1090 MHz ADS-B In Receiver

Accord's 1090 MHz ADS-B In receiver is an Automatic Dependent Surveillance – Broadcast (ADS-B) receiver unit at 1090 MHz ADS-B data-link with in-built GNSS satellite receiver best suitable for ADS-B base-station installations

1090 MHz ADS-B In receiver receives the transmissions from aircraft equipped with 1090 MHz ADS-B transponder and reports it through Ethernet and serial link

2U Rack Mountable

Rugged ADS-B Receiver

ADS-B Base Station Receiver for Strategic & Civilian Applications

Complies with RTCA DO-260B, A1S receive standards

- In-built GPS-SBAS Receiver
  GPS -GLONASS-GAGAN- IRNSS Receiver (Optional)
- Easy software-upgrade feature without disturbing it's installation
- Additional capability of Accepting Position, Velocity, Time from external GNSS position source
- Accepts time from external NTP server

Completely indigenous

- ✓ Generates UTC time labelled report
- ✓ Interactive GUI for Windows based computer
- ✓ Built-In-Self Test and fault indication
- ✓ Mean Time Between Failure greater than 5000Hrs
- ✓ MIL qualification for environmental specifications
- ✓ Available in two installation-configurations
  Rugged-MIL box & Rugged 2U 19" Rack
- ✓ Complete Installation support

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PERFORMANCE CHARACTERISTICS ISSUE 1.3

Conformity	
RTCA	DO 260B Class A3S
Performance	
General	ADS-B— Receive Only
Frequency of operation	1090 MHz +/- 5 MHz
Dynamic range	-84 dBm to 0 dBm
Detection range	250 NM Note 1
Detecting messages	DF-17 and DF-18
Message throughput	> 400 messages (i.e. > 400 targets) per second
ADSB Message update rate	1Hz
Position source	In-built GNSS receiver
Protection against unauthorized use	Password protection for all configuration changes in Graphical User Interface against unauthorized use
Software upgrade	Easy software upgrade feature without disturbing the unit from it's installation
External position feed (S/W Upgradable)	Position feed through Ethernet or RS-232 port
External time-mark feed	Accepts time from external NTP time server through Ethernet
Embedded GNSS Receiver Specifications for Internal time Stamping & synchronization	
GNSS Satellite Constellations	By-default - GPS+SBAS Optional - GPS+ SBAS+ GLONASS + IRNSS
Frequencies Note 3	GPS L1, GAGAN L1, GLONASS L1, IRNSS L5
Position Accuracy Note 2	Horizontal: 5 m (1 sigma) Vertical: 10 m (1 sigma) Time: 100 ns (1 sigma)
Other Specifications	
Fault indication	Through output messages, LED

Interfaces	
Ethernet	100 Mbps Ethernet through standard RJ-45 connector.
Protocol	UDP-Unicast/Multicast/Broadcast OR Standard TCP
Supported output data format	S/W configurable to RAW-DF-17/18 OR CAT-21 format Version 0.23 OR 2.1
Connectors	GNSS Antenna: TNC Female ADS-B Antenna : N- Female Ethernet: MIL-Ethernet RS-232/RS-422/1 PPS: DB-9 Power : Circular
Electrical Characteristics	
Power input to the unit	9 - 36 Vdc
AC Adapter (Provided as accessories for MIL-box) 2U –19" Rack enclosure accepts AC input	230V AC, 50Hz (Typical)
Power consumption	< 10 W
GNSS Antenna power	5 Vdc, 100 mA (Max)
Environmental Characteristics	
Operating temperature	-40C° to +60°C
Humidity	Up to 95%
Environmental tests[4]	EMI/EMC : As per MIL-STD-461E Temperature: JSS55555 Altitude :JSS55555 IP-66
Antenna Specification	
GPS Antenna	Standard GNSS active patch antenna.
ADS-B Antenna	Standard Omni-directional L band 1090 MHz ADS-B antenna

Rack Mountable Rear View

Rugged ADS-B Rear View

Note 1: Depends on the transmitter power, antenna-make & its installation location, available Line-of-Sight for a particular location and also on other standard conditions like rain, fog, or path attenuations etc.
Note 2: The one sigma GPS-SBAS or GPS+GLONASS+GAGAN+IRNSS combined accuracy is measured for a static user. Typical Values at 1Hz and at nominal signal strength. Performance specifications are subject to change due to the selected constellation characteristics, DOP, time of measurement, U.S. DOD operational degradation, ionosphere and tropospheric conditions, and multipath effects.
Assumes SA OFF.
Note 3: Frequency of operation depends on the chosen GNSS constellation upgradation.
Note 4: 2U rack mount enclosure meets the environmental specification and MIL box is designed to meet the requirement and is under qualification process

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