PUBLIC SAFETY AND FIRST RESPONDERS APPLICATION BRIEF

ST Engineering

Communication and access to information are critical in any emergency situation. Response teams and their command centers need to be in constant communication regardless of location or situation. Ensuring public safety, managing a natural disaster, and treating life-threatening injuries are all responsibilities that benefit from a reliable and secure high-speed broadband platform.

Independent from terrestrial and wireless infrastructure, satellite communications provides a secure, reliable network that can be deployed quickly and easily for disaster response or national emergencies.

ST Engineering iDirect and Kymeta have joined forces to provide the u7 Terminal to first responders to take real-time communications to the front lines. Integrated with the ST Engineering iDirect X7 modem, the flat panel antenna fits on emergency vehicles and can provide a mobile hotspot for communications through any device such as radios, smartphones, or laptops. The solution can also send crucial data from radiation sensors or live camera feeds for accurate and detailed response coordination. The ST Engineering iDirect platform is engineered for flexible bandwidth management and the ability to prioritize critical network traffic.

VELOCITY
EVOLUTION

powered by
Newtec ◄ **iDirect**

Kymeta u7
Ku-band Terminal

Seamless, always-connected, mobile communications
Flat panel for low-profile installation options

Comms-on-the move: secure, broadband connectivity for greater situational awareness and improved response times
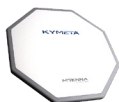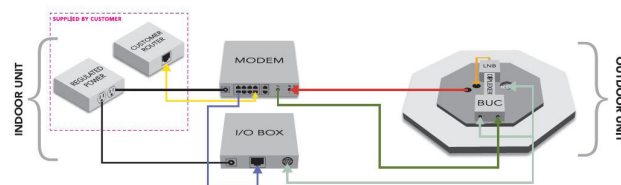
No moving parts for low maintenance connectivity

Remote updates

Tx/Rx on a single panel

Industry leading pointing and tracking ability

Powered by the proven ST Engineering iDirect X7 ModemRouter

Kymeta u7 Terminal

Antenna Specifications

Band	Ku
Antenna Type	Electronically scanned array
Polarization	Vertical and horizontal software defined
RX Frequency Range	11.4 – 12.4 GHz
RX Gain	33.0 dB
RX G/T	9.5 dB/K
TX Frequency Range	14.0 – 14.5 GHz
TX Gain	32.5 dB

Tracking

Tracking rate	>20°/second
Scan Angles	Theta up to 75° off broadside and Phi 360°
Accuracy	<0.2°
Mobile Tracking Accuracy	FCC compliant for 25.222 and 25.226
Tracking Receiver Type	Integrated DVB-S2

Mechanical

ODU Dimensions	L 82.3 cm x W 82.3 cm x D 16.5 cm (L 32.4 in. x W 32.4 in. x D 6.4 in.)
ODU Weight	21.1 kg (46.5 lb.)
ODU Mounting Interfaces	4 x M8 x 1.25 mounting standoffs; 0.95 cm (0.375 in.) deep
Max IDU Dimensions	W 44.5 cm x D 31.75 cm x H 9.06 cm (W 17.5 in. x D 12. 5 in. x H 3.57 in.)
Indoor Unit Weight	6.35 kg (14.0 lb.)

Environmental

ODU Temperature	Operating: -25°C to +55°C; Storage: -40°C to +75°C
ODU Ingress Protection	IP 66
ODU Shock/Vibration	IEC 60068-2-27 / MIL-STD-167-1A, MIL-STD 810G, IEC 60068-2-64, IEC 60068-2-57
IDU Temperature	Operating: -0°C to +50°C; Storage: -40°C to +75°C
IDU Ingress Protection	IP20
IDU Shock/Vibration	IEC 60068-2-27 / MIL-STD-810G

X7 Satellite Modem Specifications

Channel Technologies	DVB-S2/ACM outbound	Adaptive TDMA returns
Modulation	QPSK, 8PSK, 16APSK, 32APSK	BPSK, QPSK, 8PSK
Max. Symbol Rate	1 - 45 Msps	128 ksps - 7.5 Msps
Max. IP Data Rate	59.2 Mbps	16 Mbps
Spread Spectrum		Up to 7.5 Mcps (Spreading Factors: 2, 4, 8)
BUC Options	8W or 16W	
Networking Software	Evolution® or Velocity®	

Newtec ◄ iDirect