

# RF NETWORKING SOLUTIONS

## EWA's Secure High Bandwidth RF Network Architecture Provides Solutions to Your Connectivity Requirements

Addressing Multiple Requirements with an Architecture that is Flexible and Scalable:

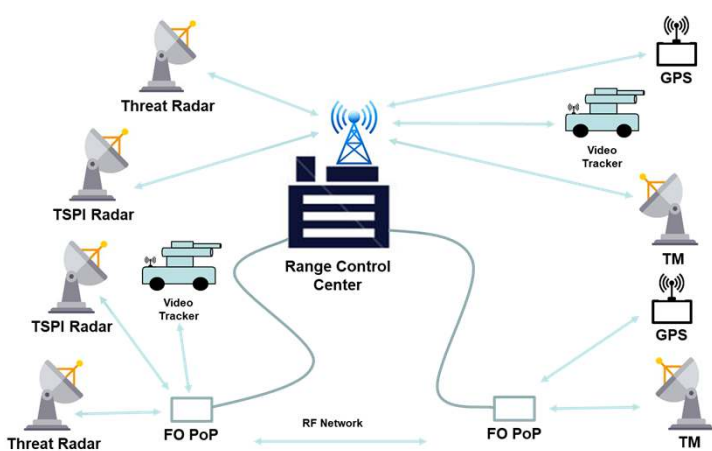
- Range Instrumentation Inter-connectivity
- Surveillance Systems Data Transport
- Range Calibration Systems

### Range Instrumentation

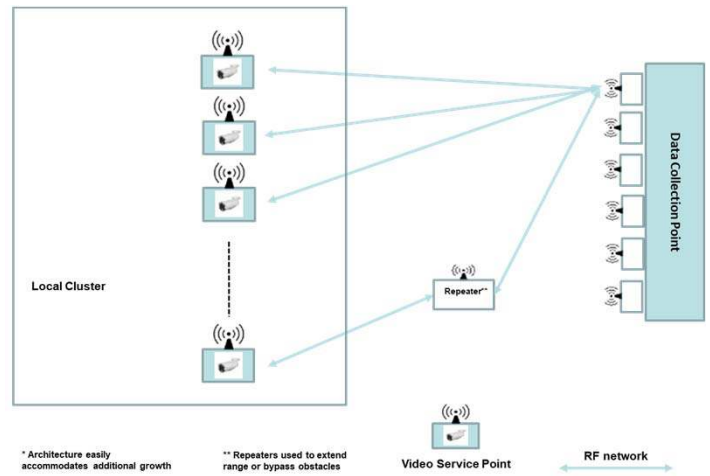
- High Bandwidth Bi-Directional Data Transport
- Highly Secure Encryption where needed
- 20 + Mile LOS Range at <1W Tx Power
- Flexible, Tailorable RF Features
  - Multiple Frequency Bands
  - Multiple Power Levels
  - Beam Forming
  - Built-in Spectrum Scanning and Monitoring
  - Remote and Local Reconfiguration of all RF Parameters
- COTS Hardware and Software
  - Minimizes Development Risks
- Easily integrated with existing Range Networks
  - RF and Terrestrial Networks
- Ultra Low Latency (0.7ms Average)

### Surveillance Systems Data Transport

- Secure High Bandwidth Data Transport
  - IP Over RF Based Architectures
  - 256 Bit Encryption Standard, Higher Levels Available
- Multiple Network Configurations
  - Self Healing, Flexible Network Topographies Increase Layout Options
- Low Power Consumption
- Self-Cooled
- Flexible RF Capabilities
  - Multiple Frequency Bands, Power Levels, Modulations
  - Built-in Spectrum Scanning and Monitoring to Avoid Interference
  - Supports High Quality Data Requirements



Sample Range Instrumentation Architecture



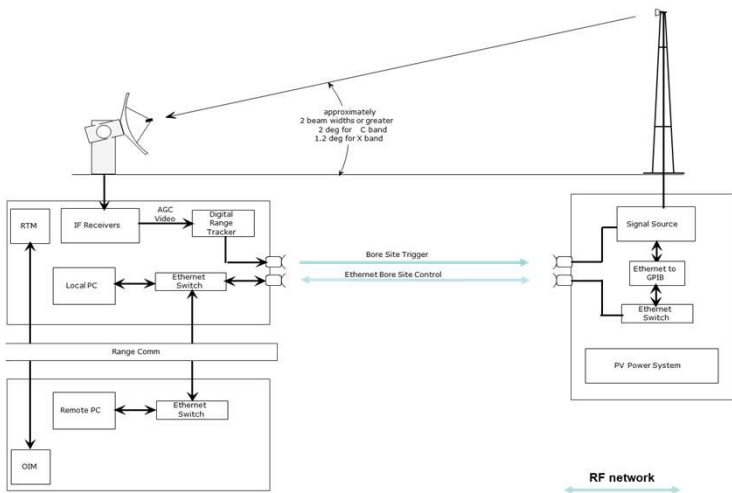
Sample Surveillance System Architecture Example #1

## EWA's Secure High Bandwidth RF Network Architecture Provides Solutions to Your Connectivity Requirements

EWA has the expertise, experience, and vendor relationships to provide integrated, secure, and highly capable RF Based Network solutions for a variety of requirements. We utilize current generation, state of the art COTS hardware and software to reduce development risks and partner with our customers to provide the tailored solution based on your needs.

### Range Calibration Systems

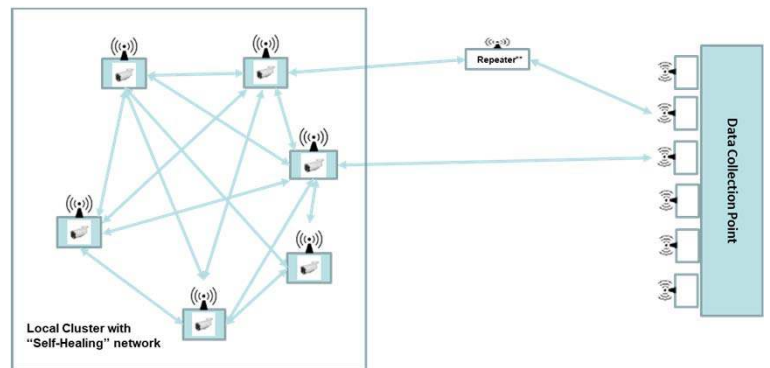
- COTS replacement of obsolete old approaches
  - Removes requirement for dedicated microwave systems
  - Significantly reduces cost and parts counts
- Spectrally efficient
  - Multiple radar systems can be supported by single, central site transceiver
- <1W Tx Power achieves 20+ mile range
  - Radios spec'd to 8W
  - 32W effective power with included beam forming
- Modernizes calibration communications at low risk, low cost



Calibration Application

### General Specifications

- RF Bands: 400MHz to 5875MHz
  - UHF, L-Band, Upper L-Band, Broadcast A&B, S-Band, C-Band, ISM Bands
- Channel Bandwidths: 5, 10, 20 MHz Standard, Others as needed
- Data Rate: 100+Mbps (Adaptive)
- Total Output Power : 1mW to 8W Variable
  - Up to 32W effective output power w/beamforming
- Input Voltage: 9-20 VDC
- Power Consumption: 4.8W-24W @ 4W Tx Power
- Ambient Temperature: -40° to +65° C
- Interfaces: User Selectable
- Advanced Compression and Modulation Techniques
- Techniques to deal with non-LOS Situations
- Custom Configurable GUI



\* Architecture easily accommodates additional growth

\*\* Repeaters used to extend range or bypass obstacles



Sample Surveillance System Architecture  
 Example #2