The table below describes all the functions, variant handling, and physical interfaces that shall be supported by the control unit.

For detailed description of the interfaces, see each functions under Electrical properties.
The pin list working document is stored in Phoenix No: 50316046.

	Requirement Name for Electrical features		PCB 1				PCB 2			
Function Name	Full	Short	Base	Parking Heater	EMOB	Connector pin	Base	Sleeper	Max	Connector pin
3_WAY_VALVE1_H1	Digital Bi-level Half-Bridge 01	DOBHB_01		A	A	A1.03		A	A	A1.03
3_WAY_VALVE1_H2	Digital Bi-level Half-Bridge 02	DOBHB_02		A	A	A1.04		A	A	A1.04
AC_CLUTCH	Digital output bi level high side 01	DOBHS_01	A	A		A1.12	A	A	A	A1.12
AQS_12V	Analogue output 01	AO12V_01	B	B	B	B1.03	A	A	A	A2.15
AQS_GND	Digital output bi level low side 13	DOBLS_13	B	B	B	B1.04	A	A	A	A2.16
AQS_PWM	digital input pwm/frequency pull up 01	DIWPU_01	B	B	B	B1.02	A	A	A	A2.11
CANH Aux Heater	CAN2H	CAN2H		A	A	A2.15		A	A	A3.01
CANH Cab Sub Net	CAN1H	CAN1H	A	A	A	A2.13	A	A	A	A2.13
CANL Aux Heater	CAN2L	CAN2L		A	A	A2.16		A	A	A3.02
CANL Cab Sub Net	CAN1L	CAN1L	A	A	A	A2.14	A	A	A	A2.14
CHILLER TXV SHUT OFF	Digital output bi level high side 04	DOBHS_04			A	A1.06			A	A1.06
COMPRESSOR_PWM	Digital output pwm high-side 12V 04	DOWHS12V_04				A1.13			A	A1.13
DISCHARGE_SIG1	Analogue input pull-up 5V 04	AIPU5V_04	B	B	B	B1.06	B	B	B	B1.02
DISCHARGE_SIG2	Analogue input pull-up 5V 05	AIPU5V_05				N/A	B	B	B	B1.03
DISCHARGE_SIG3	Analogue input pull-up 5V 06	AIPU5V_06				N/A	B	B	B	B1.04
DISCHARGE_SIG4	Analogue input pull-up 5V 07	AIPU5V_07				N/A		A	A	A3.04
ECU GND (K31)	Power ground 02	PWRGND_02	A	A	A	A1.16	A	A	A	A1.16
End of Line	EOL digital input pull down 01	DIBPD_EOL	B	B	B	B1.14	B	B	B	B1.14
EVAP_SIG1	Analogue input pull-up 5V 08	AIPU5V_08	B	B	B	B1.09	B	B	B	B1.09
EVAP_SIG2	Analogue input pull-up 5V 09	AIPU5V_09				N/A		A	A	A3.05
FAN_ANALOGUE	Analogue output linear 02	AOLF12V_02	B	B	B	B1.11				N/A
FAN_PWM1	Digital output pwm high-side 5V 01	DOWHS5V_01				N/A	B	B	B	B1.05
FAN_PWM2	Digital output pwm high-side 5V 02	DOWHS5V_02				N/A		A	A	A3.12
HEAT PUMP VALVE	Digital output bi level high side 15	DOBHS_15				A2.10			A	A3.09
HEAT_CIRC_PUMP_PWM	digital output pwm low-side 01	DOWLS_01		A	A	A1.15		A	A	A1.15
HEAT_CIRC_PUMP_PWR	Digital output bi level high side 07	DOBHS24V_07		A	A	A1.10		A	A	A1.10
HVAC SHUT OFF	Digital output bi level high side 03	DOBHS_03			A	A1.05			A	A1.05
ITOS_NTC	Analogue input pull-down 02	AIPD5V_02	A	A	A	A2.05	A	A	A	A2.05
ITOS_REF	Analogue input pull-down 01	AIPD5V_01	A	A	A	A2.04	A	A	A	A2.04
ITOS_SUN	Analogue input pull-down 03	AIPD5V_03	A	A	A	A2.06	A	A	A	A2.06

LIN1_12V	Digital output bi level high side 11	DOBHS12V_11	A	A	A	A1.11	A	A	A	A1.11
LIN1_BUS	LIN1_BUS	LIN20 01	A	A	A	A2.12	A	A	A	A2.12
LIN1_GND	LIN1_GND	LIN20GND 01	A	A	A	A1.01	A	A	A	A1.01
LIN2_12V	Digital output bi level high side 12	DOBHS12V_12	A	A	A	A1.14		A	A	A1.14
LIN2_BUS	LIN2_BUS	LIN20 02	A	A	A	A2.11		A	A	A3.03
LIN2_GND	LIN2_GND	LIN20GND 02	A	A	A	A1.09		A	A	A1.09
LIN3_12V	Digital output bi level high side 13	DOBHS12V_13				N/A	B	B	B	B1.11
LIN3_BUS	LIN3_BUS	LIN20 03				N/A	B	B	B	B1.06
LIN3_GND	LIN3_GND	LIN20GND 03				N/A	B	B	B	B1.08
Not used (ESD cap only)						N/A				A3.07
Not used (ESD cap only)						N/A				A3.08
PRES_SENS_SIG	Analogue input pull-down 04	AIPD5V_04	B	B	B	B1.05	A	A	A	A2.10
SENSOR_SUPPLY_5V_EXT	Analogue output 08	AO5V_08	A	A	A	A1.07	A	A	A	A1.07
SENSOR_SUPPLY_5V_INT	Analogue output 09	AO5V_09	B	B	B	B1.10	B	B	B	B1.10
SENSOR_SUPPLY_GND_EXT	Signal ground 01	SIGGND_01	A	A	A	A1.02	A	A	A	A1.02
SENSOR_SUPPLY_GND_INT	Signal ground 02	SIGGND_02	B	B	B	B1.01	B	B	B	B1.01
SHUT_OFF_VALVE	Digital output bi level high side 02	DOBHS_02				N/A		A	A	A3.11
SLEEP_TEMP_SIG	Analogue input pull-up 5V 10	AIPU5V_10				N/A		A	A	A3.06
SPARE AI 02	Analogue input pull-down 06	AIPD5V_06				B1.12			B	B1.12
SPARE AI 03	Analogue input pull-up 5V 14	AIPU5V_14				B1.13			B	B1.13
STEP_SUP1_24V	Analogue output 02	AO_02	B	B	B	B1.08				N/A
STEP_SUP2_24V	Analogue output 03	AO_03	B	B	B	B1.07				N/A
STEP_SUP3_12V	Analogue output 04	AO12V_04				N/A	B	B	B	B1.07
STEP_SUP4_12V	Analogue output 05	AO12V_05				N/A		A	A	A3.10
Stepper motor 1&4 Pin 3	Digital output bi level low side 01	DOBLS_01	B	B	B	B2.09				N/A
Stepper motor 1&4 Pin 4	Digital output bi level low side 02	DOBLS_02	B	B	B	B2.01				N/A
Stepper motor 1&4 Pin 5	Digital output bi level low side 03	DOBLS_03	B	B	B	B2.03				N/A
Stepper motor 1&4 Pin 6	Digital output bi level low side 04	DOBLS_04	B	B	B	B2.04				N/A
Stepper motor 2&5 Pin 3	Digital output bi level low side 05	DOBLS_05	B	B	B	B2.06				N/A
Stepper motor 2&5 Pin 4	Digital output bi level low side 06	DOBLS_06	B	B	B	B2.10				N/A
Stepper motor 2&5 Pin 5	Digital output bi level low side 07	DOBLS_07	B	B	B	B2.07				N/A
Stepper motor 2&5 Pin 6	Digital output bi level low side 08	DOBLS_08	B	B	B	B2.08				N/A
Stepper motor 3&6 Pin 3	Digital output bi level low side 09	DOBLS_09	B	B	B	B2.02				N/A
Stepper motor 3&6 Pin 4	Digital output bi level low side 10	DOBLS_10	B	B	B	B2.05				N/A
Stepper motor 3&6 Pin 5	Digital output bi level low side 11	DOBLS_11	B	B	B	B2.11				N/A
Stepper motor 3&6 Pin 6	Digital output bi level low side 12	DOBLS_12	B	B	B	B2.12				N/A
SUN_SENSOR_SIG_HIGHT	Analogue input pull-up 5V 03	AIPU5V_03				A2.03			A	A2.03
SUN_SENSOR_SIG_LEFT	Analogue input pull-up 5V 01	AIPU5V_01	A	A	A	A2.01	A	A	A	A2.01
SUN_SENSOR_SIG_RIGHT	Analogue input pull-up 5V 02	AIPU5V_02	A	A	A	A2.02	A	A	A	A2.02

TEMP BEFORE CAB LOOP	Analogue input pull-up 5V 16	AIPU5V_16			A	A2.09			A	A2.09
TEMP COOLANT AFTER HVAC	Analogue input pull-up 5V 11	AIPU5V_11			A	A2.07			A	A2.07
TEMP COOLANT CHILLER	Analogue input pull-up 5V 12	AIPU5V_12			A	A2.08			A	A2.08
VBAT (K30)	Power supply 24 system 20A fuse 01	PWR24V20A_01	A	A	A	A1.08	A	A	A	A1.08
3_WAY_VALVE2_H1	Digital Bi-level Half-Bridge 03	DOBHB_03	Reserved for future growth				Reserved for future growth			
3_WAY_VALVE2_H2	Digital Bi-level Half-Bridge 04	DOBHB_04	Reserved for future growth				Reserved for future growth			
SPARE Relay	Digital output bi level high side 08	DOBHS_08	Reserved for future growth				Reserved for future growth			
SPARE HSD 01	Digital output bi level high side 09	DOBHS_09	Reserved for future growth				Reserved for future growth			
SPARE HSD 02	Digital output bi level high side 10	DOBHS_10	Reserved for future growth				Reserved for future growth			
SPARE AI 04	Analogue input pull-up 15	AIPU5V_15	Reserved for future growth				Reserved for future growth			
SPARE AI 01	Analogue input pull-down 05	AIPD5V_05	Reserved for future growth				Reserved for future growth			

The picture below shows arrangement of connector pins.