

COMMERCIAL AIR THERMOSTAT PRODUCT GUIDE

SMART SOLUTIONS



GE APPLIANCES
a Haier company

AIR&WATER
SOLUTIONS

A complete guide in creating a comfortable environment

- Changing technology
- Understanding terminology
- Getting the correct thermostat for the specifications

Thermostat technologies and requirements are ever-changing in the Hospitality, Multi-family, Senior Living and student living applications. Getting the right equipment, paired with the right accessories can be a daunting task. The GE Appliances Air and Water Commercial AC team has resources to help you determine the right equipment and compatibility, to complete a successful project.



THERMOSTAT FEATURE GUIDE

A quick reference guide to PTAC, VTAC & Built In thermostat features

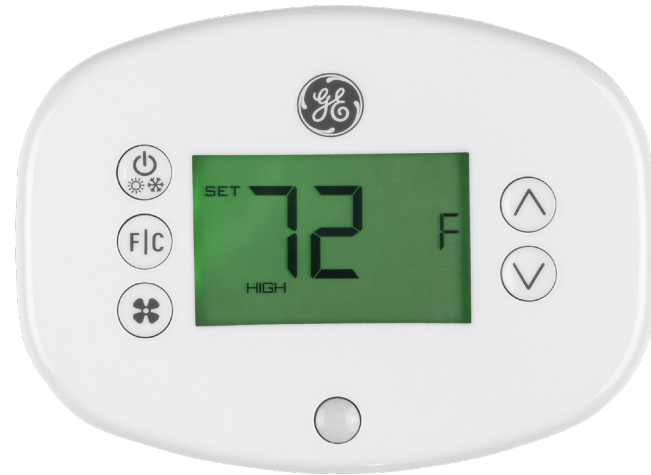
BRAND	GE RAK180W1	GE RAK160W2	GE RAK150VF2	VX3TWGEA	VX3TWGEAXMF	ZX3TWGEA	ZX3TWGEAXMF	GE RAK149F2	GE RAK149F2A	GE RAK149P2	GE RAK149P2A	HOTPOINT RAK148H2	HOTPOINT RAK148H2A	ZONELINE RAK190V
Energy management	✓			✓	✓	✓	✓							✓
Occupancy sensing	✓			✓	✓	✓	✓							
Network capable	✓	✓			✓		✓							✓
Programmable (time of day)										✓	✓			
Wireless communication signal	✓	✓		✓	✓	✓	✓							
Wired power only			✓					✓	✓	✓	✓	✓	✓	✓
Wired or battery powered	optional	optional		optional	optional	optional	optional							
Heat pump capable	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Single speed fan										✓	✓			
Two speed fan	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Manual changeover only			✓					✓	✓	✓	✓	✓	✓	
Auto or manual changeover	optional	optional		optional	optional	optional	optional							
California lighting compliant				✓	✓	✓	✓							
Occupancy based makeup air	✓			✓	✓	✓	✓							✓
V12 compatible			✓	✓	✓	✓	✓							✓
Bacnet capable	✓	✓			✓		✓							
RFID lock capable (additional fees apply)					✓		✓							
PMS capable	✓				✓		✓							
Communicates with SmarthQ™														✓

✓ Reason to quote

RAK180W1

REASON TO QUOTE

- GE branded
- Occupancy based energy management
- Occupancy based makeup air
- Good option for EVERY quote except V12



SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	• STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	Switched based on occupancy	Switched based on occupancy	

•not applicable on this model

POWER

24VAC Wired or Battery (if using wireless accessories power must be wired)

8 pin 7 wire harness included

WORKS WITH

Wireless control card (included with thermostat)

Plug and play ready for AZ45/65/95/AJ standard wiring for Hotpoint

NETWORK CAPABILITIES

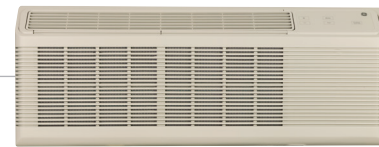
Requires OLKITNTWK (one per property, up to 1,000 rooms within one building)

XMF (one per thermostat)

INTEGRATION CAPABILITIES

Does not integrate with Door locks PMS systems or BACnet systems

WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV10 AZ95



AJ Heat/Cool Models Only

Go to Quick Spec and learn more:
RAK180W1

RAK160W2

REASON TO QUOTE

- Economical WIRELESS option



SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	• STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	Switched based on occupancy	Switched based on occupancy	

•not applicable on this model

POWER

24VAC Hard wired or batteries (if using wireless accessories power must be wired)

8 pin 7 wire harness included

WORKS WITH

Wireless control card (included with thermostats)

Plug and play ready for AZ45/65/95/AJ standard wiring for Hotpoint

NETWORK CAPABILITIES

OLKITNTWK (one per property)
XMF (one per thermostat)

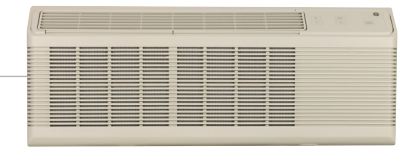


Allows remote temperature control and monitoring (does not have occupancy detection used for energy management)

INTEGRATION CAPABILITIES

Does not integrate with Door locks PMS systems or BACnet systems

WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV10 AZ95



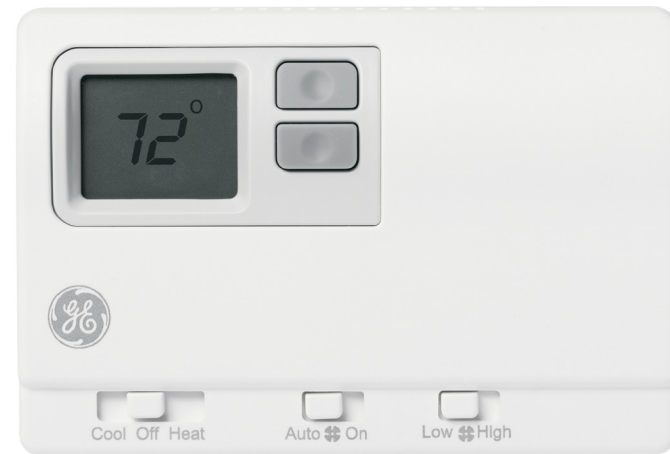
AJ Heat/Cool Models Only

Go to Quick Spec and learn more:
RAK160W2

RAK149F2

REASON TO QUOTE

- Economical option
- Two fan speeds



SIGNALS

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	• STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	• Switched based on occupancy	• Switched based on occupancy

•not applicable on this model

POWER

24VAC Hard wired only
8 pin 7 wire harness included

WORKS WITH

Hard wired installations
Requires 5-7 wires (function dependent)

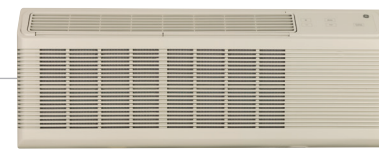
NETWORK CAPABILITIES

No network options

INTEGRATION CAPABILITIES

Does not integrate with Door locks
PMS systems or BACnet systems

WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV10 AZ95



AJ Heat/Cool Models Only

RAK149F2A

REASON TO QUOTE

- Economical option
- Two fan speeds



SIGNALS

B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	• STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	• Switched based on occupancy	• Switched based on occupancy

•not applicable on this model

POWER

24VAC Hard wired only
8 pin 7 wire harness included

WORKS WITH

Hard wired installations
Requires 5-7 wires (function dependent)

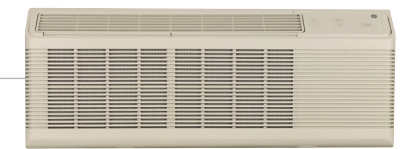
NETWORK CAPABILITIES

No network option

INTEGRATION CAPABILITIES

Does not integrate with Door locks
PMS systems or BACnet systems

WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV10 AZ95

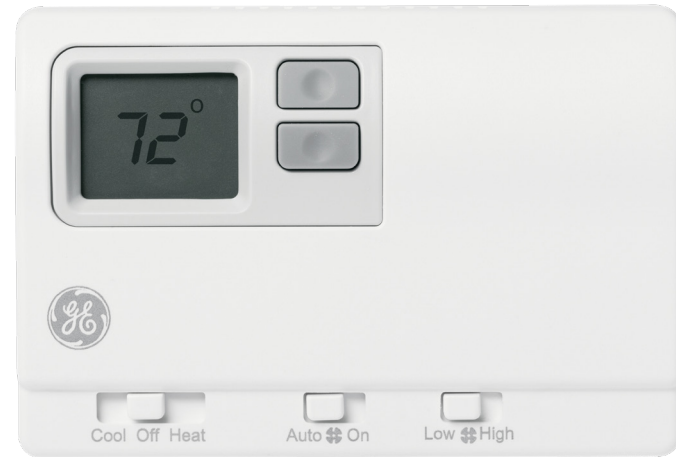


AJ Heat/Cool Models Only

RAK149P2

REASON TO QUOTE

- PROGRAMMABLE option



SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)										
INDOOR FAN-LOW										
INDOOR FAN-HIGH										
STAGE 1 COMPRESSOR										
•STAGE 2 COMPRESSOR										
HEAT-ELECTRIC										
24VAC COMMON										
24VAC HOT										
										• Switched based on occupancy
										• Switched based on occupancy

•not applicable on this model

POWER

24VAC Hard wired only
8 pin 7 wire harness included

WORKS WITH

Hard wired installations
Requires 5-6 wires (function dependent)

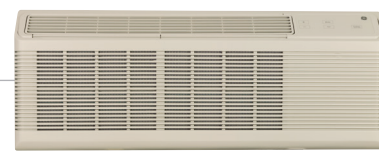
NETWORK CAPABILITES

No network options

INTEGRATION CAPABILITES

Does not integrate with Door locks
PMS systems or BACnet systems

WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV10 AZ95



AJ Heat/Cool Models Only

RAK149P2A

REASON TO QUOTE

- PROGRAMMABLE option



SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)										
INDOOR FAN-LOW										
INDOOR FAN-HIGH										
STAGE 1 COMPRESSOR										
•STAGE 2 COMPRESSOR										
HEAT-ELECTRIC										
24VAC COMMON										
24VAC HOT										
										• Switched based on occupancy
										• Switched based on occupancy

•not applicable on this model

POWER

24VAC Hard wired only
8 pin 7 wire harness included

WORKS WITH

Hard wired installations
Requires 6-7 wires (function dependent)

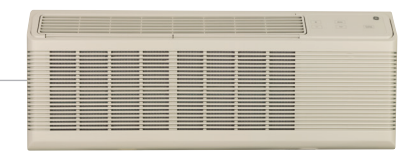
NETWORK CAPABILITES

No network options

INTEGRATION CAPABILITES

Does not integrate with Door locks
PMS systems or BACnet systems

WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV10 AZ95

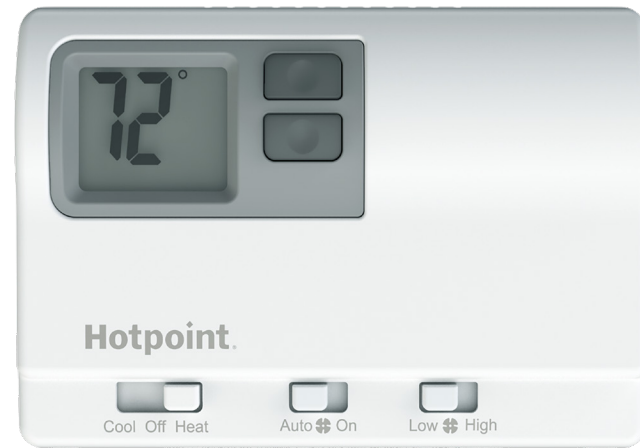


AJ Heat/Cool Models Only

RAK148H2

REASON TO QUOTE

- Hotpoint branded
- Economical option
- Two fan speeds



SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	• STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	• Switched based on occupancy	• Switched based on occupancy	

•not applicable on this model

POWER

24VAC Hard wired only
8 pin 7 wire harness included

WORKS WITH

Hard wired installations
Requires 5-7 wires (function dependent)

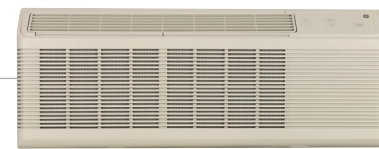
NETWORK CAPABILITIES

No network option

INTEGRATION CAPABILITIES

Does not integrate with Door locks
PMS systems or BACnet systems

WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV10 AZ95

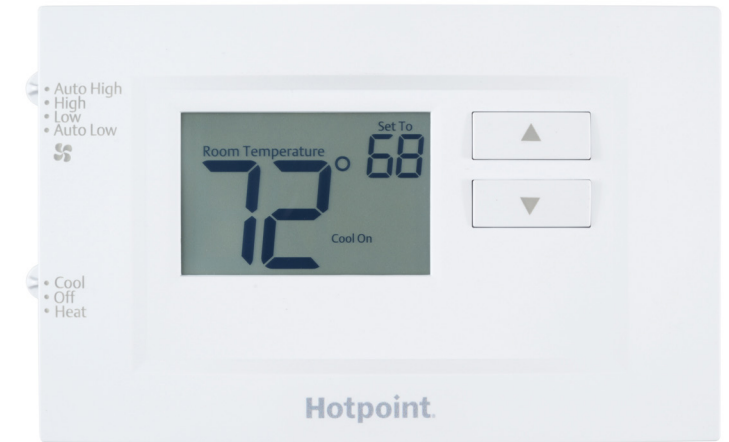


AJ Heat/Cool Models Only

RAK148H2A

REASON TO QUOTE

- Hotpoint Branded
- Economical option
- Two fan speeds



SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	• STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	• Switched based on occupancy	• Switched based on occupancy	

•not applicable on this model

POWER

24VAC Hard wired only
8 pin 7 wire harness included

WORKS WITH

Hard wired installations
Requires 5-7 wires (function dependent)

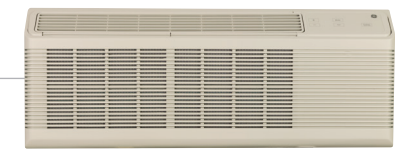
NETWORK CAPABILITIES

No network option

INTEGRATION CAPABILITIES

Does not integrate with Door locks
PMS systems or BACnet systems

WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV10 AZ95



AJ Heat/Cool Models Only

RAK190V

REASON TO QUOTE

- Occupancy sensing
- Occupancy based energy management
- Occupancy based makeup air
- Onboard temperature sensing
- Onboard humidity sensing
- 2 stage heat, 2 stage cool or 2 way communication operation
- Intergrates with SmartHQ™



SIGNALS	
B/O	REVERSING VALVE (HEAT ACTIVE)
GL	INDOOR FAN-LOW
GH	INDOOR FAN-HIGH
Y	STAGE 1 COMPRESSOR
Y2	STAGE 2 COMPRESSOR
W	HEAT-ELECTRIC
C	24VAC COMMON
R	24VAC HOT
AUX1	Switched based on occupancy
AUX2	Switched based on occupancy

POWER
24VAC Hard wire only
 Includes thermostat connectors (staged and communicating)

WORKS WITH
 Standard 18 gauge thermostat wire

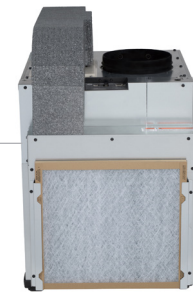
NETWORK CAPABILITIES
 SmartHQ™ Management (requires 1 connect module per thermostat and subscription)

INTEGRATION CAPABILITIES
 Does not integrate with Door locks
 PMS systems or BACnet systems

WORKS WITH



UltimateV11 AZ9V



UltimateV12 AZ9V

RAK150VF2

REASON TO QUOTE

- Economical 2 stage cool operation
- Compatible with V12 AZ9V



SIGNALS	
B/O	REVERSING VALVE (HEAT ACTIVE)
GL	INDOOR FAN-LOW
GH	INDOOR FAN-HIGH
Y	STAGE 1 COMPRESSOR
Y2	STAGE 2 COMPRESSOR
W	HEAT-ELECTRIC
C	24VAC COMMON
R	24VAC HOT
AUX1	• Switched based on occupancy
AUX2	• Switched based on occupancy

•not applicable on this model

POWER
24VAC Hard wired only
 8 pin 7 wire harness included

WORKS WITH
 Hard wired installations
 Requires 8 wires

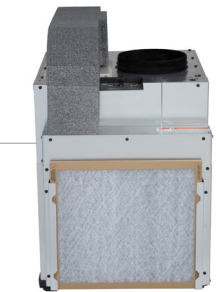
NETWORK CAPABILITIES
 No network options

INTEGRATION CAPABILITIES
 Does not integrate with Door locks
 PMS systems or BACnet systems

WORKS WITH



UltimateV11 AZ9V



UltimateV12 AZ9V

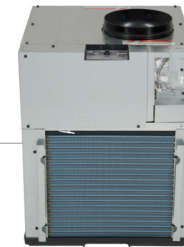
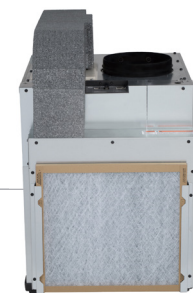
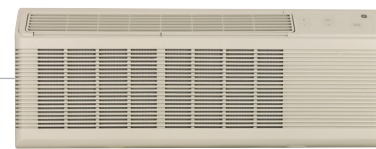
VX3TWGEA

REASON TO QUOTE

- Lighting control
- Occupancy based energy management
- Occupancy based makeup air
- Marriott GRMS requirement
- 2 stage cooling operation



WORKS WITH



SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	Switched based on occupancy	Switched based on occupancy	

• not applicable on this model

POWER

24VAC Wired or Battery (if using wireless accessories power must be wired)
Includes thermostat connector

WORKS WITH

Wireless control card (included with thermostats)

NETWORK CAPABILITIES

If networking is desired use VX3TWGEAXMF

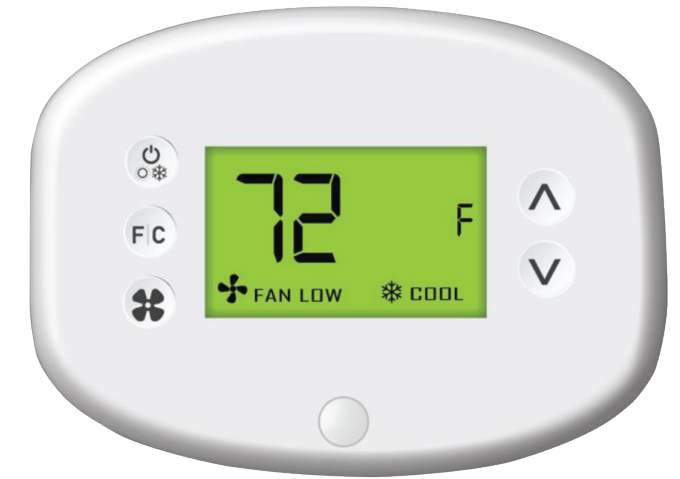
INTEGRATION CAPABILITES

For integration capabilities use VX3TWGEAXMF

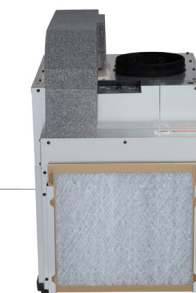
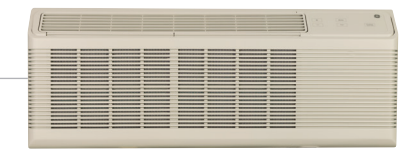
VX3TWGEAXMF

REASON TO QUOTE

- Lighting control
- Occupancy based energy management
- Occupancy based makeup air
- Marriott GRMS requirement
- 2 stage cooling operation



WORKS WITH



SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)	INDOOR FAN-LOW	INDOOR FAN-HIGH	STAGE 1 COMPRESSOR	STAGE 2 COMPRESSOR	HEAT-ELECTRIC	24VAC COMMON	24VAC HOT	Switched based on occupancy	Switched based on occupancy	

• not applicable on this model

POWER

24VAC Wired or Battery (if using wireless accessories power must be wired)
Includes thermostat connector

WORKS WITH

Wireless control card (included with thermostats)

NETWORK CAPABILITIES

Requires ZXOLU (one per property)

INTEGRATION CAPABILITES

Door lock integration (requires ZXOLDLICOM adder one/property)

BACnet (requires ZXOLBACCOM adder one/property)

PMS (requires ZXOLPMSCOM adder one/property)

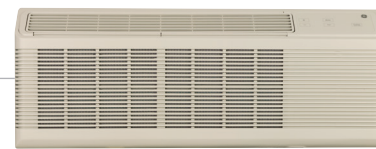
ZX3TWGEA

REASON TO QUOTE

- Appearance
- Same functionality as VX3TWGEA



WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV12
AZ9V

UltimateV11
AZ9V

UltimateV10
AZ95



AJ Heat/Cool Models Only

SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)										
INDOOR FAN-LOW										
INDOOR FAN-HIGH										
STAGE 1 COMPRESSOR										
STAGE 2 COMPRESSOR										
HEAT-ELECTRIC										
24VAC COMMON										
24VAC HOT										
Switched based on occupancy										
Switched based on occupancy										

•not applicable on this model

POWER

24VAC Wired or Battery
(if using wireless accessories power must be wired)

WORKS WITH

Wireless control card (included with thermostats)

NETWORK CAPABILITIES

If networking is desired use
ZX3TWGEAXMF

INTEGRATION CAPABILITES

For integration capabilities use
ZX3TWGEAXMF

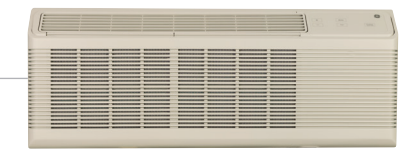
ZX3TWGEAXMF

REASON TO QUOTE

- Appearance
- Same functionality as VX3TWGEAXMF



WORKS WITH



Zonline PTAC



Hotpoint PTAC



UltimateV12
AZ9V

UltimateV11
AZ9V

UltimateV10
AZ95



AJ Heat/Cool Models Only

SIGNALS										
B/O	GL	GH	Y	Y2	W	C	R	AUX1	AUX2	
REVERSING VALVE (HEAT ACTIVE)										
INDOOR FAN-LOW										
INDOOR FAN-HIGH										
STAGE 1 COMPRESSOR										
STAGE 2 COMPRESSOR										
HEAT-ELECTRIC										
24VAC COMMON										
24VAC HOT										
Switched based on occupancy										
Switched based on occupancy										

•not applicable on this model

POWER

24VAC Wired or Battery
(if using wireless accessories power must be wired)
Includes thermostat connector

WORKS WITH

Wireless control card (included with thermostats)

NETWORK CAPABILITIES

Requires ZXOLU (one per property)

INTEGRATION CAPABILITES

Door lock integration (requires
ZXOLDLICOM adder one/property)

BACnet (requires ZXOLBACCOM
one/property)

PMS (requires ZXOLPMSCOM
one/property)

AVAILABLE ACCESSORIES



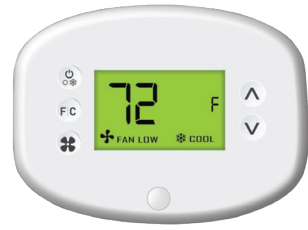
RAK180W1



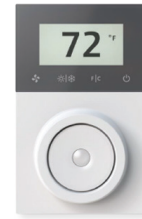
RAK160W2

Quote Model	Description	Notes Contact your sales rep for pricing
OLKITNTWK	Network connection kit	1/property
XMFB	Enables remote management	1/thermostat for RAK180W1 ONLY
XMFNOS	Enables remote management	1/thermostat for RAK160W2 ONLY
X9RFAOS*	Wireless occupancy sensor	Primarily for separate room occupancy sensing
X9RFDW*S	Wireless door and window sensor	Used to control heating/cooling based on door or window status
X9RFRTS*	Wireless temperature sensor	Used to average temperatures in separate rooms
VXWPTW	Oval wall plate	Used to cover oversized wall openings

*Must hard wire power to thermostat (receiver is placed in battery compartment)



VX3TWGEA
(for non networked applications)
VX3TWGEAXMF
(for networked applications)



ZX3TWGEA
(for non networked applications)
ZX3TWGEAXMF
(for networked applications)

Quote Model	Description	Notes Contact your sales rep for pricing
ZXOLU	Network connection kit	1/property
ZXAOS*	Wireless occupancy sensor	Primarily for entry lighting and separate room occupancy sensing
ZXDWS*	Wireless door and window sensor	Used to control heating/cooling based on door or window status
ZXTWS*	Wireless temperature sensor	Used to average temperatures in separate rooms
ZBU	Zigbee/BLE adder	Used for door lock integration
ZXWPTW	Rectangular wall plate	Used to cover oversized wall openings
ZXOLDLICOM	Door lock integration	One time fee
ZXOLPMSCOM	Property management integration	One time fee
ZXOLBACCOM	BACnet integration	One time fee

*Must hard wire power to thermostat (receiver is placed in battery compartment)

DEFINITIONS TO KNOW

Energy Management Thermostat

Temperature setbacks are enabled/disabled based on room occupancy to save energy while rooms are vacant.

PMS

(Property Management System) is a comprehensive software application used to cover objectives like coordinating the operational functions of the front office, sales and planning, reporting etc.

NOTE: PMS integration requires a Network Connection Kit, an XMF thermostat, and a one time configuration fee (ZXOLPMSCOM).

API

(Application Programming Interface) is a way for two or more computer programs to communicate with each other.

BACnet

A communication protocol for building automation and control networks that use the ASHRAE, ANSI, and ISO 16484-5 standards protocol.

NOTE: BACnet integration requires a Network Connection Kit, an XMF thermostat and a one time set up fee (ZLOUBACCOM).

GRMS

(Guest Room Management System) is the automation system of the hotel room. It manages information sent by the commands, allowing to operate many functions: Light management (ON/OFF or dimmer) Openings (curtains, rolling, shutters and so on) HVAC system.

NOTE: There is no standard for what a GRMS controls or includes. The most important thing to know is, if the GRMS being quoted includes door lock integration (all Marriott GRMS require door lock integration) See door lock integration.

RFID

Technology is used in the hospitality industry to allow room access based on key card identification recognized by the door lock.

NOTE: RFID is used in the door lock integration for communication from the key card to the door lock. The door lock then uses Zigbee or BLE to communicate door status to the thermostat. Functionality requires a Network Connection Kit, and an XMF thermostat.

Zigbee

Low power mesh network.

NOTE: Zigbee functionality requires a Network Connection Kit, and an XMF thermostat.

BLE

Technology is used for creating mesh networks.

NOTE: BLE functionality requires a Network Connection Kit, and an XMF thermostat.

Occupancy Based MUA

MUA (damper and fan) is operated based on the occupancy status, determined by the thermostat. The thermostat uses an aux relay to communicate status to MUA equipped PTAC and VTAC.

Door Lock Integration

Thermostat operation based on the door lock activation/status (Occupancy).

NOTE: Functionality requires a ZXOLU connection kit, an XMF thermostat, ZBU adder and ZXOLDLICOM.

NOTE: Door lock integration only available on VX3 and ZX3 thermostats.

Auto Changeover Thermostat

Refers to the thermostat being switched from heat to cool as the air crosses a certain temperature. Auto changeover thermostats switch from heat to cool automatically while manual changeover thermostats require heat or cool mode selection.

Deadband

A temperature range in which neither heating nor cooling system turns on. The deadband prevents the thermostat from activating heat and cooling in rapid succession. This conserves energy by providing a range of temperatures requiring no energy consumption.

Wireless Control Card

Paired with a wireless thermostat and plugs directly into the HVAC unit. The control card allows you the flexibility of placing the wireless thermostat anywhere in the room for ideal temperature control and occupancy detection.

Quote Guidance

Hilton Connected Room Currently (4/28/23) Hilton no longer has a connected room initiative.

Marriott GRMS quote guidance

VX3TWGEAXMF or ZX3TWGEAXMF (1 per room)

ZXOLU (1 site controller)

ZBU (Zigbee chip, 1 for each thermostat)

ZXOLDLICOM (door lock integration fee, one per site)

If PMS is noted on schedule add ZXOLPMSCOM (one time fee per property)

If BMS is noted on schedule add ZXOLBACCOM (one time fee per property based lighting control (minimum requirements)

VX3TWGEA or ZX3TWGEA (1/room)

ZXAOS (1/room)

erty)

NOTE: you do not require an occupancy sensor at front door for Marriott lighting applications. The door lock feature provides the occupancy hit for lighting.

Visit: zoneline.com



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