

DAS Antenna

Neuron Probe



The Neuron Express is Consultix's high end DAS monitoring System engineered to ensure indoor network reliability by providing timely insights into the DAS infrastructure. The system consists of battery-operated probes, known as Neuron tags or beacons, that are mounted directly (or in close proximity) on each DAS antenna. These probes periodically transmit a "keep-alive" signal back through the DAS path to a central Neuron gateway located in the equipment room. This process verifies the infrastructure's continuity, regardless of the carried technology or operational bands.

The Neuron express came to be the perfect choice for medium-to-large venues specially when very fast (reporting interval is needed (starting from 3 minutes.

Versatility

- Vendor agnostic system with generic non-Intrusive Probes
- Band independent Beacon-based concept
- Extended Range up to 55 dB DAS path from antenna to gateway
- Flexible Monitoring either through cloud server, dry-contact, SNMP or direct onsite access

Neuron Express

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	< 3ms
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	CR2450
Neuron battery Life	4 Years @ default Packet cycle
Default Packet cycle	10-15 Seconds. Factory Settings
Alarm decision interval	Recommended 10 Cycles
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 (for detailed information, refer to separate Gateway datasheet)

<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)
Dry contacts (Optional)	1 × output and 16 × inputs (refer to separate Gateway datasheet for details)
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)

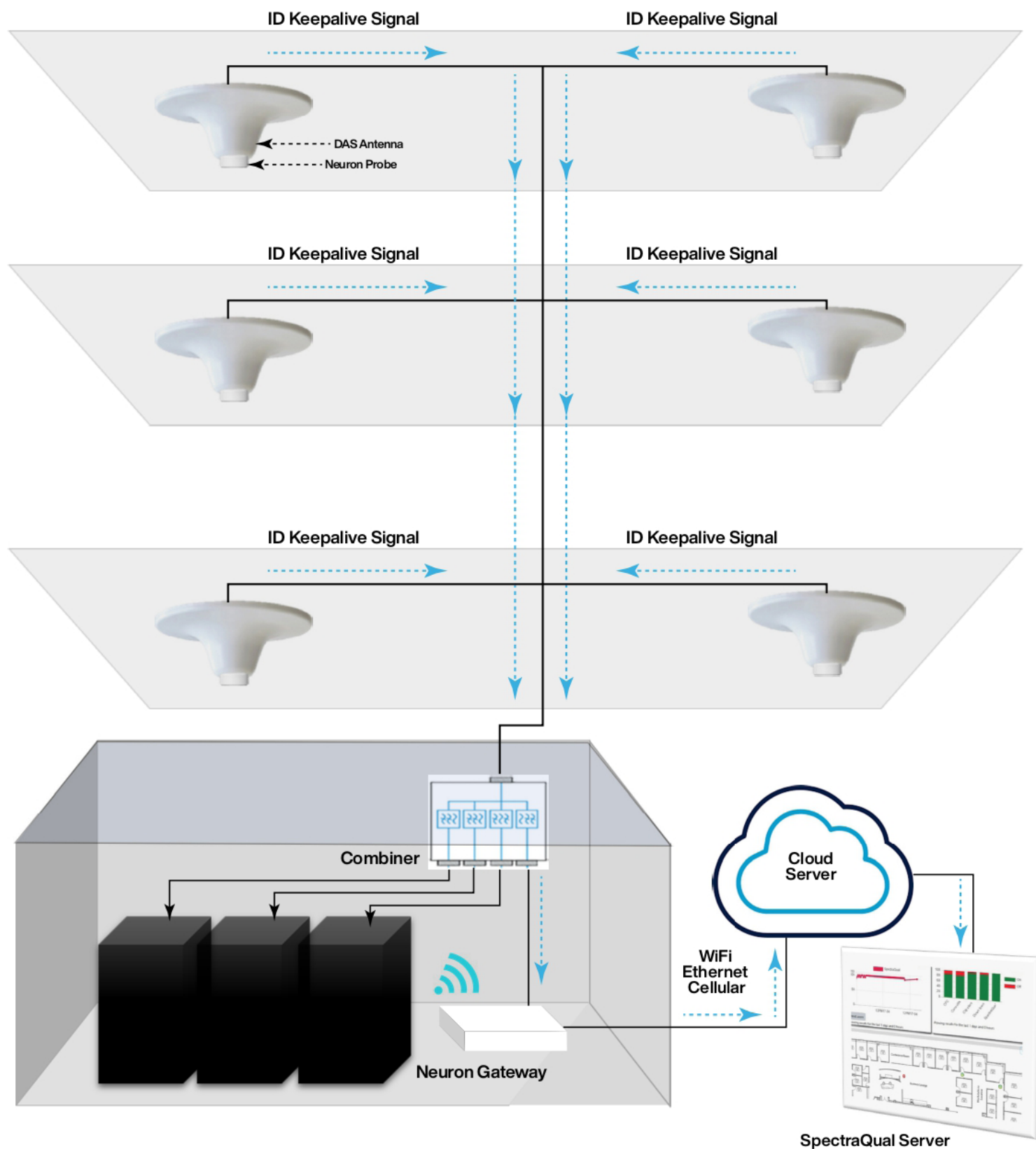
SYSTEM SPECIFICATIONS

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; Express packet, Super Capacity Battery.	Neuron-EXP
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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