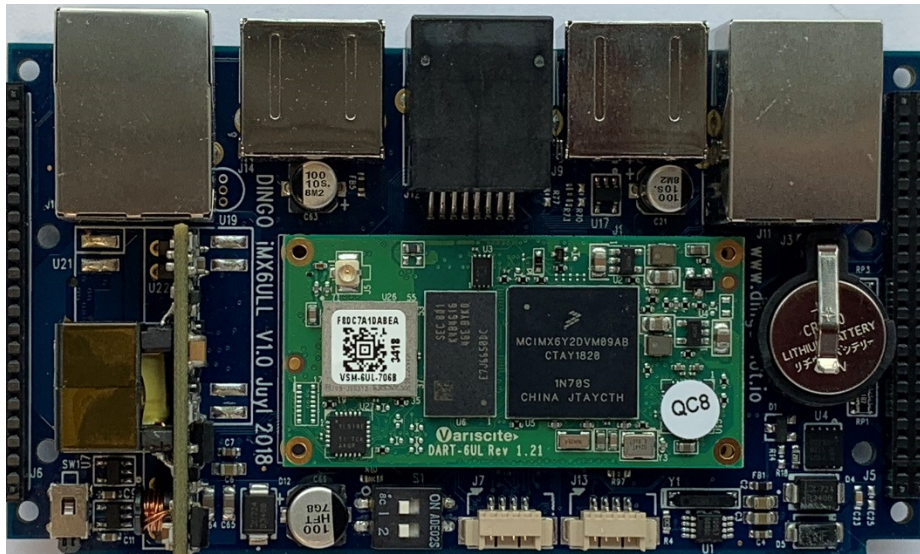


DINGO NXP iMX6ULL Compute Board

Item specifications

Go-IoT Item Id:	OPTION	DINGO-CB-IMX6ULL
CPU		Freescall i.MX6UltraLite/6ULL
	1	533MHz
	2	800MHz – Industrial Range
	3	900MHz – Commercial Range
RAM	A	LvDDR3 128MByte
	B	LvDDR3 512MByte
NAND	C	512MByte
eMMC	D	8GByte
SD Holder		Upto 64GByte SD Card
Ethernet		2 x 10/100 with Link / Activity LEDs
Ethernet POE	E	802.11af POE – 12.95W
WiFi	F	Certified 802.11 b.g.n.ac
Bluetooth	G	4.2 + BLE
Secure Authentication	H	NXP A7101
USB		1 x USB 2.0 Type A Connector 4 x USB 2.0 Ports to Base Board
Serial Interface		1 x RS232 via RJ45 Connector 1 x RS485 via RJ45 Connector 1 x TTL Serial Debug Connector 4 x TTL Serial Ports to Base Board
HDMI Video Output		None
1-Wire Interface		1 x 1-Wire Interface via RJ45 Connector
Real Time Clock		ISL12057 with Battery Backup
EEPROM		24LC32 – 4K x 8
I2C Ports		4
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		Linux Debian Stretch Yocto Krogoth/Morty/Pyro/Rocko Boot2QT Morty
DC Input		+12V @ 0.6A
Size (L x W x H)		101 x 60 x 19 mm
Temperature		-20degree C to +85degree C
Country of Manufacture:		EU



J12 – 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	GPIO3_23	OUT	NO	RELAY 1	Logic 1 – Activate Relay 1
4	GPIO1_0	IN	YES	OPTO	Opto Input 1
5	GPIO3_24	OUT	NO	RELAY 1	Logic 1 – Activate Relay 2
6	GPIO1_1	IN	YES	OPTO	Opto Input 2
7	SPI_CLK	OUT	NO	SPI	GPIO11 – SPI Clock
8	GPIO1_2	IN	YES	OPTO	Opto Input 3
9	SPI_MOSI	OUT	NO	SPI	GPIO10 - SPI Master Out – Slave In
10	GPIO1_4	IN	YES	OPTO	Opto Input 4
11	SPI_MISO	IN	NO	SPI	GPIO9 - SPI Master In – Slave Out
12	GPIO1_5	IN	YES	OPTO	Opto Input 5
13	SPI_SS0	OUT	NO	SPI	GPIO8 - SPI Slave Select 0 – Base Middle
14	GPIO1_9	IN	YES	OPTO	Opto Input 6
15	SPI_SS1	OUT	NO	SPI	GPIO7 - SPI Slave Select 1 – Base Left
16	GPIO5_1	IN	YES	OPTO	Opto Input 7
17	SPI_SS2	OUT	NO	SPI	GPIO34 - SPI Slave Select 1 – Base Right
18	GPIO5_5	IN	YES	OPTO	Opto Input 8
19	GPIO4_21	IN	YES	EVENT	EVENT from N-PLC Station 1
20	GPIO4_22	IN	YES	EVENT	EVENT from N-PLC Station 2
21	GPIO4_23	IN	YES	EVENT	EVENT from N-PLC Station 3
22	GPIO4_24				spare
23	TXD7	OUT	YES	UART	TXD to N-PLC Stations 1, 2, 3
24	RXD7	IN	YES	UART	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	USB DN				USB Channel 1 D- to Base Board Plug In 1
30	USB DP				USB Channel 1 D+ to Base Board Plug In 1
31	RTC Battery				Larger RTC Backup if required
32	NC				spare
33	I2C1_SCL	OUT	YES	I2C	I2C Channel 1 Clock
34	I2C1_SDA	BI	YES	I2C	I2C Channel 1 Data
35	GPIO5_8	bi	NO		Spare
36	CTS3	IN	YES	UART	CTS from Baseboard – Station 2, 3
37	TXD3	OUT	NO	UART	TXD to Baseboard – Station 2, 3
38	RXD3	IN	YES	UART	RXD from Baseboard – Station 2, 3
39	RTS3	OUT	NO	UART	RTS to Baseboard – Station 2, 3
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_SDA1	BI	YES	I2C	I2C Channel 1 Data
3	GND			POWER	GROUND
4	GND			POWER	GROUND
5	RTS3	OUT	NO	UART	RXD from Baseboard – Station 2, 3
6	GPIO3_13	OUT	NO	BOOT	BOOT to N-PLC Station 2
7	I2C_SCL1	OUT	YES	I2C	I2C Channel 0 Clock
8	TXD_CON	OUT	NO	UART	TXD – Debug Console
9	RXD_CON	IN	YES	UART	RXD – Debug Console
10	GPIO3_14	OUT	NO	BOOT	BOOT to N-PLC Station 1
11	GPIO3_15	OUT	NO	BOOT	BOOT to N-PLC Station 3
12	USB_DP				USB Channel 4 D+ to Base Board 4
13	GPIO3_16				Battery ON -1 = Battery Backup
14	USB_DN				USB Channel 4 D- to Base Board 4
15	+5V	OUT		POWER	+5V Output – 2A available
16	USB_DP	BI	NO	USB	USB Channel 3 D+ to Base Board 2
17	USB_DN	BI	NO	USB	USB Channel 3 D- to Base Board 2
18	USB_DP	BI	NO	USB	USB Channel 4 D+ to Base Board 3
19	USB_DN	BI	NO	USB	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	RS232 – TXD
2	RXD RS232	IN	UART	RS232 – RXD
3	TX-/RX- RS485	BI	UART	RS485 –TX/RX- Half Duplex – 120OHM Termination Resistor
4	TX+/RX+ RS485	BI	UART	RS485 –TX/RX+ Half Duplex – 120OHM Termination Resistor
5	GND		POWER	GROUND
6	1 WIRE VCC	OUT	1 WIRE	1 WIRE +5V – 100mA Fuse
7	1 WIRE DATA	OUT	1 WIRE	1 WIRE DATA
8	1 WIRE GND		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_SCL1	OUT	YES	I2C0	I2C – Channel 1 Clock
6	SPI_MISO	IN		SPI	SPI Master In – Slave Out – LCD I/F
7	I2C_SDA1	BI DI	YES	I2C0	I2C – Channel 1 Data
8	SPI_MOSI	OUT		SPI	SPI Master Out – Slave In – LCD I/F
9	I2C_SCL	OUT	YES	I2C1	I2C – Channel 1 Clock
10	SPI_CLK	OUT		SPI	SPI Clock – LCD I/F
11	I2C_SDA	IN	YES	I2C1	I2C – Channel 1 Data
12	SPI_SS0	OUT		SPI	SPI Slave Select 0 – LCD I/F
13	SPI_SS2	OUT		SPI	SPI Slave Select 2
14	SPI_SS1	OUT		SPI	SPI Slave Select 1
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	GPIO3_17	IN		INT	I2C INTERRUPT – I2C Switches
20	GPIO3_20				Spare
21	GPIO3_18	OUT		GPIO	LCD BACKLIGHT ON/OFF - PWM
22	SPI_SS2	OUT		SPI	SPI Slave Select 3
23	GPIO3_19	OUT		GPIO	SPI DATA/CMD for LCD
24	nPOR	OUT		RESET	RESET – Active Low
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