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AWR5805 Series

Wi-Fi Mesh Router

FEATURE HIGHLIGHTS

- Wi-Fi 5 2x2 MU-MIMO with 802.11ac peak speed 867 Mbps
- Easily Expandable Mesh WiFi System
- 1 x RJ45 for 10/100/1000Mbps BaseT WAN
- 4 x RJ45 for 10/100/1000Mbps BaseT LAN
- DNV-GL Marine application
- 1x micro-SD slot for flexible use
- Firewall and VPN for security connection
- Backup WAN interfaces for connection reliability
- Industrial EMC protection, -40 to +75°C wide-range temperature operation
- Rugged metal case with wall or DIN-Rail mount
- PoE PD support for flexible deployment

PRODUCT DESCRIPTION

ATOP AWR is an advanced device that allows a very tangible scale-up of almost any industrial wireless infrastructure. In addition to high EMC protection, wide-temperature operation, superb hardware and advanced features, AWR will provide high-speed internet access with load balancing and high degrees of security, high speeds and advanced configuration options.

Quad-ARM Cortex A7 CPU

AWR integrates an industrial-grade Quad-core A7 ARM CPU, enabling the processing power you need to filter heavy traffic over firewalls, routing, forwarding and security meansures.

High-Performance

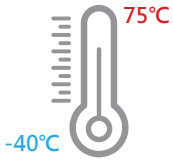
With its integrated IEEE802.11ac wave-2 feature and supporting 2x2 concurrent MU-MIMO RF, AWR provides high-throughput connections through 2.4 GHz and 5.0 GHz bands.

Wi-Fi Mesh

AWR's advanced chipset allows you to set up several devices as a mesh network, achieving a self-healing network that adjusts its topology based on need--perfect for dynamic applications.

Security

Integrating firewall, zone forwarding, and VPN features, ATOP AWR allows you to connect your industrial network to the internet without fearing intrusions into your organization data.



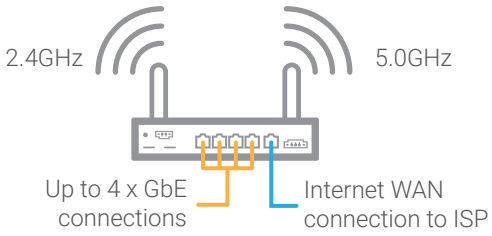
Harsh Environments

ATOP AWR is proven to run at its maximum loading in the harshest EMC and climate environments.

Reliability

With a rugged metal housing and power redundancy, AWR is resistive to damage in harsh industrial environments.

APPLICATION

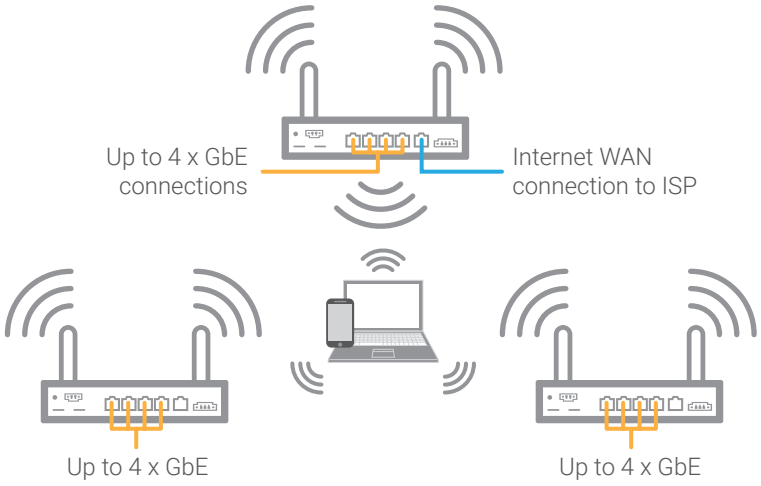


As a Wi-Fi DBDC Router

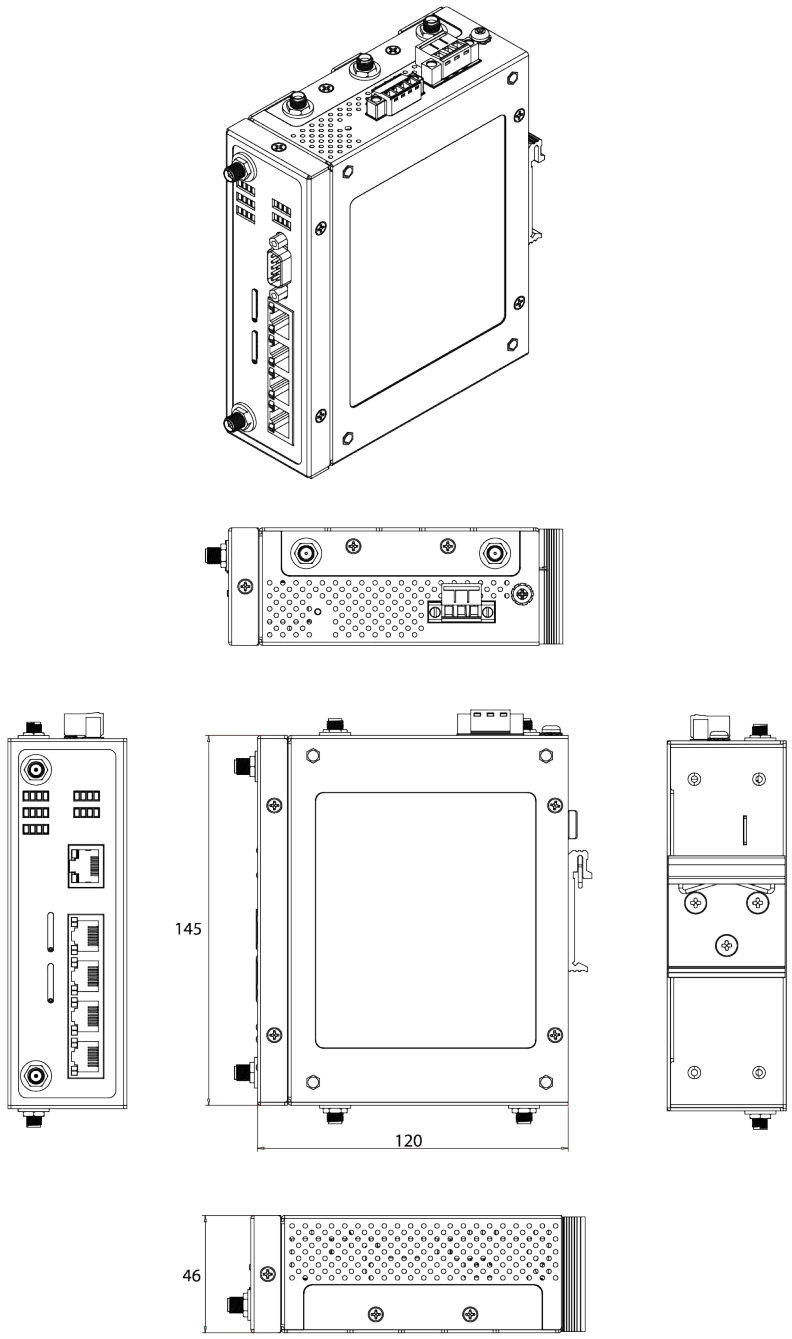
AWR5805's simplest operating mode is as a router/access point. Use it to connect to the internet through your broadband provider via PPPoE, Static IP or DHCP and provide internet connection to Wi-Fi and wired clients. With AWR you can define your own wireless access policy and set up a Firewall and VPN connection based on your needs.

As a Wi-Fi Mesh Primary Router

AWR5805 is designed to act as a mesh router or as a mesh node, and the configuration of one or both radios to work in mesh mode takes barely any time. No more fussing with topology changes or complicated wiring! With Wi-Fi mesh, all nodes can communicate with each other and the transmission paths are dynamically adjusted if a change in signal strength or topology is detected. So, even if a device is temporarily unaccessible due to interference or position, the network will still work perfectly. Mesh functionality can be combined with all other features of AWR5805.



DIMENSIONS & LAYOUT



AWR5805 SERIES: 145 x 120 x 46 mm

SPECIFICATIONS

Hardware Specifications		
Model Name	AWR5805	
SOC		
CPU	ARM Cortex A7, Quad-Core	
Network Interfaces/Connectivity		
Wi-Fi	802.11ac wave 2(5GHz), 802.11a/b/g/n(2.4GHz/5GHz) MU-MIMO 2x2 (2 streams) Wi-Fi Mesh ready	
Ethernet ports	Standard	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X)
	Ports	5x 10/100/1000 BASE-TX RJ-45 1 x WAN 4 x LAN
Antennas		
Wi-Fi	2x SMA(M) antennas	
Watchdog		
Hardware WD Reset	Yes	
External IO Interfaces		
Default/Reset Button	1 key	
SD Slot	1x micro-SD slot	
LED Indicators		
LEDs	PWR, 2.4GHz Wi-Fi, 5.0 GHz Wi-Fi, LAN, WAN	
Power		
Voltage Input	DC Power : 12 to 48V	
Consumption	< 18W	
Redundancy	No	
Connector	3-pin Terminal block	
Reverse polarity protection	Yes	
PoE	PoE PD, 802.3at, Mode A	
Mechanicals		
Casing material	Metal housing	
Dimension L x W x H (mm)	145 x 120 x 46	
Weight	726 g	
Installation	DIN-Rail or Wall-Mount (optional kit)	
Ingress Protection Rating	IP30 protection	
Environment limits		
Operating Temperature	-40°C to +75°C (-22°F to +158°F)	
Storage Temperature	-40°C to +85°C (-40°F to +185°F)	
Ambient Relative Humidity	5% to 95% RH, (non-condensing)	

Software Specifications	
Network	
IPv4/IPv6	DHCP server
	DHCP Client/Static IP/PPPoE
Connection	Telnet, SSH, TFTP/SFTP, Http, Https, SNMP
Other Protocols	NTP, DNS, 802.1Q VLAN, QoS, VRRP, MQTT
Security	
Firewall	Access control list (ACL)
	Port Forwarding
	Attack Prevention (Inserted after Port Forwarding)
VPN	IPSEC, OPEN-VPN, L2TP, PPTP
Reliability	
Dev Redundancy	VRRP
Schedule operation	Schedule control of application
WLAN	
WLAN Connection	AP (802.11 a/b/g/n/ac), Mesh
Wi-Fi Security	OWE/WPA-PSK/WPA2-PSK/WPA3-PSK (SAE)
Management	
System Configuration	WEB, Telnet, SSH
Firmware upgrade	WEB, TFTP
System Log	Log data to Local memory, remote logger, local flash
SNMP	SNMP v1/v2/v3
Diagnostics	Ping, Traceroute, Nslookup
Remote Management	ATOP OKRA remote management system
Statistics	
Statistics	Memory, Mobile, WAN, Wireless, LAN

REGULATORY APPROVALS

Regulatory Approvals				
Safety	UL/IEC 62368-1, IEC60950-1, EN62368-1			
EMC	EN55032, EN61000-6-4, EN55024, EN61000-6-2, FCC Part 15B, FCC Part 18			
Wi-Fi	EN300328 for WIFI b/g/n 2.4G, EN301893 for WIFI a/n/ac 5G, EN62311 MPE Report, Part 15C for 2.4G b/g/n, Part 15E for 5G B1/B4 a/n/ac			
Test	**Item**		**Value**	**Level**
IEC 61000-4-2	ESD	Contact Discharge Air Discharge	±6KV ±8KV	3 3
IEC 61000-4-3	RS	Enclosure Port	10 (V/m) , 80-1000MHz 3 (V/m), 1.4-2.0GHz 10 (V/m), 2.0 to 2.7GHz	3 3 3
IEC 61000-4-4	EFT	DC Power Port Signal Port	±2.0KV@ 5.0kHz ±1.0KV @ 5.0kHz	3 3
IEC 61000-4-5	Surge	DC Power Port Signal Port	Line-to-Line ±1KV Line-to-Earth ±2KV Line-to-Earth ±2.0KV	3 3 3
IEC 61000-4-6	CS	DC Power Port Signal Port	10V, 150KHz to 80MHz, 80%AM 10V, 150KHz to 80MHz, 80%AM	3 3
IEC 61000-4-8	PFMF	Enclosure	30A/m (r.m.s), 50Hz or 60Hz	4
Shock	IEC 60068-2-27			
Drop	IEC 60068-2-32			
Vibration	IEC 60068-2-64			
Others	RoHS, including 2015 amendment REACH Conflict Mineral Free			
Warranty	5 years			

ORDERING INFORMATION

Ordering information

Model	Part Number	Ethernet (RJ45)	WI-FI	BT	LoRa	PoE	GPS
AWR5805	1P1AWR58050001G	1x WAN, 4x LAN	802.11/a/b/g/n/ac	-	-	-	-
AWR5805P	1P1AWR5805P001G	1x WAN, 4x LAN	802.11/a/b/g/n/ac	-	-	Yes	-

Optional Accessories

Model	Part Number	Description
AD1048-24FS	505004812400001G	DIN-Rail Power Supply Input: 100-240VAC / 120-370VDC; Output: 2A@24VDC
UV336-1230	505003611200001G	Power adapter Input: 100-240VAC; Output: 3A@12VDC; US plug

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