DATA-LINC GROUP

DAX6500

2.4 GHz Discrete/Analog I/O Extender

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The Data-Linc Group DAX6500 I/O extender offers the ability to transmit discrete and analog signals with robust, industrial wireless technology. This allows wireless I/O communication between the Master and one or more Remotes from a few feet to many miles with applications in many industries. For added convenience, any unit may be configured as Master, Remote, Repeater or Repeater/Remote. This not only simplifies replacement but also reduces the number of units needed for "spare" inventory. A further convenience is the use of pluggable terminal blocks. If a unit needs to be replaced, unplug the terminal block with all its connecting wires and simply plug it into the replacement unit, eliminating the need to reconnect each individual wire.

The DAX6500 offers 12 bit analog resolution for enhanced accuracy and resolution of the analog channels. It therefore provides more precise monitoring and control, allowing data collected at the input to be relayed and reported with greater accuracy to the Master. For confidence in the wireless network's performance, the DAX is capable of utilizing Data-Linc's powerful, proprietary LincView™ OPC RF network diagnostics and management software (see LincView OPC data sheet for information).

Each DAX6500 has a total of 24 independent points—eight discrete inputs and eight discrete outputs, as well as four analog inputs and four analog outputs. The SRM6x20 radio component reliably relays data even in harsh industrial environments. But in the event of a communications failure, the output states of the discrete and analog channels can be configured to retain the last known value or a pre-defined state.

System Features

- **12 bit analog resolution**
- **Expandable for future growth**
- **8 discrete inputs, 8 discrete outputs, 4 analog inputs and 4 analog outputs**
- **Pluggable terminal blocks for easy unit replacement**
- **10 mile (16 km) range– LOS (line-of-sight) & omni antennas**
- **Single unit configurable as Master, Remote, Repeater or Repeater/Remote**
- **ARRA compliant***

LincView™ OPC Included Software

Data-Linc Group's *LincView*™ OPC Software provides an optional RF network diagnostics management tool for products with SRM radio components. *LincView* OPC offers complete RF network monitoring and maintenance from your Master location.

The DAX6500 is ideal for fixed or mobile installations. Its wireless component combines the analog and discrete I/O extender with Data-Linc Group's SRM industrial grade license-free wireless modems. In addition to the DAX6500 2.4 GHz (up to 10 miles, 16 km with LOS) and the DAX6400 900 MHz versions, the DAX/EXP expansion non radio Remote is also an option. The result is a simple to implement solution for wireless I/O signal transmission that ensures solid performance and reliability in any RF or wire environment. It is also ARRA compliant.

* American Recovery and Reinvestment Act of 2009

DAX6500 Specifications

Operating Frequency

License-free, 2.4 GHz ISM band

Included.

CD Configuration software, *LincView*™ OPC RF network management software, User Manual

Antenna. 0 dB bench test antenna

Other. Programming cable, power supply

Operating ranges

System gain. 134 dB

Distance. 10 miles (16 km) LOS with omni antennas

Transmitter

RF Output Power. 500 mW maximum, (10 programmable steps)

Modulation. FHSS, GFSK

Hop Patterns. 15 (user selectable)

Occupied Bandwidth. 230KHz

Error Correction. 32 bit CRC

RF Encryption. Substitution Dynamic Key

Receiver

Sensitivity. -107 dBm @ 10^{-4} raw BER

Selectivity. 40 dB @ fc ±230 KHz and 60dB @ fc ±460 KHz

Channel Functions

Analog. 0-20ma, 4-20mA or 0-10 VDC, 24VDC max. loop voltage, 12 bit resolution. Self-powered outputs.

Discrete Input. Dry contact closure

Discrete Output. Open collector (sink to ground), 100mA per channel, 12-24VDC

Connections

Antenna. Standard thread female SMA for optional external omni directional or yagi antennas

I/O Discrete and Analog

Detachable screw-type terminal blocks

Wire size 12-26 AWG

Power. Detachable three position screw terminal block

Configuration port. Standard DB9 RS232 port

EX-Linc. DB9 RS232 or RS485 2-wire

Indicators

General. Power (P), Carrier Detect (C), RF output (O), RF input (I), Comm Error

Discrete. Activity LED for each discrete I/O

Power

Voltage. 12-28VDC nominal

Current. 160mA idle, 660mA peak on transmit

Operating Environment

Temperature. -40 to 167°F (-40 to 75°C)

Humidity. 0 to 95% non-condensing humidity

Enclosure

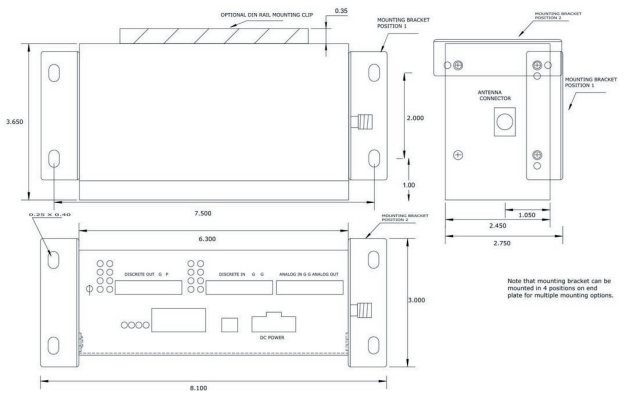
Standard. 18-gauge steel with mounting flanges 3.0 in x 2.75 x 8.1 in (7.6 x 7 x 20.6 cm)

Optional. DIN rail mounting

Shipping Weight. 1.8 lb (0.82 kg)

* Backward compatibility with DDAA legacy products for certain features. Version also available without the radio component for expanding I/O points at an existing DAX Remote location.

Dimensions



DAX (as a Master unit)

Supports to up to 8 DAX Remotes.

Each Master discrete input is replicated on each Remote discrete output.

Discrete inputs from one or more Remote units are wired as active low to appear on Master discrete outputs.

Compatible with existing DDAA1000 8 bit mode Remote devices (8 bit analog only)

All Master analog inputs replicate on all Remote analog outputs

Analog outputs are mapped via configuration software from Remote analog inputs (0 to 4 total)

DAX (as a Remote unit)

Address selected by internal dip switches.

With a DAX Master, a Remote can have addresses 0 to 7 (8 choices)

Compatible with existing DDAA1000 8 bit mode Master devices (8 bit analog only)

Remote analog inputs are mapped via setup to Master analog outputs (0 to 4 total)

Alliance Partners

GE Fanuc

National Instruments

Rockwell Automation Encompass Product Partner Global

OMRON

Collaborative Automation by Schneider Electric

Siemens Product Partner

See the data sheet for *LincView* OPC — included, powerful RF network diagnostic software

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