

NM-2128 NMEA BUFFER DISTRIBUTOR MULTIPLEXER COMBINER 2 IN / 8 OUT



Installation and User Manual

The NMEA buffer is used to distribute NMEA data communicating between navigation equipment. The NMEA output of a device can be connected to a maximum of one or two devices. NMEA buffer should be used to distribute data to more devices.

The NM-2128 NMEA distributor has two independent isolated data inputs and can distribute data to up to eight outputs. The NM-2128 features three operating modes, auto-switching mode, dual mode and combiner mode. In Auto mode, priority is always on the first input. In dual mode the distributor can be used as two independent distributor with one input and four outputs.

In combiner mode, it combines data from two inputs and sends it to eight outputs. It also calculates checksum for each NMEA sentence and indicates if error.

Technical Specifications

- ☐ Isolated 9-32VDC Power supply
- ☐ 24VDC 0.3 A Power consumption
- ☐ Internal resetable fuse
- ☐ Reversed polarity protection
- ☐ NMEA0183, IEC61162 Protocol
- ☐ 2 X Independent galvanic isolated input ports (RS232-RS422-RS485)
- ☐ 2 X 4 RS422 Outputs
- ☐ 4800, 38400, 115200 bps Input output speed
- ☐ NMEA Inputs LEDs indicator
- ☐ Auto / Manual Mode (Optional)
- ☐ Automatic input signal detection and channel selection - Auto switching mode (Optional)
- ☐ NMEA Combiner - Combining 2 channels and sending output (Optional)
- ☐ Checksum calculation each NMEA sentence and Error Indicator (Optional)
- ☐ DIN Rail Mount Box

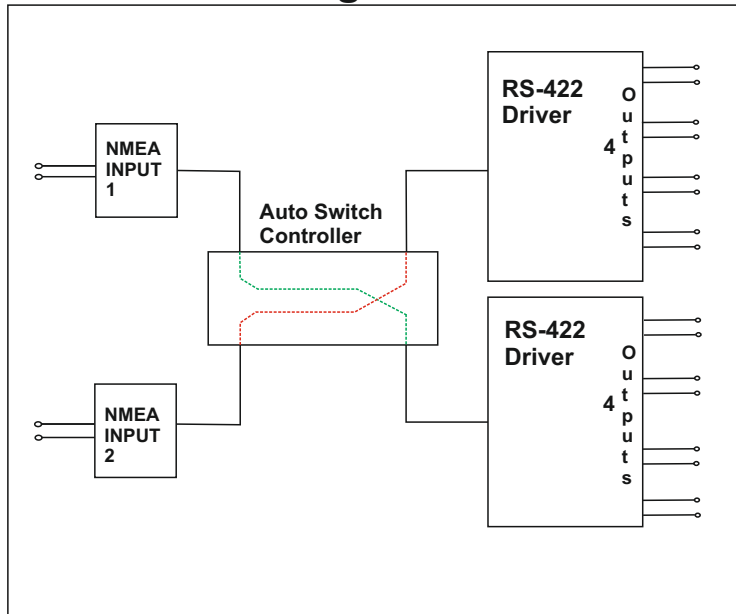
Order Information:

NM-2128-M Manual-Dual Mode: 1 Input 8 Outputs. Dual mode: Operate as two independent buffers with 1 input and 4 outputs.

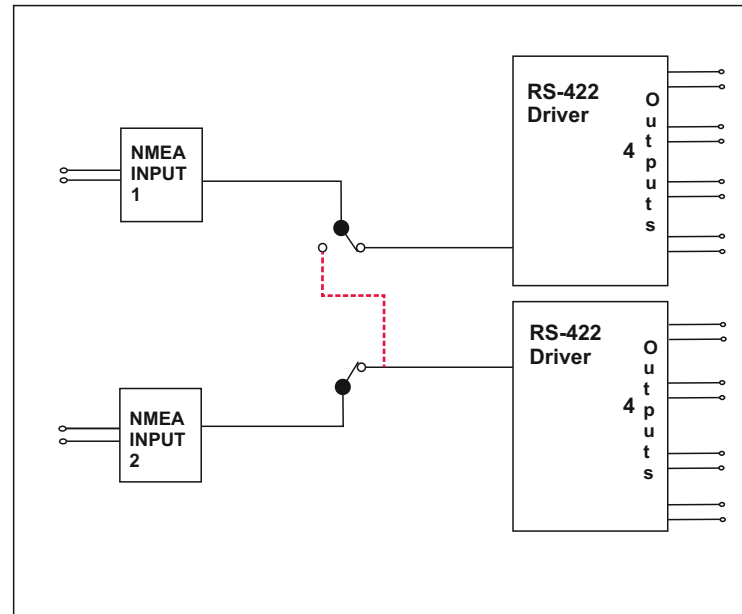
NM-2128-A Auto Switch Mode: If input 1 is lost for 20 seconds the buffer will automatically switch to NMEA input 2.

NM-2128-C Combiner Mode: It combines data from 2 inputs and sends it to 8 outputs.

Auto Switching Mode:



Manual / Dual Mode:



Operation:

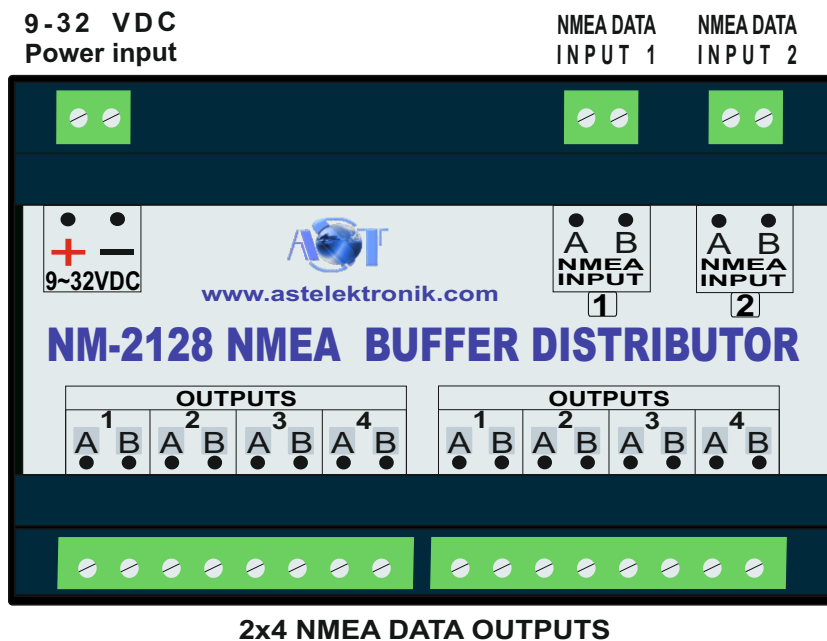
NM-2128-M: Manual-Dual Mode: 1 input and 8 outputs can be selected as standard.

Dual mode: Operate as two independent buffers with 1 input and 4 outputs.

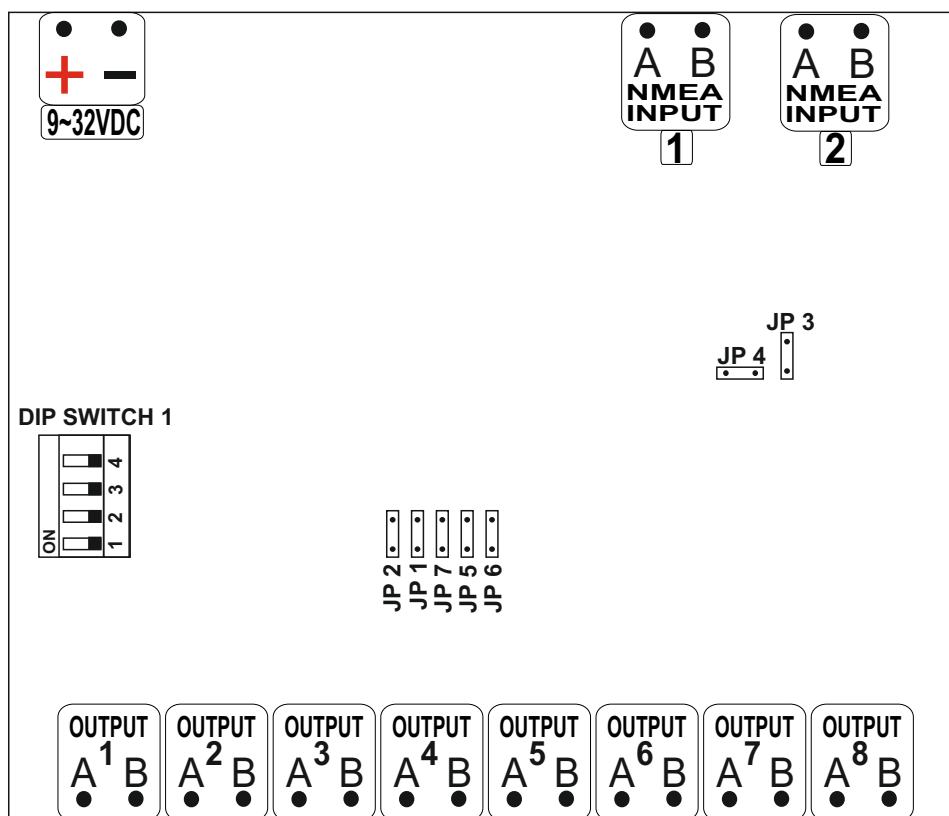
NM-2128-A: Auto Switch Mode: The priority is always on the first input. If input 1 is lost for 20 seconds the buffer will automatically switch to NMEA input 2. If data comes from the first input, the first input is selected and transferred to the outputs.

NM-2128-C: Combiner Mode: It combines data from 2 inputs and sends it to 8 outputs.

View:



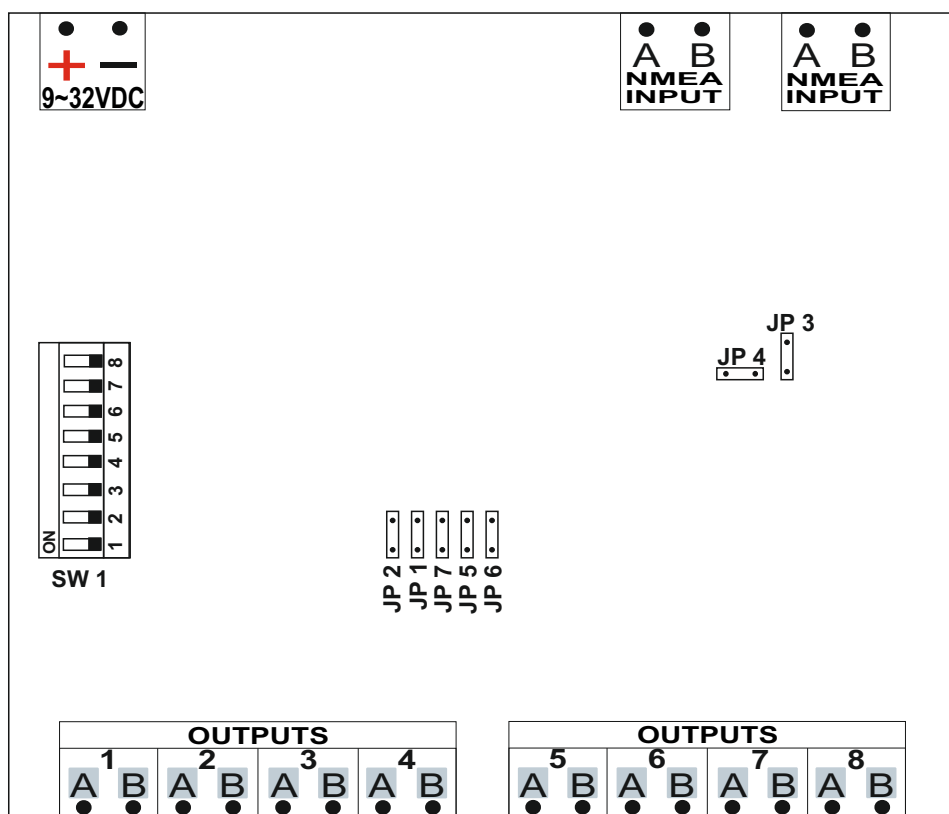
On Board Jumper -DIP Switch Location for PCB V1_3 and lower versions:



Jumper -DIP Switch Settings for PCB V1_3 and lower versions:

	1 Input 8 Outputs		1 Input 4 Outputs Dual Mode	
Manual Mode	JP5 SHORT JP6 SHORT JP1 OPEN JP2 OPEN JP3 OPEN JP4 OPEN JP7 OPEN	DIPSW1 X DIPSW2 X DIPSW3 X DIPSW4 X	JP5 SHORT JP7 SHORT JP6 OPEN JP1 OPEN JP2 OPEN JP3 OPEN JP4 OPEN	DIPSW1 X DIPSW2 X DIPSW3 X DIPSW4 X
Auto Mode	JP5 OPEN JP6 OPEN JP1 OPEN JP2 OPEN JP3 SHORT JP4 SHORT JP7 OPEN	DIPSW1 OFF=4800, ON=38400 INPUT 1 DIPSW2 OFF=4800, ON=38400 INPUT 2 DIPSW3 X DIPSW4 ON		
Combiner Mode	JP5 OPEN JP6 OPEN JP1 SHORT JP2 SHORT JP3 SHORT JP4 SHORT JP7 OPEN	DIPSW1 OFF=4800, ON=38400 DIPSW2 OFF=4800, ON=38400 DIPSW3 OFF=4800, ON=38400 DIPSW4 OFF	INPUT 1 INPUT 2 ALL OUTPUT	

On Board Jumper -DIP Switch Location for PCB V1_4 version:



Jumper -DIP Switch Settings for PCB V1_4 version for Manual Mode:

WORKING MODE	JP1	JP2	JP3	JP4	JP5	JP6	JP7
MANUAL	OPEN	OPEN	OPEN	OPEN	SHORT	SHORT	OPEN
MANUAL-DUAL	OPEN	OPEN	OPEN	OPEN	SHORT	OPEN	SHORT

Operation:

NM-2128-M: Manual Mode: 1 input and 8 outputs can be selected as standard. It receives NMEA data from the first input.

Dual mode: Operate as two independent buffers with 1 input and 4 outputs. In dual mode the distributor can be used as two independent distributor with one input and four outputs.

SW1 settings are irrelevant in these modes.

Jumper -DIP Switch Settings for PCB V1_4:

NM-2128-V1_4-G DIP SWITCHES - JUMPER SETTINGS FOR AUTO SWITCH AND COMBINER MODE

SW1 87 SWITCHING DELAY Applies to auto switch mode settings 0 = OFF 1 = ON	SW1 654321 0 = OFF 1 = ON	NMEA INPUT-1 BAUDRATE	NMEA INPUT-2 BAUDRATE	NMEA OUTPUT BAUDRATE	WORKING MODE	JP1	JP2	JP3	JP4	JP5	JP6	JP7
00 = 5 SECOND	000000	2400	2400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
01 = 10 SECOND	000001	2400	4800	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
10 = 15 SECOND	000010	2400	9600	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
11 = 20 SECOND	000011	2400	38400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	000100	2400	115200	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	000101	4800	2400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	000110	4800	4800	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	000111	4800	9600	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	001000	4800	38400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	001001	4800	115200	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	001010	9600	2400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	001011	9600	4800	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	001100	9600	9600	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	001101	9600	38400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	001110	9600	115200	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	001111	38400	2400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	010000	38400	4800	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	010001	38400	9600	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	010010	38400	38400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	010011	38400	115200	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	010100	115200	2400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	010101	115200	4800	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	010110	115200	9600	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	010111	115200	38400	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	011000	115200	115200	SELECTED INPUT SPEED	AUTO SWITCH	OPEN	OPEN	SHORT	SHORT	OPEN	OPEN	OPEN
	011001	RESERVED	RESERVED		RESERVED							
	011010	RESERVED	RESERVED		RESERVED							
	011011	RESERVED	RESERVED		RESERVED							
	011100	RESERVED	RESERVED		RESERVED							
	011101	RESERVED	RESERVED		RESERVED							
	011110	RESERVED	RESERVED		RESERVED							
	011111	RESERVED	RESERVED		RESERVED							

Operation:

NM-2128-A: Auto Switch Mode: The priority is always on the first input. If input 1 is lost for the set time, the buffer will automatically switch to NMEA input 2. If data comes from the first input, the first input is selected and transferred to the outputs.

In order for the DIP switch settings to be effective, the device must be disconnected from the power and given again.

NM-2128-V1_4-G DIP SWITCHES - JUMPER SETTINGS FOR AUTO SWITCH AND COMBINER MODE

SW1 87 AUTO MODE SWITCHING DELAY Applies to auto switch mode settings 0 = OFF 1 = ON	SW1 654321 0 = OFF 1 = ON	NMEA INPUT-1 BAUDRATE	NMEA INPUT-2 BAUDRATE	NMEA OUTPUT BAUDRATE	WORKING MODE	JP1	JP2	JP3	JP4	JP5	JP6	JP7
NA	100000	2400	2400	2400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	100001	2400	4800	2400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	100010	2400	9600	2400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	100011	2400	38400	2400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	100100	2400	115200	2400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	100101	4800	2400	4800	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	100110	4800	4800	4800	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	100111	4800	9600	4800	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	101000	4800	38400	4800	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	101001	4800	115200	4800	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	101010	9600	2400	9600	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	101011	9600	4800	9600	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	101100	9600	9600	9600	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	101101	9600	38400	9600	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	101110	9600	115200	9600	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	101111	38400	2400	38400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	110000	38400	4800	38400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	110001	38400	9600	38400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	110010	38400	38400	38400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	110011	38400	115200	38400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	110100	115200	2400	115200	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	110101	115200	4800	115200	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	110110	115200	9600	115200	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	110111	115200	38400	115200	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	111000	115200	115200	115200	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	111001	4800	4800	9600	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	111010	4800	4800	38400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	111011	4800	4800	115200	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	111100	9600	9600	4800	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	111101	9600	9600	38400	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	111110	9600	9600	115200	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN
NA	111111	38400	38400	115200	COMBINER	SHORT	SHORT	SHORT	SHORT	OPEN	OPEN	OPEN

Operation:

NM-2128-C Combiner Mode: It combines data from 2 inputs and sends it to 8 outputs.

In order for the DIP switch settings to be effective, the device must be disconnected from the power and given again.

Outline Drawing:

