



GANESHA AVIONICS

ASM100

Airspace Monitor System

ABOUT GA-ASM100

Airspace Monitor System

Is an Aviation-Safety support system

Displaying the real-time airspace situation complete with Data Block and Plan Position Indicator

Useful for monitor the airspace above the airport, but not for air traffic control purposes

Generally needed by an Aerodrome/ Tower Controller, especially at the airports that do not have surveillance (RADAR, ADS-B) or ATC system.

GA-ASM100

GA-ASM100 is a computer-based Airspace Monitor System that processes surveillance (RADAR, ADS-B) data and ATS-Message as the source of information.

GA-ASMP (ASM-Processor) and GA-ASMD (ASM-Display), which are the main modules of this system, were developed using the same engine as Ganesha Avionics Air Traffic Control System, that has been implemented and used at Supadio International Airport of Pontianak and Syarif Qasim II International Airport of Pekanbaru.

GA-ASM100 comes with GA-Chronus GPS-Network Time Protocol and GA-Ethernity RADAR Interfaces that have been proven and used in several airports in Indonesia.

GA-ASM100 is supported and continuously developed by Indonesian national-based company with reference to the international regulations and aviation safety standards



GA-ASM Processor

Surveillance sensor (RADAR and/ or ADS-B) covering a certain designated areas of airspace will be the input to the GA-ASM Processor (GA-ASMP).

GA-ASMP is capable to process RADAR data with several types/ formats, including: Asterix (34, 48, 62), PR-800, EV760, EV-720, NEC, and a number of other types/formats.

In addition to the surveillance data, GA-ASMP will also receive and process ATS-Message and Flight-Plan, then correlate it with RADAR to complete the information in Data Block.

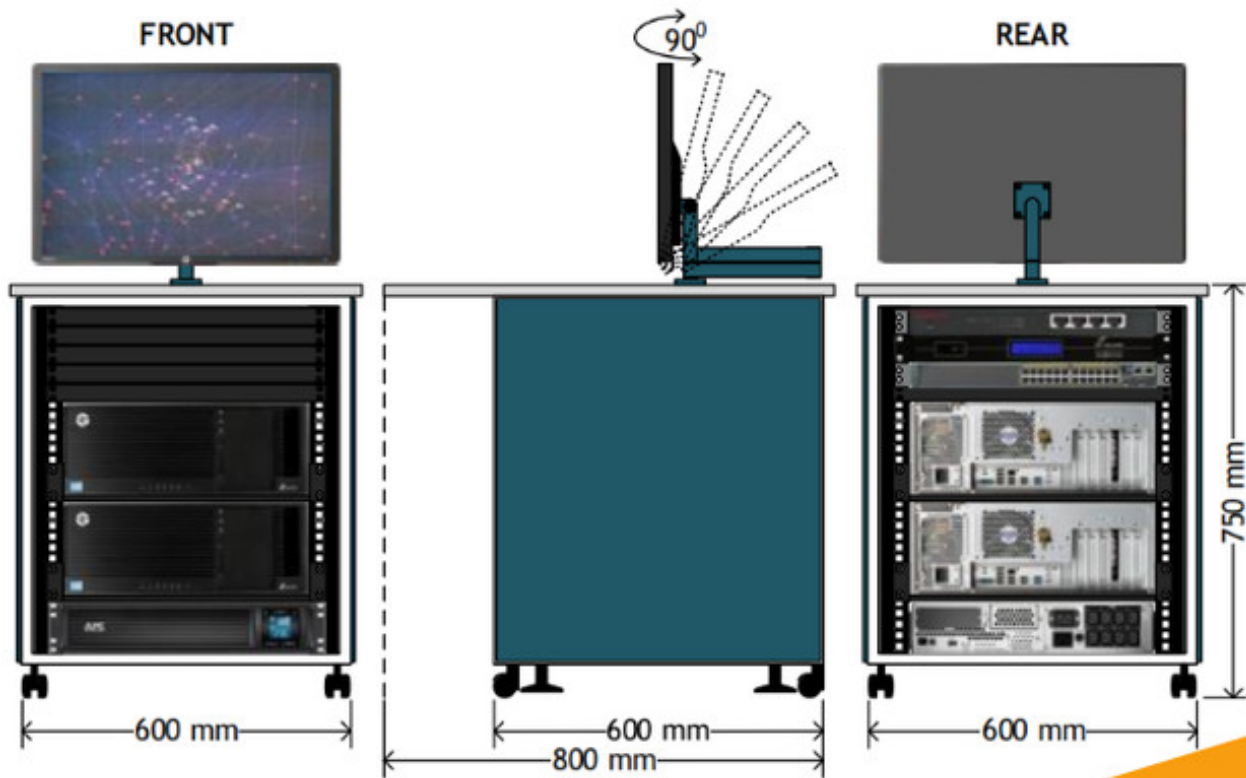
Here are some features of GA-ASMP:

- Single RADAR and/ or ADS-B Source
- Multi Source Surveillance Tracking, with multiple Algorithm of Surveillance Data Filter Decision
- RADAR By-Pass
- RADAR Data Filter
- RADAR Mode Support
- Receive and Process ATS- Messages and Flight-Plans

GA-ASM Display

GA-ASMD is a Human-Machine Interface (HMI) that provides interaction functions between user(s) and the system. Features of GA-HMI are:

- Multi Layer Map - Private Map - Map Editor
- RADAR Reinforce
- PSR & SSR Tracks (Plots) Display
- Advance Track Label
- Situation Display Filter
- Range Bearing, Range Ring & Range Center
- Plan Position Indicator (PPI): Track Trail (History), Velocity Vector, Auto Offset
- Configurable PPI
- Configurable Data Block



HARDWARE CONFIGURATION AND SPECIFICATION

GA-ASMP & GA-ASMD

Processor : Intel® Xeon® Processor
 Memory : 8GB DDR-3
 HardDisk : 1 TB SATA-3
 Operating System : LINUX
 Form Factor : Tower Chasis

DISPLAY MONITOR

Diagonal Size : 24 Inch
 Resolution : 1920 x 1600 @ 60Hz.
 Panel Type : LED
 Brightness : 300 cd/m2
 Contrast Ratio : 1,000:1
 Dynamic Contrast : 5,000,000:1
 Ratio

RADAR INTERFACE

Brand : Ganesha Avionics Ethernity
 Port Input : 2 x Synchronous Serial
 Output : 1 x Ethernet
 Console : 1 x USB/ DB-9
 Supported Data : Asterix (34, 48, 62), PR800,
 Format : EV760, NEC
 Number of RADAR : 2
 Form Factor : 19" RackMount 1U

GPS-NETWORK TIME SERVER

Brand : Ganesha Avionics Chronus
 Time Standard : True Stratum-1
 Time Reference : Global Positioning Satellite
 Request Handled: > 250,000 NTP/ Minute
 Processor : Micro Controller
 Management : Web Based
 Form Factor : 19" RackMount 1U

ETHERNET SWITCH

Port : 8 x 10/ 100/ 1000Base-T RJ-45
 Form Factor : 19" RackMount 1U

UNINTERRUPTABLE POWER SUPPLY

Output Power : 2100 Watts/ 3000VA
 Output Voltage : 230V
 WaveForm Type : Sine Wave
 BackUp Time : 15 Minute
 Form Factor : 19" RackMount 2U

CONSOLE

Brand : Customized by Ganesha Avionics
 Frame & Body : Metal, Powder Coating
 Table Top : PlyWood, Scratch-Resistant
 Dimension : 750 (H) x 600 (W) x 920 (D) mm



GA-ASM100 has been implemented at :

- ✓ Adi Soemarmo International Airport, Solo - Central Java
- ✓ Halim Perdanakusuma International Airport - Jakarta

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