

BU-xH1H Base Units

Features

- ✓2.4 GHz or 900 MHz DSSS Technology
- ✓H-Bridge Motor Control
- ✓Three FET Input/Outputs
- ✓Dual connectors for ease of wiring
- ✓RS-232 OR CANbus Capable
- ✓Diagnostic LEDs
- ✓Two Analog Inputs
- ✓Weatherproof
- ✓Compact design



The SmaRT BU-xH1H base units feature an H-bridge (25 A max.) for forward/reverse motor drive, three field effect transistor (FET) high-side switching outputs or switch-to-ground digital inputs, and two analog inputs (typically for monitoring use). Cervis, Inc. can customize the versatile, programmable digital input/outputs to fit specific user applications. It accepts a broad range of input power, with operating voltages ranging from +7 to +28 VDC. The rugged weatherproof enclosure allows the unit to operate worry free in harsh weather conditions. Two 12-wire color-keyed weatherproof connecting cables connect the controlled devices.

SmaRT base units feature seamless association with SmaRT handheld remotes without the need to open the case. Using Direct Sequence Spread Spectrum (DSSS) wireless technology at 2.4 GHz or 900 MHz, the base unit provides a robust link with SmaRT handheld remotes in congested radio environments. The unit also features a choice of factory configurable CANbus or RS-232 communication port.

Specifications

Power

V_{in} +7 to +28 VDC

Radio

Frequency

BU-2H1H 2405–2480 MHz @ 100 mW,
BU-9H1H 906–924 MHz @ 10 mW

License None required

Modulation DSSS

Antenna Internal or External

Enclosure

Dimensions mm: 119 x 133 x 36
inches: 5.24 x 4.69 x 1.42

Durability High-Impact Polymer

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

Outputs/Inputs

Three DI/DO FET –High Side; 4 A Per channel

H-Bridge 25 A Max. total @ 55° C (131° F)
12 V

Two AI Two-state monitor (typical)

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%

LED Indicators

Unmarked

ON – Supply polarity reversed
OFF – Supply polarity OK

+V1, +V2, +V3

Voltages OK when lit solid

1 – Health

OK when blinking 1x/sec

2 – RF TX

Flashes when active

3 – RF RX

Flashes when active

4 – CAN TX

Flashes when active

5 – CAN RX

Flashes when active

6 – Output

OK when blinking 1x/sec

7 – Input

OK when blinking 1x/sec

8 – Error

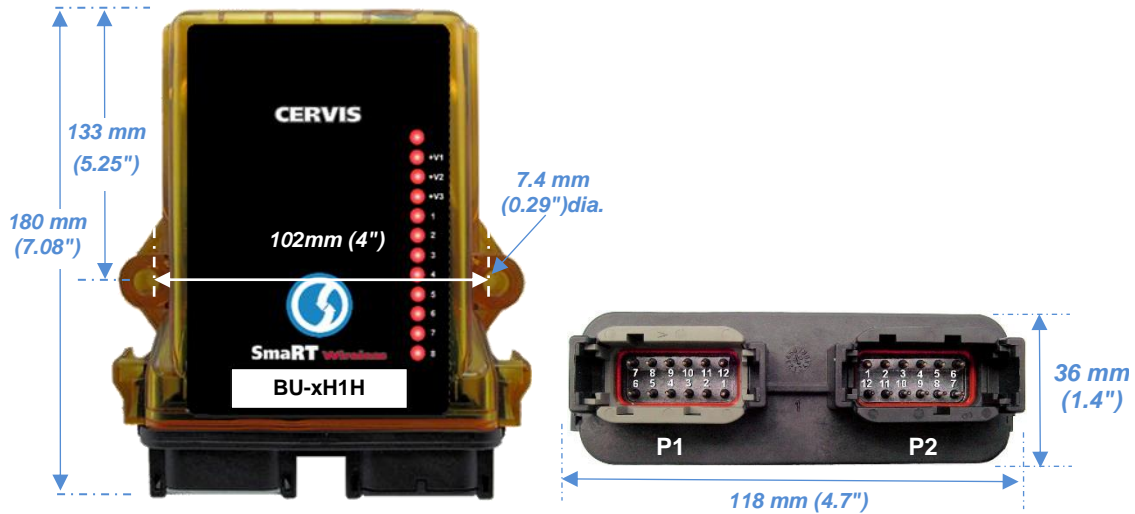
Error when lit steady

Pin Assignments

P1-1: Motor A	P1-2: Motor A	P1-3: Motor B
P1-4: –VBatt	P1-5: –VBatt	P1-6: –VBatt
P1-7: +VBatt	P1-8: +VBatt	P1-9: +VBatt
P1-10: Motor B	P1-11: Motor B	P1-12: Motor A

P2-1: +VBatt	P2-2: DI/DO 1	P2-3: DI/DO 2
P2-4: DI/DO 3	P2-5: AI 1	
P2-6: RS-232 RX/CANL	P2-7: RS-232 TX/CANH	
P2-8: AI 2	P2-9: Return	P2-10: Return
P2-11: Return	P2-12: Communications Return	

Dimensions



SmaRT BU-xH1H Pinout

P1 Pin	Assignment	P2 Pin	Assignment
P1:1	Motor A	P2:1	+VDC
P1:2	Motor A	P2:2	DI/DO 1
P1:3	Motor B	P2:3	DI/DO 2
P1:4	-VDC	P2:4	DI/DO 3
P1:5	-VDC	P2:5	AI1
P1:6	-VDC	P2:6	CANL/RS232 RX
P1:7	+VDC	P2:7	CANH/RS232 TX
P1:8	+VDC	P2:8	AI2
P1:9	+VDC	P2:9	Return
P1:10	Motor B	P2:10	Return
P1:11	Motor B	P2:11	Return
P1:12	Motor A	P2:12	Communications Return

SmaRT BU-x00H Options

Name	Freq.	RF Power	Type	Power	Antenna	Inputs	Comm.
BU-9H1H-INT	900 MHz	10 mW	H-Bridge	7-28 VDC	Internal	2@0-10 V _{in}	CAN
BU-9H1H-EXT	900 MHz	10 mW	H-Bridge	7-28 VDC	External	2@0-10 V _{in}	CAN
BU-2H1H-INT	2.4 GHz	100 mW	H-Bridge	7-28 VDC	Internal	2@0-10 V _{in}	RS-232
BU-2H1H-EXT	2.4 GHz	100 mW	H-Bridge	7-28 VDC	External	2@0-10 V _{in}	RS-232
BU-2H1H-INT-CAN	2.4 GHz	100 mW	H-Bridge	7-28 VDC	Internal	2@0-10 V _{in}	CAN
BU-2H1H-EXT-CAN	2.4 GHz	100 mW	H-Bridge	7-28 VDC	External	2@0-10 V _{in}	CAN

✓ **Note:** BU-xH1H units are internally terminated at 3.3 kΩ. Termination can be removed at the factory.

