TECHNICAL DATASHEET

NEXUS Series

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NEXUS-264 | NEXUS-2128

DESCRIPTION

The NEXUS is an IoT (Internet of Things) embedded ASPECT® Control Engine designed to provide flexible site control applications for medium to large scale building automation systems. It can be used to connect with Cylon CB Series and AAM NB Series of BACnet® MS/TP field level controllers. The NEXUS supports serial communications protocols such as BACnet®, AAM PUP, and Modbus®. Additionally, TCP/IP communications using FT/Net, BACnet®, Modbus® and Cylon's Unitron (when used with the UC32.netK) protocols are available when using the RJ-45 connection.

APPLICATION

A capacity based licensing model makes the NEXUS family of controllers scalable for medium to large buildings applications, including a campus environment when combined with the ASPECT®-Enterprise server software. The NEXUS provides network management and integration of the supported field level RS-485 and TCP/IP communication protocols.

When deployed with embedded ASPECT® Runtime Engine, the NEXUS is capable of supervisory-based control functions including but not limited to energy management routines, custom sequencing, alarm and event annunciation, historical alarming and trending, and master control scheduling. Additionally, streaming of live connected data is displayed rich HTML5 graphics using a web browser.

ASPECT® uses secure web technologies to enrich the user experience through common internet applications for alarm annunciation and scheduling. Receive alarms either from the integrated alarm console or through e-mail clients, or Twitter®. Schedule your building equipment through an integrated scheduler or by using common scheduling platforms such as Microsoft® Outlook®, Apple iCal, Google Calendar™.

NEXUS-264

4,000 Points or 64 Devices (TCP/IP and/or RS485)

NEXUS-2128

8,000 Points or 128 Devices (TCP/IP and/or RS485)

NEX-LP-16 (License Upgrade)

1,000 Points or 16 Devices (TCP/IP and/or RS485)

PLATFORM MAXIMUMS

10,000 Points or 128 Devices
64 Devices per RS-485 port

HARDWARE PLATFORM

Intel® CPU E3827 @ 1.75 GHz, 4GB RAM, 64 GB SSD
One 10/100/1000 MB Ethernet RJ-45 Connection
Two RS-485 ports @ 9K6, 19K2, 38K4, 57K6, 76K8 or 115K2

EMBEDDED SOFTWARE

Operating System: Secure Linux OS
Application: Embedded ASPECT® Runtime Engine

USB Service Port

DIN-rail and VESA mounting

Fan-less design

Designed to military standards MIL-STD-810G

Product Selection Chart							
Part Number	Device Capacity[1]	Point Capacity[1]	BACnet MSTP and/or IP	Modbus RTU and/or TCP	AAM PUP	Teletrol TSC®	Unitron (using UC32.netK)
NEXUS-264	64	4,000	✓	✓	✓	✗	✓
NEXUS-2128	128	8,000	✓	✓	✓	✗	✓
NEX-LP-16[2]	16	1,000	-	-	-	-	-
NEX-LIC-CHG [3]	-	-	-	-	-	-	-

Note: 1 – NEXUS supports a maximum of 10,000 points and 128 device connections.

Note: 2 – If added to 2128 only points are added for a maximum of 10000.

Note 3: Field upgrades require an NEX-LIC-CHG license.

SPECIFICATIONS

Physical

Form Factor	Fanless design Optimized for wall and DIN-rail mounting Designed for industrial conditions
Dimensions	217 mm wide x 206 mm deep x 73 mm high (8.5 in x 8.1 in x 2.9 in)
Weight	3.4 Kg
IP Rating	IP50

Operation

Processor	Intel® Atom™ E3827 1.75 GHz 2 cores
Memory	4G (8x 256Mx16 DDR3L) 1333MHz
Power Input	Nominal input 24V AC / DC (18 – 26.4 V), 4.0 Amps* Also accepts standard Dell notebook AC adapter, 65 W, 7.4 mm plug*

Note: NEXUS requires a dedicated SELV 24 V 60 VA AC / DC supply* (Class II supply) or a dedicated SELV 19.5 V 65 W PSU*.
The recommended supply is a 24 V 60 VA transformer. When using a higher VA transformer, care must be taken to ensure that the voltage stays within specification.

***Warning:** Earthing or Grounding of any of the terminals connected to the SELV power supply will cause serious damage to the power supply rectifier and will invalidate the product Warranty.
Never Earth or Ground any of the terminals connected to this power supply.
Never use this power supply to power CB, NB, or SBC control devices, or any other equipment, because it is possible that the other equipment may be connected to Earth or Ground.

Environmental

Operating temperature	0 °C to 50 °C
Relative humidity	5% to 95% non-condensing

Communications

Network	10/100/1000 Mbps using RJ-45 port
Serial Interfaces	2 x RS-485@ 9K6, 19K2, 38K4, 57K6, 76K8 or 115K2 (default 38K4)

Hardware Rating

Safety	CE Approved UL 61010-1/2 CAN/CSA-C22.2 No. 61010-1/2 IEC/EN 61010-1/2 IEC/EN 60950-1 EN 62311
EMC (Emissions class: B)	US CFR Title 47, FCC Part 2, 15 ANSI C63.4 2009 Canadian ICES-3 (B)/NMB-3 (B), Issue 5 EN 55032/CISPR 32 EN 55024/CISPR 24 IEC/EN 61000-3-2/3 IEC/EN 61326-1 EN55011
ROHS (Directive 2011/65/EU)	EN 50581

