

Project Name:	Approval:
Location:	Date:
Engineer:	Construction:
Submitted to:	Unit #:
Submitted by:	Drawing #:
Reference:	

### MODEL COMPATIBILITY:

Compatible with the following indoor units:

Indoor Unit Family	Model Number	Type
VRV and VRV Life	CXTQ <sup>2</sup> , FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXNQ, FXSQ, FXTQ <sup>2</sup> , FXUQ, FXZQ, FXAA <sup>3</sup> , FXFA <sup>3</sup> , FXMA <sup>3</sup> , FXSA <sup>3</sup> , FXTA <sup>2,3</sup> , FXZA <sup>3</sup> ,	P1P2
SkyAir	FAQ, FBQ, FTQ <sup>2</sup> , FCQ, FHQ, FAA <sup>3</sup> , FBA <sup>3</sup> , FCA <sup>3</sup> , FTA <sup>2,3</sup>	P1P2
Single-Zone and Multi-Zone	FDMQ, FFQ, FDMA	P1P2
	CDXS, CTX <sup>1</sup> , CTXS, CTXV, FDXS, FTK <sup>1</sup> , FTKB <sup>1</sup> , FTKF, FTX <sup>1</sup> , FTXB <sup>1</sup> , FTXC, FTXF, FTXG, FTXM, FTXQ, FTXR, FTXS, FTXV, FVXS, FVXV	S21

<sup>1</sup> FTK\_AXVJU, FTKB\_AXVJU, FTX\_AXVJU, FTXB\_AXVJU and CTX\_AXVJU units are not compatible.

<sup>2</sup> Remote or return temperature sensor should be installed on the CXTQ and FXTQ for use with the fallback logic, i.e., when using a wired thermostat.

<sup>3</sup> Power harness adapter WH-KRPPPOW is required to connect DKN adapter to unit.

The following indoor units do not have the S21 connection and require an additional interface adaptor (ordered separately) to provide the S21 connector:

S21 Adaptor	KRP067A41E	KRP980B2E	KER087A41
Indoor Unit Model	CTX09/12AVJU9 CTXV07AVJU9 FTK09/12NMVJU FTKF09/12/18/24BVJU9 FTKN09/12NMVJU FTX09/12NMVJU(A)	FTX09/12WMVJU9 FTXF09/12/18/24BVJU9 FTXN09/12NMVJU FTXQ09/12ASBU9 FTXV09/12/15/18/24AVJU9	FTK18/24NMVJU FTKN18/24NMVJU FTX15/18/24NMVJU(A) FTX15WMVJU9 FTXN18/24NMVJU
			FTXM09/12/18/24VVJU FTXM09/12/18/24WVJU9 FVXV09/12/15/18AVJUT9 FVXV09/12/15/18AVJUW9

### SPECIFICATIONS:

<b>Model</b>		AZAI6WSPDKC
<b>Description</b>		DKN Plus Interface
<b>Maximum connections</b>		1 for each S21/P1P2 indoor unit
<b>Wiring</b>	<b>S21 Wire</b>	8.2 ft / 2.5 m (Included)
	<b>P1P2 Wire</b>	8.2 ft / 2.5 m (Included)
<b>Modbus RTU / BACnet MSTP communication baud rate</b>		9600, 19200, 38400, 57600, 76800, 115200 bps (Default: 38400)
<b>Power supply</b>	<b>For DKN Plus Interface</b>	12-16 VDC by the Indoor unit PCB. For P1P2 indoor units: X18A or X35A. (For FXTQ_PA(B) and FTQ_PA(B), use the X9A terminal on the A2P PCB)
	<b>For 3<sup>rd</sup> party thermostat</b>	24VAC from external power supply
<b>Contact Rating</b>	<b>Digital output (Aux. Heat)</b>	1 amp. at 24VAC (Normally Open (NO))
	<b>Digital Input (Force Off)</b>	Dry contact (Configurable as NO or NC).
<b>Dimensions</b>		3.62 in x 3.15 in x 1.14 in / 92mm x 80 mm x 29 mm
<b>Weight</b>		3.24 oz / 92g
<b>Storage temperature</b>		-4°F to 158°F
<b>Operation temperature</b>		32°F to 113°F
<b>Compliance</b>		EMC with the standard 47 CFR Part 15B (US) EMC with ICES-003 Issue 6 standard (Canada)

### PRODUCT IMAGE:





# Submittal Data Sheet

## AZAI6WSPDKC – DKN Plus Interface

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### FEATURES:

- Easy commissioning with Bluetooth configuration App through DKN Cloud NA App
- Indoor unit control and monitoring points using the DKN Cloud NA App
  - On/Off – Setpoint - Room temperature - Mode (Auto, Cool, Heat, Fan, Dry) - Fan speed - Louver position - Error code
- Versatile interface that can integrate with smart thermostats through multiple approaches:
  - Cloud API (Honeywell Home App/Cloud – Ecobee App/Cloud – Nest App/Cloud -*Pelican Thermostat*)
  - Local API (Daikin Color Touch (P1P2 only))
  - Modbus RTU (Lutron Palladium Thermostat)
  - BACnet MS/TP
- 3rd party thermostat G/Y/W (Fan/Cool/Heat) relay control through thermostat wiring.
  - Automatically disables the thermostat relay logic when the cloud API connection is detected.
  - Custom control logic applied to minimize the loss of indoor unit efficiency when no cloud API, BACnet or Modbus connection was detected.
  - Compatible Daikin thermostats: App Stat 250803400 – Value Series (TSTATD1100-2 or TSTATD1152-2) – Premium series (D4271C) – Premium Mini (D2270C) – Color Touch (DT4272C)
- Controls auxiliary heater with dry contact as a secondary heat source:
  - Turn on and off the auxiliary heater based on the differential (configured in the App) between the setpoint and the room temperature.
  - Enable/Disable the auxiliary heater based on outdoor temperature (S21 IDU only)
  - The user can enable the emergency heat mode from the DKN App
    - If the indoor unit has an error, the user can enable the emergency heater from the app.
- Ability to disable Bluetooth/Wi-Fi for secure building applications with firmware v4.06+
- Digital input dry contact to force the indoor unit off.
- Integration into home automation systems through software drivers, available in Daikin City
  - Crestron
  - Control4
  - RTI Control
  - Fibaro
- BACnet MS/TP and Modbus RTU Integration
  - The DKN Plus adaptor will provide the following data objects:

No.	Point Name	Read Only/Writable
1	Unit on/off	Writable
2	Setpoint	Writable
3	Room temperature	Writable**
4	Mode Auto/Cool/Heat/Fan/Dry	Writable
5	Fan speed	Writable
6	Louver position	Writable
7	Error code	Read only
8	Digital input status	Read only
9	Auxiliary heat output status	Read only

\*\* The room temperature is writable for P1P2 indoor units only and read-only for S21 indoor units.



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AZAI6WSPDKC – DKN Plus Interface

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- For FTX\_B, FTK\_B, FTXB\_B models the unit is running based on a 1°C temperature control. The setpoint command will be rounded to °C to send to the indoor unit. For some setpoints, the indoor unit temperature command may not change as shown in the table below.

<b>User Setpoint on Controller (°F)</b>	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
<b>Actual Indoor Unit Setpoint (°F)</b>	68	68	70	70	72	73	73	75	75	77	77	79	79	81	82

## FEATURE COMBINATIONS:

Some features may conflict with the operation of other features. This chart defines the features that can be combined on a single unit.

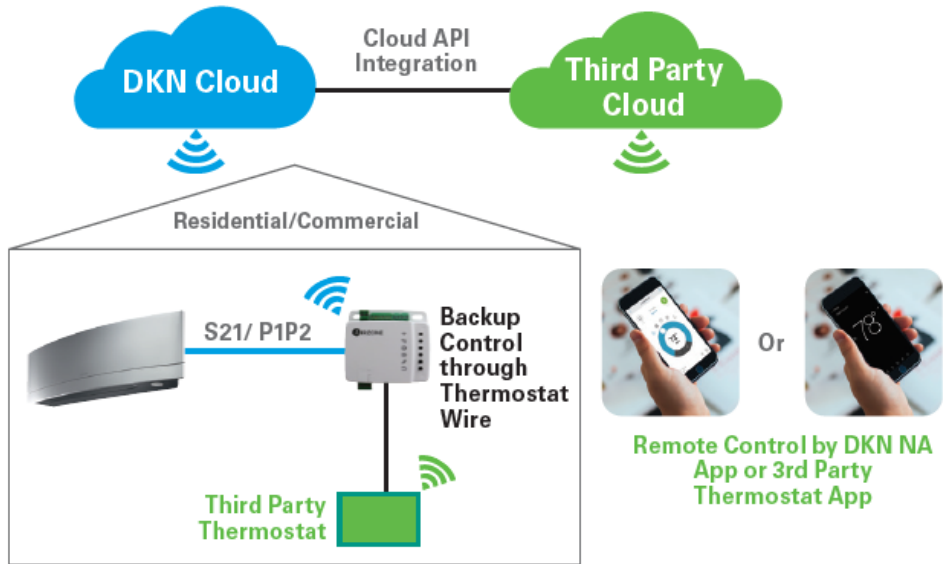
ALLOWED FEATURE COMBINATIONS	DKN CLOUD APP	API STAT	FALLBACK	BACNET	MODBUS	LUTRON PAL.	DIGITAL INPUT	AUX HEAT	RADIO DISABLE
DKN CLOUD APP				✓	✓		✓	✓	
API THERMOSTAT			✓	✓	✓		✓	✓	
FALLBACK		✓		✓ <sup>1</sup>					✓
BACNET	✓	✓	✓ <sup>1</sup>				✓	✓	✓
MODBUS	✓	✓					✓	✓	✓
LUTRON PALLADIOM							✓	✓	✓
DIGITAL INPUT	✓	✓		✓	✓	✓		✓	✓
AUX HEAT	✓	✓		✓	✓	✓	✓		✓
RADIO DISABLE			✓	✓	✓	✓	✓	✓	

1. When combined with fallback logic, BACnet can be used for error monitoring and fan speed control only.

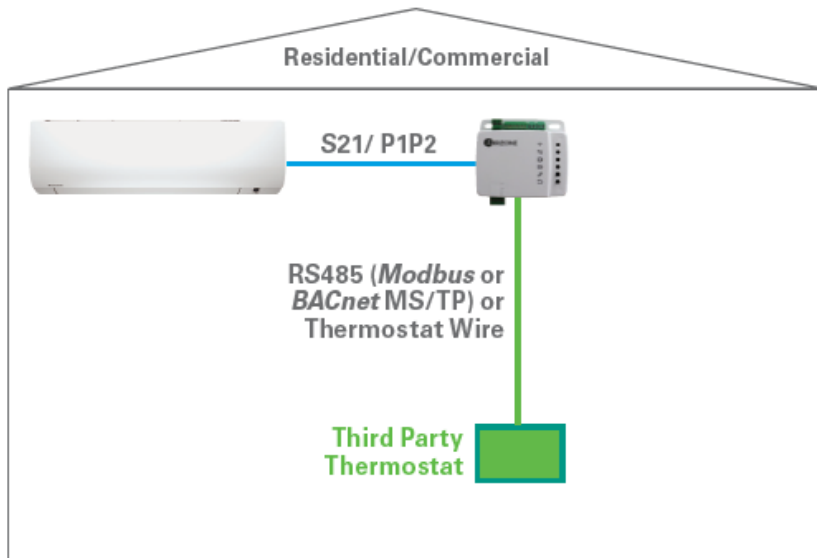
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### SYSTEM DIAGRAM:

- Integration with 3<sup>rd</sup> party thermostat
  - Integration with Smart Thermostats through 3rd third-party Cloud API

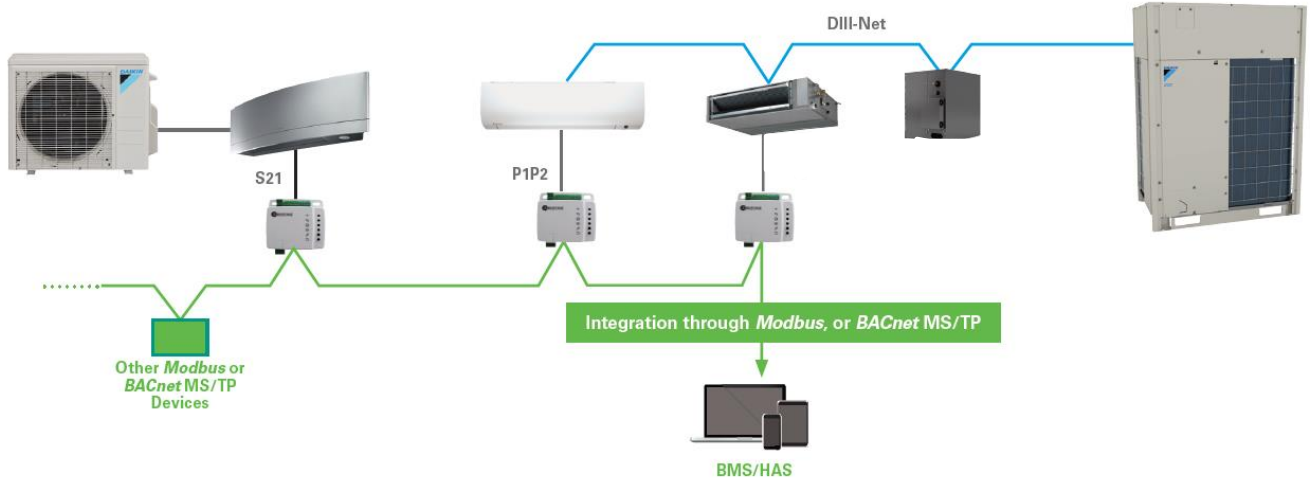


- Integration through RS485 or Thermostat Wire

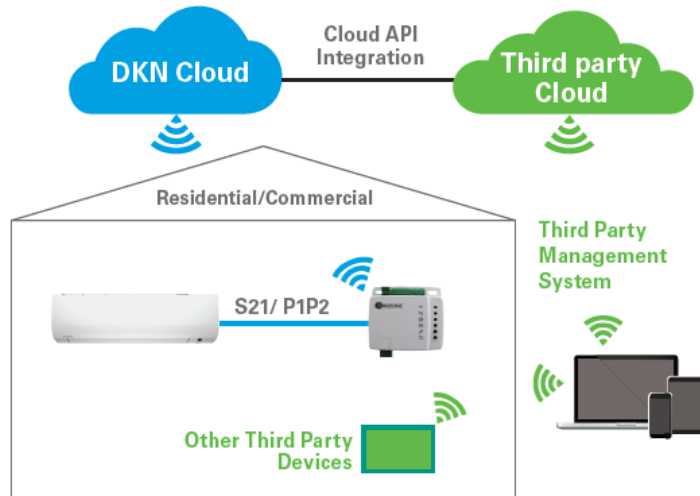


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- Integration with Building Management System (BMS) or Home Automation System (HAS)
  - Integration through Modbus RTU or BACnet MS/TP



- Integration through Cloud API

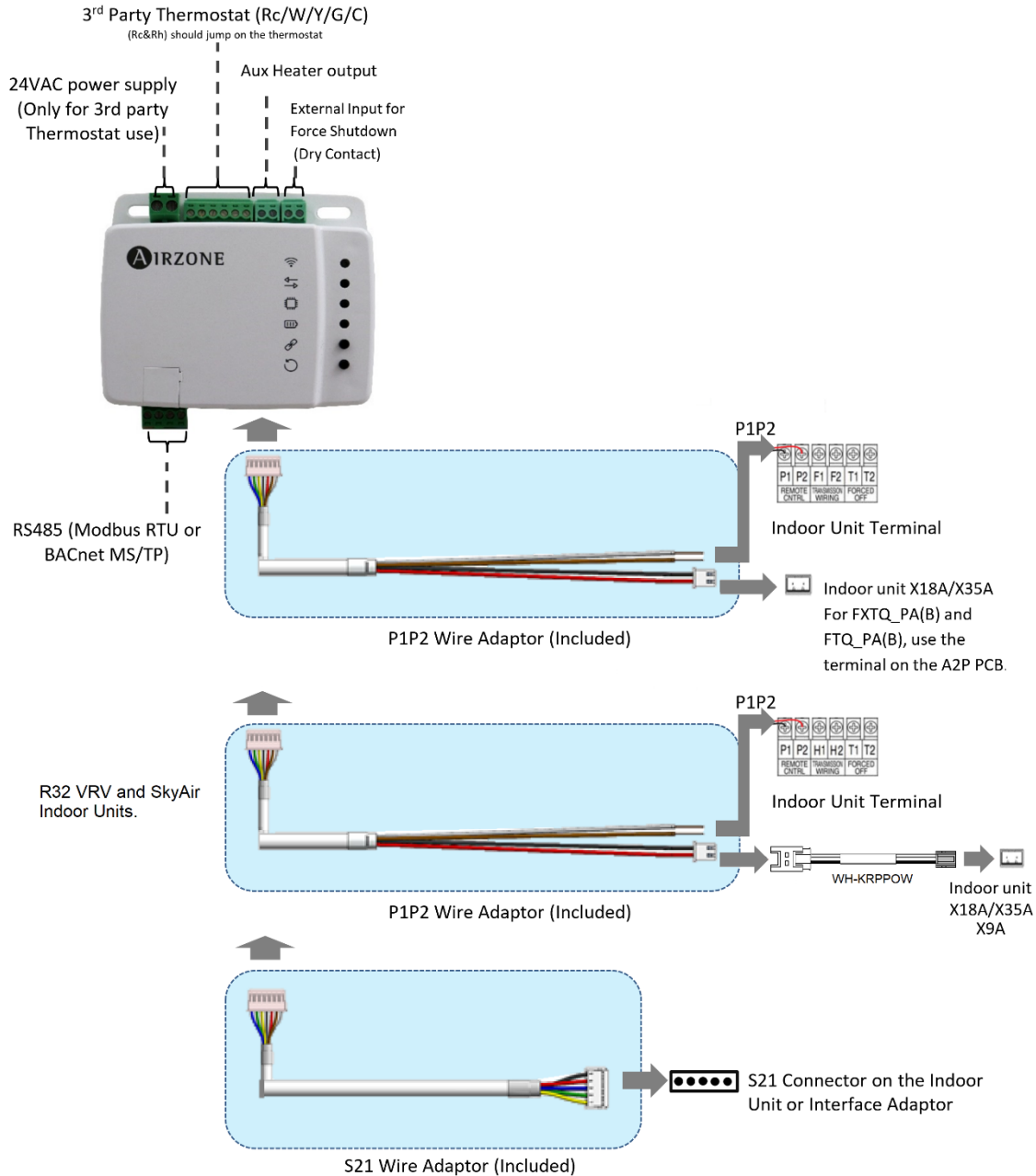


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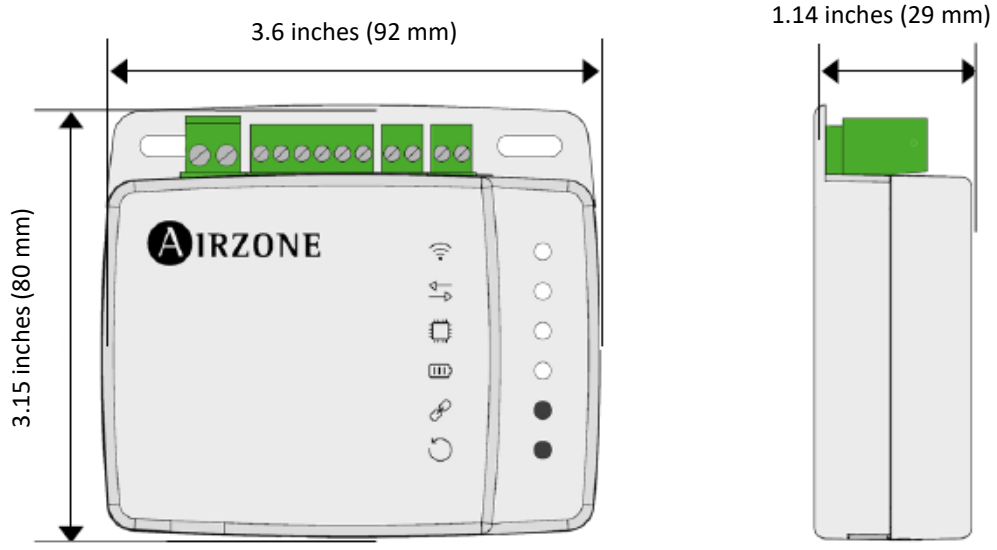
### WIRING DIAGRAM:

- Connects to P1P2 and S21 indoor unit



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### DIMENSIONS:



### DOCUMENTATION:

Documentation available on [www.daikincity.com](http://www.daikincity.com) and/or [www.daikincomfort.com](http://www.daikincomfort.com):

- Product Flyer
- Operation Manual
- Installation Manual
- Bacnet Integration Manual
- Modbus Integration Manual
- Local API integration Manual
- Pelican Thermostat Integration Manual
- Lutron Palladium Thermostat Integration Manual
- DKN Plus and 3<sup>rd</sup> party thermostat Application Guide
- Written Guide Specs