

DAS Antenna

Neuron Probe



Network availability & reliability are main targets for every DAS operator or owner. And both targets cannot be fulfilled without timely insights about the DAS infrastructure. The DASwizad system is Consultix DAS monitoring system which is engineered to promptly report RF defects along the DAS infrastructure and to significantly reduce troubleshooting effort and costs.

Extending the options of DASwizad monitoring nodes, the Neuron tag is designed to cover those scenarios where the detection mechanism of the DASwizad probe is not relevant.

The tiny battery-operated device is directly mounted on each DAS antenna to periodically transmit a keep-alive signal backward along the DAS path down to the equipment room where the Neuron gateway is located to report all probe alarms to the SpectraQual server.

The **Keep-alive** signal which is transmitted back into the antenna path verifies the infrastructure continuity regardless of the carried technology or operational bands.

Neuron

DAS Monitoring System

DAS Sounds Good 

SYSTEM SPECIFICATIONS

NEURON

<i>Parameter/Feature</i>	<i>Value</i>
Mode	DAS continuity check
Communication with the gateway	Keep-alive signal (coded with each Neuron ID)
Communication media	Keep-alive signal transports through the DAS
Keep-alive Frequency Band	900 MHz ISM band (Other bands available)
Neuron Express Grouping	Up to 4 Frequency Groups
Keep-alive Packet width	< 30 ms (< 3ms in Neuron Express)
Keep-alive signal Modulation	GFSK
Keep-alive Signal BW	50 KHz
Max. loss (DAS path from any antenna to the Neuron gateway)	55 dB
Reporting Interval	1 minute to 1 day
Battery Type	Coin CR2032 (Replaceable). CR2450 in Neuron Express
Neuron battery Life	4 Years @ default Packet cycle
Default Packet cycle	15 Minutes in standard version (10-15 Seconds in Neuron Express). Factory Settings
Alarm decision interval	Recommended 3 Cycles (10 Cycles in Neuron Express)
Weight (incl. Battery)	Standard Neuron; 1.25 oz (35 grams). And Neuron-Pro; 5 oz (144 grams)
Dimensions	Diameter; 4.5 cm (1.77"). Hight; 2 cm (0.8"). And Neuron-Pro; 3"× 3"×1.8"
Mounting	Adhesive (screw-mount optional)
Settings	Neuron ID, site and floor location
Operating Temperature	-10 to 50 °C (14 to 122 °F)
Relative Humidity (Non-condensing)	< 80 % @ 0 to 35 °C and <70 % @ 36 to 50 °C
Certifications	FCC (part 15.109 and 15.107) and EN55022/CISPR 22 EMI
Enclosure material	ABS Plastic. UL94 HB Flammability. White color.

NEURON GATEWAY

<i>Parameter/Feature</i>	<i>Value</i>
Capacity	>100 Neurons / gateway
Connectivity to server	Ethernet (Optional WIFI and Cellular)
Back-up mechanism	Store & forward
Security method	SSL
Alarming Method	Direct access (hotspot GUI), SpectraQual server, SNMP interface (optional) or Dry-contact (optional)
Power Supply	24/48 VDC (connector 5.5 × 2.1 mm). Incl. AC adapter (100-240 VAC, 50-60 Hz)
Ingress Protection	IP 64 (Optional IP 67)
Power Consumption	< 6 Watts (220 mA @ 24VDC)

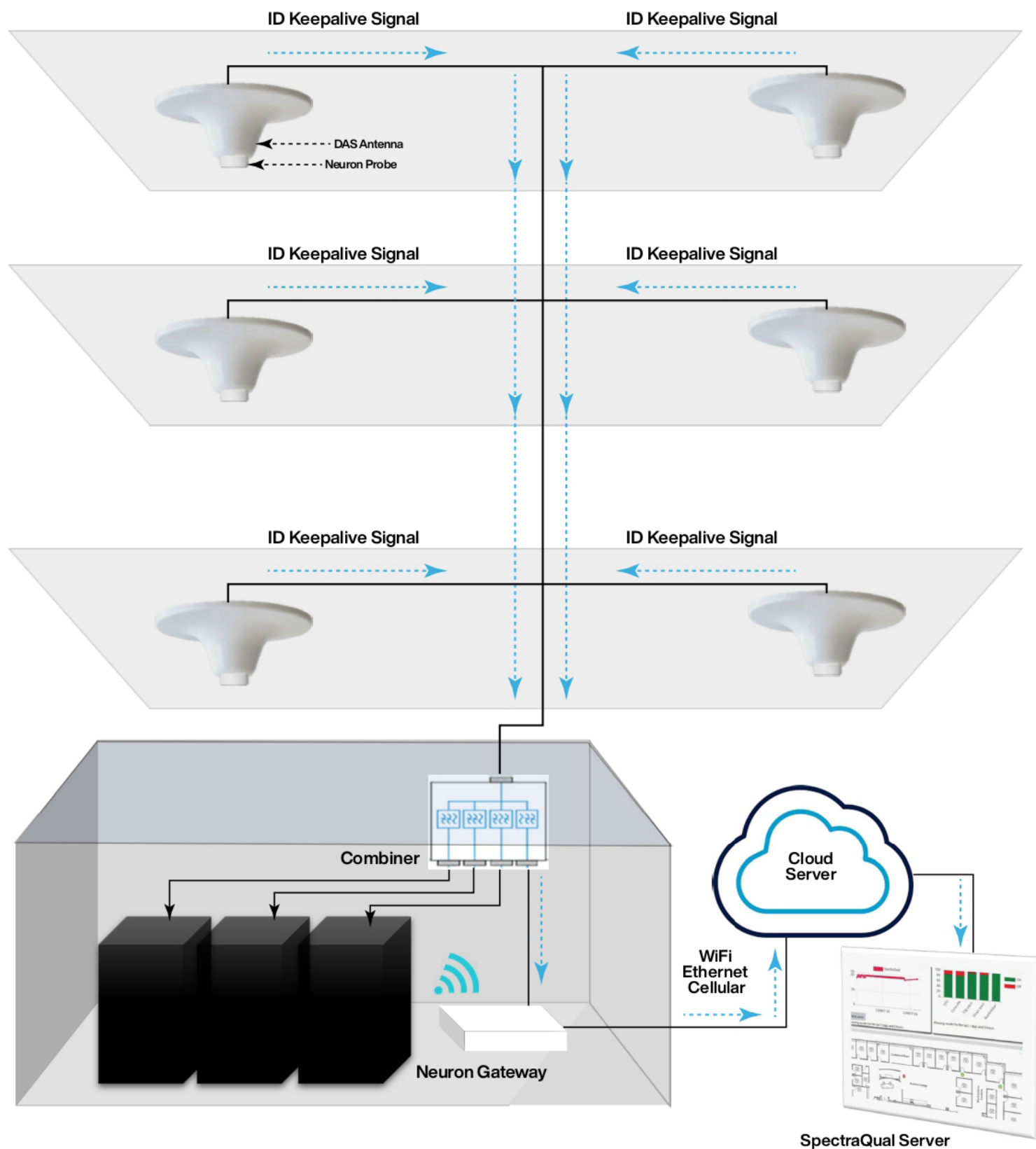
SYSTEM SPECIFICATIONS

SPECTRAQUAL SERVER

<i>Parameter/Feature</i>	<i>Value</i>
User access	Web-based
Setup	On-Premises or Cloud
Security	SSL to gateway, token for user authentication and access levels
Widgets	Standard or customizable
Data Representation	Tabular, time graph, bar chart, pie chart and maps
Capacity	As per ordering information below
Notifications	Dashboard, visual floor map, e-mail and SMS
OS	Windows Server
Database	MySQL
Integration with existing OSS	Custom option

ORDERING INFORMATION

<i>Description</i>	<i>Model</i>
RF beacon for DAS continuity check; built-in battery, adhesive-mount.	Neuron
RF beacon for DAS continuity check; Extended link range, IP68 Protection.	Neuron-Pro
RF beacon for DAS continuity check; Express packet, Super Capacity Battery.	Neuron-EXP
Neuron Gateway: Receiver unit for Neuron keepalive checks; Ethernet connection to SpectraQual server; incl. AC/DC Adapter.	Neuron-GW
Neuron Gateway: Receiver unit for Neuron Express packet checks	Neuron-GW-EXP
19" rack-mounted Neuron Gateway & dry-contact hub (16 inputs)	Neuron-GW-Exp-Pack19d
Form C Dry-contact interface for Neuron Gateway.	Neuron-GW-FC
External Directional Coupler for Neuron Gateway connection with site equipment.	Neuron-GW-DIR
Neuron gateway option: WIFI backhaul connection to SpectraQual server.	Neuron-GW-WIFI
Neuron gateway option: Cellular backhaul connection to SpectraQual server.	Neuron-GW-CELL
SNMP interface for Neuron Gateway.	Neuron-GW-SNMP
RSSI mode for Neuron Gateway (Neuron signal level monitoring).	Neuron-GW-RS
Local Instance of SpectraQual Server Licence (< 100 Probes)	SpectraQual-P100
Local Instance of SpectraQual Server Licence (< 200 Probes)	SpectraQual-P200
Local Instance of SpectraQual Server Licence (< 1000 Probes)	SpectraQual-P1K
Local Instance of SpectraQual Server Licence (> 1000 Probes)	SpectraQual-Mega
SpectraQual server (Cloud): Annual subscription (< 100 Probes)	SpectraQual-Light100
SpectraQual server (Cloud): Annual subscription (< 200 Probes)	SpectraQual-Mini200
SpectraQual server (Cloud): Annual subscription (< 1000 Probes)	SpectraQual-C1K
SpectraQual server (Cloud): Annual subscription (> 1000 Probes)	SpectraQual-Mega/C



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