DAS Antenna --------->

<------ Neuron Probe

Neuron
DAS Monitoring System

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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 DASwizard 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 DASwizard monitoring nodes, the Neuron tag is designed to cover those scenarios where the detection mechanism of the DASwizard 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.

DAS Sounds Good ✅

FCC

SYSTEM SPECIFICATIONS

NEURON

Parameter/Feature	Value
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 infrastructure
Keep-alive Frequency Band	900 MHz ISM band (custom option choose from 287 to 1054 MHz)
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	5 minutes to 1 day (Factory Settings)
Keep-alive Signal Duration (active period)	30 ms
Neuron battery Life	4 years @ 15-minute reporting interval
Battery Type	Built-in, Coin CR2032 (Replaceable)
Weight	35 grams (1.25 oz) including battery
Dimensions	Diameter; 45 mm (1.77"). Hight; 20.3 mm (0.8")
Mounting	Adhesive (screw-mount optional)
Settings	Neuron ID, site and floor location
Operating Temperature	-10 to 50 °C (14 to 122 °F)
Operating humidity	Up to 95%
Certifications	FCC (part 15.109 and 15.107) and EN55022/CISPR 22 EMI
Enclosure material	ABS Plastic. White color (custom color available)

NEURON GATEWAY

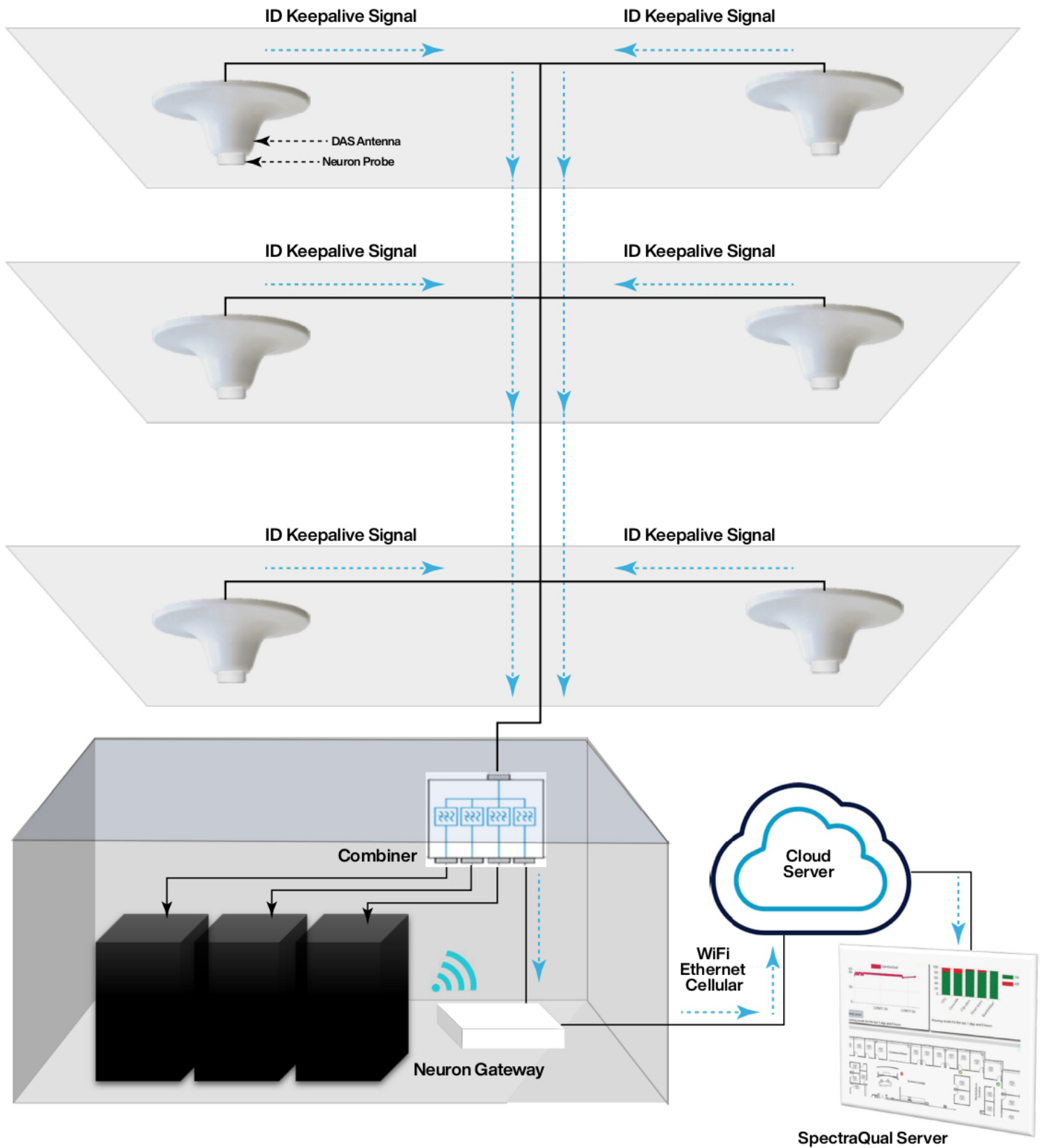| Parameter/Feature	Value
Capacity	>100 Neurons / gateway
Connectivity to server	Ethernet (Optional WIFI and Cellular)
Back-up mechanism	Store & forward
Security method	SSL
Alarming Method	Direct access (hotspot GUI), SpectraQual server, SNMP interface (optional) or Dry-contact (optional)
Power Supply	DC input (5 VDC; connector 5.5 × 2.1 mm) and AC/DC adapter included (100-240 VAC, 50-60 Hz). Optional 24/48 VDC input.

SYSTEM SPECIFICATIONS

SPECTRAQUAL SERVER

Parameter/Feature	Value
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

Parameter/Feature	Value
RF beacon for DAS continuity check; built-in battery, adhesive-mount.	Neuron
Neuron Gateway: Receiver unit for Neuron keepalive checks; Ethernet connection to SpectraQual server; incl. AC/DC Adapter.	Neuron-GW
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

Neuron

DAS Monitoring System

ID Keepalive Signal

ID Keepalive Signal

DAS Antenna

Neuron Probe

ID Keepalive Signal

ID Keepalive Signal

ID Keepalive Signal

ID Keepalive Signal

Combiner

Cloud Server

WiFi
Ethernet
Cellular

Neuron Gateway

SpectraQual Server

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