



Bill of material for ANTARIS ROM-only solution with ATR0635 (excluding PCB)

Building Block	Part number	Qty.	Component	Type	Value	Package	Alternative part	Value	Package
RF Input Filter	F11	1	SAW Filter	EPCOS B7840	all tolerances 5% if not otherwise stated				
	C12, C13	2	SMD Capacitors	Taiyo Yuden EVK105CH1R3BW	1.3pF +/- 0.1pF	CSSP	EPCOS B4060		QCC8D
	L1	1	SMD Inductor, multilayer, 5%	Wuerth 744 784 056	5.6 nH, 5%	0402	Murata GRM1555C1H1R3BZ01D	1.3pF +/- 0.1pF	0402
GPS TCXO	XO2	1	GPS TCXO, 23.104 MHz	Rakon IT5305BE 23.104 MHz TX4130	23.104 MHz, 5 x 3,2 mm ² TCXO	5 x 3,2 mm ²			
	C8	1	SMD Capacitor	Vishay VJ0402A4k7JXXA	4.7pF	0402			
	C9	1	SMD Capacitor	Vishay VJ0402A120JXXA	12pF	0402			
	C10	1	SMD Capacitor	Vishay VJ0402A220JXXA	22pF	0402			
<i>if no TCXO switch is used</i>	R2	1	SMD Resistor	Vishay CRCW0402000Z	0 Ohm, when TCXO switch is mounted n.c.	0402			
RTC-Oscillator	X1	1	RTC Crystal	MicroCrystal CC7V-T1A 32.768 kHz 9.0 pF	32.768 kHz +/- 30 ppm	3.2x1.5x0.9mm	MicroCrystal MS1V-T1K (metal can package) Seiko Instruments Inc. NC-T7	32.768 kHz +/- 30ppm 32.768 kHz +/- 30ppm	2x2x6mm 3.2x1.5x0.9mm
	C1, C2	2	SMD Capacitors	Vishay VJ0402A150JXXA.	15pF	0402			
AGC Block & Test output Decoupling ATR0635	IC3	1	ATR0635	ATMEL ATR0635-7KQY	GPS single chip GPS receiver with SuSe	BGA96			
	C6, C7	2	SMD Capacitors	Vishay VJ0402A101JXXA	100pF +/- 5%	0402			
	C4, C14	2	SMD Capacitors	Vishay VJ0402V104JXJ	100nF	0402			
	C5	1	SMD Capacitor		not connected	0402			
	C15, C11	2	SMD Capacitors	Murata GRM155F50J105ZE01	1uF, 10%	0402			
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LNA <i>(optional)</i>	IC4	1	ATR0610	ATMEL ATR0610-PQQ	GPS LNA (not necessary with active ant.)	0402			
	L3	1	SMD Inductor, wirewound	Wuerth 744 765 047	4,7nH	0402			
	C18	1	SMD Capacitor	Vishay VJ0402A470JXXA	47pF	0402			
	C16	1	SMD Capacitor	Murata GRM1555C1H1R2BZ01D	1.2pF +/- 0.1 pF	0402			
4									
Active Antenna Supply <i>(optional)</i>	C17	1	SMD Capacitor	Vishay VJ0402A101JXXA.	100pF				
	L2	1	SMD Inductor, multilayer	Wuerth 744 784 27	27nH				
2									
TCXO Switch <i>(optional)</i>	IC2	1	load switch	Vishay SI1865DL		SC70-6			
	R1	1	SMD Resistor	Vishay CRCW0402104J	100kOhm +/- 5%	0402			
	decoupling IC2	1	SMD Capacitor	Vishay VJ0402V104JXJ	100nF	0402			
3									
EEPROM <i>(optional)</i>	Decoupling	1	EEPROM	ATMEL AT25320AY1-10YU-1.8		MSOP8	ATMEL AT25160A-10TU-1.8		MSOP8
		1	SMD Capacitor	Vishay VJ0402V104JXJ	100nF	0402			
2									
Backup system <i>(optional)</i>		1	Rechargeable battery	MS621F-FL11E, Seiko	5.5mAh				
		1	Schottky diode	Full Power Semiconductors ASD751V					
		1	SMD resistor		depending on battery type				
3									
Shielding <i>(optional)</i>		1	metal can	CuNi18Zn20, t = 0.15mm	Shield H60905.pdf				
Brown-out detection	IC1	1	Voltage detector	Seiko S1000N25-I4T1G	2.5V +/- 5%		Richtek RT980825CV	2.5V +/- 5%	
Brown-out detection is needed if the user cannot guarantee, that the supply voltage is always above 2.7V in active mode									

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