

**Trane IntelliPak w/GBAS Module Interface to BAS Remote System Controller**

	Device	Terminal ID	Range	Description	Interface to
Analog Inputs	GBAS	1TB17-1	0-5 VDC	AI-1 Occ CSP Adjust	Kele PWA-1T (from BAS DO7/DO8)
		1TB17-2	Com	0.5 VDC = 50 F, 4.5 VDC = 90 F	
	GBAS	1TB17-3	0-5 VDC	AI-2 Occ HSP Adjust	Kele PWA-1T (from BAS DO5/DO6)
		1TB17-4	Com	0.5 VDC = 50 F, 4.5 VDC = 90 F	
	GBAS	1TB17-5	5 VDC	Regulated Power Supply	Not Used
	GBAS	1TB17-6	5 VDC	Regulated Power Supply	Not Used
	GBAS	1TB17-7	0-5 VDC	AI-3 Unocc CSP Adjust	Not Used
		1TB17-8	Com	0.5 VDC = 50 F, 4.5 VDC = 90 F	
	GBAS	1TB17-9	0-5 VDC	AI-4 Unocc HSP Adjust	Not Used
		1TB17-10	Com	0.5 VDC = 50 F, 4.5 VDC = 90 F	
	RTM	1TB4-1	10k Thermistor	Discharge Air Temp	Factory Installed DA Temp Sensor
		1TB4-2	Com	Common to SP, Temp, and Mode	
	RTM	1TB4-3	300 - 1k ohm	Zone Cooling or VAV Supply Air Setpoint	Not Used
	RTM	1TB4-5	300 - 1k ohm	Zone Heating Setpoint	Not Used
	RTM	1TB4-4	2.3k - 27.9k ohm	Mode Select	Not Used
RTM	1TB4-11	Com	Aux Temp Input	Not Used	
	1TB4-13	10k Thermistor			
RTM	1TB5-8	0-270 ohm	30 ohm = 0%, 240 ohm = 100%	Not Used	
	1TB5-9	Econo Min Pos	>350 ohm use factory setting		
RTM	1TB5-10	Com	OSA Temp	Factory Installed OSA Temp Sensor	
	1TB5-11	10k Thermistor			

Analog Input Or Output	RTM	J4-1	0-10 VDC	Economizer Actuator Control Signal	BAS Analog Output AO3
		J4-2	Com	Monitor or Override	BAS AO Com
	RTM	J6-1	0-10 VDC	Inlet Guide Vane Control Signal	Not Used
		J6-2	Com	Monitor or Override	

Binary Input	RTM	1TB4-15	NC	Emergency Stop/FA Shutdown	Fire Alarm Panel NC
		1TB4-16	Com		Fire Alarm Panel Com
	RTM	1TB4-17	NC	External Start/Stop	Pilot Relay NO (from BAS DO1)
		1TB4-18	Com		Pilot Relay Com (DO1 & DO2)
		1TB4-19	NO		Pilot Relay NO (from BAS DO2)
	GBAS	1TB5-1	NO	Demand Limit Input	Not Used
		1TB5-2	Com		
	RTM	1TB5-21	NO	Changeover to Heat Mode VAV units with heat only	Pilot Relay NO (from BAS DO3)
		1TB5-22	Com		Pilot Relay Com
	RTM	1TB7-7	NC	Hi Duct Temp T'Stat	Not Used
1TB7-8		Com			
RTM	1TB7-9	NO	Filter Status	Factory Installed Filter DP Switch	
	1TB7-10	Com			

Digital Outputs	GBAS	1TB16-1	NO	BO-1 Dirty Filter	BAS Digital Input DI6
		1TB16-2	Com		BAS Digital Input Pwr
		1TB16-3	NC		
	RTM	1TB16-4	NO	Ventilation Override Mode	Not Used
		1TB16-5	Com		
		1TB16-6	NC		
	RTM	1TB16-7	NO	Heat Mode (Hydronic or Modulating Gas Heat)	BAS Digital Input DI3
		1TB16-8	Com		BAS Digital Input Pwr
		1TB16-9	NC		
	RTM	1TB16-12	NO	Unoccupied/Warmup Mode	BAS Digital Input DI2
		1TB16-13	Com		BAS Digital Input Pwr
		1TB16-14	NC		
	RTM	1TB16-15	NO	Alarm	BAS Digital Input DI8
		1TB16-16	Com		BAS Digital Input Pwr
		1TB16-17	NC		
	GBAS	1TB17-11	NO	BO-2 Refrigeration Failure	BAS Digital Input DI4
		1TB17-12	Com		BAS Digital Input Pwr
		1TB17-13	NC		
	GBAS	1TB17-14	NO	BO-3 Heat Failure	BAS Digital Input DI5
		1TB17-15	Com		BAS Digital Input Pwr
		1TB17-16	NC		
	GBAS	1TB17-17	NO	BO-4 Supply Fan Failure	BAS Digital Input DI1
1TB17-18		Com	BAS Digital Input Pwr		
1TB17-19		NC			
GBAS	1TB17-20	NO	BO-5 Any Active Diagnostics	BAS Digital Input DI7	
	1TB17-21	Com		BAS Digital Input Pwr	
	1TB17-22	NC			

Power Supply	RTM	1TB7-1	24 VAC Hot	24 VAC Power Supply
		1TB7-6	24 VAC Com	
	GBAS	1TB7-3	24 VAC Hot	24 VAC Power Supply
		1TB7-4	24 VAC Com	

Remote Interface Module	IntelliPak	1TB4-20	J1-1 (+)	Communications Bus	Connect to Optional Remote IntelliPak Interface Module
		1TB4-21	J1-2 (-)		
			J1-3		
	1TB4-14	J2-1 (+)	Communications Bus		
	1TB4-22	J2-2 (-)	Communications Bus		
		J2-3	Earth Ground		

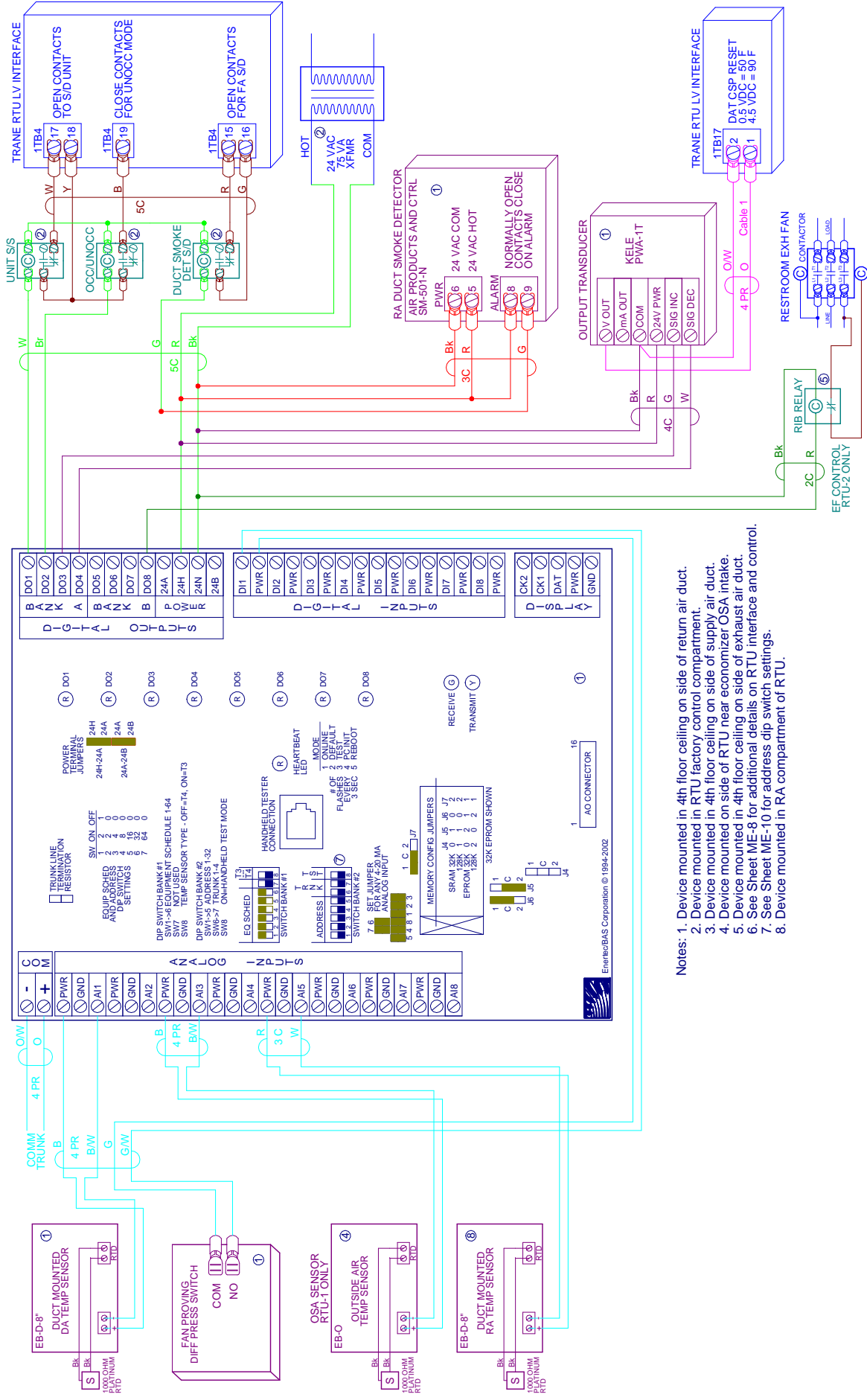
Remote Status Panel	RTM	1TB4-6	Com	Status Ground	Connect to Optional Remote Status Panel
		1TB4-7		Heat Status	
		1TB4-8		Cool Status	
		1TB4-9		System On	
		1TB4-10		Service Light	
		1TB4-12	Comm (+)	Communications Bus	
		1TB4-14	24 VAC Hot	24 VAC Power Supply	

## BAS Remote System Controller to Trane GBAS Interface

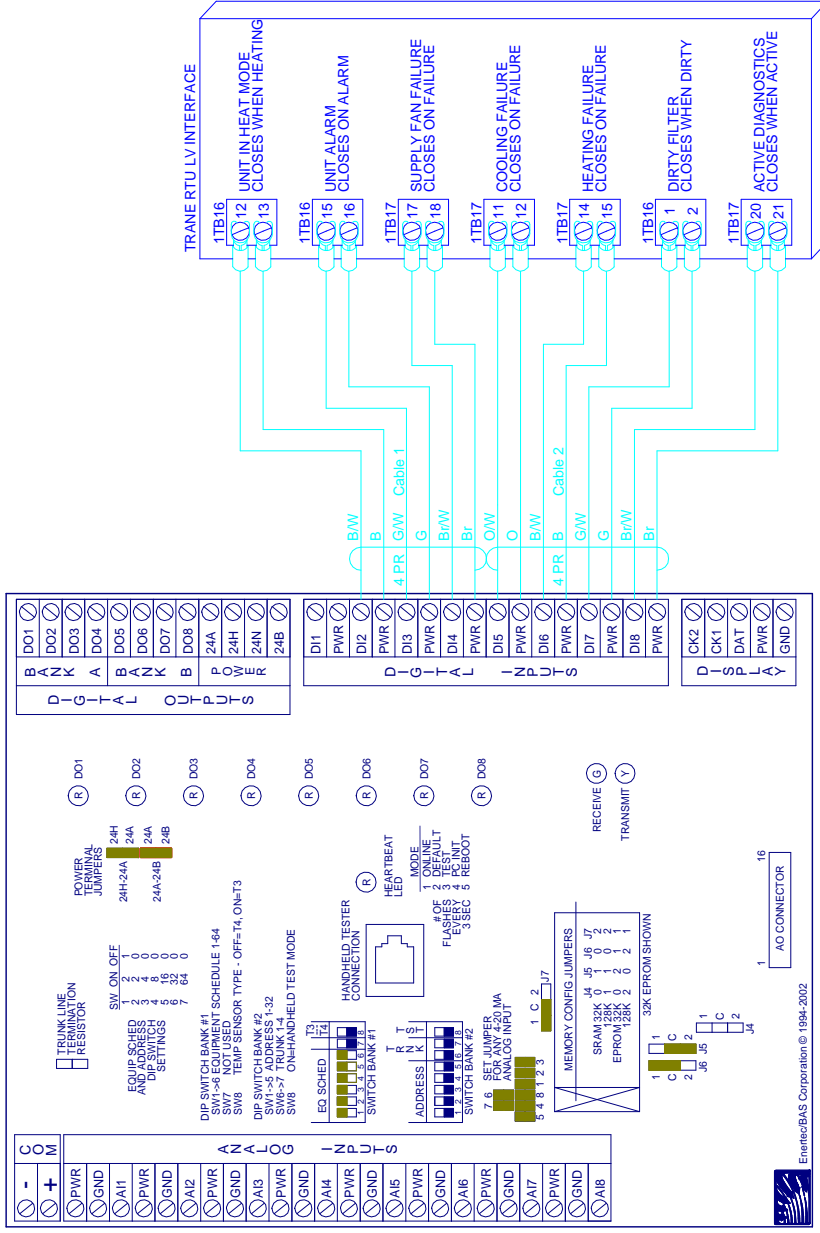
	Point	Description	Interface to
<b>Analog Inputs</b>	Pwr Gnd AI1	Discharge Air Temp	BAS Duct Temp Sensor
	Pwr Gnd AI2	N/C	
	Pwr Gnd AI3	Outside Air Temp	BAS OSA Temp Sensor (1 location/site only)
	Pwr Gnd AI4	N/C	
	Pwr Gnd AI5	Return Air Temp	BAS Duct Temp Sensor (Optional)
	Pwr Gnd AI6	N/C	
	Pwr Gnd AI7	N/C	
	Pwr Gnd AI8	Indoor Air Quality	IAQ or CO2 Sensor (Optional)
<b>Digital Outputs</b>	DO1	Unit Start/Stop	Trane 1TB4-17 / 1TB4-18 thru pilot relay
	DO2	Unoccupied Mode	Trane 1TB4-18 / 1TB4-19 thru pilot relay
	DO3	Changeover to Heat Mode	Trane 1TB5-21 / 1TB5-22 thru pilot relay
	DO4	N/C	
	DO5	Occ HSP Increase	Trane 1TB17-3 / 1TB17-4 thru Kele PWA-1T
	DO6	Occ HSP Decrease	"" ""
	DO7	Occ CSP Increase	Trane 1TB17-1 / 1TB17-2 thru Kele PWA-1T
	DO8	Occ CSP Decrease	"" ""
<b>Power Supply</b>	24V HA	N/C	
	24V ACIP	24 VAC Hot to RSC	Control Transformer
	24V ACN	24 VAC Common to RSC	"" ""
	24V HB	N/C	
<b>Digital Inputs</b>	DI1	Supply Fan Failure	Trane 1TB17-17
	Pwr		Trane 1TB17-18
	DI2	Unoccupied/Warmup Mode	Trane 1TB16-12
	Pwr		Trane 1TB16-13
	DI3	Heat Mode	Trane 1TB16-7
	Pwr		Trane 1TB16-8
	DI4	Refrigeration Failure	Trane 1TB17-11
	Pwr		Trane 1TB17-12
DI5	Heat Failure	Trane 1TB17-14	
Pwr		Trane 1TB17-15	
DI6	Dirty Filter	Trane 1TB16-1	
Pwr		Trane 1TB16-2	
DI7	Any Active Diagnostics	Trane 1TB17-20	
Pwr		Trane 1TB17-21	
DI8	Unit Alarm	Trane 1TB16-15	
Pwr		Trane 1TB16-16	
<b>Analog Outputs*</b>	AO1	N/C	
	Com		
	AO2	N/C	
	Com		
AO3	Economizer Min Pos O/R	Trane J4-1	
Com	For Optional IAQ Control	Trane J4-2	
AO4	N/C		
Com			

\* Analog Outputs require optional AO Card.

# CONTROL OF TRANE INTELLIPAK ROOFTOP VAV UNIT WITH GBAS OPTION



# CONTROL OF TRANE INTELLIPAK ROOFTOP VAV UNIT WITH GBAS OPTION



Notes: 1. See Sheet ME-7 for additional details on RTU interface and control.



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CONTENTS: CONTROL SCHEMATIC FOR ROOFTOP A/C UNIT - STATUS MONITORING

ES #: 64 ES DESCRIPTION: AHU, UNIT VAV MODE ENABLE, OCC/UNOCC CONTROL, DAT SETPOINT CONTROL

REVISIONS	DATE	BY

SHEET	8	OF	15
JOB NO:	XX-XXXX	DRAWN BY:	RBJ
DATE:	SEPTEMBER 5, 2008		