# **Field Control Layer Device**

## **BACnet Advanced Application Controller**

# DAC8864BT

### [Description]

DAC8864BT is a BTL certified logic controller that meets the BACnet B-AAC level of advanced programmable and independent operation. It is often used to monitor and control the mechanical and electrical equipment in the building, such as large air-conditioning boxes, water pumps, fans, and exhaust cabinets. Waiting for equipment. It uses a 32-bit microprocessor to manufacture super powerful functions and superior performance, with a communication rate of up to 76,800 BPS and a transmission distance of up to 1,200 meters. DAC8864BT has programmable control functions, and supports BACnet standard objects such as calendars, timetables, notification types, and alarm event registration; it has physical digital input points (BI), analog input points (AI), digital output points (BO) and Analog output point (AO); It has an ElMnet communication port that can be connected to 12 EIM series expansion modules, allowing you to flexibly combine to meet the point needs of different occasions; It has an LCD screen touch panel, which is convenient for users to set, operate, and Monitor and check equipment operating status and information. DAC8864BT adopts the international BACnet communication protocol standard, which can be integrated, interconnected and mutually controlled with any brand of BACnet monitoring system. It is definitely the best equipment for you to build a monitoring system.



#### **Features**

- Made in accordance with the BACnet communication protocol established by the American Heating, Refrigeration and Air-Conditioning Association (ASHRAE), and passed the BTL B-AAC level certification.
- With Peer to Peer peer-to-peer data transmission and sharing functions and the ability to read and write external controller objects, it can read single or multiple data (DS-RP-A/DS-RPM-A) and change the value setting (DS-WP-A).

  Built-in 32-bit microprocessor 64K RAM, 32K FRAM and 384K Flash memory.
- Built-in 2.8" TFT LCD touch screen, full-color 65,536 colors, resolution 320\*240 module, can be programmed by AIRTEK BACsoft software to display content, display colors up to 65,536 colors, with simplified/traditional/English operation menu, you can switch the menu directly set up. Built-in MS/TP master and servant token communication interface, 2,500Vrms potential isolation device and peer to peer data transmission and
- Built-in RS-232 communication interface, through the AD-Linker connection line and hyper terminal machine program, the initial value of the equipment can be set or parameter modification.

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  Digital input point (BI), with 5,000Vrms anti-interference optical coupling isolation capability and status indicator design.

  Analog input point (AI), with 12-bit resolution, can accept 3K or 10KΩ NTC thermistor, 4~20mA or 0~10VDC and other signals.

  Digital output point (BO), with 250VAC, 7A, SPST dry contact relay, with 5,000Vrms anti-interference optical coupling isolation device, status indicator light and HOA (manual/stop/automatic) switch with switching status feedback Monitoring function.

  Analog output point (AO), with 12-bit resolution, 0~10VDC output signal, with HA (manual/automatic) switch and with switching state feedback monitoring function and manual signal output adjustment knob to facilitate on-site test run Adjustment and maintenance work is carried out. With online program editing, debugging, online program download and online firmware update functions.

  It has common function calculation functions such as enthalpy value, dew point temperature, PID control, and advanced mathematical function calculation functions such as longitible functions and root sign.
- calculation functions such as logarithm, trigonometric function, and root sign.
- With BACnet standard objects such as Calendar, Schedule, Notification Class, Event enrollment, etc.; Timetable and alarm event registration support external object access functions.
- It has 150 digital software points (BV) and 150 analog software points (AV), which can be used as calculation values, set points, timers or
- All analog input cumulative value (AI), digital output value (BO), analog output value (AO), digital software point (BV), analog software point (AV) all have power-off memory function, which can be automatically when power is off Data can be stored in FRAM for more than 10 years. All BO, AO and BV points support 16-bit priority control function.

#### **Specification**

Model	BI	Αl	ВО	AO	EIM Q'TY	Calendars	Schedules	Notification	Event	BV Points	AV Points
DAC8864BT	8	8	6	4	12	2	12	4	20	150	150

**Power Supply** : 24VAC/VDC, 20VA.

**LCD Display** : 2.8", 65,536 color, touch TFT LCD320\*240 pixels, 32-bit MCU for panel,8M memory for fonts and user data.

Microprocessor : 32-bit high performance MCU, 64K RAM, 32K FRAM, and 384K Flash memory.

Binary Input (BI) : 12VDC detection voltage, 1,000VDC optical coupling isolator, accepts dry contact or open collector signal. : 12-bit resolution, jumper selectable to accept 3K/10KΩ NTC thermistor, 10VDC, or 4~20mA signal. Analog Input (AI)

**Binary Output (BO)** : 7A/250VAC, SPST dry contact. With manual on / off / auto switch, can monitor the status. Analog Output (AO) : 12-bit resolution, 0~10VDC. With manual / automatic switch and output signals adjust knob.

MS/TP Port : MS/TP MODBUS RS-485, communication speed 9,600/ 19,200/ 38,400/ 76,800 bps, auto select, max. length

1,200 meters, having 2500Vrms optical coupling isolator and TVS ARRAY surge protection.

**EIM Port** : MODBUS RTU RS-485, communication speed 38,400 bps, max. length 1,200 meters, up to 12 EIMs.

**Auxiliary Power** : 24VDC, 200mA, for sensor use.

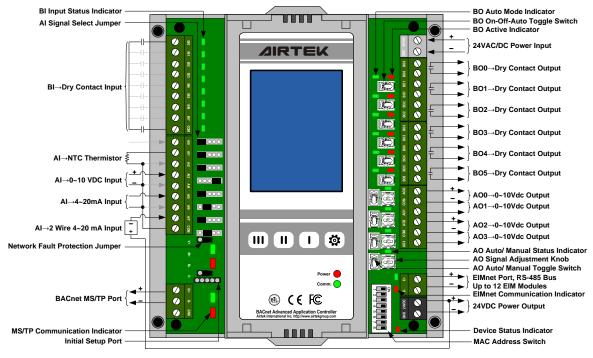
**Real Time Clock** : A build-in gold capacitor can back up real time clock after power failure.

**Environment** : 0~50°C, 20~90%RH, non-condensing BTL(B-AAC), CE, FCC, and RoHS Certification



# [Network Architecture] Management Layer **Building Management & Control System Architecture** Tablet PC (Wi-Fi,3G,GSM) Operator workstation (BACnet Ethernet) Smart Phone (Wi-Fi,3G,GSM) Web Brown (Ethernet) = IP WAN (((\*\*))) Integration Layer Field control Layer Sensor/Actuator Layer 77 34

### **[Wiring Diagram]**



#### 【Dimension】 Unit: mm

