ARD-4008 HF Direction Finding Receiver

ARD-4008 HF DF Receiver is a high-end, state-of-the-art receiver equipment for all types of COMINT-DF applications. ARD-4008 is ready to provide accurate direction finding functionality in fixed and land mobile platforms.

ARD-4008 has 1-30 MHz frequency coverage in 1 Hz steps. ARD-4008 provides the reception capabilities to perform search and detection of emissions in a wide band and help to determine angle of arrival of the detected signals with its coherent multichannel.

ARD-4008 HF DF Receiver utilizes the latest digital architecture to achieve outstanding DF performance and high sensitivity.

**Technical Specifications**

- **Frequency coverage**: 10 kHz-30 MHz
- **Tuning Resolution**: 1 Hz
- **Number of Channels**: 8
- **Channel Modes**: Phase coherent
- **Selectable Demod. Filters**: 30 Filters (within 0,05-32 KHz range)
- **Noise Figure**: ≤17 dB
- **AM/FM/SSB-ISB/CW**: -106/-104/-108/-125 dBm typical
- **Frequency stability**: 1 ppm
- **Power input**: 18-32VDC (≤160W)
- **Size**: 19 inch, 2U, 50 cm depth
- **Weight**: ≤16 kg
- **Shock, Vibration**: MIL-STD-810G
- **EMI/EMC**: MIL-STD-461E
- **Operating Temp. Range**: -10/+50°C
- **Storage Temp. Range**: -40/+60°C

**General Features**

- Compatible with family of ASELSAN products; Monitoring receivers, recorders, etc.,
- Demodulation capability for AM, FM, LSB, USB, ISB, CW I/Q signals,
- Digital data stream IQ and FFT output at the selected IF BW,
- Online remote controlled operation via Ethernet interface,
- SW support packages, for fixed and mobile applications,
- Extensive built-in self test,
- Digital audio output.
ADF-3401 is a high-end, state-of-the-art equipment for all types of COMINT-DF applications. As a key equipment in ASELSAN Surveillance, Monitoring and Radio Direction Finding Family, ADF-3401 is ready to provide fast, accurate direction finding functionality in fixed, land mobile, naval, airborne platforms.

ADF-3401 frequency coverage of 20-3000 MHz, can be extended down to HF band.

ADF-3401 provides the capabilities to perform search and detection of emissions in a wide band and determine angle of arrival of the detected signals.

Meeting the challenge of the modern frequency environment, including burst, FHSS, DSSS signal types, the ADF-3401 utilizes the latest technology to achieve outstanding DF performance and high sensitivity.

**Technical Specifications**

- **Frequency coverage**: 20-3000 MHz
- **Opt. HF extension**
- **DF Accuracy (clear site)**: 1° rms or better
- **Tuning Resolution**: 100Hz
- **Scan Rate**: 2.5 GHz/sec
  - (40 MHz IFBW, 25 kHz frequency resolution, 10% spectrum density)
- **Instantaneous IFBW**: 40/10/1 MHz (3 IF filters)
- **FFT Resolution**: 100/50/25/12.5/6.25 kHz
  - (4/2/1/0.5/0.25 kHz (available depending on IFBW)
- **Frequency stability**: 1 ppm or better
- **Power input**: 20-32VDC (<175W)
- **Size**: 19 inch, 4U, 36 cm depth
- **Weight**: <22 kg
- **Shock, Vibration**: MIL-STD-810G
- **EMI/EMC**: MIL-STD-461E
- **Operating Temp. Range**: 0/+50°C
- **Storage Temp. Range**: -40/+60°C

**General Features**

- Wide Frequency coverage,
- HF extension option,
- Conduction cooled architecture,
- Compatible with ASELSAN products; Mon./WB receivers, Recorders, etc.,
- Demodulation capability for AM/FM/LSB/USB/CW/IQ signals,
- Band scan, channel scan, frequency/band lock-out features,
- Online remote controlled operation via Ethernet interface,
- SW support packages, for fixed, land mobile, naval and airborne applications.
ARM-3401 Monitoring Receiver

Almost all COMINT operations necessitate monitoring of multiple communications nets simultaneously. ARM-3401 is a Digital Monitoring Receiver designed for military and professional applications where high end products are needed. Its Half Rack form factor and compact size (compared to its specifications and features) make it easy to stack for multiple monitoring channel requirements.

ARM-3401 has 20-3000 MHz frequency coverage as standard and it can also be extended to cover 3-6 GHz and/or HF band without changing the package size.

ARM-3401 is also a key member of ASELSAN Surveillance, Monitoring and Radio Direction Finding Family of equipment/products.

Along with the ARM-3401, user interface SW running on PC platform is also provided featuring, band scan, channel scan, panoramic scan, listing operations; capable of driving multiple receivers.

ARM-3401 Monitoring Receiver is command compatible with other ASELSAN equipment allowing easy application SW developments. Ethernet based control interface provides remote operation.

ARM-3401 is suitable for fixed, land mobile, naval, airborne platforms.

<table>
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<tr>
<th>General Features</th>
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<tbody>
<tr>
<td>• Wide Frequency coverage,</td>
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<tr>
<td>• 3-6 GHz and/or HF extension option,</td>
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<tr>
<td>• Compatible with family of ASELSAN products; DF Systems WB receivers, recorders, etc.,</td>
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<tr>
<td>• Online remote controlled operation via 1 Gb Ethernet interface,</td>
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<tr>
<td>• Band scan, channel scan, frequency/band lock-out, panorama scan features,</td>
</tr>
<tr>
<td>• AM, FM, CW, USB, LSB, ISB, demodulation</td>
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<tr>
<td>• Digital data stream IQ output at the selected IF BW,</td>
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<td>• Digital audio output,</td>
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<tr>
<td>• Two analog line out on the rear panel, headphone jack-out on the front panel,</td>
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<tr>
<td>• Separate antenna input for HF,</td>
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<tr>
<td>• 10 MHz Reference In/Out,</td>
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<tr>
<td>• Adjustable BW 10 KHz-1 MHz Panoramic display digital data output,</td>
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<tr>
<td>• Mechanical accessories for table top operation and single in 19 inch, two side-by-side rack mounting (see figure on the right).</td>
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<th>Technical Specifications</th>
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<tbody>
<tr>
<td>• Frequency coverage : 20-3000 MHz</td>
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<tr>
<td>-Opt. 3-6 GHz / Opt. 1-20 MHz</td>
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<tr>
<td>• Tuning speed : 1 msec or better</td>
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<tr>
<td>• Tuning Resolution : 100 Hz (20-6000 MHz)</td>
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<tr>
<td>10 Hz (1-20 MHz)</td>
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<tr>
<td>• Instantaneous IFBW : 1 MHz</td>
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<tr>
<td>• Programmable IF Filters: 15 Filters (within 0.2-500 KHz range)</td>
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<tr>
<td>• Noise Figure : 12 dB typical (20-1100 MHz)</td>
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<tr>
<td>14 dB typical (1.1-3/3-6 GHz)</td>
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<tr>
<td>17 dB typical (1-20 MHz)</td>
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<tr>
<td>• Frequency stability : 1 ppm or better</td>
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<tr>
<td>• IP3 (attenuator off) : -5 dBm typical (20-3000 MHz)</td>
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<tr>
<td>• AM/FM/SSB-ISB/CW : -107/-105/-109/-116 dBm typical</td>
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<tr>
<td>• Power input/cons. : 18-32VDC/&lt;60W (w/o options)</td>
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<tr>
<td>• Size : 1U, Half Rack, 50 cm depth</td>
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<tr>
<td>• Total weight : &lt;5 kg</td>
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<td>• Shock, Vibration : MIL-STD-810G</td>
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<td>• EMI/EMC : MIL-STD-461E</td>
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<tr>
<td>• Operating Temp. Range : 0/+50°C</td>
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<tr>
<td>• Storage Temp. Range : -40/+60°C</td>
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MONITORING AND DIRECTION FINDING RECEIVERS

ARM-4001
HF Monitoring Receiver

Almost all COMINT operations necessitate monitoring of multiple communications nets simultaneously. ARM-4001 is a Digital Monitoring Receiver designed for military and professional applications where high end products are needed. 1U Half Rack form factor and compact size (compared to its specifications and features) make it easy to stack for multiple monitoring channel requirements. ARM-4001 has 1-30 MHz frequency coverage in 1 Hz steps.

Along with the ARM-4001, user interface SW running on PC platform is also provided featuring, band scan, channel scan, panoramic scan, listing operations; capable of driving multiple receivers.

Ethernet based control interface provides remote operation. ARM-4001 is suitable for fixed, land mobile, naval, airborne platforms.

General Features

• Compatible with DF Systems ,WB receivers, recorders, etc.,
• Online remote controlled operation via 1 Gb Ethernet interface,
• Band scan, channel scan, frequency/band lock-out, panorama scan features,
• Demodulation capability for AM, FM, LSB, USB, ISB, CW signals,
• Digital data stream IQ output at the selected IF BW,
• Digital audio output,
• Two analog line out on the rear panel, headphone jack-out on the front panel,
• Adjustable BW 1 KHz-1 MHz Panoramic display digital data output,
• Extensive built-in self test.

Technical Specifications

• Frequency coverage :10 kHz-30 MHz
• Tuning Resolution :1 Hz
• Programmable IF Filters: 30 Filters (within 50 Hz-32 KHz range)
• Noise Figure :≤ 17 dB
• AM/FM/SSB-ISB/CW typical :
  -108/-106/-110/-127 dBm typical
• Power input/cons. :18-32VDC ≤ 60 W
• Size :1U, Half Rack, < 40 cm depth
• Total weight :≤ 5 kg
• Shock, Vibration :MIL-STD-810G
• EMI/EMC :MIL-STD-461E
• Operating Temp. Range :-10/+50°C
• Storage Temp. Range :-40/+70°C
ARW-3401 is a HW/SW configurable wideband signal reception platform that provides various COMINT functionalities/features. Modular architecture of ARW-3401 allows it to be configured as:

- Single channel fast tuner,
- Multi channel coherent/independent fast tuner,
- Surveillance/Monitoring receiver with multichannel DDRs.

ARW-3401 with its various configurations is enough to provide full backbone of a COMINT/DF system. ARW-3401 is suitable for fixed, land mobile, naval, airborne platforms.

Fast tuning speed, compact size, exceptional environmental, RFI/EMI specifications of ARW-3401 best suit military/professional applications in challenging RF spectrum crowded by state-of-the-art communication emitters.

**General Features**

- Wide Frequency coverage,
- HF extension,
- Conduction cooled equipment architecture,
- Compatible with DF Systems Mon. receivers, recorders, etc.,
- Online remote controlled operation via 1Gb ethernet interface,
- Band scan, channel scan, frequency/band lock-out features,
- Upto 4 channel coherent configurations,
- Upto 2 independent channel configurations,
- Upto 8 channel Digital Drop Receivers (DDR) tunable within the IFBW

**Technical Specifications**

- Frequency coverage : 20-3000 MHz
  Opt. HF extension
- Tuning speed : <20usec
- Tuning Resolution : 100 Hz (20-3000 MHz)
- Scan Rate : 40 GHz/sec
  (40 MHz IF, 25 KHz freq. res.)
- Instantaneous IFBW : 40/10/1 MHz
- FFT Resolution : 100/50/25/12.5/6.25 kHz
  4/2/1/0.5/0.25 kHz
  (available dep on IFBW)
- Frequency stability : 0.5 ppm or better
- Power input/cons. : 20-32VDC /<150W
  (depends on configuration)
- Size : 19 inc, 4U, 36 cm depth
- Total weight : <19 kg (1 channel receiver)
- Shock, Vibration : MIL-STD-810G
- EMI/EMC : MIL-STD-461E
- Operating Temp. Range : 0/+50°C
- Storage Temp. Range : -40/-60°C