

# VENUS RADIO HARDWARE



## Overview

- Modular architecture
- Flexible
- Supports all Ondas Software Applications
- Interoperable

## Venus Features

- Compact enclosure
- Modular fixing options – wall, DIN mount, etc.
- IEEE 1613 compliant
- Class 1 Division 2 compliant
- Passive cooling



The versatile **Venus Radio Hardware Platform** is capable of operating all Ondas Radio Software Applications including the IEEE 802.16s and 802.16e air interface protocols and operation as a Base Station, Fixed Remote or Mobile Remote Radio.

Venus' compact anodized aluminum enclosure hosts three state-of-the-art PCB Boards including a powerful **Communications Baseband Board (CBB)**, a wide-ranging **DC Power Supply Unit (PSU)** and a **Radio Frequency Module (RFM)** board.

### RADIO SPECIFICATIONS

Modular Architecture	RF Modules to support different frequency ranges
Frequency Range	70 MHz to 6 GHz
Channel Sizes	12.5 kHz to 10 MHz
TX Power	Up to 4 watts @ antenna port
Rx Sensitivity	As low as -117 dBm

### CONNECTORS / INTERFACES

DC Input	Phoenix 1776508
Grounding Post	10x32 Threaded
Console	RJ45 Cisco Serial
Serial Data	RJ45 RS232 / RS449
Ethernet (x2)	RJ45 10/100 Mb
RF 50Ω	Type N Female
GPS Antenna	SMA Female
LCD Display	16x2 Backlit

### PHYSICAL CHARACTERISTICS

DC Power Input	18 to 75 VDC
Power Consumption	No Load: 13.1 watts @ 48 VDC Peak Load: 23.4 watts @ 48 VDC
Construction	Anodized Aluminum
Packaging	Freestanding unit with modular fixing options
Dimensions	8.5" x 4.85" x 2.95" (216mm x 123mm x 75mm)
Weight	4 lbs 2 oz (1.9 kg)
Operating Temp	-40°C to +70°C
Cooling	Passive
Compliance	IEEE 1613 Class 1 Division 2

**Compact Form Factor with up to 36dBm (4 Watts) Tx Power**  
**Functions as Base Station, Fixed or Mobile Remote**  
**Security includes AES 256 VLAN AAA Radius**

Venus' modular hardware can be configured with an RFM board that supports any frequency band from as low as 70 MHz up to 6 GHz. Furthermore, the Venus Radio Hardware supports flexible channel sizes ranging from as narrow as 12.5 kHz up to 10 MHz. Venus' ability to operate a variety of software applications combined with its frequency and channel size independence minimizes future obsolescence allowing the operator to plan for a minimum 15-year life cycle.

The Venus Radio supports transmit power up to 4 Watts at the antenna port (before antenna gain) with industry leading radio receiver sensitivity as low as -117 dBm. The combination of TX power, excellent receiver sensitivity, flexible channel sizes and frequencies, leads to exceptional range in a point-to-multipoint wireless data system with 30+ mile non-line-of-sight of connectivity.

Venus' passive cooling design (no fans) supports operation in extreme temperatures from -40°C to +70°C. The hardware is designed for operation in conditions of severe electromagnetic interference (EMI) including compliance with the IEEE 1613 standard for operation in electric power substations. Venus Radio Hardware is also compliant with Class 1, Division 2.

**Complies with new IEEE 802.16s and IEEE 802.16e standards**