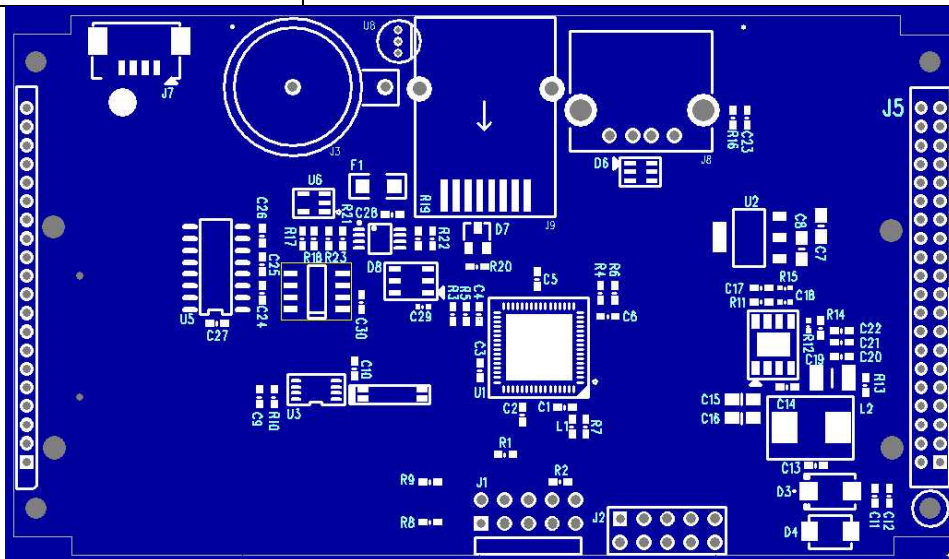


DINGO ATXMEGA Compute Board

Item specifications

Go-IoT Item Id:	DINGO-CB-ATXMEGA-01
CPU	ATXMEGA256A3U or ATXMEGA256C3 @ 32 MIPS
SRAM	16Kbyte
Flash	256Kbyte
EEPROM	4KByte
Ethernet	None
USB	1 x USB 2.0 Type A Connectors
Serial Interface	1 x RS232 via RJ45 Connector 1 x RS485 via RJ45 Connector 1 x TTL Serial Debug Connector 2 x TTL Serial Ports to Base Board
1-Wire Interface	1 x 1-Wire Interface via RJ45 Connector
Real Time Clock	DS1339 with Battery Backup
EEPROM	24LC32 – 4K x 8
I2C Ports	1
SPI Ports	1
Expansion Connectors	1 x 40way header to Base Board 1 x 20way header to Base Board 1 x 30way header to Display Board 21 x GPIO
OS	Embedded C – Various OS
DC Input	+12V @ 0.2A
Size (L x W x H)	101 x 60 x 19 mm
Temperature	-20degree C to +85degree C
Country of Manufacture:	EU



J5 – 40WAY GPIO TO BASEBOARD

Pin	Port	Dir	Pull Up	Function	Description
1	+12V	IN		POWER	Main Power IN +12V DC
2	+12V	IN		POWER	Main Power IN +12V DC
3	PF0	OUT	NO	RELAY 1	Logic 1 – Activate Relay 1
4	PB0	IN	YES	OPTO	Opto Input 1
5	FP1	OUT	NO	RELAY 1	Logic 1 – Activate Relay 2
6	PB1	IN	YES	OPTO	Opto Input 2
7	SPI_CLK	OUT	NO	SPI	PC7 – SPI Clock
8	PB2	IN	YES	OPTO	Opto Input 3
9	SPI_MOSI	OUT	NO	SPI	PC5 - SPI Master Out – Slave In
10	PB3	IN	YES	OPTO	Opto Input 4
11	SPI_MISO	IN	NO	SPI	PC6 - SPI Master In – Slave Out
12	PB4	IN	YES	OPTO	Opto Input 5
13	NC				
14	PB5	IN	YES	OPTO	Opto Input 6
15	SPI_SS1	OUT	NO	SPI	PR0 - SPI Slave Select 1 – Station 2
16	PB6	IN	YES	OPTO	Opto Input 7
17	SPI_SS0	OUT	NO	SPI	PC4 - SPI Slave Select 0 – Station 1
18	PB7	IN	YES	OPTO	Opto Input 8
19	PF4	IN	YES	EVENT	EVENT from N-PLC Station 1
20	PF5	IN	YES	EVENT	EVENT from N-PLC Station 2
21	NC	IN	YES	EVENT	EVENT from N-PLC Station 3
22	NC				spare
23	TXD0	OUT	YES	UART	PC3 - TXD to N-PLC Stations 1, 2, 3
24	RXD0	IN	YES	UART	PC2 - RXD from N-PLC Stations 1, 2, 3
25	+5V	OUT		POWER	+5V Output – 2A available
26	+5V	OUT		POWER	+5V Output – 2A available
27	GND			POWER	GROUND
28	GND			POWER	GROUND
29	NC				spare
30	NC				spare
31	VEXTERNAL				Optional
32	NC				spare
33	I2C1_SCL	OUT	YES	I2C	PE1 - I2C Channel 1 Clock
34	I2C1_SDA	BI	YES	I2C	PE0 - I2C Channel 1 Data
35	PD4	bi	NO		Spare
36	PD5	IN	YES	UART	CTS from Baseboard – Station 2, 3
37	TXD1	OUT	NO	UART	PE7 - TXD to Baseboard – Station 2, 3
38	RXD1	IN	YES	UART	PE6 - RXD from Baseboard – Station 2, 3
39	NC				
40	GND			POWER	GROUND

J13 – 20WAY GPIO TO BASEBOARD

Pin	Port	Dir	Pull Up	Function	Description
1	+3.3V	OUT		POWER	+3.3V Output – 300mA available
2	I2C_SDA0	BI	YES	I2C	PE1 - I2C Channel 0&1 DATA
3	GND			POWER	GROUND
4	GND			POWER	GROUND
5	RTS3	OUT	NO	UART	RXD from Baseboard – Station 2, 3
6	PF6	OUT	NO	BOOT	BOOT to N-PLC Station 2
7	I2C_SCL0	OUT	YES	I2C	PE1 - I2C Channel 0&1 Clock
8	TXD4	OUT	NO	UART	PF3 - TXD – Debug Console
9	RXD4	IN	YES	UART	PF2 - RXD – Debug Console
10	PF7	OUT	NO	BOOT	BOOT to N-PLC Station 1
11	NC				BOOT to N-PLC Station 3
12	NC				spare
13	NC				Battery ON -1 = Battery Backup
14	NC				spare
15	+5V	OUT		POWER	+5V Output – 2A available
16	NC				USB Channel 3 D+ to Base Board 2
17	NC				USB Channel 3 D- to Base Board 2
18	NC				USB Channel 4 D+ to Base Board 3
19	NC				USB Channel 4 D- to Base Board 3
20	GND			POWER	GROUND

J9 – 8WAY RJ45

Pin	Port	Dir	Function	Description
1	TXD RS232	OUT	UART	TXD3 - PE7 RS232 – TXD
2	RXD RS232	IN	UART	RXD3 - PE6 RS232 – RXD
3	TX+/RX+ RS485	BI	UART	RS485 - PE3 - TX/RX+ Half Duplex – 120ohm Termination Resistor
4	1 WIRE VCC	BI	1 WIRE	1 WIRE +5V – 100mA Fuse
5	GND		POWER	GROUND
6	TX-/RX- RS485	BI	UART	RS485 - PE2 - TX/RX- Half Duplex – 120ohm Termination Resistor
7	1 WIRE DATA	OUT	1 WIRE	1 WIRE DATA
8	1 WIRE GND	OUT	1 WIRE	1 WIRE GROUND

J2 – 30WAY GPIO TO LED / LCD DISPLAY PCB

Pin	Port	Dir	Pull Up	Function	Description
1	+5V	OUT		POWER	+5V Output – 1A available
2	+5V	OUT		POWER	+5V Output – 1A available
3	+5V	OUT		POWER	+5V Output – 1A available
4	+5V	OUT		POWER	+5V Output – 1A available
5	I2C_SCL	OUT	YES	I2C0	PE1 - I2C Channel 1 Clock
6	SPI_MISO	IN		SPI	PC6 - SPI Master In – Slave Out
7	I2C_SDA	BI DI	YES	I2C0	PE0 - I2C Channel 1 Data
8	SPI_MOSI	OUT		SPI	PC5 - SPI Master Out – Slave In
9	I2C_SCL	OUT	YES	I2C1	I2C – Channel 1 Clock
10	SPI_CLK	OUT		SPI	PC7 – SPI Clock
11	I2C_SDA	IN	YES	I2C1	I2C – Channel 1 Data
12	SPI_SS0	OUT		SPI	PC4 - SPI Slave Select 0 – LCD
13	NC				Spare
14	SPI_SS1	OUT		SPI	PR0 - SPI Slave Select 1 – LCD
15	+3.3V	OUT		POWER	+3.3V Output – 300mA available
16	+3.3V	OUT		POWER	+3.3V Output – 300mA available
17	+3.3V	OUT		POWER	+3.3V Output – 300mA available
18	+3.3V	OUT		POWER	+3.3V Output – 300mA available
19	NC				I2C INTERRUPT – I2C Switches
20	PD0	BI		GPIO	General Purpose – Not used
21	PD5	OUT		GPIO	LCD BACKLIGHT ON/OFF - PWM
22	PD1	OUT		GPIO	General Purpose
23	PD4	OUT		GPIO	SPI DATA/CMD for LCD
24	NC				Output from 3.3V Supervisor
25	+12V	OUT		POWER	+12V DC OUT
26	+12V	OUT		POWER	+12V DC OUT
27	GND			POWER	GROUND
28	GND			POWER	GROUND
29	GND			POWER	GROUND
30	GND			POWER	GROUND

Serial



USB

