

# **Advisory Circular**

## BROADCAST REMOTE IDENTIFICATION OF UNMANNED AIRCRAFT

GENERAL		1
PURPOSE		1
<b>APPLICABILITY</b>	,	1
<b>RELATED REG</b>	ULATIONS	1
<b>RELATED ADVI</b>	SORY CIRCULARS	1
CANCELLATIO	N	1
<b>EFFECTIVE DA</b>	TE	1
OTHER REFER	ENCES	1
1 INFORMATIO	N ON BROADCAST REMOTE IDENTIFICATION	2
	ΓΥ	
3 MEETING B-F	RID REQUIREMENTS	2
APPENDIX 1	EXCERPTS OF B-RID RELATED REGULATIONS	5
APPENDIX 2	B-RID TECHNICAL REQUIREMENTS	8
APPENDIX 3	B-RID PRE-FLIGHT CHECKS	9
APPENDIX 4	FREQUENTLY ASKED QUESTIONS	16

#### **GENERAL**

Advisory Circulars (ACs) are issued by the Director-General of Civil Aviation (DGCA) from time to time to provide practical guidance or certainty in respect of the statutory requirements for aviation safety. ACs contain information about standards, practices and procedures acceptable to CAAS. An AC may be used, in accordance with section 11 of the Air Navigation Act 1966 (ANA), to show that compliance with a statutory requirement has been achieved. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.

#### **PURPOSE**

This Advisory Circular provides guidance for requirements relating to broadcast remote identification ("B-RID") of unmanned aircraft ("UA") in Singapore.

## **APPLICABILITY**

This AC is applicable to the person who operates or causes or permits an individual to operate a registrable UA under regulation 19F of the Air Navigation (101 – Unmanned Aircraft Operations) Regulations 2019 ("ANR-101").

#### **RELATED REGULATIONS**

This AC relates specifically to Division 1 and 3 of Part 2A of ANR-101, which will come into effect from 1 December 2025. Refer to **Appendix 1** for details.

#### **RELATED ADVISORY CIRCULARS**

AC 101-2A-1 Centralised Flight Management System

#### **CANCELLATION**

Nil.

## **EFFECTIVE DATE**

This AC is effective from 1 April 2025.

#### OTHER REFERENCES

Nil.

#### 1 INFORMATION ON BROADCAST REMOTE IDENTIFICATION

- 1.1 Broadcast remote identification leverages Wi-Fi and Bluetooth technology to transmit information such as the UA's position and serial number, the location of the UA operator and the identification reference number of the operator. This allows UA in the skies to be identified for safety and security purposes.
- 1.2 This AC is intended to prepare UA users in complying with the B-RID requirements that will come into effect on 1 December 2025.

#### 2 APPLICABILITY<sup>1</sup>

- 2.1 A UA user must ensure the UA being operated comply with B-RID requirements unless:
  - (a) the UA is not a registrable UA; or
  - (b) the UA is operated or intended to be operated indoors; or
  - (c) the UA and UA activity is conducted in compliance with Centralised Flight Management System (CFMS) requirements. Information on the CFMS is found in AC 101-2A-1 Centralised Flight Management System.

Note: Failure to comply could lead to a fine of up to \$10,000, or imprisonment not exceeding 6 months, or both.

#### 3 MEETING B-RID REQUIREMENTS

Step 1: Using B-RID capable devices

- 3.1 To comply with B-RID requirements, a UA user must ensure that the UA broadcast remote identification information through one of the following means:
  - (a) Built-in B-RID capability: B-RID capability has been integrated into the UA as part of its original design and manufacture; or
  - (b) Attached B-RID module: The UA is equipped with an external functioning B-RID module securely affixed to the UA.
- 3.2 The UA with B-RID capability or B-RID module will have to meet the B-RID technical requirements specified in **Appendix 2**. Should the manufacturer enable any B-RID setting to be editable by UA user, the UA user must ensure the correct setting is selected.
- 3.3 A UA user may refer to the CAAS website (<a href="https://go.gov.sg/caas-brid">https://go.gov.sg/caas-brid</a>) for a non-exhaustive list of UA models and B-RID modules that meet the B-RID technical standards and requirements in Singapore.

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<sup>&</sup>lt;sup>1</sup> Refer to **Appendix 1** for applicable definitions of the terms used.

3.4 A UA user using any UA that is not equipped with B-RID capability would have to affix a functioning B-RID module prior to operating the UA.

# Step 2: Ensuring B-RID functionality

- 3.5 Besides having a UA or B-RID module that meets the B-RID technical standards, the UA user must ensure that the B-RID functionality is functional prior to operating the UA. UA user is advised to:
  - (a) Check that the UA or B-RID module is <u>not</u> indicating any B-RID system error or fault, with reference to the user / operating manual provided by the UA manufacturer or B-RID module manufacturer.
  - (b) Carry out the pre-flight checks as detailed in **Appendix 3**.
- 3.6 Pursuant to ANR-101 regulation 19F, a UA user is to ensure that the following B-RID information are being broadcasted

B-RID Information	Description
Operator ID	The unique identification reference number assigned to each UA user by CAAS.
	A UA user will be required to input their unique Operator ID into the UA operating interface, ground control station or that of the B-RID module. As the interface to input the Operator ID is dependent on the model of the UA and the B-RID modules used, please refer to the respective user manuals from manufacturers.
	Note: UA user may check for their unique Operator ID via the UA portal ( <a href="https://esoms.caas.gov.sg/uaportal/index.html">https://esoms.caas.gov.sg/uaportal/index.html</a> ), which is pending upgrades to provide the Operator ID. A notification to UA users will be sent once the upgrades are completed by 3Q2025.
Unique serial	(i) The serial number of the UA if the UA has B-RID capability; or
number	(ii) The serial number of the B-RID module affixed to the UA, if the UA is affixed with a B-RID module.
Geographical position of UA	The geographical position of the UA and time stamp corresponding to that geographical position.
Height of UA	The height of the UA operation measured from the ground or from the
operations	take off point of the UA and time stamp corresponding to that height.
UA heading	The route course of the UA measured clockwise from true north.
Speed of UA	The ground speed of the UA.

B-RID Information	Description	
Geographical	The geographical position of the pilot or operator operating the UA, or	
position of pilot	if that information is not available, the geographical position of the take	
	off point of the UA.	

Note: It is an offence to intentionally broadcast any remote identification information that is false or misleading, and could face a fine of up to \$10,000, or imprisonment not exceeding 6 months, or both.

#### APPENDIX 1 EXCERPTS OF B-RID RELATED REGULATIONS

Definitions extracted from the First Schedule of ANR-101

# ANR-101 FIRST SCHEDULE DEFINITIONS

"registrable unmanned aircraft" means an unmanned aircraft with a total mass exceeding 250 grams, but does not include an unmanned aircraft that is operated or intended to be operated solely for the conduct of light shows under a Class 1 activity permit.

"indoors", in relation to any place, means any place that is enclosed at the top and on all sides (whether permanently or temporarily) so as to prevent the flight of any unmanned aircraft into or out of that place.

# 2 Forthcoming B-RID related regulations

The new Part 2A (covering Regulations 19A to 19F) of ANR-101 will come into effect on 1 December 2025. These regulations<sup>2</sup> are reproduced below for ease of reference for purpose of this AC.

# PART 2A REMOTE IDENTIFICATION

Division 1 — General

## Purpose of this Part

**19A.** The purpose of this Part is to enable the operation of unmanned aircraft in and over Singapore to be identified, monitored, and controlled for the safety of air navigation and for public safety.

#### Definitions of this Part

**19B.** In this Part, unless the context otherwise requires —

"Broadcast Remote Identification capability" or "B-RID capability" means the capability built into an unmanned aircraft to broadcast remote identification information of the unmanned aircraft when the unmanned aircraft is in flight.

"Broadcast Remote Identification module" or "B-RID module" means a device affixed to an unmanned aircraft that is capable of broadcasting remote identification information of the unmanned aircraft when the unmanned aircraft is in flight.

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<sup>&</sup>lt;sup>2</sup> These are excerpts from Air Navigation (101 — Unmanned Aircraft Operations) (Amendment) Regulations 2025. Readers must consult the official published regulation for the authoritative version. The official regulations shall prevail in the event of any discrepancy.

"remote identification information", in relation to an unmanned aircraft, means —

- (a) the identification number that the Authority has assigned to the person who registered the unmanned aircraft under regulation 45;
- (b) the unique serial number of the following, whichever is applicable:
  - (i) in a case where the unmanned aircraft has functioning B-RID capability the unmanned aircraft;
  - (ii) in any other case the B-RID module affixed to the unmanned aircraft;
- (c) the geographical position of the unmanned aircraft and the time stamp corresponding to that geographical position;
- (d) the height of the unmanned aircraft measured from the ground or from the take-off point of the unmanned aircraft and the time stamp corresponding to that height;
- (e) the route course of the unmanned aircraft measured clockwise from true north;
- (f) the ground speed of the unmanned aircraft; and
- (g) the geographical position of the remote pilot operating the unmanned aircraft, or if that information is not available, the geographical position of the take-off point of the unmanned aircraft.

Division 3 — Broadcast Remote Identification or B-RID

#### Non-application and waiver of regulation 19F to certain unmanned aircraft

**19E.**—(1) Regulation 19F does not apply in relation to —

- (a) an unmanned aircraft that is not a registrable unmanned aircraft;
- (b) an unmanned aircraft that is operated or intended to be operated indoors;
- (c) an unmanned aircraft in relation to which the requirement in regulation 19D(1)(b) applies; or
- (d) a flight of an unmanned aircraft in relation to which the requirement in regulation 19D(1)(b) applies.

- (2) Where regulation 19F applies in relation to an unmanned aircraft, the Authority may waive the application of any provision in regulation 19F in relation to the unmanned aircraft or any flight of an unmanned aircraft if the Authority is satisfied that the design of the unmanned aircraft or the circumstances under which the flight of an unmanned aircraft is to take place (as the case may be) are such that the waiver
  - (a) poses negligible risk to aviation safety or to public safety; or
  - (b) is necessary or desirable in the interest of national security.

# Requirements relating to remote identification Information

- **19F.**—(1) A person must not operate, or cause or permit an individual to operate, an unmanned aircraft unless
  - (a) the unmanned aircraft has functioning B-RID capability or is affixed with a functioning B-RID module; and
  - (b) the unmanned aircraft or the B-RID module affixed to the unmanned aircraft is capable of broadcasting all remote identification information in relation to the unmanned aircraft in accordance with the requirements specified in the Aviation Specifications 10 Broadcast Remote Identification issued by the Director-General of Civil Aviation when the unmanned aircraft is in flight.
- (2) A person who operates, or causes or permits an individual to operate, an unmanned aircraft without functioning B-RID capability must ensure that the B-RID module affixed to the unmanned aircraft is switched on before the unmanned aircraft takes flight.
- (3) A person must not intentionally broadcast any remote identification information that is false or misleading.
- (4) A person who, without reasonable excuse, contravenes paragraph (1) or (2) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000 or to imprisonment for a term not exceeding 6 months or to both.
- (5) A person who contravenes paragraph (3) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000 or to imprisonment for a term not exceeding 6 months or to both.

#### APPENDIX 2 B-RID TECHNICAL REQUIREMENTS

# **Technical Standards and Specifications**

- The broadcasting of remote identification information must be in accordance with the standard known as EN 4709-002 that is adopted by the European Committee for Standardization, and includes any amendment or revision to the standard made from time to time that is so adopted.
- The remote identification information are to be broadcasted when the UA is in flight<sup>3</sup> in the settings stated below.

CATEGORY	ALLOWABLE SETTINGS	
Broadcast Method(s)	<ul> <li>Bluetooth 5 Long Range; or</li> <li>Wi-Fi NAN; or</li> <li>Wi-Fi Beacon.</li> </ul> Only 1 of the broadcast methods is required.	
Broadcast Frequency and Minimum Power	<ul> <li>2.4 GHz Bluetooth with at least +5 dBm;</li> <li>2.4 GHz Wi-Fi with at least +11 dBm;</li> <li>5.8 GHz Wi-Fi with at least +4 dBm.</li> </ul>	
Update and Transmission Rates	<ul> <li>For dynamic messages: at least once every 1 second (i.e. 1 Hz or higher).</li> <li>For static messages: at least once every 3 seconds (i.e. 1/3 Hz or higher).</li> <li>For maximum data age: no older than one second for dynamic messages.</li> </ul>	

<sup>&</sup>lt;sup>3</sup> The remote identification information can optionally also be transmitted when the UA is on the ground (i.e. from switch-on to switch-off).

#### APPENDIX 3 B-RID PRE-FLIGHT CHECKS

This document outlines the procedures to check that your UA is properly setup and broadcasting correctly before flight. For detailed setup and verification instructions, consult your UA or B-RID module manufacturer's manual.

Note: This document provides a means to check that the B-RID system is setup properly, such as broadcasting the correct Operator ID, serial number, heading, and geographical position. However, it does not guarantee that the system is in full compliance with the B-RID technical standards and requirements for Singapore as stated in **Appendix 2**, especially if (i) UA user selected incorrectly for B-RID setting that is editable, or (ii) the UA or B-RID module is not listed within the list of UA models and B-RID modules that meets the B-RID technical standards and requirements for Singapore.

There are two sections to this document. Please refer to the right section of the document, depending on your UA's B-RID configuration:

Section 1	UA with built-in B-RID capability
Section 2	UA affixed with B-RID module

#### Section 1 – UA with Built-in B-RID Capability

# 1.1 Objectives

The objective of this pre-flight check is to ensure that the UA with built-in B-RID capability is transmitting B-RID information accurately.

# 1.2 Equipment and Documentation Required

S/N	Description		
1	UA and UAS support equipment and operating manual e.g., remote controller,		
	landing system, where necessary.		
2	Mobile device with B-RID receiver application installed.		
	Note: Free-to-use B-RID receiver mobile applications are available for download.		
3	ID details:		
	(a) Operator ID: Unique identification reference number assigned to each UA user by		
	CAAS. UA user may check for their unique Operator ID via the UA portal		
	(https://esoms.caas.gov.sg/uaportal/index.html), which is pending upgrades to		
	provide the Operator ID. A notification to UA users will be sent once the upgrades are		
	completed by 3Q2025.		
	(b) Serial number: Serial number of the UA.		
4	Compass		

#### 1.3 Setup

- (a) Refer to the CAAS website: (<a href="https://go.gov.sg/caas-brid">https://go.gov.sg/caas-brid</a>), and check that your UA model is listed within the list of UA models that meets the B-RID technical standards and requirements for Singapore. If your UA is not listed, refer to the frequently asked questions in **Appendix 4**.
- (b) Complete the UA setup procedures as per the UA user manual provided by the UA manufacturer. For B-RID setting that is editable, UA user must ensure the correct settings as stated in **Appendix 2** are selected.
- (c) Take note of the geographical position of your UA.

Note: You may use google map. Center the map around your location. Press and hold at the spot at your map location until you manage to drop a red pin. Drag up info tab and you will be able to retrieve the coordinate of your location in the following format: 1.3XXXXXXX, 103.XXXXXXXX).

# 1.4 Test Steps

Step	Description	Expected Result / Evaluation Criteria
1	Place your UA on a flat open area at your intended operating area.	NA
2	With the help of the compass, place the UA facing North.	NA
3	Switch on your UA and enter the Operator ID information into the UA.	Operator ID is successfully entered into the system.
4	Check that the UA is not indicating any B-RID system error or fault.	No B-RID system error or fault.
5	Switch on the B-RID application on your mobile device.	UA is detected and displayed in the application.
	Switch on your mobile device's Bluetooth and Wi-Fi connections.	Note: If your UA is not detected, refer to Annex to Appendix 3.
	Check to make sure that your UA can be detected by the application.	
6	Check the <b>Operator ID</b> field displayed in the B-RID application.	Operator ID is the same as that entered in Step 3.
7	Check the <b>serial number</b> field displayed in the B-RID application.	Serial number is the same as the UA serial number.
8	Check the <b>heading</b> field displayed in the B-RID application.	UA heading is 'north' or '0°'.
9	Check the <b>geographical position of UA</b> field displayed in the B-RID application.	UA coordinates is similar to that of the location's actual coordinates captured during setup.

- (a) In the event there is an unexpected result / observation from the procedure, UA user is to refer to the UA or B-RID module manual for instructions and contact the UA or B-RID module manufacturer if necessary.
- (b) If the issue persists, do not proceed with the UA operations until the issue has been rectified.

#### Section 2 - UA Affixed with B-RID Module

# 2.1 Objectives

The objective of this pre-flight check is to ensure that:

- (a) The B-RID module is affixed to the UA securely and do not affect the airworthiness of the UA.
- (b) The B-RID module is transmitting B-RID information accurately.
- 2.2 Equipment and Documentation Required

S/N	Description		
1	UA and UAS support equipment and operating manual e.g., remote controller,		
	landing system, where necessary.		
2	B-RID module including all attachment equipment and devices.		
2	Mobile device with B-RID receiver application installed.		
	Note: Free-to-use B-RID receiver mobile applications are available for download.		
3	ID details:		
	(a) Operator ID: Unique identification reference number assigned to each UA user by		
	CAAS. UA user may check for their unique Operator ID via the UA portal		
	(https://esoms.caas.gov.sg/uaportal/index.html), which is pending upgrades to		
	provide the Operator ID. A notification to UA users will be sent once the upgrades are		
	completed by 3Q2025.		
	(b) Serial number: Serial number of the B-RID module.		
4	Compass		

#### 2.3 Setup

- (a) Refer to the CAAS website: (<a href="https://go.gov.sg/brid-products">https://go.gov.sg/brid-products</a>), and check that your B-RID module is listed within the list of modules that meets the B-RID technical standards and requirements for Singapore. If your module is not listed, refer to the frequently asked questions in **Appendix 4**.
- (b) Complete the UA setup procedures as per the UA user manual provided by the UA manufacturer.
- (c) Taking guidance from the B-RID module manual, determine a suitable location on the UA and attach the B-RID module on the UA. For B-RID setting that is editable, UA user must ensure the correct settings as stated in **Appendix 2** are selected.

Note: In general, the B-RID module should be attached firmly on the external upper surface of the UA, without hindering the movement of the propellers and any onboard sensors. Do make sure that the module is mounted securely to prevent the module from coming loose during the flight. To minimise impact to flight performance and safety, the module should also be installed as central to the UA body as possible.

# (d) Take note of the geographical position of your UA.

Note: You may use google map. Center the map around your location. Press and hold at the spot at your map location until you manage to drop a red pin. Drag up info tab and you will be able to retrieve the coordinate of your location in the following format: 1.3XXXXXXX, 103.XXXXXXXX)

# 2.4 Test Steps

Step	Description	Expected Result / Evaluation Criteria
1	With the B-RID module attached, shake the UA to ensure that the attachment is secure.	After shaking, module position on the UA is unchanged.
2	Locate the Centre of Gravity (CG) of your UA. You may refer to your UA's manual for the CG location.  Place your fingertips under the UA at the specified CG point.  Observe the balance of the UA.	The UA remained level without tipping forward or backward.  The UA do not tilt to either side.  Note: If the UA is not balanced, adjust the location of the B-RID module until the UA is level.
3	With the help of the compass, place the UA affixed with B-RID module facing North.	NA
4	Switch on your UA and B-RID module.  Enter the Operator ID information into the B-RID module.  Conduct a UA pre-flight check.  Check that the B-RID module is not indicating any system error or fault.	<ul> <li>There is no abnormal UA system error or fault:</li> <li>Command and control link is established and maintained without any interference from the B-RID module.</li> <li>UA status and sensor data reported by the UA is valid.</li> <li>Operator ID is successfully entered into the system.</li> <li>There is no B-RID system error or fault.</li> </ul>
5	Switch on the B-RID application on your mobile device.  Switch on your mobile device's Bluetooth and Wi-Fi connections.  Check to make sure that your B-RID module can be detected by the application.	UA is detected and displayed in the application.  Note: If your B-RID module is not detected, refer to <b>Annex to Appendix 3</b> .

Step	Description	Expected Result / Evaluation Criteria
6	Check the <b>Operator ID</b> field displayed in the B-RID application.	Operator ID is the same as that entered in Step 4.
7	Check the <b>serial number</b> field displayed in the B-RID application.	Serial number is the same as the module serial number.
8	Check the <b>heading</b> field displayed in the B-RID application.	UA heading is 'north' or '0°'.
9	Check the <b>geographical position of UA</b> field displayed in the B-RID application.	UA coordinates is similar to that of the true location coordinates.

- (a) In the event there is an unexpected result/ observation from the procedure, UA user is to refer to the UA or B-RID module manual for instructions and contact the UA or B-RID module manufacturer if necessary.
- (b) If the issue persists, do not proceed with the UA operations until the issue has been rectified.

#### **Annex to Appendix 3**

B-RID leverages Bluetooth and Wi-Fi technology to transmit UA's information, and the B-RID technical standards (EN 4709-002) adopted by EASA and Singapore specify the usage of at least 1 of the following broadcast methods:

- Bluetooth 5 Long Range; or
- Wi-Fi NAN; or
- Wi-Fi Beacon.

While the technology is selected to be compatible with commonly carried mobile devices, it is noted there are mobile devices unable to receive the information broadcasted via some or all of the B-RID broadcast methods<sup>4</sup>.

Should your mobile device be unable to detect your UA or B-RID module, perform 1 or all of the following troubleshooting methods:

- 1. If configurable, switch on all broadcast methods available on your UA or B-RID module.
  - If not detected, you may choose not to operate your UA, or rely on the UA or B-RID module manual to verify that the B-RID is functional before operating your UA.
- 2. If available, switch on Bluetooth 4 (also known as Bluetooth Legacy) on your UA or B-RID module, and check if your UA or B-RID module is detected.
  - All mobile devices, including iOS devices, should be able to receive Bluetooth 4 signals.
  - If your UA or B-RID module is detected via Bluetooth 4, check that the Operator ID, serial number, heading, and geographical position, as displayed in the B-RID application are correct.
  - Note: While this method provides a means to check that the B-RID system is setup properly, it is important to note that Bluetooth 4 is <u>not</u> a compliant broadcast method, and thus <u>does not guarantee</u> that the other broadcast methods are functioning. You may choose not to operate your UA, or rely on the UA or B-RID module manual to verify that the B-RID is functional before operating your UA. Should you decide to operate, remember to switch on at least 1 of the compliant broadcast methods before operating your UA.
- 3. If both troubleshooting methods 1 and 2 are not possible, you may choose not to operate your UA, or rely on the UA or B-RID module manual to verify that the B-RID is functional before operating your UA.

Note: This checklist provides an additional means for UA user to ascertain that your UA system is setup properly and is broadcasting correctly just before flight. UA user is advised to refer to the UA manufacturer or B-RID module manufacturer user manual for more detailed setup and verification instructions.

<sup>&</sup>lt;sup>4</sup> For example, Apple iOS devices seem to be unable to receive B-RID signals broadcasted via Bluetooth 5, Wi-Fi NAN, and Wi-Fi Beacon.

# APPENDIX 4 FREQUENTLY ASKED QUESTIONS

S/N	Question	Answer	
1	Who needs to comply with B-RID requirements?	UA weighing above 250 grams and operating outdoors under the following conditions must comply with B-RID requirements when:	
		(a) Activities conducted for educational purposes using UA with total weight of up to 7 kilograms; or	
		(b) Activities conducted for recreational purposes using UA with a total weight of up to 25 kilograms; or	
		(c) Training and assessments conducted by UA training and assessment organisations (UATO); or	
		(d) Activities conducted under the scope of the Operator Permit, and the activity granted a waiver by CAAS from the usage of the CFMS "FlyltSafe" mobile application.	
		Note: B-RID is not required for activities conducted indoors.	
2	I am only intending to fly my UA indoors. Do I need to comply with B-RID requirements?	•	
3	If I intend to operate both outdoors and indoors / within enclosed environments, do I	Yes, you will need to comply with B-RID requirements, if you intend to carry out a mix of activities.	
	need to comply with B-RID requirements?	To carry out any outdoor UA activities, you will need to operate a B-RID capable UA or a UA affixed with a B-RID module.	
4	I am a UA Operator Permit holder. Do I need to comply with B-RID requirements?	B-RID is not required for UA activities conducted under the scope of the UA Operator Permit and Class 1 Activity Permit.	
		However, B-RID is required if the UA activity has been granted a waiver by CAAS from the usage of the CFMS "FlyltSafe" mobile application.	
5	I am a foreigner visiting Singapore and intend to operate my UA that is already compliant to my country's B-	You will be required to first register your UA, and obtain an Operator ID.	

Question	Answer
RID requirements. Do I still need to obtain a local B-RID module and Operator ID?	Please also refer to the Q&A on "If my UA already has built-in B-RID capabilities conforming to another country's standard, do I still need to obtain a local B-RID module?"
How do I know if my UA or B- RID module meets the B-RID requirements?	You may refer to the CAAS website (https://go.gov.sg/caas-brid) for the list of UA models and B-RID modules that meet the B-RID technical standards and requirements, to determine if your UA is equipped with B-RID capability, or when purchasing a B-RID module.
	If your UA is not listed, refer to the Q&A for "What should I do if my UA or B-RID module is not listed in the list of UA models and B-RID modules?"
What should I do if my UA or B-RID module is not listed in the list of UA models and B-RID modules?	The list is non-exhaustive. You may contact your UA or B-RID module manufacturer for clarification, and request them to declare conformity to CAAS via "https://go.gov.sg/brid-declaration" should they already meet B-RID requirements as per 'ASD-STAN EN 4709-002', and has activated the B-RID functionality for usage in Singapore. Do note that this will involve processing and validation of the declaration of conformity before the UA or B-RID module will be updated in the list.  Alternatively, you may affix a B-RID module that is listed within the list of modules that meets the B-RID technical standards and requirements. CAAS is working with manufacturers to publish a list of B-RID modules that will meet CAAS' B-RID requirements. This list will be made available in 2Q 2025.  You may choose to self-determine if your UA system meets the B-RID technical standards and requirements for Singapore using the B-RID Preflight Checks.
If my UA already has built-in B-RID capabilities conforming to another country's standard, do I still need to obtain a local B-RID module?	The B-RID technical standards adopted by Singapore is the 'ASD-STAN EN 4709-002'. There may also be a need for UA manufacturers to activate the B-RID functionality for usage in Singapore.  Please also refer to the Q&A on "How do I know if my UA meets B-RID requirements?"
Can I purchase any B-RID module from any OEM that fits my technical specification requirements?	UA and B-RID modules that are not aligned with the adopted technical standards are not considered compliant to the B-RID requirements.  To find out if the B-RID module you are intending to purchase is compliant, refer to the Q&A on "How do I"
	RID requirements. Do I still need to obtain a local B-RID module and Operator ID?  How do I know if my UA or B-RID module meets the B-RID requirements?  What should I do if my UA or B-RID module is not listed in the list of UA models and B-RID modules?  If my UA already has built-in B-RID capabilities conforming to another country's standard, do I still need to obtain a local B-RID module?  Can I purchase any B-RID module from any OEM that fits my technical

Question	Answer
	know if my UA or B-RID module meets the B-RID requirements?"
If my UA complies with B-RID requirements, can I remove the UA registration label?	No, you are still required to register your UA, and affix the registration label on the UA.
Do I need to register my UA if it is complying with B-RID requirements?	Yes, if your UA has a total weight exceeding 250 grams, you are required to register it before you fly.
I have registered my UA and complied with B-RID requirements. Do I still need to obtain permits and/or hold a UA Pilot License?	Yes, depending on the purpose of activity, the total weight of your UA, as well as the location and height at which you intend to fly your UA, you may still need to obtain a UA Basic Training Certificate, a UA Pilot Licence, an Activity Permit and/or an Operator Permit.
How do I get my Operator ID?	The Operator ID is a unique identification reference number assigned to each UA registrant by CAAS. You may log in to the UA portal to check for your ID.
	Note: The UA portal is pending upgrades to provide the Operator ID. A notification to UA registrants will be sent once the upgrades are completed by 3Q 2025.
How many B-RID modules do I need for my fleet of UA?	You do not need a module for every registrable UA in your fleet. As B-RID modules are transferrable between UA, the number of B-RID modules you require is dependent on the number of UA you intend to operate concurrently. Minimally, every registrable UA should be affixed with a B-RID module at the time of its operation.
	Note: UA with functioning built-in B-RID capability will not need to be affixed with a B-RID module.
Can I share or transfer my B- RID module to my friend to operate their UA?	Yes, while the B-RID modules are transferrable between UA, your friend will need to enter their own Operator ID to the B-RID module operating interface at the time of their UA operation.
How should I install the B-RID module to reduce the impact on the flight performance of my UA?	You should refer to the B-RID manual for instructions on how to mount/install the B-RID module securely.  In general, the B-RID module should be attached firmly on the external upper surface of the UA, without hindering the movement of the propellers and any onboard sensors. Do make sure that the module is mounted securely to prevent the module from coming
	If my UA complies with B-RID requirements, can I remove the UA registration label?  Do I need to register my UA if it is complying with B-RID requirements?  I have registered my UA and complied with B-RID requirements. Do I still need to obtain permits and/or hold a UA Pilot License?  How do I get my Operator ID?  How many B-RID modules do I need for my fleet of UA?  Can I share or transfer my B-RID module to my friend to operate their UA?

S/N	Question	Answer
		loose during the flight. To minimise impact to flight performance and safety, the module should also be installed as central to the UA body as possible.
17	What should I do if my UA or B-RID module indicates B-RID system errors or does not fulfil the pre-flight check	You should refer to the UA or B-RID module manual for instructions and contact the UA or B-RID module manufacturer if necessary.
	criteria?	If the issue persists, do not proceed with the UA operations until the issue has been rectified.