



MAC

Q-MAC Electronics Pty Ltd

Tactical Radios

Digital Encrypted Speech, Data and
Video over HF SSB





QM4091M HF SSB Digital Modem

- Digital Voice
- Digital Data
- Digital Video
- All Encrypted



QM4091M Modem



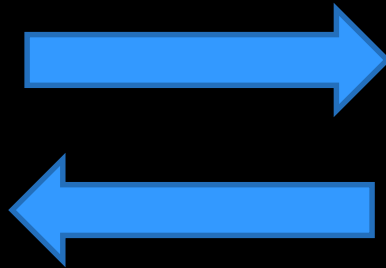
Standard Analog HF SSB Radio



Digital Voice



Encrypted Voice Communications





Digital Data

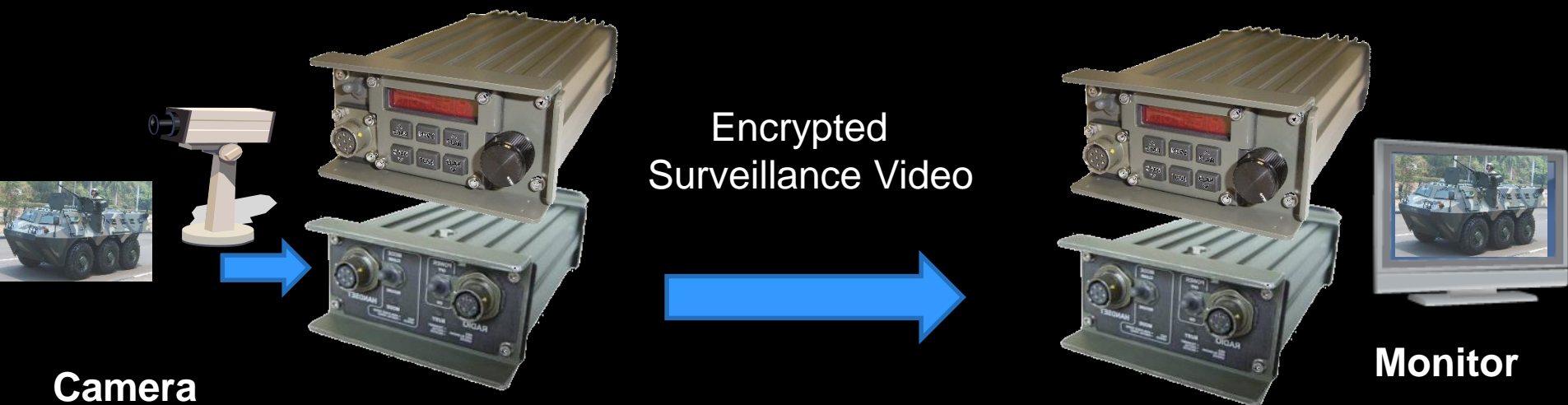


Encrypted Data
Communications





Digital Video over HF



Applications

- Remote Area Monitoring
- Surveillance

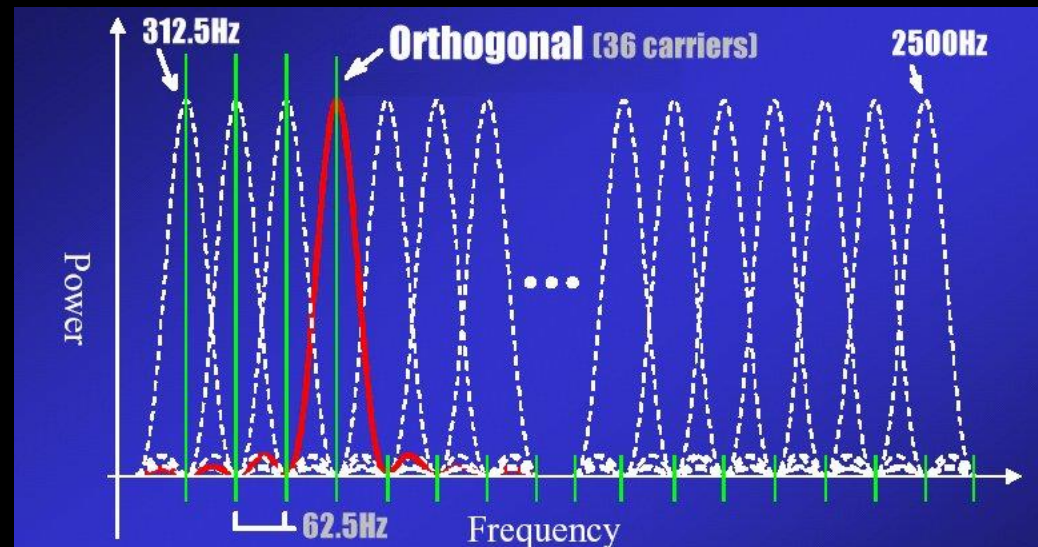
Video signals are captured to memory and sent as image. No PC is required just analog video in.



Technical Specifications

OFDM Modem

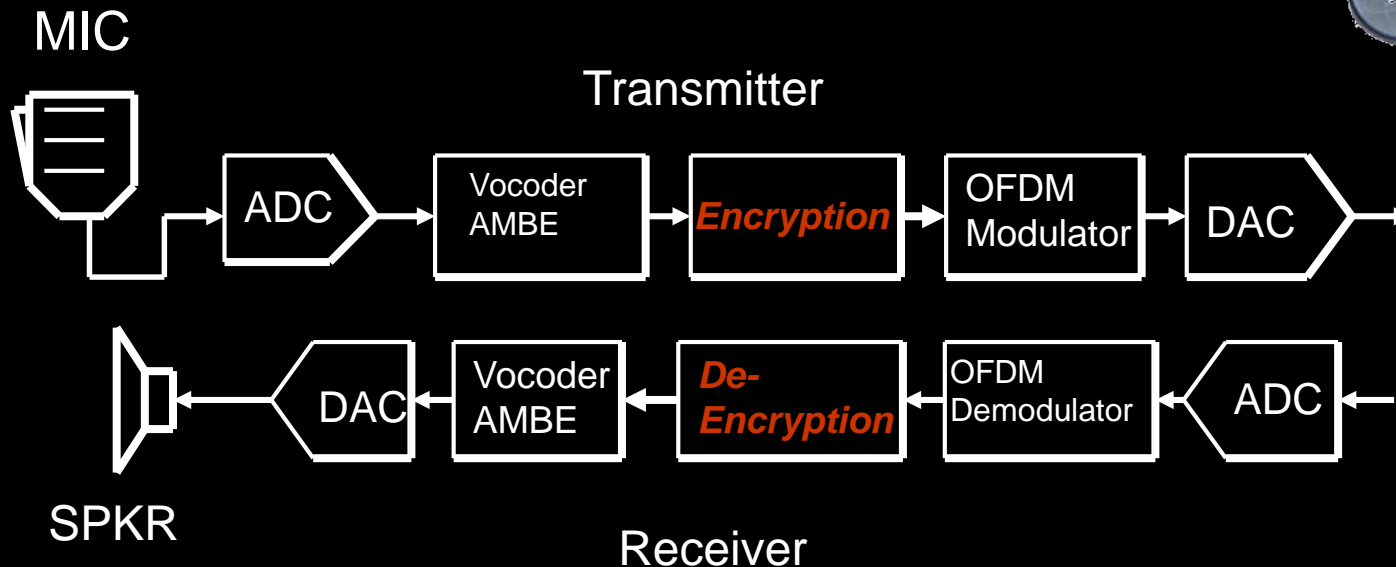
- 36 carriers DQPSK
- 280Hz ~ 2530Hz
- 50 - 3600bps
- AFC $\pm 125\text{Hz}$
- 1sec 3 tones Header ,
20msec OFDM frame
- 4msec Guard Interval





Digital Voice

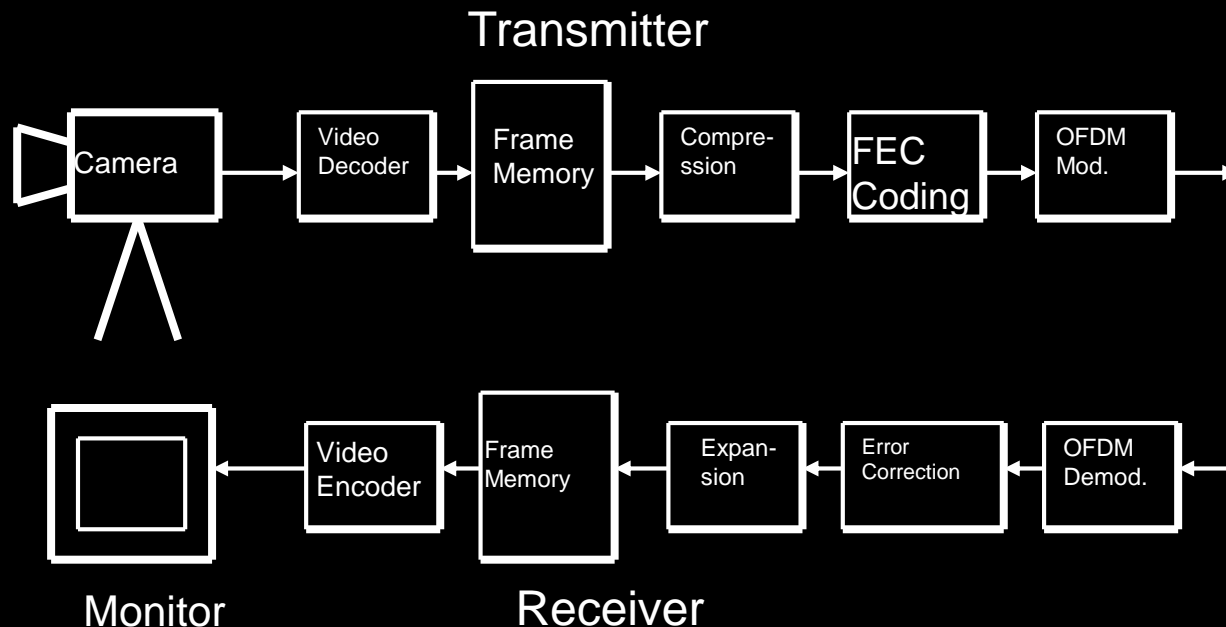
- Totally encrypted (2^{71} code based key)
- Excellent voice quality at low bit rates.
- Easy interface with HF-90 Radio
- Acceptable quality during fading signals
- Automatic detection of digital voice
- Compatible with HF-90 selective calling handsets





Digital Video

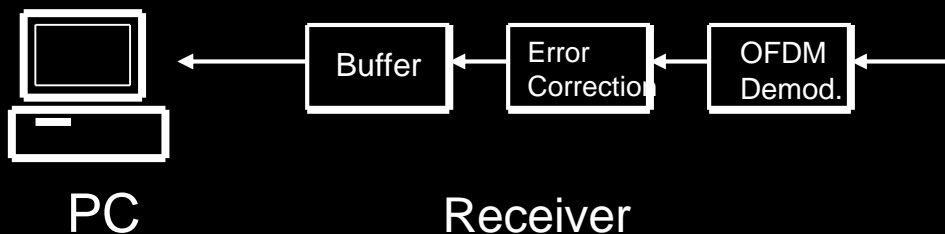
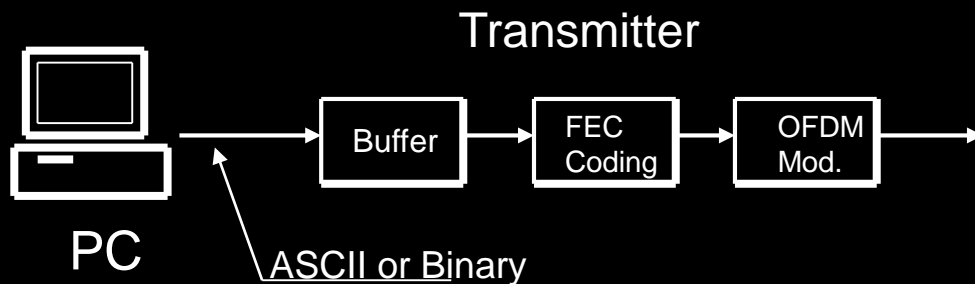
- Totally Encrypted
- Video Capture from the PAL/NTSC video source
- PAL/NTSC video output to Monitor (No PC required)
- Powerful forward error correction
- Flexible PC interface option for control of upload/download
- 368x240 with compression
- Auto detection of incoming picture





Data Transmission

- Totally encrypted
- Transmission of ASCII or Binary packets
- 2Kbyte maximum packet size
- FEC Vitabi and Reed/Solomon
- Auto Detection Data mode





Customer Benefits



- Simple to use
- Automatic detection of Voice, Video, Data
- Digital encryption with forward error correction (FEC)
- Robust in poor signal conditions
- Small Size
- Compatible with Q-MAC HF Radios and 3rd party products