

## LongRT Base Unit (LBU)

### Features

- ✓ Rugged High-Impact Polymer Enclosure
- ✓ 8-Character LED Display
- ✓ 450MHz to 470MHz
- ✓ Removable Antenna
- ✓ Weatherproof Design
- ✓ Real-Time Clock
- ✓ CAN Capable
- ✓ Logging
- ✓ 2-Form-C Relays
- ✓ 2-Frequency Counters
- ✓ 16-Digital I/O, 2-AO, 2-AI
- ✓ Field Upgradeable



The LongRT Base Unit (LBU) represents the next generation of Cervis configurable command and control machine-mounted units. Designed for safety, the LBU employs a dual processor architecture compliant with ISO 13849 Category 3 Pld. Versatile and configurable, the LBU enables complex command and control solutions in harsh environments and industrial applications.

### Specifications

#### Max. Power Ratings

<b>Operating Voltage</b>	7 to 30VDC
<b>Reverse Voltage Protection</b>	Up to -40VDC
<b>Over Voltage Protection</b>	Up to 60VDC
<b>Operating Power</b>	1W @ 12VDC
<b>Max. Cont. I Sourcing</b>	15A @ +55°C (all channels)

#### Environment

<b>Operating Temp</b>	-40 to +85°C
<b>Storage Temp</b>	-40 to +85°C
<b>Humidity</b>	0 to 100%

#### Indicators

<b>L1–L4</b>	Available for application specific use
<b>TX</b>	Lit when message transmitted
<b>RX</b>	Lit when message received
<b>LNK</b>	Lit when safety-link is active
<b>HB</b>	Blinks during normal operation
<b>Display</b>	8-character LED

#### Digital I/O (16)

<b>Outputs</b>	M1–M16
<b>Type</b>	High-Side switch
<b>Max. Source I</b>	4A
<b>Avg. Source I</b>	2A
<b>One H-Bridge</b>	M1 & M2
<b>Output Protection</b>	Over current; under current; over temp.
<b>PWM Frequency</b>	0 – 1000Hz*
<b>INPUT</b>	M1–M16
<b>Type</b>	Current sense
<b>I Sense Threshold</b>	5mA typical; 10mA max.

#### Form-C RELAY (Two, M17 & M18)

<b>Max. Contact V</b>	277VAC, 30VDC
<b>Max. Contact I</b>	8A max. switching @ 250VAC or VDC

#### Analog Output (Two, M19 & M20)

<b>Voltage Range</b>	0V to Input Voltage
<b>Drive Current</b>	30mA

#### Analog Input (Four, M21–M24)

<b>Voltage Range</b>	0V to Input Voltage
<b>Input Impedance</b>	10000Ω

#### Analog Input (Two, M25 & M26)

#### Frequency Counters

#### Serial Communications

<b>CAN Protocol</b>	SAE J1939/CANopen
<b>RS-232 Port</b>	Upgrade/Debug

#### Enclosure

<b>Dimensions</b>	cm: 21.59 x 16.31 x 5.715 inches: 8.75 x 6.42 x 2.25
<b>Total Weight</b>	0.680kg (1.5lbs)

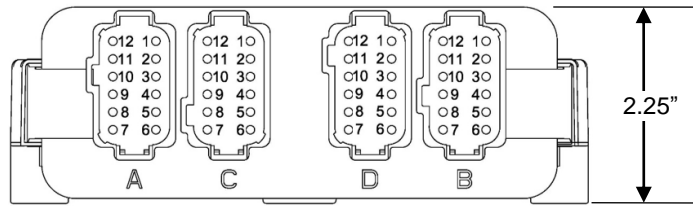
#### Radio

<b>Frequency</b>	450MHz to 470MHz
<b>RF Power</b>	100mW (+20 dBm max)
<b>License</b>	Certified FCC Part-90
<b>Modulation</b>	2-GFSK
<b>Range</b>	Up to One Mile
<b>Antenna</b>	External, RP-TNC 50Ω port

\*1000Hz max. when a single channel is configured for PWM output. Increasing the number of PWM channels decreases the max. PWM frequency.

\*\* For best performance, do not connect antenna directly to the base unit. Instead, Cervis recommends to use an extension cable with an antenna base plate mount.

## Connector Pin Configurations



A	
Pin	Name
1	M1
2	M2
3	M3
4	M4
5	M5
6	M6
7	M7
8	M8
9	VIN / nSHDN
10	VIN
11	GND
12	GND

C	
Pin	Name
1	M9
2	M10
3	M11
4	M12
5	M13
6	M14
7	M15
8	M16
9	VIN / M25
10	VIN
11	GND
12	GND

D	
Pin	Name
1	M17.NC
2	M17.C
3	M17.NO
4	M18.NC
5	M18.C
6	M18.NO
7	M19
8	M20
9	VIN / M26
10	VIN
11	GND
12	GND

B	
Pin	Name
1	CANH
2	CANL
3	CANT
4	RS232TX
5	RS232RX
6	M21
7	M22
8	M23
9	M24
10	VIN
11	GND
12	GND

## Mounting Dimensions

