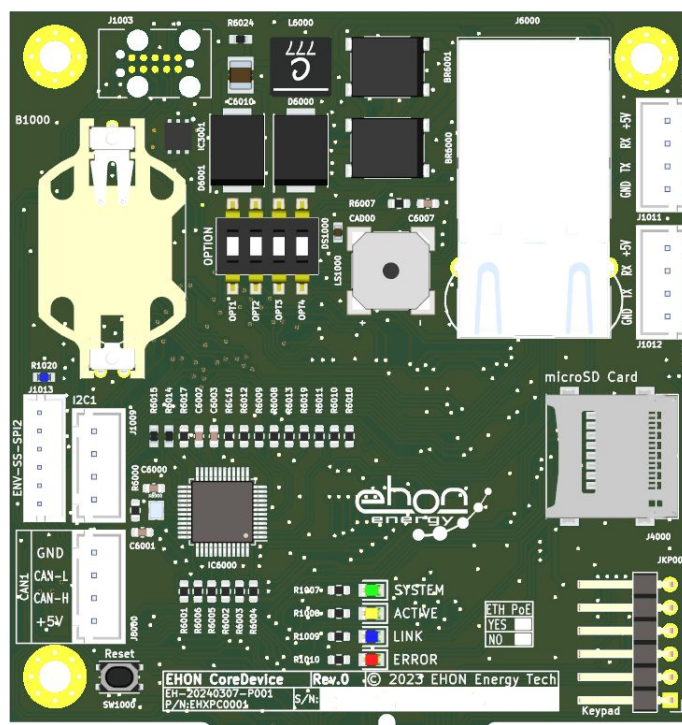


Hardware Configuration Manual

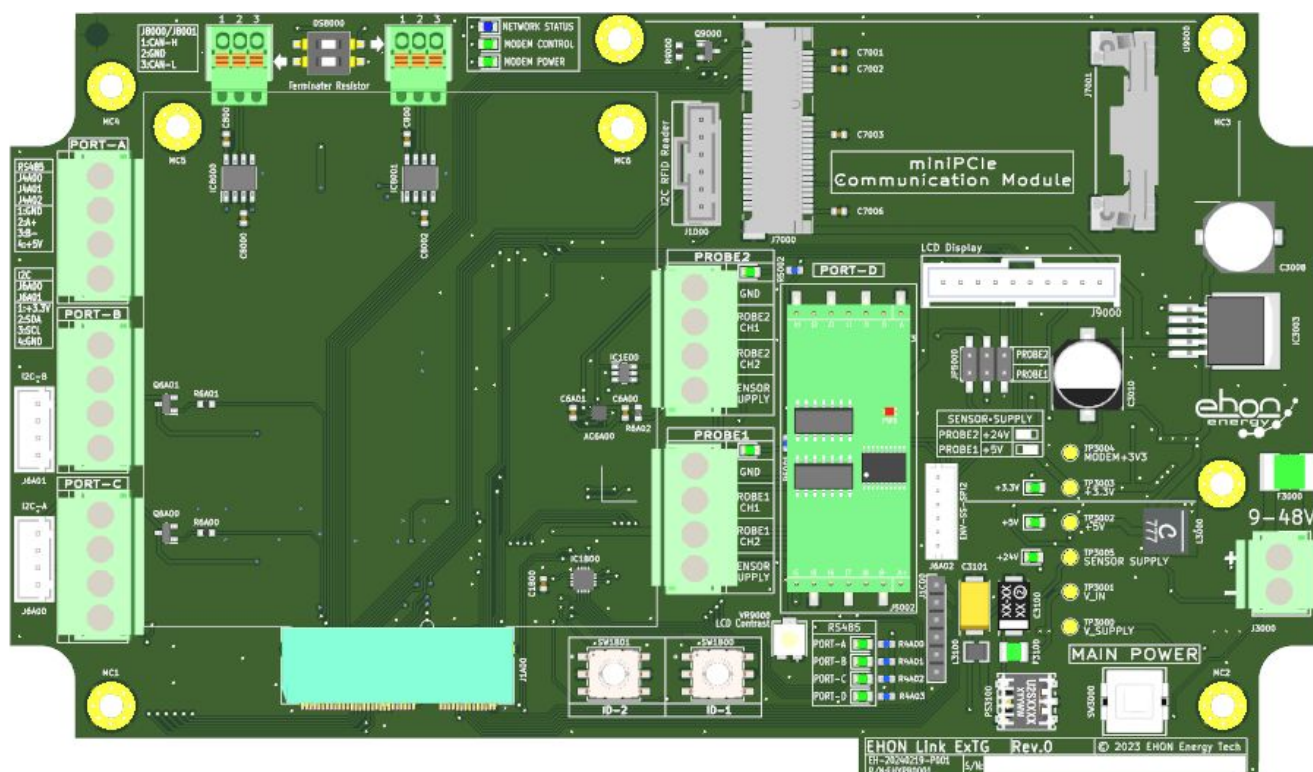


Board Identification

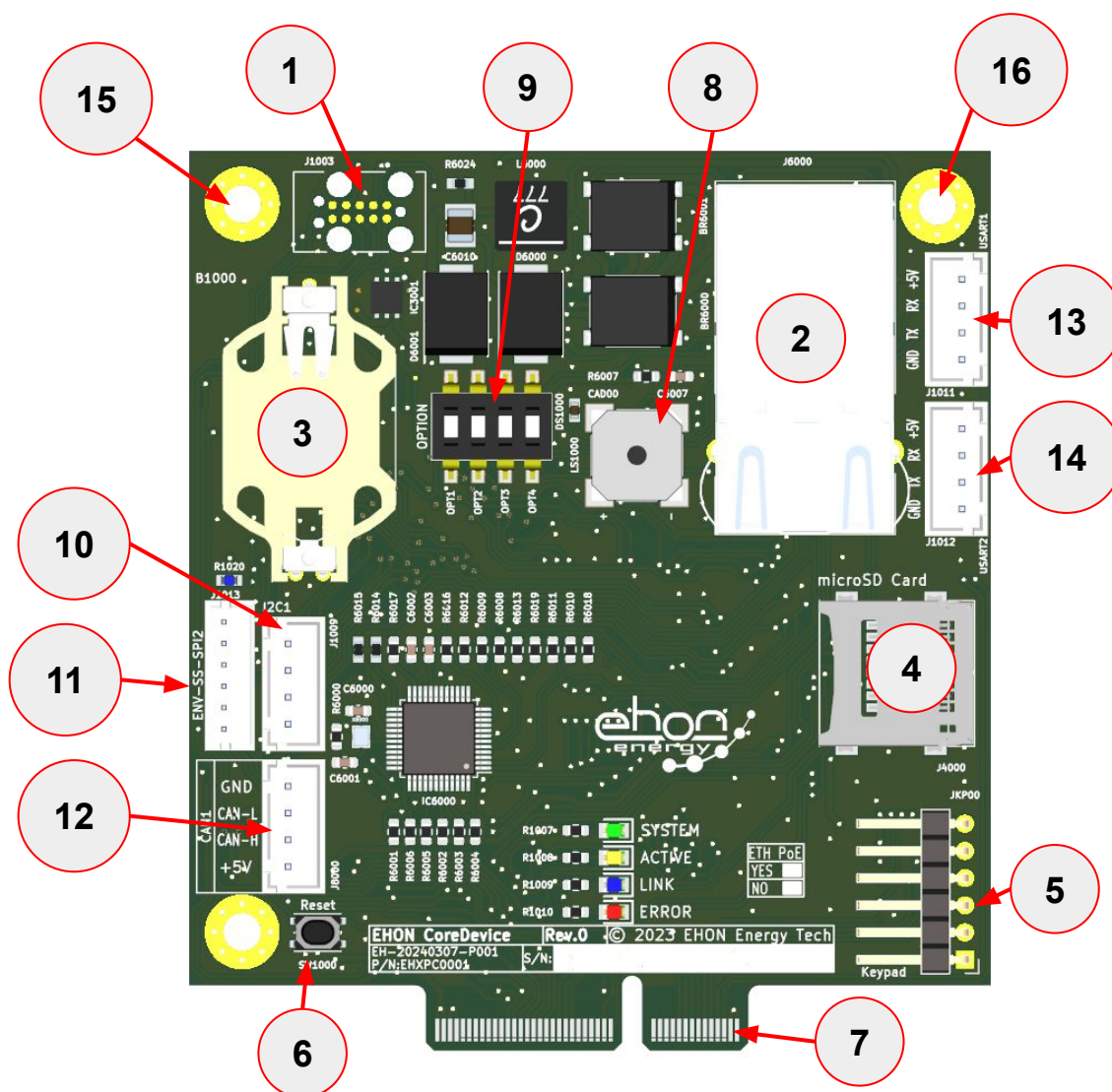
EHON Core Device Board



EHON ExTG Board (Daughter Board)

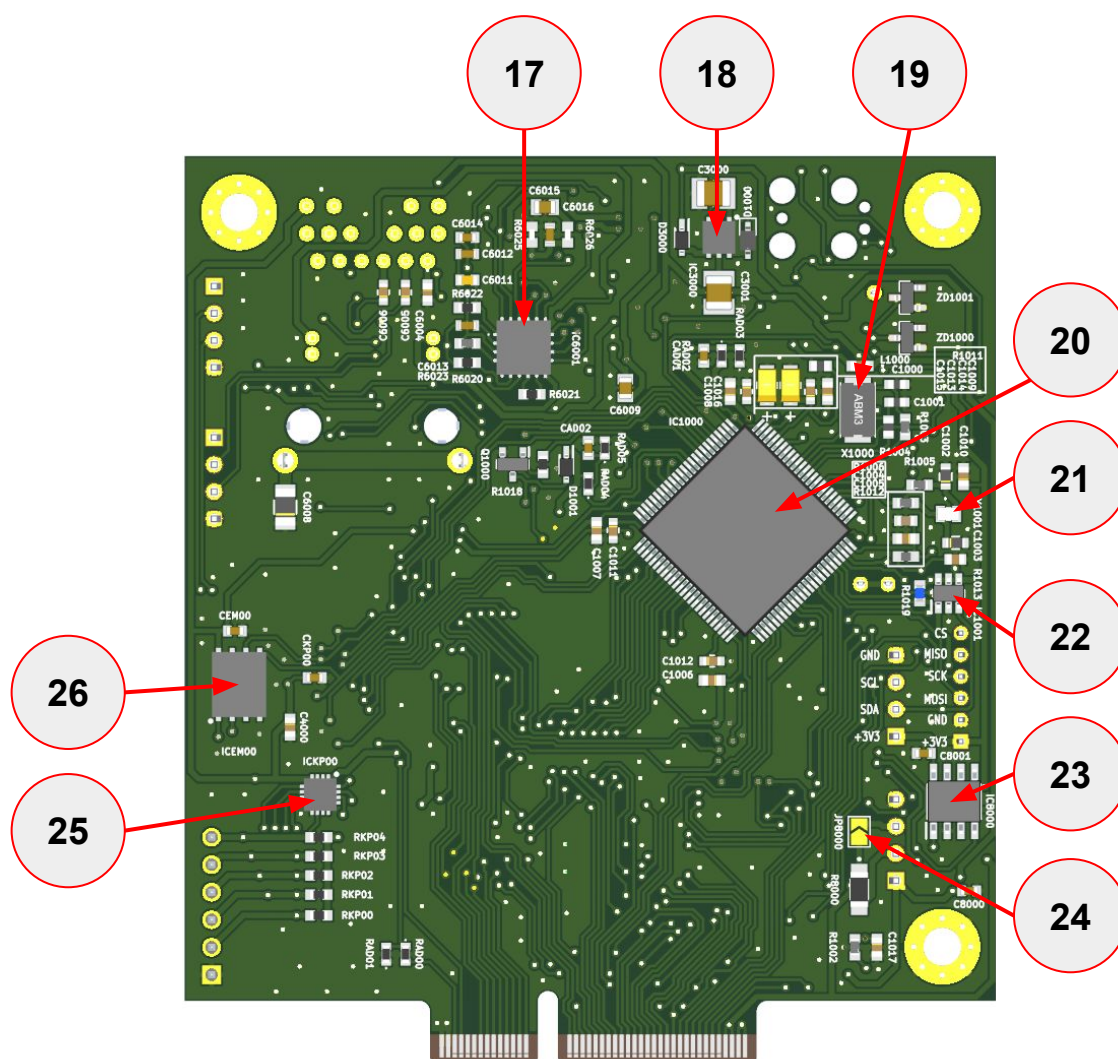


Component location - EHON Core Device Board <Front>



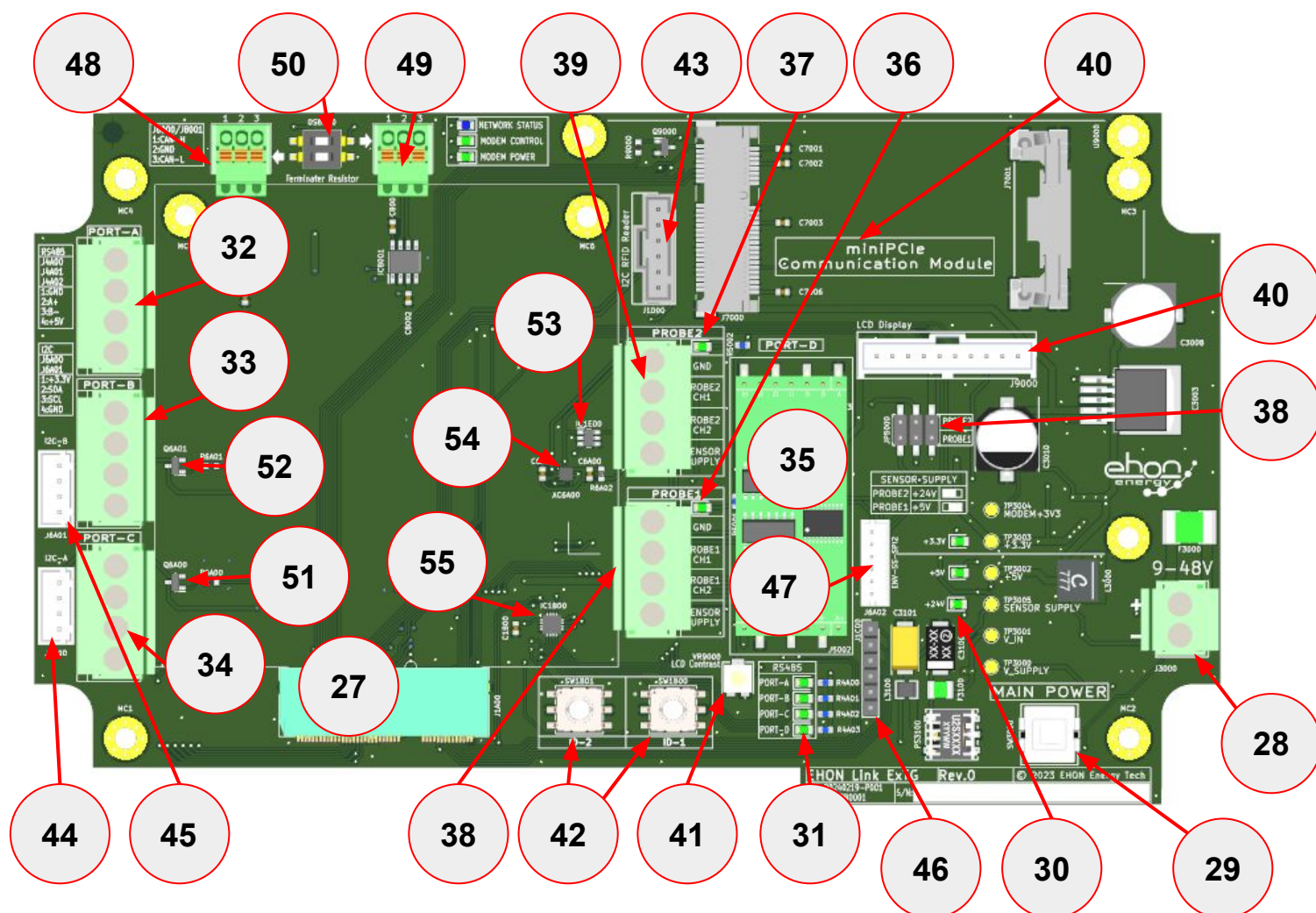
1. Tag-Connect and Serial Link (Debug/Modem).
2. Ethernet Connector.
3. Real time clock battery backup (CR2032).
4. microSD Card Socket.
5. Keypad Connector.
6. Reset Button.
7. Card Edge Connector.
8. Buzzer.
9. Dip Switch Option.
10. I2C1 Connector.
11. Environment Sensor (SPI2)
12. CAN1 Connector.
13. UART1 Connector.
14. UART2 Connector.
15. Mounting hole.
16. Mounting hole.

Component location - EHON Core Device Board <Back>



17. PoE Power Converter IC.
18. +5VDC Voltage Regulator IC.
19. Crystal Oscillator 32.768 kHz for RTC.
20. Microcontroller IC
21. Crystal Oscillator 8 MHz for MCU.
22. EUI64 EEPROM IC1 (MAC Address).
23. CAN Bus Signal Level Converter IC.
24. Solder Pad for enable 120 Ω Terminator.
25. Keypad I2C Expansion IC.
26. External Flash Memory IC

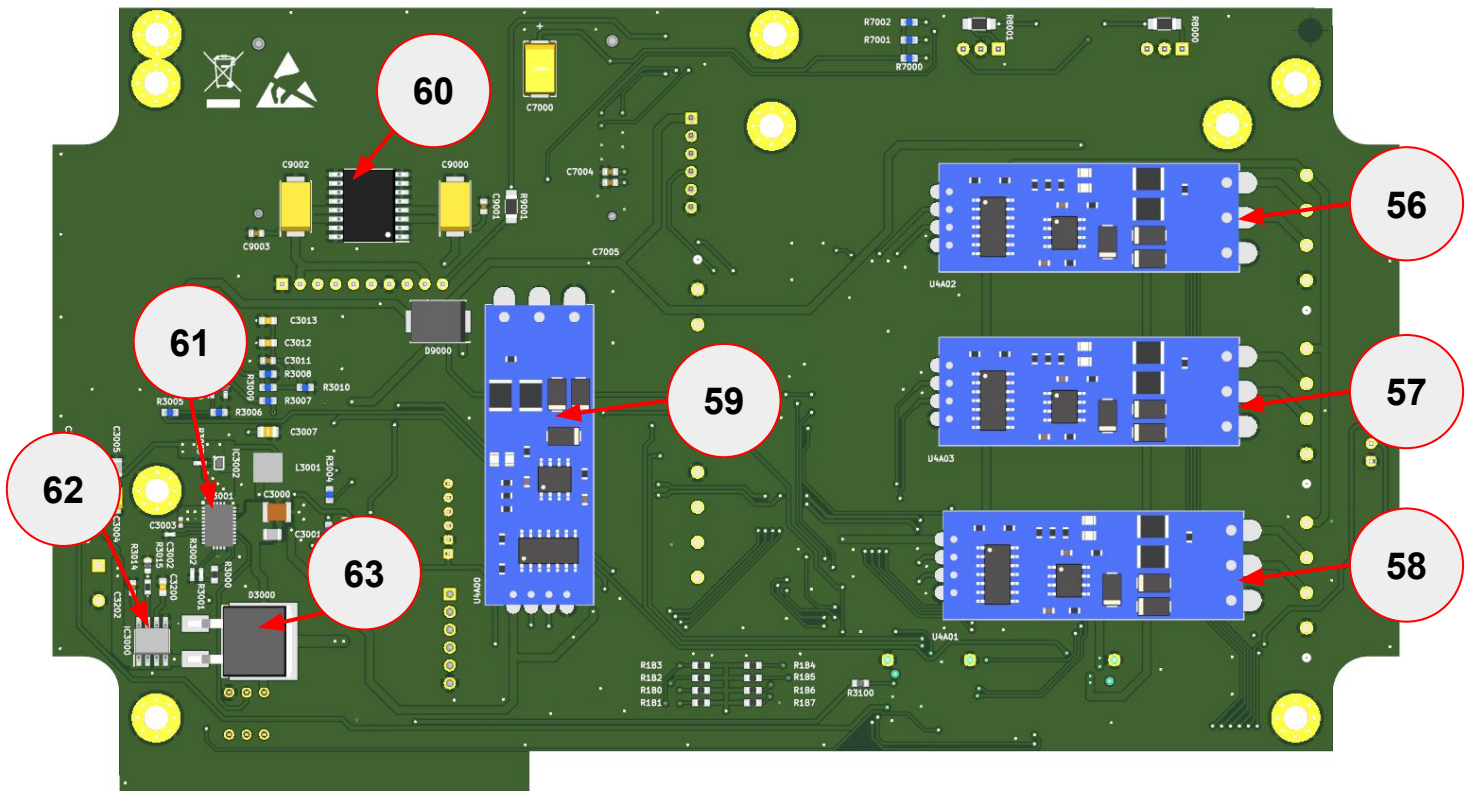
Component location - EHON ExTG Board <Front>



- 27. Card Edge connector for EHON Core Device.
- 28. Main power connector.
- 29. Main power switch.
- 30. Power indicator LED.
- 31. RS485 Port Indicator LED.
- 32. RS485 Port-A Connector. <UART5>
- 33. RS485 Port-B Connector. <UART6>
- 34. RS485 Port-C Connector. <UART3>
- 35. RS485 Port-D Modbus to Analog converter. <UART1>
- 36. Analog sensor Probe-1 indicator LED.
- 37. Analog sensor Probe-2 indicator LED.
- 38. Analog sensor Probe-1 Connector.
- 39. Analog sensor Probe-2 Connector.
- 40. LED Display connector.

- 41. Contrast adjustment VR.
- 42. Multi purpose ID Setting knob.
- 43. RFID Reader Connector (I2C1).
- 44. Auxiliary I2C1-A
- 45. Auxiliary I2C1-B
- 46. 5 buttons Keypad (I2C1)
- 47. Environmental Sensor (SPI2)
- 48. CAN1 Bus Connector.
- 49. CAN2 Bus Connector.
- 50. Enable switch for terminator resistor 120 Ohm.
- 51. I2C Auxiliary sensor 1 power transistor.
- 52. I2C Auxiliary sensor 2 power transistor.
- 53. EUI64 EEPROM IC2 (MAC Address).
- 54. Triaxial acceleration sensor.
- 55. Expansion I/O for Multi purpose ID Setting knob (41/42)

Component location - EHON ExTG Board <Back>



56. UART5 to RS485 Converter module for RS485 Port-A
57. UART6 to RS485 Converter module for RS485 Port-B
58. UART3 to RS485 Converter module for RS485 Port-C
59. UART1 to RS485 Converter module for RS485 Port-D
60. DC-DC Converter 5VDC for LCD Display Power Supply.
61. Main 5VDC Power regulator IC.
62. Current sense measurement for main power input.
63. Diode protection for main Power Input.

Feature configuration

microSD Card

- Connected Port/Type: SPI1
- Chip selected pin: PC9 (SD_CS) <Active Low>

Ethernet Chip (W5500)

- Connected Port/Type: SPI1
- Chip selected pin: PC8 (WIZCHIP_CS) <Active Low>
- Reset pin: PA15 (W5x00_RESET) <Active Low>

EUI64 Chip 1 (MAC Address)

- Connected Port/Type: I2C1
- I2C_SCL: PB8
- I2C_SDA: PB9
- I2C Address: 0xA6 (0x53<<1))

EUI64 Chip 2 (MAC Address)

- Connected Port/Type: I2C1
- I2C_SCL: PB8
- I2C_SDA: PB9
- I2C Address: 0xA2 (0x51<<1))

External flash memory

- Connected Port/Type: SPI1
- Chip selected pin: PE2 (CS_SPI_EXMEM) <Active Low>

Modem Control

- Connected Port/Type: UART2
- Power control pin: PC10 (MODEM_POWER) <Active Low>
- Reset pin: PC1 (MODEM_PERST) <Active Low>
- Enable/Disable pin: PC2 (MODEM_W_DISABLE) <Active Low>

DIP Switch Option

- Connected Port/Type: GPIO
- DS_OPT_01 Pin: PE8
- DS_OPT_02 Pin: PE9
- DS_OPT_03 Pin: PE10
- DS_OPT_04 Pin: PE11

5D Keypad I2C

- Connected Port/Type: I2C1
- I2C_SCL: PB8
- I2C_SDA: PB9
- I2C Address: 0x27 (0x4E<<1))

Feature configuration

Triaxial acceleration sensor

- Connected Port/Type:
- I2C_SCL:
- I2C_SDA:
- I2C Address:

Core Device Board

I2C1
PB8
PB9
0x18 (0x30<<1))