

## SmaRT BU-9H8D Family Base Units

### Features

- ✓ 900MHz Spread Spectrum Technology
- ✓ Eight FET Outputs/Inputs
- ✓ High Side or Low Side Outputs
- ✓ Diagnostic LED outputs
- ✓ Two Analog Inputs/Outputs Capable
- ✓ Single connector interface for ease of wiring
- ✓ Power FET Cutoff
- ✓ Current Sense Capable
- ✓ CAN Bus Capable
- ✓ Weatherproof
- ✓ Compact design



The SmaRT Base Unit BU-9H8D features eight high-side or low-side switching FET outputs, each 3A max. It accepts a broad range of input power operating voltages (from 7 to 28VDC standard). All connections are made via a single cable and the rugged weatherproof enclosure allows the unit to operate worry free in harsh weather conditions.

SmaRT base units feature seamless association to a SmaRT™ hand-held unit without the need to open the case. Using Direct Sequence Spread Spectrum (DSSS) wireless technology at 900MHz, the base unit provides a robust link with a SmaRT Hand-Held Remote in congested radio environments.

### Specifications

#### Power

<b>V<sub>in</sub></b>	+7 to +28VDC
<b>Operating</b>	1W max.

#### Indicators

<b>Unnamed (V<sub>in</sub>)</b>	OK when inactive; Polarity reversed when active
<b>+V1 – +V3</b>	OK when lit
<b>1 (Health)</b>	OK when lit
<b>2 (RF TX)</b>	Blinks when active transmit message
<b>3 (RF RX)</b>	Blinks when active receive message
<b>4 (CAN TX)</b>	Blinks when active transmit message
<b>5 (CAN RX)</b>	Blinks when active receive message
<b>6 (OUT)</b>	Lit when an output is active
<b>7 (IN)</b>	Lit when an input is active
<b>8 (ERR)</b>	Error when active

#### Radio

<b>Frequency</b>	906-924MHz
<b>RF Power</b>	10mW
<b>License</b>	License Free
<b>Modulation</b>	DSSS
<b>Antenna</b>	Internal

#### Enclosure

<b>Dimensions</b>	mm: 133 x 118 x 36 inch: 5.24 x 4.65 x 1.42
<b>Weight</b>	.24kg (0.5lbs)
<b>Durability</b>	High Impact Polymer

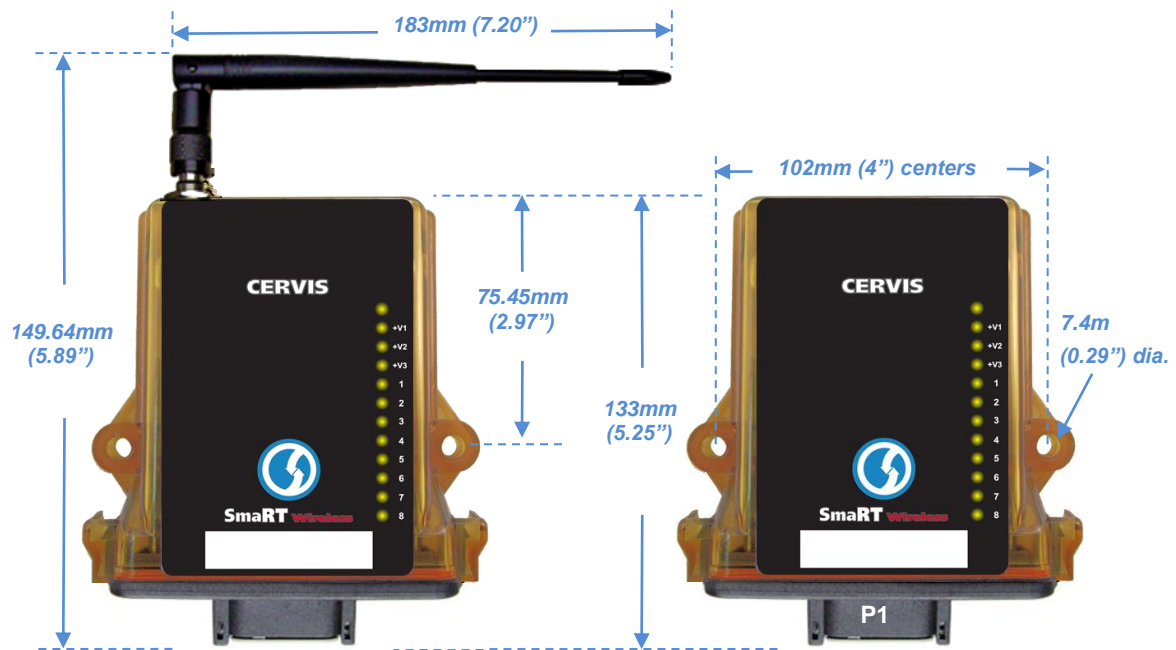
#### Environment

<b>Operating Temp</b>	-20°C to 55°C (-4°F to 131°F)
<b>Storage Temp</b>	-40°C to 85°C (-40°F to 185°F)
<b>Humidity</b>	0 to 100%
<b>Vibration/Shock</b>	IEC60068-2-6 10Hz to 150Hz @ 1.0g peak acceleration 10.0g peak shock acceleration

#### Outputs/Inputs

<b>Eight FET</b>	Open Drain
<b>Two Analog (optional)</b>	0-10V input/4-20mA input 0-10V output M7 and M8 analog when chosen
<b>Max. Current</b>	Per Channel 2.5A max per output Total 15A max @ 55°C (131°F)

## Cable Wiring and Connection



**P1 Connector Pin Numbers**

Connection	BU-9H6D	BU-9H6D-CAN✓	BU-9H8D	BU-9H8D-CAN✓
P1:1	+VDC	+VDC	+VDC	+VDC
P1:2	+VDC	+VDC	M7	M7
P1:3	M1	M1	M1	M1
P1:4	M2	M2	M2	M2
P1:5	M3	M3	M3	M3
P1:6	M4	M4	M4	M4
P1:7	RS-232 TX	CANH	RS-232 TX	CANH
P1:8	RS-232 RX	CANL	RS-232 RX	CANL
P1:9	RS-232 COM	UMBILICAL PWR	M8	M8
P1:10	M5	M5	M5	M5
P1:11	M6	M6	M6	M6
P1:12	-VDC	-VDC	-VDC	-VDC

✓ Note: BU-9H6D-CAN and BU-9H8D-CAN units are internally terminated at 1.2KΩ.  
Termination can be removed at the factory.

## List of BU-9H8D Models

### Common Features

**Operating Frequency:** 900MHz      **Suppression:** None      **Channels:** 9H8D = 8; 9H6D = 6  
**Input Power:** 7 – 28VDC      **RF Power:** 10mW\*      **Type:** FET

Model	Antenna	Analog Channel	Serial Port	Display
BU-9H6D-INT	Internal	NA	RS-232	No
BU-9H6D-EXT	External	NA	RS-232	No
BU-9H6D-INT-CAN	Internal	NA	CAN	No
BU-9H6D-EXT-CAN	External	NA	CAN	No
BU-9H6D-INT-DIS	Internal	NA	RS-232	Yes
BU-9H6D-EXT-DIS	External	NA	RS-232	Yes
BU-9H6D-INT-DIS-CAN	Internal	NA	CAN	Yes
BU-9H6D-EXT-DIS-CAN	External	NA	CAN	Yes
BU-9H8D-INT-AV2	Internal	(2) 0-10V IN	RS-232	No
BU-9H8D-EXT-AV2	External	(2) 0-10V IN	RS-232	No
BU-9H8D-INT-AV2-CAN	Internal	(2) 0-10V IN	CAN	No
BU-9H8D-EXT-AV2-CAN	External	(2) 0-10V IN	CAN	No
BU-9H8D-INT-AI2	Internal	(2) 4-20mA IN	RS-232	No
BU-9H8D-EXT-AI2	External	(2) 4-20mA IN	RS-232	No
BU-9H8D-INT-AI2-CAN	Internal	(2) 4-20mA IN	CAN	No
BU-9H8D-EXT-AI2-CAN	External	(2) 4-20mA IN	CAN	No
BU-9H8D-INT-AO2	Internal	(2) 0-10V OUT	RS-232	No
BU-9H8D-EXT-AO2	External	(2) 0-10V OUT	RS-232	No
BU-9H8D-INT-AO2-CAN	Internal	(2) 0-10V OUT	CAN	No
BU-9H8D-EXT-AO2-CAN	External	(2) 0-10V OUT	CAN	No
BU-9H8D-INT	Internal	NA	RS-232	No
BU-9H8D-EXT	External	NA	RS-232	No
BU-9H8D-INT-CAN	Internal	NA	CAN	No
BU-9H8D-EXT-CAN	External	NA	CAN	No
BU-9H8D-INT-DIS-AV2	Internal	(2) 0-10V IN	RS-232	Yes
BU-9H8D-EXT-DIS-AV2	External	(2) 0-10V IN	RS-232	Yes
BU-9H8D-INT-DIS-AV2-CAN	Internal	(2) 0-10V IN	CAN	Yes
BU-9H8D-EXT-DIS-AV2-CAN	External	(2) 0-10V IN	CAN	Yes
BU-9H8D-INT-DIS-AI2	Internal	(2) 4-20mA IN	RS-232	Yes
BU-9H8D-EXT-DIS-AI2	External	(2) 4-20mA IN	RS-232	Yes
BU-9H8D-INT-DIS-AI2-CAN	Internal	(2) 4-20mA IN	CAN	Yes
BU-9H8D-EXT-DIS-AI2-CAN	External	(2) 4-20mA IN	CAN	Yes
BU-9H8D-INT-DIS-AO2	Internal	(2) 0-10V OUT	RS-232	Yes
BU-9H8D-EXT-DIS-AO2	External	(2) 0-10V OUT	RS-232	Yes
BU-9H8D-INT-DIS-AO2-CAN	Internal	(2) 0-10V OUT	CAN	Yes
BU-9H8D-EXT-DIS-AO2-CAN	External	(2) 0-10V OUT	CAN	Yes
BU-9H8D-INT-DIS	Internal	NA	RS-232	Yes
BU-9H8D-EXT-DIS	External	NA	RS-232	Yes
BU-9H8D-INT-DIS-CAN	Internal	NA	CAN	Yes
BU-9H8D-EXT-DIS-CAN	External	NA	CAN	Yes