



### Features

- RF, Modem and Power Supply Modules are common to the complete Advantech Wireless ManPack line of terminals
- Supports X- (WGS-certified), Ku-Band and Ka-Bands (military and commercial)
- No Fans – high reliability design that eliminates cooling fans and motors
- Auto Assist Pointing – simple front panel display instructions assist satellite acquisition. NVG Compatible
- High Performance – low loss
- One-man setup, without tools
- Center-fed antenna enables simple frequency/feed swap as well as robust satellite connectivity due to superior wind stability
- Interchangeable reflector panels
- Integrated Advantech Wireless S5420 modem
- Internal GPS

### Key Discriminators

- **Lightweight:** Monolithic RF design requires no cooling fans resulting in the smallest, lightest, most reliable terminal available
- **Simple to Operate:** Auto-assist display provides “BGAN like” setup (that an unskilled operator can use to point at the satellite)
- **Battery Saving Mode:** Optional BB 2590 battery available
- **Multi-Band:** Quick change between X, Ku (co-pol and cross-pol) and Ka bands (both Global Express and WGS frequencies supported)
- **MIL-SPEC Reliability:** Purpose-built for tactical environment (MILSTD-810F)

### Overview

Advantech Wireless family of ManPack terminals was specifically designed for the needs of a dismounted soldier or first responder. They are designed to be jumped or carried and then operate in inhospitable territory.

The ManPack terminal offers several operational and logistical advantages over its competition. The compact design and intelligent packaging concept facilitate one-man setup and operation. The terminal packs up in a backpack which can be placed in the airline overhead compartment. The terminals also include a hard transit case for the backpack so the system can be checked as baggage (<68lbs / 31kg IATA) or shipped.

The key electronic modules for this terminal are used across the entire product line. The transceivers, modem assembly and power supply modules can be interchanged (without any tools) among our entire family of terminals with aperture sizes from the 45cm ManPack to the 1.3 meter FlyAway. This architecture simplifies sparing and maintenance at all organizational levels. It further facilitates multi-band operation with only a small incremental increase in terminal size and weight. These features significantly reduce system life cycle costs and logistics footprints.


Operating without fans, the ManPack Satellite Terminal is both rugged and quiet. The easy to use auto-assist pointing enables fast satellite acquisition by minimally trained personnel. The absence of automated mechanical / electrical pointing and tracking mechanisms increases reliability and ensures that there are no single point failures that would compromise the mission.

# X5420MP X-Band Manpack Satellite Terminal



## PRODUCT FEATURES & SPECIFICATIONS

System Parameters		Receive/Transmit Parameters	
Parameter	65 cm antenna	Receive/Transmit Parameter	X-band
EIRP X-band P1dB	43.6 dBW @ 8150 MHz	Frequency Band RX 1 / LO	7.25 - 7.75 GHz / 6.3GHz
EIRP Ku-band P1dB	49.5 dBW @14.125GHz	Frequency Band RX 2 / LO	N/A
EIRP Ka-band P1dB	51.4 dBW	Rx 1 IF-frequency	950 - 1450 MHz
G/T X-band (30° elevation)	11.4dB/K @ 7500 MHz	Rx 2 IF-frequency	N/A
G/T Ku-band	14.9 dB/K @ 11.35 GHz	Frequency Band TX 1 / LO	7.9 to 8.4 GHz 6.95 GHz
G/T Ka-band	16.4 dB/K	Frequency Band TX 2 / LO	N/A
System weight	27lbs (12.2kg)	Tx IF-frequency	950 - 1450 MHz
		Polarization	RCP/LCP reversible
		Certifications	WGS 12-221
<b>Environmental</b>			
Environment	Value	Environment	Value
Humidity	100%, Condensing	Vibration	Method 514.4
Salt Fog	Method 509.4	Sand and Dust	Method 510.4
Blowing Rain	Method 506.4		
Power input	85 – 265 VAC, 47-440Hz 12 – 36 VDC, External battery option		
<b>Advantech Wireless Modem</b>			
Parameter	Value	Parameter	Value
Network Architectures	Point-to-point, Point to MultiPoint,Star	Upstream TDMA Burst Rates	128 kbps - 8Mbps
Quality of Service	Multiple queues, filtering on IP header, QoS groups	Upstream SCPC Data Rates	128 kbps – 10 Mbps (Optional 20 Mbps)
Air Interface	DVB-RCS (Q/8PSK), DVB-S2 (CCM Q/8PSK, (ACM, VCM Q/8/16PSK)), DVB-S (QPSK)	Network Interface	Ethernet 10/100 BaseT, RJ45
Encapsulation	IP over MPEG with section packing		
Coding	RS/Convolutional (DVB-S), LDPC/BCH (DVB-S2), Turboencoding (TCC/DVB-RCS)	TCP/HTTP Acceleration	Included
Security	Optional IPSec (3DES or AES 256)	Data Compression	Included

Packaging	
<p><b>STANDARD</b></p> <p>The X5420MP X-Band Manpack Satellite Terminal comes with the two cases shown to the right: a soft backpack or rucksack, FAA overhead compliant, in black or desert tan. Also includes an airline checkable and shippable hard case for the backpack or rucksack in black or desert tan. ManPack modules can be either gray or desert tan.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Backpack</p> </div> <div style="text-align: center;">  <p>Hard case</p> </div> </div>	<p><b>OPTIONAL</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Roll-away soft case with backstraps. FAA overhead compliant. (Black)</p> </div> <div style="text-align: center;">  <p>Roll-away hard case. FAA Overhead compliant. (Black)</p> </div> </div>

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