

Bill Of Materials for LoRaNode

Design Title	LoRaNode
Author	EHo
Document Number	20200801
Revision	2.0
Design Created	lauantai 30. marraskuuta 2019
Design Last Modified	perjantai 31. heinäkuuta 2020
Total Parts In Design	42

1 Modules

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>Part Description</u>	<u>PCB Package</u>	<u>Stock Code</u>	<u>Remarks</u>
1	M1	SX1276 LoRa Module 868MHz	LoRa Module 868MHz	LORA-SX1276-SMT	SX1276 LoRa Module 868MHz	

Sub-totals:

12 Capacitors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>Part Description</u>	<u>PCB Package</u>	<u>Stock Code</u>	<u>Remarks</u>
6	C1,C6,C7,C8, C13,C25	100nF	Capacitor, 50V, ±10%	0603		
2	C2,C3	1nF	Capacitor, 50V, ±10%	0603		Not mounted
1	C4	1uF	Capacitor, 50V, ±10%	0603		
1	C5	4.7uF	Capacitor, 50V, ±10%	0603		
1	C12	10nF	Capacitor, 50V, ±10%	0603_CAP		
1	C18	100nF		0603		

Sub-totals:

12 Resistors

<u>Quantity</u>	<u>References</u>	<u>Value</u>	<u>Part Description</u>	<u>PCB Package</u>	<u>Stock Code</u>	<u>Remarks</u>
1	R1	330	Resistor, ±5%	0603		
1	R2	2.2k	Resistor, ±5%	0603		
2	R3,R4	47k	Resistor, ±5%	0603		
1	R5	0.001	Zero ohm resistor	0603		Not mounted
2	R6,R8	10k	Resistor, ±5%	0603		

2	R7,R9	170k		0603
1	R12	0.001	Zero Ohm Resistor	0603
2	R18,R19	1.5M	Resistor, ±1%	0603

Sub-totals:

3 Integrated Circuits

Quantity	References	Value	Part Description	PCB Package	Stock Code	Remarks
1	U1	ATMEGA328P	MCU	QFP80P900X900X120-32	Farnell 1715486	
1	U2	TPS78233DDCR	Regulator, 3.3V	SOT95P280X110-5N		
1	U4	TPL5010DDCT		SOT95P280X110-6N		

Sub-totals:

1 Transistors

Quantity	References	Value	Part Description	PCB Package	Stock Code	Remarks
1	Q1	BSS123	N-MOSFET	SOT95P230X109-3	Digikey BSS123NTR-ND	

Sub-totals:

4 Diodes

Quantity	References	Value	Part Description	PCB Package	Stock Code	Remarks
2	D1,D2	KPT-1608CGCK	LED	LEDC1608X85N		
1	D8	MBR0530	Diode	SOD123-AC	Farnell 1431036	
1	D9	BAT42WS-7	Schotky Diode	SOD2514X100	Digikey BAT42WSDITR-ND	

Sub-totals:

9 Miscellaneous

Quantity	References	Value	Part Description	PCB Package	Stock Code	Remarks
1	J1	CONN-SIL6	SIL Header, 6-pin	CONN-SIL6	Farnell 1248144	
1	J2	Taoglas RECE-20279-001E-01	IPEX-Connector	CONN-IPEX	Mouser 960-RECE20279001E01	Not mounted
1	J3	640454-3	SIL Header, 3-pin	CONN-SIL3	Farnell 588489	
2	J4,J6	CONN-SIL2	MTA-100 Connector	CONN-SIL2		
1	J5	T-module	BME280 Module	BME280-TE-V2		
1	J9	CONN-DIL6	DIL Header, 2x5-pin	CONN-DIL6	Farnell 1248159	
1	L1	1mH	Inductor	0603		Zero ohm resistor

1	SP1	SPADS	SPADS	Solder after Arduino downloader is programmed.
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Sub-totals:

Totals:

perjantai 31. heinäkuuta 2020 8.41.10