

**MODE S DAPs IMPLEMENTATION STATUS IN THE APAC REGION**

<b>No.</b>	<b>State/ Administration</b>	<b>Mode-S Surveillance Facilities and ATM System Readiness</b>	<b>Operational Status</b>	<b>Remark</b>
<b>1</b>	<b>CHINA</b>	<p>78 Mode-S capable radars.</p> <p>Now ATM automation systems could process the DAPs including the position altitude and Mode 3/A Code.</p> <p>By 31 December 2021, ATM system ready to process almost all the DAPs.</p>	<p>Radars and DAPs application in ATM system for the first stage are operational</p>	
<b>2</b>	<b>INDIA</b>	<p>30 Mode-S capable Radars have already been installed.</p> <p>All ATM systems except Chennai are capable to process DAPs.</p>	<p>Out of 30 Mode-S capable Radars, 28 radars are presently operational.</p> <p>All DAPs capable ATM systems are operational.</p>	<p>Commissioning of remaining 02 Mode-S capable radars is under process.</p>
<b>3</b>	<b>INDONESIA</b>	<p>26 Mode-S capable Radars</p> <p>ATM system in some locations are capable to DAPs; and ATM systems in some other locations are in evaluation for DAPs.</p>	<p>Radars are in operational.</p> <p>ATM systems in some locations are in operational; and the rest are in evaluation process.</p>	
<b>4</b>	<b>JAPAN</b>	<p>4 Mode-S capable radars</p> <p>ATM system is in evaluation process for DAPs.</p>	<p>Radars are operational and DAPs application in ATM is in evaluation.</p>	

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5	MALAYSIA	<p><b>Surveillance Facilities:</b></p> <p><b>Kuala Lumpur FIR</b></p> <p><b>Mode-S Radar</b> 5 Mode-S capable SSR are operational</p> <p><b>ADS-B</b> 3 ADS-B ground stations are operational</p> <p><b>In Progress</b> 2 Mode-S capable SSR being Installed (will be operational in 2024)</p> <p><b>Kota Kinabalu FIR</b></p> <p><b>Mode-S Radar</b> 5 Mode-S capable SSR are operational</p> <p><b>ADS-B</b> 4 ADS-B ground stations are operational</p> <p><b>In Progress</b> 1 Mode-S capable SSR being Installed (will be operational in 2024)</p> <p><b>ATM System Readiness:</b> The ATM system in Kuala Lumpur and Kota Kinabalu FIR are capable to process DAPs</p>	Radars and DAPs application in ATM system are operational	<p><b>Note:</b> As of March 2019, CAA Malaysia is embarking Optimization Programme of CNS/ATM as part of CAA Malaysia Transformation.</p> <p>Under this programme, CAA Malaysia is to achieve 100% of Mode-S Coverage by year 2021 in Peninsular Malaysia, Sabah &amp; Sarawak.</p> <p>*Currently, DAPs information is evaluated for safety case studies and data analytic.</p> <p>CAA Malaysia is in supports of the DAPs implementation in APAC Region. In view of this, the earliest for full implementation of DAPs in Malaysia will be in 2025 to make way for infrastructures, procedures and technical competency readiness; coordination and bilateral agreement with all stakeholders that will be affected and benefited from this implementation are in agreement.</p>

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6	<b>NEW ZEALAND</b>	Current Operational Surveillance equipment: 5 MSSR, 1 combined MSSR/PSR and 2 PSR 1 MLAT for surface movements, 1 MLAT for WAM 27 ADSB sites (some dual, others single).	All current surveillance systems are operational. The ATM is processing all DAPS data from ADSB, MLAT and MSSR – MODE A/C/S Code, Flight ID, SFL, IAS, and MACH data is provided to controllers, other data is used by the ATM – e.g., for calculating the wind speed/direction.	Planned Install 3 New MSSR/PSR. Remove Old MSSR/PSR - 5 MSSR, 1 combined MSSR/PSR and 2 PSR  Note, New Zealand does not have a MODE S Mandate.
7	<b>PHILIPPINES</b>	12 Mode-S capable radars  ATM system Capable of DAPs.	All radar systems are Operational ATM systems are likewise operational with DAPs capability disabled	Temporarily turned off/disabled due to some issues as advised by the vendor (Thales).
8	<b>SINGAPORE</b>	3 Mode-S capable radars  ATM system ready to process DAPs.	Radars and DAPs application in ATM system are operational	
9	<b>SRI LANKA</b>	2 Mode-S Radars Being Implemented  ATM system for Approach Control Centre at BIA with DAPs Processing, Being Implemented	Targeted to be available by 2022  Targeted to be available by 2022	WAM System with the DAPs capability to be implemented in parallel to the implementation of DAPs Compatibility in ATM systems by 2022

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		ATM system for Area Control Centre with DAPs Processing, planned implementation	Targeted to be available by 2023	
10	THAILAND	12 Mode-S EHS RADARs The new ATM system, TMCS project, is capable to process DAPs. The TMCS made use of DAPs as information for ATC for determining.	The TMCS project has been fully operating since last quarter of year 2020.	
11	VIET NAM	<ul style="list-style-type: none"> <li>- 2 Mode-S capable radars</li> <li>- 2 ATM system ready to process DAPs.</li> <li>- 13 ADS-B stations</li> </ul>	<ul style="list-style-type: none"> <li>- Radars and ATM are capable of handling Mode S DAPs but not yet officially operation.</li> <li>- ADS-B is on operation</li> </ul>	Vietnam is deploying following projects in 2019 -2021: <ul style="list-style-type: none"> <li>- New 5 SSR Mode Station (EHS),</li> <li>- 10 ADS-B stations;</li> <li>- 01 MLAT system,</li> <li>- New Ho Chi Minh ATCC and new Da Nang ATCC (with new modern ATM system).</li> </ul>

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