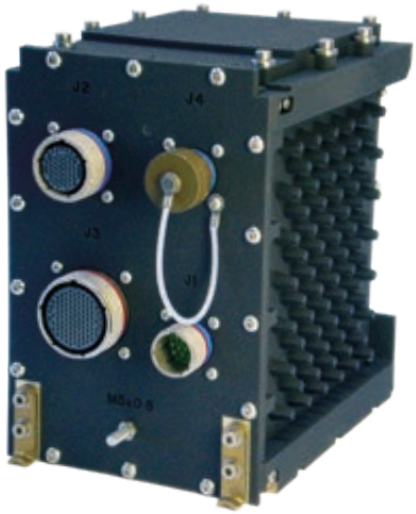
AGP

AIRCRAFT GATEWAY PROCESSOR

The AGP is an Aircraft Survivability Equipment (ASE) controller contained within a single, flight qualified Line Replaceable Unit. It is designed to integrate federated ASE sensors and countermeasures to provide a combined threat picture and prioritized tactical response as defined in the user-programmed Pre-Flight Message (PFM).

The AGP evolved from the Integrated ASE Controller in the combat-proven Helicopter Integrated Defensive Aids System (HIDAS) and has been selected by Boeing for integration into the Block II AH64D Apache and by the UK MOD for front-line combat helicopters.



KEY BENEFITS

- Enhanced platform survivability and reduced crew workload
  - Via increased situational awareness of the threat environment and initiation of optimized countermeasure responses
- Prioritized threats shown on a single Multi Function Display (MFD)
  - With co-ordinated audio warnings to prevent simultaneous reporting to the crew
- Mission configurable
  - By means of user-defined PFM
- Data Recording
  - Threat information is captured for post-flight analysis
- Flexible architecture
  - AGP allows for the addition of new and enhanced sensors and countermeasures without re-qualification of aircraft Operational Flight Programs (OFPs)

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DATA RECORDING

A key advantage of the AGP is its ability to record ASE mission data for post-flight analysis. This has three clear benefits:

- Analysis of spurious signatures to update PFM and reduce false alarm rates
- Ability to use the threat data to enhance battlefield intelligence
- Updating theater Electronic Order of Battle. Data is recorded on internal flash memory, accessed by both USB and Ethernet.

PRIORITIZED THREATS ON A SINGLE MULTIFUNCTION DISPLAY

With AGP installed the ASE reporting is user defined and can be managed via a single threat warning page, displayed on an existing screen or via an installed MFD.

Both approaches have previously been adopted. When selected emitters are reported to the crew by the AGP, they are presented on the display, both in relation to each other and the aircraft, and also in accordance with their degree of platform lethality. This ability to prioritize threats is user programmable via the PFM.

CO-ORDINATED COUNTERMEASURE RESPONSES AND AUDIO REPORTING

The AGP minimizes detection and countermeasure response anomalies that can occur in a federated ASE configuration. This is achieved by monitoring the combined sensor reports and providing a best-case countermeasure response.

Audio warnings from the ASE equipment and other aircraft systems can also be co-ordinated by the AGP. These warnings are prioritized according to lethality and reported one by one, rather than simultaneously, as is often the case when the ASE is not integrated.

AIRCRAFT/ASE LINK

AGP communicates with the ASE sensors through databuses and discrete lines. These include command and mode control, status reporting, threat reporting, receipt/supply of INS data, BIT functions and other data communications.

By making the AGP a Group A solution, the ASE is segregated from the rest of the aircraft systems, providing a low cost implementation. Sensors and countermeasures can then be added or removed without full aircraft re-qualification.

TECHNICAL SPECIFICATIONS

DIMENSIONS	INCH	CENTIMETRES
Height	7.68	19.5
Width	5.11	13
Depth (inc. connectors)	7.35	18.7
Mass	7.60 lbs	3.45Kg
Power watts (Typical Usage)	30	1.1A @ 28V

BUS TYPES

EIA-232	x 2
MIL-STD 1553B	x 2
10\100\1000 Base-T	x 2
USB	x 1
EIA-422	x 3, 2 of which can support HDLC
EIA-485	x 3
Number of discrete I/O	51

MEMORY CAPACITY

Type	Capacity	Typical Usage
RAM	512MB	< 15%
Flash	256MB	< 15%
NVRAM	128K	< 2%
Computation speed	1GHz PowerPC, with expansion capabilities	
Spare Card Slots	1 x 3U CPCI, AGP includes a spare card slot to enable capability growth	

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