



Commands List

Suitable for the following GNSS Fusion Series Product

Product Type	Model Name
GNSS Module	MG-1612AD-DR 、 RTK-1612AD-DR
GNSS Smart Antenna	LC20030-35AD、 LC20031-35AD、 LC20032-35AD
GNSS Mouse	LU23030-35AD 、 LU23032-35AD 、 LU23036-35AD
Mini PCIE Card	LS26030-35AD 、 LS26031-35AD
M.2 Card	M.2-35AD 、 M.2-R35AD

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PAIR Commands

PAIR command is an AIROHA proprietary GNSS data transfer protocol. This protocol is used to configure the GNSS module's parameters, aiding information and to receive notifications from the GNSS module.

The PAIR aligns with the NMEA sentence format to process data more conveniently.

Command Format

The PAIR packet format with number of bytes allocated for each field is show in the table.

1	4	3	variable	1	1	1	1	1
Preamble	Tracker ID	PktType	DataField	*	CHK1	CHK2	CR	LF

The details of each field in the packet are provided in the table.

Parameter	Description
Preamble	One-byte character. - Default: '\$'
TalkerID	Four-byte character string. - Default: PAIR. Customer can change this string for customization commands.
PktType	Three-byte character string. - From 000 to 999. An identifier used to tell the decoder how to decode the packet.
DataField	Has a variable length depending on the packet type. - A comma symbol ',' must be inserted before each data field to help the decoder process the DataField.
*	One-byte character. - The asterisk symbol is used to mark the end of the DataField.
CHK1, CHK2	One-byte character for each. - CHK1 and CHK2 are the checksum of the data between Preamble and '*'. Please use <code>gnss_app_get_command_checksum</code> or reference Appendix - How to get checksum .
CR, LF	One byte ASCII data for each. - The two bytes are used to identify the end of a packet.

Command List

The PAIR command list for each packet type is given in the table.

Note:

1. All Commands will respond with PAIR001 (**PAIR_ACK**) as the default result. You can check the command result from PAIR001 (**PAIR_ACK**) parameter.
2. All command strings shown do not include spaces.

Packet Type	Command	Description
770	PAIR_SENSOR_SET_CONFIG	Set the sensor configuration.
771	PAIR_SENSOR_GET_CONFIG	Get the sensor configuration.
772	PAIR_VMDS_SET_CONFIG	Set the VMDS configuration.
773	PAIR_VMDS_GET_CONFIG	Get the VMDS configuration.
776	PAIR_FUSION_BINARY_MSG_ENABLE	Enable or disable fusion binary message output.
777	PAIR_FUSION_BINARY_MSG_GET_STATUS	Query whether fusion binary message output is enabled or disabled.
778	PAIR_FUSION_SET_DEBUGLOG_OUTPUT	Set (enable/disable) fusion binary debug log output.
779	PAIR_FUSION_GET_DEBUGLOG_OUTPUT_STATUS	Query status of fusion debug log output.
781	PAIR_FUSION_NVRAM_SAVE	Save current fusion content into NVRAM.
782	PAIR_FUSION_NVRAM_DELETE	Delete the fusion content saved in NVRAM.
784	PAIR_DR_SET_ALIGNMENT_TYPE	Set DR Alignment configuration.
785	PAIR_DR_GET_ALIGNMENT_TYPE	Get DR Alignment configuration.
790	PAIR_FUSION_SLEEP_SET_MODE	Set fusion sleep mode setting.
791	PAIR_FUSION_SLEEP_GET_MODE	Get fusion sleep mode setting.
792	PAIR_FUSION_NVRAM_SET_SAVING_MODE	Set the NVRAM saving mode of fusion content.
793	PAIR_FUSION_NVRAM_GET_SAVING_MODE	Get the NVRAM saving mode of fusion content.
794	PAIR_FUSION_SET_IMU_MOUNT_ANGLES	Set the user-defined IMU-mounting angles.
795	PAIR_FUSION_GET_IMU_MOUNT_ANGLES	Get the IMU-mounting angles set by the user or calculated by the algorithm.
798	PAIR_FUSION_SET_HIGH_SOLUTION	Set high fusion solution output rate.

	_OUTPUT_RATE	
799	PAIR_FUSION_GET_HIGH_SOLUTION _OUTPUT_RATE	Get high fusion solution output rate.

<p>PAIR_SENSOR_SET_CONFIG</p>	<p>[Packet Type] 770</p> <p>[Command] PAIR_SENSOR_SET_CONFIG</p> <p>[Description] Set the sensor configuration.</p> <p>[Note] Only support AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR770,<ChipType>,<BusType>,<EintType>*CS<CR><LF> ChipType: '0' BMI160 '1' ICM-42607-T / ICM-42670-P BusType: '0' I2C '1' SPI EintType: external interrupt number '0' BSP_SENSOR_IN_EINT_0 '1' BSP_SENSOR_IN_EINT_1</p> <p>[Return]</p> <ol style="list-style-type: none"> 1. PAIR_ACK for send result. 2. \$PAIR770,<Sensor status>*CS<CR><LF> Sensor status: 0 : Success -1 : Sensor initialization fail -2 : No sensor data update. <p>[Example]</p> <p>Send: \$PAIR770,1,0,0*27\r\n</p> <p>Response: \$PAIR001,770,1*3A\r\n ==> Processing \$PAIR001,770,0*3B\r\n ==> Success \$PAIR770,0*26\r\n ==> Sensor status: success</p>
<p>PAIR_SENSOR_GET_CONFIG</p>	<p>[Packet Type] 771</p> <p>[Command] PAIR_SENSOR_GET_CONFIG</p>

	<p>[Description] Get the sensor configuration.</p> <p>[Note] Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR771*CS<CR><LF></p> <p>[Return]</p> <ol style="list-style-type: none"> 1. PAIR_ACK for send result. 2. \$PAIR771,<ChipType>,<BusType>,<EintType>,<Sensor status>*CS<CR><LF> <p>ChipType: '0' BMI160 '1' ICM-42607-T / ICM-42670-P</p> <p>BusType: '0' I2C '1' SPI</p> <p>EintType: external interrupt number '0' BSP_SENSOR_IN_EINT_0 '1' BSP_SENSOR_IN_EINT_1</p> <p>Sensor status: 0 : Success -1 : Sensor initialization fail -2 : No sensor data update.</p> <p>[Example]</p> <p>Send: \$PAIR771*3B\r\n</p> <p>Response: \$PAIR001,771,0*3A\r\n ==> Success \$PAIR771,0,1,0,0*3A\r\n</p>
<p>PAIR_VMDS_SET_CONFIG</p>	<p>[Packet Type] 772</p> <p>[Command] PAIR_VMDS_SET_CONFIG</p> <p>[Description] Set the VMDS configuration.</p> <p>[Note] Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR772,<VMDS_type>,<threshold1>,<threshold2>*CS<CR><LF> VMDS_type -> (threshold1, threshold2)</p>

	<p>1 -> threshold1 : Threshold for harsh acceleration [m/s²], [Range: 1.0 ~ 5.0, default: 2.5]</p> <p>2 -> threshold1 : Threshold for harsh deceleration [m/s²], [Range: -2.0 ~ -6.0, default: -4.5]</p> <p>4 -> threshold1 : Lateral acceleration threshold for harsh turn [m/s²], [Range: 2.0 ~ 6.0, default: 4.0] threshold2 : Heading change threshold for harsh turn [deg], [Range: 30 ~80, default: 45]</p> <p>8 -> threshold1 : Lateral acceleration threshold for harsh lane change [m/s²], [Range: 1.5 ~ 5.0, default: 4.0] threshold2 : Heading change threshold for harsh lane change [deg], [Range: 15 ~ 30, default: 20]</p> <p>16 -> threshold1 : Acceleration threshold for horizontal collision [m/s²], [Range: 15 ~ 20, default: 20] -> threshold2 : Tilt angle threshold for horizontal collision [deg], [Range: 15 ~ 50, default: 20]</p> <p>32 -> threshold1 : Threshold for rollover angle [deg], [Range: 50 ~ 90, default: 70]</p> <p>64 -> threshold1 : Heading change threshold for instability warning [deg/s], [Range: 20 ~ 60, , default: 50]</p> <p>128 -> threshold1 : Max angle for euler angle anomaly [deg], [Range: 50 ~ 80, , default: 70] threshold2 : Min angle for euler angle anomaly [deg], [Range: 15 ~ 40, , default: 20]</p> <p>[Return] 1. PAIR_ACK for send result.</p> <p>[Example] Send: \$PAIR772,1,1*38\r\n Response: \$PAIR001,772,1*38\r\n ==> Processing \$PAIR001,772,0*39\r\n ==> Success</p> <p>[Note] The threshold would be set with 2 decimal places.</p>
<p>PAIR_VMDS_GET_CONFIG</p>	<p>[Packet Type] 773</p> <p>[Command] PAIR_VMDS_GET_CONFIG</p> <p>[Description] Get the VMDS configuration.</p>

	<p>[Note] Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR773,<VMDS_type>*CS<CR><LF></p> <p>[Return]</p> <ol style="list-style-type: none"> PAIR_ACK for send result. \$PAIR773,<VMDS_type>,<threshold1>,<threshold2>*CS<CR><LF> VMDS_type -> (threshold1, threshold2) <ol style="list-style-type: none"> -> threshold1 : Threshold for harsh acceleration [m/s²] -> threshold1 : Threshold for harsh deceleration [m/s²] -> threshold1 : Lateral acceleration threshold for harsh turn [m/s²] hreshold2 : Heading change threshold for harsh turn [deg] -> threshold1 : Lateral acceleration threshold for harsh lane change [m/s²] threshold2 : Heading change threshold for harsh lane change [deg] -> threshold1 : Acceleration threshold for horizontal collision [m/s²] -> threshold2 : Tilt angle threshold for horizontal collision [deg] -> threshold1 : Threshold for rollover angle [deg] -> threshold1 : Heading change threshold for instability warning [deg/s] -> threshold1 : Max angle for euler angle anomaly [deg] threshold2 : Min angle for euler angle anomaly [deg] <p>[Example]</p> <p>Send: \$PAIR773,1*24\r\n</p> <p>Response: \$PAIR001,773,1*39\r\n ==> Processing \$PAIR001,773,0*38\r\n ==> Success \$PAIR773,1,2.50*11\r\n</p>
<p>PAIR_FUSION_BINARY_MSG _ENABLE</p>	<p>[Packet Type] 776</p> <p>[Command] PAIR_FUSION_BINARY_MSG_ENABLE</p> <p>[Description] Enable or disable fusion binary message output.</p> <p>[Note] Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR776,<Enable>*CS<CR><LF></p> <p>Enable: (format in bitwise) [Default: 0x00] IMU data (0x01) -> 1: enable, 0: disable DR solution (0x02) -> 1: enable, 0: disable</p>

	<p>VMDS solution (0x04) -> 1: enable, 0: disable</p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>[Example]</p> <p>Send:</p> <p style="padding-left: 40px;">\$PAIR776,1*21\r\n</p> <p>Response:</p> <p style="padding-left: 40px;">\$PAIR001,776,0*3D\r\n ==> Success</p>
<p>PAIR_FUSION_BINARY_MSG _GET_STATUS</p>	<p>[Packet Type]</p> <p>777</p> <p>[Command]</p> <p>PAIR_FUSION_BINARY_MSG_GET_STATUS</p> <p>[Description]</p> <p>Query whether fusion binary message output is enabled or disabled.</p> <p>[Note]</p> <p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p> <p>\$PAIR777*CS<CR><LF></p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>2. \$PAIR777,<Enable>*CS<CR><LF></p> <p>Enable: (format in bitwise) [Default: 0x00]</p> <p style="padding-left: 40px;">IMU data (0x01) -> 1: enable, 0: disable</p> <p style="padding-left: 40px;">DR solution (0x02) -> 1: enable, 0: disable</p> <p style="padding-left: 40px;">VMDS solution (0x04) -> 1: enable, 0: disable</p> <p>[Example]</p> <p>Send:</p> <p style="padding-left: 40px;">\$PAIR777*3D\r\n</p> <p>Response:</p> <p style="padding-left: 40px;">\$PAIR001,777,0*3C\r\n ==> Success</p> <p style="padding-left: 40px;">\$PAIR777,1*20\r\n</p>
<p>PAIR_FUSION_SET_DEBUGLOG _OUTPUT</p>	<p>[Packet Type]</p> <p>778</p> <p>[Command]</p> <p>PAIR_FUSION_SET_DEBUGLOG_OUTPUT</p> <p>[Description]</p> <p>Set (enable/disable) fusion binary debug log output.</p> <p>[Note]</p> <p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p>

	<p>\$PAIR778,<Status>*CS<CR><LF></p> <p>Status: [Default: 0]</p> <p>0: Disable</p> <p>1: Enable</p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>[Example]</p> <p>Send:</p> <p>\$PAIR778,1*2F\r\n</p> <p>Response:</p> <p>\$PAIR001,778,0*33\r\n ==> Success</p>
PAIR_FUSION_GET_DEBUGLOG _OUTPUT_STATUS	<p>[Packet Type]</p> <p>779</p> <p>[Command]</p> <p>PAIR_FUSION_GET_DEBUGLOG_OUTPUT_STATUS</p> <p>[Description]</p> <p>Query status of fusion debug log output.</p> <p>[Note]</p> <p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p> <p>\$PAIR779*CS<CR><LF></p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>2. \$PAIR779,<Status>*CS<CR><LF></p> <p>Status: [Default: 0]</p> <p>'0': Disable</p> <p>'1': Enable</p> <p>[Example]</p> <p>Send:</p> <p>\$PAIR779*33\r\n</p> <p>Response:</p> <p>\$PAIR001,779,0*32\r\n ==> Success</p> <p>\$PAIR779,1*2E\r\n ==> Fusion debug log is enabled</p>
PAIR_FUSION_NVRAM_SAVE	<p>[Packet Type]</p> <p>781</p> <p>[Command]</p> <p>PAIR_FUSION_NVRAM_SAVE</p> <p>[Description]</p> <p>Save current fusion content into NVRAM.</p> <p>[Note]</p>

	<p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR781*CS<CR><LF></p> <p>[Return] 1. PAIR_ACK for send result.</p> <p>[Example]</p> <p>Send: \$PAIR781*34\r\n</p> <p>Response: \$PAIR001,781,1*34\r\n ==> Processing \$PAIR001,781,0*35\r\n ==> Success</p>
PAIR_FUSION_NVRAM_DELETE	<p>[Packet Type] 782</p> <p>[Command] PAIR_FUSION_NVRAM_DELETE</p> <p>[Description] Delete the fusion content saved in NVRAM.</p> <p>[Note] Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR782*CS<CR><LF></p> <p>[Return] 1. PAIR_ACK for send result.</p> <p>[Example]</p> <p>Send: \$PAIR782*37\r\n</p> <p>Response: \$PAIR001,782,1*37\r\n ==> Processing \$PAIR001,782,0*36\r\n ==> Success</p>
PAIR_DR_SET_ALIGNMENT_TYPE	<p>[Packet Type] 784</p> <p>[Command] PAIR_DR_SET_ALIGNMENT_TYPE</p> <p>[Description] Set DR Alignment configuration.</p> <p>[Note] Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR784,<Alignment_type>*CS<CR><LF> Alignment_type:</p>

	<p>'0' Standard Alignment (Better performance but longer alignment duration) '1' [Default Value] Swift Alignment (Normal performance but shorter alignment duration)</p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>[Example]</p> <p>Send:</p> <pre>\$PAIR784,0*2D\r\n</pre> <p>Response:</p> <pre>\$PAIR001,784,0*30\r\n ==> Success</pre>
PAIR_DR_GET_ALIGNMENT_TYPE	<p>[Packet Type]</p> <p>785</p> <p>[Command]</p> <p>PAIR_DR_GET_ALIGNMENT_TYPE</p> <p>[Description]</p> <p>Get DR Alignment configuration.</p> <p>[Note]</p> <p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p> <p>\$PAIR785*CS<CR><LF></p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>2. \$PAIR785,<Alignment_type>*CS<CR><LF></p> <p>Alignment_type :</p> <p>'0' Standard Alignment (Better performance but longer alignment duration) '1' [Default Value] Swift Alignment (Normal performance but shorter alignment duration)</p> <p>[Example]</p> <p>Send:</p> <pre>\$PAIR785*30\r\n</pre> <p>Response:</p> <pre>\$PAIR001,785,0*31\r\n ==> Success</pre> <pre>\$PAIR785,0*2C\r\n</pre>
PAIR_FUSION_SLEEP_SET_MODE	<p>[Packet Type]</p> <p>790</p> <p>[Command]</p> <p>PAIR_FUSION_SLEEP_SET_MODE</p> <p>[Description]</p> <p>Set fusion sleep mode setting.</p> <p>CM4 will go into RTC-Mode if the device is in static status for the time of</p>

	<p><Idle_time_to_sleep>.</p> <p>CM4 will be awoken if the device's IMU detects the motion exceeds the value of <Threshold_to_wake_up>.</p> <p>[Note]</p> <p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p> <p>\$PAIR790,<Mode>,<Idle_time_to_sleep>,<Threshold_to_wake_up>*CS<CR><LF></p> <p>Mode: '0' Disable fusion sleep mode. [Default Value] '1' Enable fusion sleep mode.</p> <p>If <Mode> is '1', the following parameters need to be set.</p> <p>Idle_time_to_sleep: The timer in seconds to go into sleep mode by entering RTC-Mode [Valid range: 0 and 60 ~ 3600].</p> <p>'0' a one-shot event, entering RTC-Mode immediately no matter whether the device is static or dynamic.</p> <p>Note that because '0' is a one-shot event, the setting will be restored to the configuration in gnss_config.bin after being awoken.</p> <p>Threshold_to_wake_up: Acceleration threshold in mg to wake up by leaving RTC-Mode [Valid range: 4 ~ 200].</p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>[Example]</p> <p>Send: \$PAIR790,1,300,20*18\r\n</p> <p>Response: \$PAIR001,790,0*35\r\n ==> Success</p>
<p>PAIR_FUSION_SLEEP_GET_MODE</p>	<p>[Packet Type]</p> <p>791</p> <p>[Command]</p> <p>PAIR_FUSION_SLEEP_GET_MODE</p> <p>[Description]</p> <p>Get fusion sleep mode setting.</p> <p>[Note]</p> <p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p> <p>\$PAIR791*CS<CR><LF></p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>2. \$PAIR791,<Mode>,<Idle_time_to_sleep>,<Threshold_to_wake_up>*CS<CR><LF></p>

	<p>Mode: '0' Disable sleep mode. [Default Value] '1' Enable sleep mode.</p> <p>If <Mode> is '1', the following parameters will be set.</p> <p>Idle_time_to_sleep: The timer in seconds to go into sleep mode by entering RTC-Mode [Valid range: 0, 60 ~ 3600].</p> <p>Note that because '0' is a one-shot event, the setting will be restored to the configuration in gnss_config.bin after being awoken.</p> <p>Threshold_to_wake_up: Acceleration threshold in mg to wake up by leaving RTC-Mode [Valid range: 4 ~ 200].</p> <p>[Example]</p> <p>Send:</p> <pre>\$PAIR791*35\r\n</pre> <p>Response:</p> <pre>\$PAIR001,791,0*34\r\n ==> Success \$PAIR791,1,300,20*19\r\n</pre>
PAIR_FUSION_NVRAM_SET _SAVING_MODE	<p>[Packet Type]</p> <p>792</p> <p>[Command]</p> <p>PAIR_FUSION_NVRAM_SET_SAVING_MODE</p> <p>[Description]</p> <p>Set the NVRAM saving mode of fusion content.</p> <p>[Note]</p> <p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p> <p>\$PAIR792,<Saving_mode>*CS<CR><LF></p> <p>Saving_mode:</p> <p>'0': None [Default] '1': Auto-save IMU-mounting angles into NVRAM</p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>[Example]</p> <p>Send:</p> <pre>\$PAIR792,0*2A\r\n</pre> <p>Response:</p> <pre>\$PAIR001,792,0*37\r\n ==> Success</pre>
PAIR_FUSION_NVRAM_GET _SAVING_MODE	<p>[Packet Type]</p> <p>793</p> <p>[Command]</p> <p>PAIR_FUSION_NVRAM_GET_SAVING_MODE</p> <p>[Description]</p>

	<p>Get the NVRAM saving mode of fusion content.</p> <p>[Note] Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field] \$PAIR793*CS<CR><LF></p> <p>[Return]</p> <ol style="list-style-type: none"> 1. PAIR_ACK for send result. 2. \$PAIR793,<Saving_mode>*CS<CR><LF> <p>Saving_mode:</p> <ul style="list-style-type: none"> '0': None [Default] '1': Appropriate IMU-mounting angles will be auto-saved into NVRAM <p>[Example]</p> <p>Send:</p> <pre>\$PAIR793*37\r\n</pre> <p>Response:</p> <pre>\$PAIR001,793,0*36\r\n ==> Success \$PAIR793,0*2B\r\n</pre>
<p>PAIR_FUSION_SET_IMU_MOUNT _ANGLES</p>	<p>[Packet Type] 794</p> <p>[Command] PAIR_FUSION_SET_IMU_MOUNT_ANGLES</p> <p>[Description] Set the user-defined IMU-mounting angles. Airoha DR supports the free installation through the alignment process to find the misalignment angles. You can also set the user-defined IMU-mounting angles to speed up the alignment process.</p> <p>[Note 1] Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Note 2]</p> <ol style="list-style-type: none"> 1. It is the transformation from the IMU frame to vehicle frame using three Euler angles of IMU axes with the following sequences. <ol style="list-style-type: none"> 1.a. Rotate about the X-axis of the IMU frame with the roll angle. 1.b. Rotate about the Y-axis of the intermediate frame with the pitch angle. 1.c. Rotate about the Z-axis of the intermediate frame with the yaw angle. 2. To prevent the degradation of the DR solution, the IMU-mounting angles must be set with an accuracy of at least 10 degrees. 3. The vehicle-frame is defined as: (+x -> front, +y -> right, +z -> down) relative to the vehicle.

	<p>4. The coordinates are followed by the right-hand rule.</p> <p>[Data Field]</p> <p>\$PAIR794,<IMU_mount_roll>,<IMU_mount_pitch>,<IMU_mount_yaw>*CS<CR><LF></p> <p>IMU_mount_roll: The corresponding rotation around the x-axis of the IMU frame. [deg], [Range: -180.0 - 180.0]</p> <p>IMU_mount_pitch: The corresponding rotation around the y-axis after the first rotation. [deg], [Range: -90.0 - 90.0]</p> <p>IMU_mount_yaw: The corresponding rotation around the z-axis after the first two rotation. [deg], [Range: -180.0 - 180.0]</p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>[Example]</p> <p>Send:</p> <pre>\$PAIR794,0,0,180*25\r\n</pre> <p>Response:</p> <pre>\$PAIR001,794,0*31\r\n ==> Success</pre>
<p>PAIR_FUSION_GET_IMU_MOUNT_ANGLES</p>	<p>[Packet Type]</p> <p>795</p> <p>[Command]</p> <p>PAIR_FUSION_GET_IMU_MOUNT_ANGLES</p> <p>[Description]</p> <p>Get the IMU-mounting angles set by the user or calculated by the algorithm.</p> <p>[Note]</p> <p>Only supported with AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p> <p>\$PAIR795,<Type>*CS<CR><LF></p> <p>Type: '0' Get the IMU-mounting angles set by the user. '1' Get the IMU-mounting angles calculated by the algorithm.</p> <p>[Return]</p> <p>1. PAIR_ACK for send result.</p> <p>2. \$PAIR795,<Type>,<IMU_mount_roll>,<IMU_mount_pitch>,<IMU_mount_yaw>*CS<CR><LF></p> <p>Type: same as input.</p> <p>IMU_mount_roll: The corresponding rotation around the x-axis of the IMU frame. [deg], [Range: -180.0 - 180.0 or 999.9]</p> <p>IMU_mount_pitch: The corresponding rotation around the y-axis after the first rotation. [deg], [Range: -90.0 - 90.0 or 999.9]</p> <p>IMU_mount_yaw: The corresponding rotation around the z-axis after the first</p>

	<p>two rotation. [deg], [Range: -180.0 - 180.0 or 999.9]</p> <p>Note:</p> <ol style="list-style-type: none"> The output value would be 1 decimal places. If there is no valid IMU-mounting angles, the output values are 999.9. <p>[Example]</p> <p>Send:</p> <pre>\$PAIR795,0*2D\r\n</pre> <p>Response:</p> <pre>\$PAIR001,795,0*30\r\n ==> Success \$PAIR795,0,33.0,0.0,180.0*16\r\n</pre>
<p>PAIR_FUSION_SET_HIGH_SOLUTION_OUTPUT_RATE</p>	<p>[Packet Type]</p> <p>798</p> <p>[Command]</p> <p>PAIR_FUSION_SET_HIGH_SOLUTION_OUTPUT_RATE</p> <p>[Description]</p> <p>Set high fusion solution output rate.</p> <p>Note: High fusion solution output rate only works when DR stage is equal to 3 (DR_SOLUTION_STABLE),you can refer to \$PAIRMSG,90 to know about DR stage.</p> <p>[Note]</p> <p>Only support AG3335AD/AG3335AE Fusion (DR/VMDS).</p> <p>[Data Field]</p> <p>\$PAIR798,<High_solution_output_rate>*CS<CR><LF></p> <p>High_solution_output_rate: '0' Disable high fusion solution output rate [Default Value]</p> <p>'5' : 5Hz fusion solution output rate</p> <p>'10' : 10Hz fusion solution output rate</p> <p>[Return]</p> <ol style="list-style-type: none"> PAIR_ACK for send result. <p>[Example]</p> <p>Send:</p> <pre>\$PAIR798,0*20\r\n</pre> <p>Response:</p> <pre>\$PAIR001,798,0*3D\r\n ==> Success</pre>
<p>PAIR_FUSION_GET_HIGH_SOLUTION_OUTPUT_RATE</p>	<p>[Packet Type]</p> <p>799</p> <p>[Command]</p> <p>PAIR_FUSION_GET_HIGH_SOLUTION_OUTPUT_RATE</p> <p>[Description]</p>

Get high fusion solution output rate.

Note: High fusion solution output rate only works when DR stage is equal to 3 (DR_SOLUTION_STABLE), you can refer to \$PAIRMSG,90 to know about DR stage.

[Note]

Only support AG3335AD/AG3335AE Fusion (DR/VMDS).

[Data Field]

\$PAIR799*CS<CR><LF>

[Return]

1. **PAIR_ACK** for send result.
2. **\$PAIR799,<High_solution_output_rate>*CS<CR><LF>**

High_solution_output_rate: '0' Disable high fusion solution output rate [Default Value]

'5' : 5Hz fusion solution output rate

'10' : 10Hz fusion solution output rate

[Example]

Send:

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$PAIR799*3D\r\n
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Response:

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$PAIR001,799,0*3C\r\n ==> Success
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$PAIR799,0*21\r\n
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Document change list

Revision 1.0

- Initial version released on October 09, 2024.