frequency range from 10 kHz – 30 MHz resp. to narrow the frequency range through further filters (high pass, low pass).
- Optionally a DC voltage can be connected to the antenna cables so that active receiving antennas or cable amplifiers can be directly supplied from the antenna distributor system.
- Antenna distributor systems with more than 16 inputs or more than 120 outputs are available.
- In order to increase the operational reliability system control and/or the power supply can be installed redundantly.
- The antenna distributor system can also be delivered mounted into a 19“-Rack, ready for operation.
- Remote control via LAN interface (standard) or serial RS232/RS422 interface

General Data AVS 40/16/B

Parameter	Data
Dimension slide-in units (w x h x d)	Master: 19" unit, 4 HU, 360 mm Slave: 19" unit, 4 HU, 360 mm Relay Matrix: 19" unit, 6 HU, 360 mm
Weight	Master: approx. 14 kg Slave: approx. 14 kg Relay Matrix: approx. 10 kg System: approx. 38,0 kg
Colour of Front Panel	RAL 7035 (light grey)
Mains Supply (AC)	85 – 264 Vac, 48 - 60 Hz
Ambient Temperature	-10 ... +60°C
Storage Temperature	-20 ... +70°C
Relative Humidity (1)	95%
EMC	Interference Immunity EN 61000-6-2 Interference Emissions EN 61000-6-3
Remote Control	LAN 10/100 MB
Switching Time	typ. 3 msec

Note 1:
Relative humidity valid for the front panel, non-condensing

AVS 40/8/M (Master)

aas.tech GmbH & Co. KG
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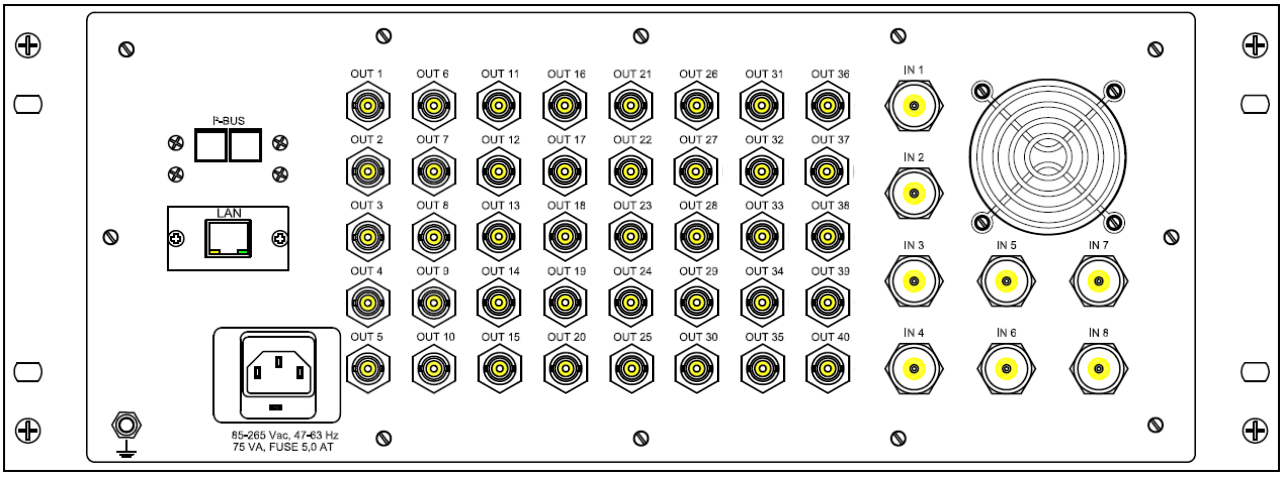
HF Data AVS 40/16/B

Parameter	Data
Frequency Range	1,5 - 30 MHz
Number of Antenna Inputs	16 (N socket)
Input Impedance	50 Ohm VSWR < 1,5
Number of Receiver Outputs	40 (BNC socket)
Output Impedance	50 Ohm VSWR < 1,5
Gain	0,5 ± 1,5 dB
Noise Figure	7,0 - 9,0 dB
Intercept Point IPOP2	60 dBm
Intercept Point IPOP3	35 dBm
1 dB Compression	12 dBm
Maximum Signal Level CW	33 dBm
Decoupling between two outputs	> 65 dB
Decoupling between output and input	> 90 dB



Rear View AVS 40/8/MB

Data given without tolerance are typical values.
Design and specification are subject to change without prior notice, errors excepted.

Typical AVS Configurations

Type Designation	Part Number	Description	Details
AVS 10/8/A	0030.1066.00	10 Outputs, 8 Inputs 0,01-30 MHz, LAN, 4HU unit	Doc. 2_4_3_1
AVS 10/8/B	0030.1085.00	10 Outputs, 8 Inputs 1,5-30 MHz, LAN	Doc. 2_4_3_1
AVS 20/8/A	0030.1067.00	20 Outputs, 8 Inputs 0,01-30 MHz, LAN	Doc. 2_4_3_2
AVS 20/8/B	0030.1086.00	20 Outputs, 8 Inputs 1,5-30 MHz, LAN	Doc. 2_4_3_2
AVS 30/4/A	0030.1068.00	30 Outputs, 4 Inputs 0,01-30 MHz, LAN	Doc. 2_4_3_3
AVS 30/4/B	0030.1084.00	30 Outputs, 4 Inputs 1,5-30 MHz, LAN	Doc. 2_4_3_3
AVS 30/8/A	0030.1069.00	30 Outputs, 8 Inputs 0,01-30 MHz, LAN	Doc. 2_4_3_4
AVS 30/8/B	0030.1083.00	30 Outputs, 8 Inputs 1,5-30 MHz, LAN	Doc. 2_4_3_4
AVS 30/16/A	0030.1075.00	30 Outputs, 16 Inputs 0,01-30 MHz, LAN	
AVS 30/16/B	0030.1080.00	30 Outputs, 16 Inputs 1,5-30 MHz, LAN	
AVS 40/4/A	0030.1070.00	40 Outputs, 4 Inputs 0,01-30 MHz, LAN	Doc. 2_4_3_5
AVS 40/4/B	0030.1087.00	40 Outputs, 4 Inputs 1,5-30 MHz, LAN	Doc. 2_4_3_5
AVS 40/8/A	0030.1071.00	40 Outputs, 8 Inputs 0,01-30 MHz, LAN	Doc. 2_4_3_6
AVS 40/8/B	0030.1072.00	40 Outputs, 8 Inputs 1,5-30 MHz, LAN	Doc. 2_4_3_6
AVS 40/16/B	0030.1100.00	40 Outputs, 16 Inputs 1,5-30 MHz, LAN	Doc. 2_4_3_10
AVS 40/16/C	0030.1140.00	40 Outputs, 8 Inputs 0,01-30 MHz, LAN	Doc. 2_4_3_10

Other configurations available on request.

Accessories

Accessory	Description	Details
Remote Control Cable V24/RS232	Remote control cable for use with ass.tech antenna distributors AVA, AVS, ADS series with V24/RS232 interface Length 2 m	Doc.: 2_10_1
AAN 800 Series	Remote power supply of up to 8 ass.tech active antennas (1.5 – 30 MHz)	Doc.: 1_6_10

Spare Parts

Designation	Type	Part No.	Remark
Wideband Amplifier	WA 4A	0029.5600.80	
Channel Board	CB A	0008.7613.80	
Power Supply	PS G3	0008.7432.00	
Input Option	IO 41	0029.5601.80	10 kHz – 30 MHz
Input Option	IO 43	0029.5602.80	1,5 – 30 MHz
Control Unit	CU N	depends on version	
Keypad board	KB E	0028.0549.80	
Display Unit	DU F	depends on version	
Motherboard	MB AVS 2	0028.2343.80	
Interface Unit	IF I2C-Bus AVS/M	0028.0553.00	
LAN Interface	LAN B1	0028.0542.00	
Relais Matrix	RM 8/2	0008.8601.00	for use in AVR
Control Unit	CU D1	0028.0562.80	for use in AVR
Motherboard	MB AVR/R	0028.2337.80	for use in AVR
Ventilator	FAN B	0029.1007.20	