

## BU-9H20XF Base Unit, BU-2H20XF Base Unit

### Features

- ✓ DSSS Technology (900MHz @ 10mW , 2.4GHz @ 100mW)
- ✓ 20 Dedicated FET Outputs/Inputs
- ✓ Current Sense Capable
- ✓ Four Character Display Option
- ✓ PWM Control
- ✓ Dual Connectors for Ease of Wiring
- ✓ Translucent Case (reduced hole drilling)
- ✓ Weatherproof
- ✓ CAN Bus Capable
- ✓ 11 Diagnostic LEDs
- ✓ Power Cutoff FET
- ✓ Compact Design
- ✓ Dual Analog Input Capable



The versatile BU-9H20XF and BU-2H20XF base units feature twenty FET (field effect transistor) high-side switching outputs or switch-to-power digital inputs, and CAN Bus control capability. Ten channels are equipped with current sense for added control capability.

The BU-9H20XF and BU-2H20XF accept a broad range of input power with operating voltages ranging from 7VDC to 28VDC. The rugged weatherproof enclosure allows these unit to operate worry free in harsh weather conditions. Two 12-wire color-keyed weatherproof connecting cables connect the controlled devices.

Using Direct Sequence Spread Spectrum (DSSS) wireless technology at 900MHz or 2.4GHz, the base unit provides a robust link with a SmaRT handheld remote in congested radio environments. SmaRT base units feature seamless association to SmaRT hand-held remotes without the need to open either the handheld remote or base unit.

### Specifications

#### Power

Operating  $V_{in}$  +7 to +28VDC

#### Environment

Operating Temp -20°C to 55°C  
(-4°F to 131°F)

Storage Temp -40°C to 85°C  
(-40°F to 185°F)

Humidity 0 to 100%

#### Enclosure

Dimensions 119mm x 133mm x 36mm  
(5.24" x 4.69" x 1.42")

Durability High Impact Polymer

Mounting 7.4mm (0.29") dia. holes  
102mm (4") center-to-center

#### Outputs/Inputs

Twenty Digital FET –Open Drain; factory configurable Input/Output

Current 2A Per channel  
8A Max. @ 55°C

#### Indicators (red LEDs)

Unmarked Unused

+V1, +V2, +V3 Voltages OK when lit

HTH Health – blinks when active

RTX RF TX – blinks when active

RRX RF RX – blinks when active

CTX CAN TX – blinks when active

CRX CAN RX – solid when active

OUT Output – solid when active

IN Input – solid when active

ERR Error – solid – channel output  
low or high current

blink – global voltage problem

#### Radio

Frequency

**BU-9H20XF**

906-924MHz

**BU-2H20XF**

2405-2580MHz

Power

10mW

100mW

License

License Free

Modulation

DSSS

Antenna

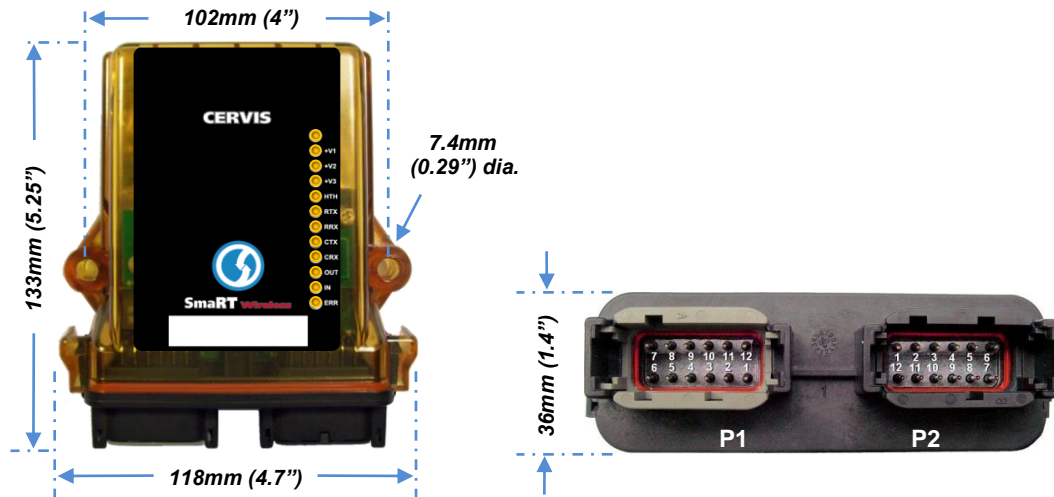
Internal or External (RP – TNC)

#### Serial Communications (option)

CAN Bus

SAE J1939

## Base Unit Dimensions and Wiring



### BU-9H20XF and BU-2H20XF Wiring Table

Pin	Name	Pin	Name
P1:1	M17	P2:1	M5
P1:2	M18	P2:2	M6
P1:3	-VDC Umbilical Com	P2:3	M7
P1:4	M11	P2:4	M8
P1:5	M12	P2:5	M19
P1:6	+VDC	P2:6	M20
P1:7	M13	P2:7	CANH
P1:8	M14	P2:8	CANL
P1:9	M15	P2:9	M1
P1:10	M16	P2:10	M2
P1:11	M10	P2:11	M3
P1:12	M9	P2:12	M4

### BU-9H20XF and BU-2H20XF Model Specifications

Model	Freq.	RF Pwr	#Ch	Channel Type	Antenna Style	Input Voltage
BU-9H20XF-INT	900MHz	10mW	20	FET	Internal	7 – 28VDC
BU-9H20XF-EXT	900MHz	10mW	20	FET	External	7 – 28VDC
BU-2H20XF-INT	2.4GHz	100mW	20	FET	Internal	7 – 28VDC
BU-2H20XF-EXT	2.4GHz	100mW	20	FET	External	7 – 28VDC

✓ **Note:** BU-xH20XF-CAN units are internally terminated at 1.2kΩ. Termination can be removed at the factory.