The Advantech Wireless Advantages

- Up converter or Down converter in a single enclosure
- L-band 950-1950 MHz IF Frequency
- Ka-Band TX: 27.0-31.0 GHz, RX: 18.1-21.2 GHz frequency, sub band selectable (1 GHz wide sub band)
- Cost effective solution
- Fully compliant with IESS 308/309 requirements
- High linearity
- Internal High Stability Reference
- Front panel control (local)
- Full remote control (remote)

Operating Bands

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Output</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARUN-LKa</td>
<td>27.0 - 31.0 GHz</td>
<td>950-1950 MHz</td>
</tr>
<tr>
<td>ARDN-KaL</td>
<td>950-1950 MHz</td>
<td>18.1 - 21.2 GHz</td>
</tr>
</tbody>
</table>

- The operating band is software selectable in 1GHz segments
- Other operating bands are available upon request

Overview

The Advantech Wireless range of converters uses the latest technology in conversion, local and remote control thus providing the ultimate in performance and user friendly operation at a very competitive price.

This converter model provides up converter and down converter in a single enclosure.

The spectral purity, low phase noise and stability exceed the requirements of all major international satellite network operators.

The flexible and comprehensive monitor and control features on the Ka-band converter ensure that it will fit into any network management system architecture. The user-friendly front panel or the RS485 remote interface will provide full set-up and fault monitoring facilities. The RS232 will provide the Monitor and Control functions via a PC and will also allow for software downloading.

The converter is fully synthesized with the PLL oscillators either locked to a highly stable internal MHz reference or if the external reference option is fitted and the proper level of signal is present, the PLL will automatically lock to the external reference.

Major Options

- Ethernet port and SNMP Interface

Applications

This type of converter is particularly well suited for wide band Ka installations. The Ka-band range of converters provides an industry leading MTBF of over 120,000 hours.
## Technical Specifications

### Up-Converter | Down-Converter
---|---
**IF Input** | **RF Input**
Frequency range | Frequency range | 950-1950 MHz | 18.1 - 21.2 GHz (sub band selectable 18.1-18.7 GHz or 18.7-19.2 GHz or 19.2-20.2 GHz or 20.2-21.2 GHz)
Input Level | Input level | -25 dBm to -5 dBm | -60 dBm to -40 dBm
Impedance | Impedance | 50 Ω | 50 Ω
Input Connector | Input Connector | BNC (female) | SMA (female)
Return loss | Return loss | 16 dB | 16 dB
**RF Output** | **IF Output**
Frequency range | Frequency range | 27.0 - 31.0 GHz (27.0-28.0 GHz or 28.0-29.0 GHz or 29.0-30.0 GHz or 30.0-31.0 GHz software selectable) | 950-1950 MHz
Output power (P1dB) | Output power (P1dB) | +10 dBm | +5 dBm at P1dB
IMD3 (two tone) | Output Connector | -26 dBc max @ +7 dBm tot. output | BNC female
Connector Impedance | Connector Impedance | 50 Ω | 50 Ω
Return loss | Return Loss | 14 dB min | 14 dB min
**Transfer Characteristics**
Conversion Gain | Conversion Gain | 20 dB @ max gain setting | 40 dB min @ max gain setting
Gain adjustment | Gain adjustment | 20 dB (0.1 dB step size) | 20 dB (0.1 dB step size)
Gain flatness | Gain flatness | 4.0 dB p-p max. over 1 GHz | 4.0 dB p-p max. over 1 GHz
Gain stability | Gain stability | ±0.25 dB max. / 24 hours | ±0.25 dB max. / 24 hours
Spurious | Spurious | -55 dBc carrier related < -70 dBc non-carrier related | -55 dBc @ 0 dBm output
Phase noise | Phase noise | Exceeds IESS 308/309 by 4 dBc | Exceeds IESS 308/309 by 4 dBc
Reference | Mechanical
External Reference (optional) | Dimensions | 10 MHz, (5 MHz option) | Width | 19” (482.6 mm)
Internal reference stability | Height | +/-2 x 10-8 / day | 1U 1.75” (44.45 mm)
Aging | Depth | +/-1 x 10-7 / year | 20” (254 mm)
**Environmental**
Operational | Power Supply | Voltage | 0°C to +50°C standard | 90 – 265 VAC (47 – 63 Hz)
Storage | Power | -55°C to +85°C | 40W (typical)
Humidity | Connector | Non-condensing | IEC 603320 10A
Altitude | | 3,000m AMSL | |
**Monitor and Control**
RS 485 | Ref.: PB-RC560B-01-18354
RS232 | | DB9 | |
Discrete | | DB9 | |
Ethernet (optional) | | RJ45 F | |

Specifications are subject to change without notice.