



VersaNode 310

2.4 GHz Wireless Radio Module

VersaNode radio modules allow you to rapidly and cost effectively develop wireless enabled sensors using your choice of industry standard protocols. To ensure forward compatibility, VersaNode modules offer dual boot capability with support for both ISA100.11a and WirelessHART. VersaNode modules help you minimize time and cost associated with the design, deployment, and testing of your wireless sensors by leveraging our extensive experience in developing

wireless sensor networks. VersaNode modules work in conjunction with any standards based router, such as our VersaRouter series of all-in-one gateways,

Key Benefits

- » Greater reliability due to low packet error rates
- » Increased range means fewer bridging nodes
- » Variable power output capabilities
- » Supports ISA100.11a Country Code feature
- » Low power consumption for long battery life

KEY SPECIFICATIONS	
Supply voltage	3.3 to 10 V (typical 3.6)
Voltage on any digital I/O	-0.3 to 3.2 V (typical 3.0)
RF output level (Nominal)	+10 dBm maximum @ antenna port
RF output level (Max)	+15 dBm maximum @ antenna port
Storage temperature range	-40 to +85 °C
Operating temperature range	-40 to +85 °C
NORMAL OPERATING CONDITIONS	
Voltage on analog pins	0 to Vcc V (typical 3.0)
Voltage supply noise	200 mVpp max; 50Hz - 15 MHz
Peak current	160 mA; TX mode, maximum output power
Storage & operating temperature	-40 to +85 °C
Operating relative humidity	10 to 90 %RH non condensing
Transmit current	max 110 mA @ 15 dBm
Receive current	max: 27 mA; typical: 21 mA
Hibernate current	40µA
ELECTRICAL	
Output high-level voltage (IOH = 5 mA) (All digital outputs)	80% Vcc to Vcc
Output low-level voltage (IOL = 5 mA) (All digital outputs)	0 to 20% Vcc
Input low voltage (All digital inputs)	0 to 30% Vcc
Input high-level voltage (All digital inputs)	70% Vcc to Vcc
Input hysteresis (All digital inputs)	0.06 x Vcc

RADIO	
Operating frequency	2.4000 to 2.4750 GHz
Number of channels	15
Channel separation	5 MHz
Occupied channel BW	2.65 Mz
Frequency accuracy	-10 to +10 ppm ± 4ppm at +25 °C
Modulation	O-QPSK
Raw data rate	250 kbps
Receiver sensitivity	-98 dBm using non-coherent differential chip detection (DCD), 50% PER
Output power adjustment range	0 to 15 dBm adjustable in 1dB increments
ANTENNA	
Operating frequency	2.4000 to 2.4835 GHz
Impedance	50Ω
Gain	+2 dBi
Pattern	Omni-directional
Maximum VSWR	2:1
Connector	*MMCX
CERTIFICATIONS	
EMC	FCC-US, IC-Canada, R&TTE/ETSI EN-EU, Giteki- Japan
Hazloc	Designed for use in intrinsically safe devices