

# Advantech Wireless Corporate Overview



End-to-end satellite communication technologies

# Overview



## Unmatched product range and experience:

- Baseband VSAT HUB, SCPC and MF TDMA remote modems/routers
- IP Encapsulators, PEP/Accelerators, Routers, QoS Traffic Shapers, GPS
- Transceivers, Frequency Converters, Ultra Linear HPA (SSPAs/BUCs)
- Antennas: COTM, Deployable, Flyaway, ManPack and Earth Stations, 16m
- System Integration: civil and electrical works, shelters and mobile trailers



- 25+ years leading the market with the most powerful innovations in technologies that helps our customers to obtain the most efficient satellite and terrestrial microwave radios solutions.
- 300+ employees in 11 countries, including 4 LATAM countries.



- Successful projects implemented in more than 150 countries in LATAM, Europe, Asia, Oceania, Africa and North America.
- Bringing the cost saving solution to the most important industries.

# Vertical Markets



**Carrier Class Services**  
**VoIP / VPN**  
**Videoconferencing**



**Distance**  
**Education**  
**and Telemedicine**



**Enterprise**  
**Networking**



**Maritime**  
**& Cruise Lines**



**Defense**



**Mining & Off Shore**  
**Oil & Gas Exploration**  
**Smart Power Grids**



**Broadcast Contribution and**  
**Distribution Solution & DTH**



**Disaster Recovery &**  
**First Responders**

# Product Lines

## The Most Comprehensive SATCOM and Terrestrial MW Solution Portfolio



**Satellite  
RF Products**

Converters  
Amplifiers,  
BUCs  
Transceivers

**Satellite  
Networks**

VSAT Hubs  
& Terminals:  
SCPC/MF TDMA  
Modems/  
Routers

**Microwave  
Point-to-Point  
Radios  
IP, PDH, SDH,  
Broadcast: MPEG TS**

**Satellite Antennas &  
ACU  
Fixed, Mobile,  
ManPack, COTM &  
Flyaway**

**Ruggedized  
Routers and IP  
Products,  
GPS Timing  
References**

**Government  
&  
Military  
Applications**

# Innovation

## GaN

Advantech Wireless is the world's foremost expert in GaN based HPA/BUC's technology and products. Smaller, Lighter, More Powerful than conventional technology. Increased power efficiency, reduced power dissipation, more linear amplitude response .

## A-SAT™ (VSAT)

Dynamic switching between different access technologies  
Based on customer requirements. Maximizes satellite bandwidth efficiency and save OPEX.

Most scalable and modular family of hubs and terminals in the market with lowest TCO (Total Cost of Ownership)

Remote upgrade capabilities via Software Key provide additional capacity and features when needed.



# Awards and recognition



## Teleport Technology of the Year 2014

– World Teleport Association Award

Awarded due to the remarkably high level of power and linearity performance that allows our customers to significantly reduce the cost of capital expenses and more importantly, at fraction of cost, compared to indoor Klystrons or super-linearized TWTs.


**Advantech Wireless SapphireBlu™ Series is the only worldwide solution able to offer the maximum use of satellite bandwidth and power.**



## Most Innovative Product of the Year 2013

– Satellite Markets and Research Vision Awards

For the first time in history of Satellite Communications, Advantech Wireless is able to saturate all transponders of the satellite with a single 13m antenna & single amplifier per polarization.



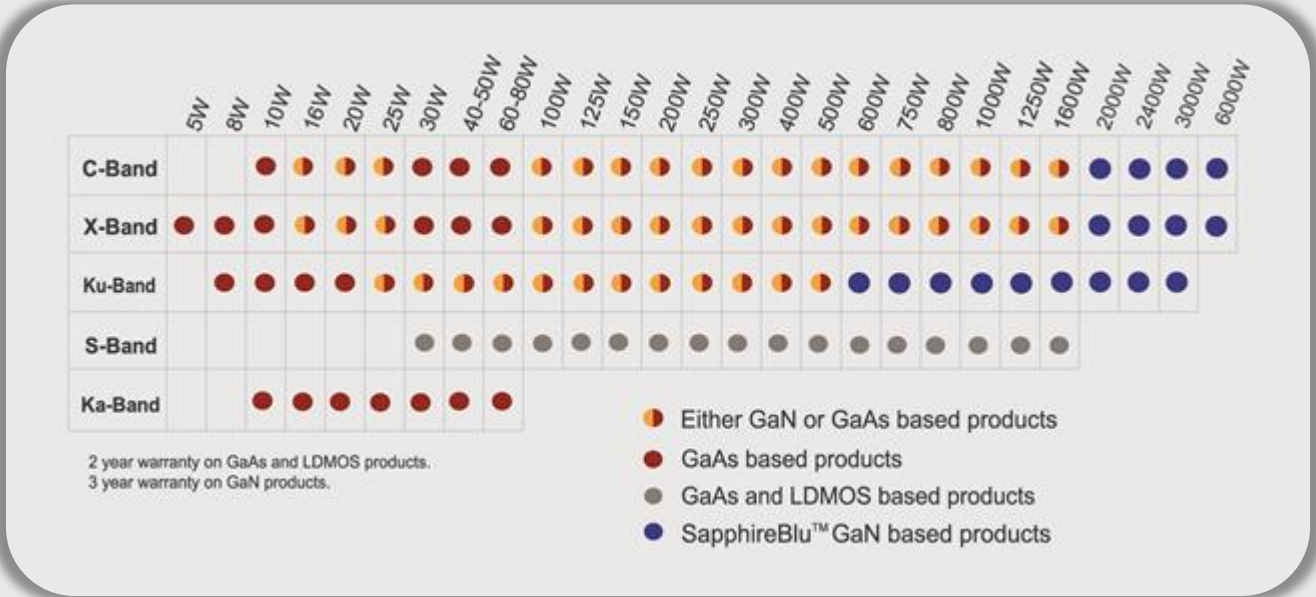
Innovation.  
World class performance.  
Best ROI.



SSPAs, Transceivers, BUCs,  
Frequency Converters &  
Satcom Antennas

# Most Complete RF Portfolio Amplifiers, Transceivers & BUCs

The newest – most reliable and efficient technology and products on the market



All Your Power Needs – Any Band – Solid State



# GaN - A New Generation of Advanced SSPAs

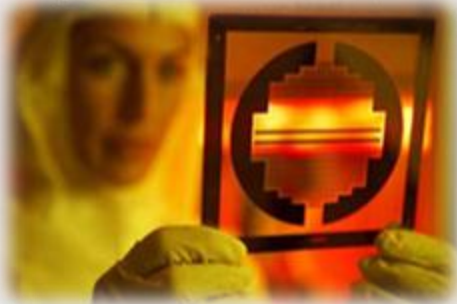
GaN based SSPAs are opening completely new market opportunities for Satellite based Communications

Unmatched performance, high reliability, low OPEX

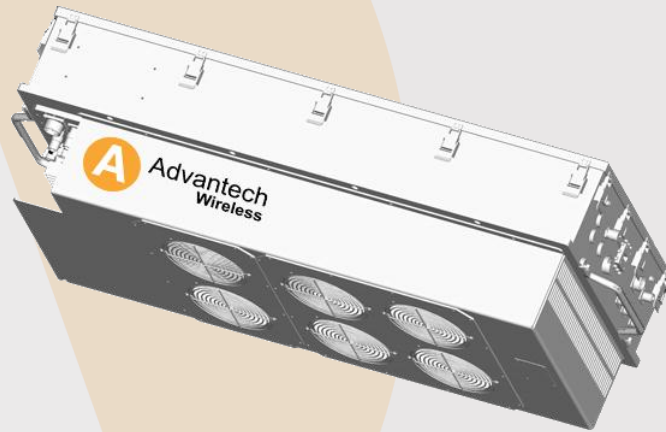
Double the RF power within the same footprint

Ideal for DTH and other applications that require high power amplifiers

Reduce energy consumption by up to 70%



# SapphireBlu™



**1250W Ku-Band GaN Based  
- SapphireBlu™ Series™**

- Low energy consumption
- High Efficiency
- High Power
- High reliability
- UltraLinear™ designed for Multi Carriers Operations
- Able to cover simultaneously all transponders of a specific satellite, regular or extended bands.
- Unmatched performance, surpassing all technologies available on the market.

The only worldwide solution able to offer the maximum use of satellite bandwidth and power.

# Summit GaN based Modular Systems



Modular design with built in redundancy 3K Ku-band System GaN Based - SapphireBlu™ Series



6.6W C-Band or X-Band Rackmount SSPA GaN Based - SapphireBlu™ Series

Millions of dollars in Energy, Bandwidth and CAPEX savings

- Completely modular, with field replaceable RF or Power Supplies, solid-state power amplifier systems.
- They deliver the highest linear power available.
- Maximum bandwidth/power efficiency, you save millions of dollars in energy costs, Satellite bandwidth and CAPEX.

# Pay-as-You-Grow™ Hub Solutions

- Key system elements are modular & upgradeable
- Pay for capacity & capability only as your network grows
- The lowest initial capital investment, and most cost efficient to expand

## DVB-SCPC HUB



## Discovery 100



## Discovery 200



## Discovery 300



## Millennium HTS Hub





Increasing performance  
and bandwidth utilization

Next Generation  
VSAT hubs and terminals

# Discovery Series VSAT with A-SAT™ Optimization



Supports Adaptive Satellite Access Technology A-SAT™ for maximum spectral efficiency

Technology dynamically adapts the satellite physical link to maximize efficiency based on application traffic flow and physical conditions of the link

Enables dynamic switching between different access technologies. Maximizes satellite bandwidth efficiency

Minimizes operation costs



**S6520 Series A-SAT™ VSAT Modems**



**S6720 High Speed Adaptive Waveform VSAT Terminal**

# Terminals



**DVBS2 Terminal 4120**

**VR7000  
Terminal**



**Professional 5120/6120**

**Mesh Terminal Series 5220**

**Dual SCPC/TDMA  
5420/6420**

**6520/6540/6720  
SCPC/TDMA A-SAT™™™**



**DVB-RCS SCADA VSAT 4920**

**Ruggedized VSAT DVB-RCS  
5920**

**Ruggedized SCPC/RCS 6920**



**Dual DVB-S/S2 6040**

**Quad TCC Demod  
TCC200**

# Ka-8000 Series



## Ka-Band Outdoor VSAT Terminal

- Industry First entirely integrated Ka- Band VSAT Terminal
- Consists of modem, Ka-Band transmitter, receiver and antenna system
- Flexible waveforms and symbol rates

# A-SAT™ Benefits



## Pay-as-you-Grow™

- Lowest initial capital investment
- Economical SW Key expandability
- Most scalable & modular hub family

## Efficiency

- Squeeze more Mbps out of your MHz
- Reduce OPEX expense
- Add more broadband services and/or users

## Performance

- Highest throughput in the market
- Secure information transport
- Flexible and Adaptive technologies

# World class antenna Solutions



Advantech Wireless offers a complete line of antennas from the **smallest VSAT** to the **largest broadcast antenna** at the best possible price. We have total solutions to meet your needs – We are a 1-stop-shop including controllers, power amplifiers and more!



**1.2m Motorized  
FlyAway  
Antenna**



**1.5m Vehicle  
Mount VSAT  
Antenna**



**1.5m Vehicle  
Mount SNG  
Antenna**



**1.8m Vehicle  
Mount SNG  
Antenna**




**Enterprise  
Antenna**



**Arctic Ku-Class  
Drive-Away  
VSAT  
Terminal**



**ManPack  
Antenna**

A photograph of a radio tower against a clear blue sky. The tower has several levels with various antennas and dishes. A tall, slender antenna mast with red and white spiral bands extends from the top. The tower and mast are reflected in a light-colored surface at the bottom of the image.

Higher availability &  
longer links

A large, stylized white letter 'A' centered within an orange circle, positioned in the lower-left area of the slide.

Microwave  
Solutions

# Microwave Solutions

General

- Telco and Broadcast market models
- Frequency Bands from 6GHz to 38GHz
- Native video, native IP and native TDM Traffic

IP

- 7xGigE, built-in Gigabit L3 Router & L2 switch
- Adaptive Coding and Modulation ACM
- Flat Throughput and Sub-milliseconds latency

Video

- 8xASI + IP, Full duplex
- High quality HD broadcast and contribution video
- 10 MHz clock, 1pps and GPS

TDM

- SDH/SONET/PDH radio
- 2xSTM-1/OC-3 +16 E1/T1 per RF channel
- 3 x DS-3/E3, up to 84 E1



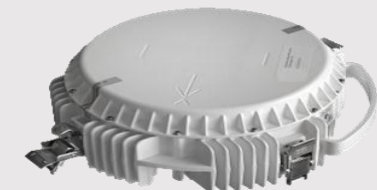
Transcend™ 1000



Transcend™ 800



Indoor microwave RF unit



Common outdoor unit (ODU)  
for microwave radios

# Routers and IP Solutions

Advantech Wireless manufactures solid state, embedded, efficient and reliable solutions for IP networking. They implement a variety of standard communication protocols and are easily integrated into existing networks.

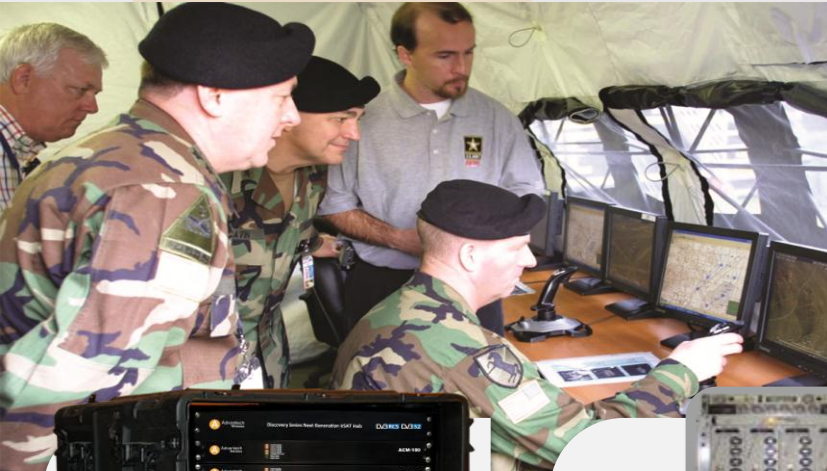


High Performance Router R800



Solid Performance ER-9160 Router

# Government & Military products



## Raptor – DVB-RCS

Compact Transportable Hub  
Supports mobile, stationary and on-demand applications



## Solid State Pulse Amplifier

Offers seamless mobile communications between different wireless networks



## KR Series –MCU-2000

Mobile Mesh Networking System  
Supports Real-Time Video, Audio, Data and Location over wireless



## AMT 73L Modem

**DISA CERTIFIED**



## Ruggedized Router RAR9160

# Your best choice



## End-to-end satellite communications technologies

At Advantech Wireless we provide industry-leading innovations in advanced end-to-end satellite communication technologies.

Our commitment is to help our customers achieve best performance and maximize ROI by providing complete customized turnkey solutions.

For more information please visit:  
[www.advantechwireless.com](http://www.advantechwireless.com)