

# Challenges of Today's SWaP Optimized Terminals

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# Drivers for Integration Services

# Evolving Terminal Integration Complexities

- Terminal Innovations and Advancements
  - Need to take advantage of new capacity innovations driven by HTS, more efficient waveforms, mobility features
  - New terminal advances (i.e. phased array, electronically steerable antennas)
  - Drive for reductions in SWaP for portability and fast deployment
- Increasing demand for solutions for mobility markets and IoT
  - Speed of innovations is accelerating
  - New markets becoming accessible (Fixed: IoT and Mobile: land and air)
  - New satellite projects (GEO/MEO & LEO) and funding accelerate new entrants and time to market
- Require tighter integration with ground segment platforms
  - More support needed in completing the integration efforts

# Terminal Integration Support

- Supported many antenna manufacturers
  - Developed OpenAMIP as open standard between ACU and modem
  - Developed OpenBMIP standard for BUC manufacturers
- Complex integration
  - Provided technical integration support for OpenAMIP/ BMIP
  - Lab hub implementation assistance & testing support
  - Assistance with complete integration and test
  - Antenna certification program/ lab testing facilities



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PHASOR

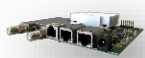
ThinKom

Sea Tel  
COBHAM

20+ antenna manufacturers  
implemented OpenAMIP

# Integrated Board Portfolio

- Full suite of integration boards used (primarily for mobility terminal solutions)



iQ 200



e150



CX700



CX780



980



e850mp



950mp



900

- Strong, longstanding interest from the integrator community

**Honeywell**

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COBHAM

**SATCUBE**

**KVHI®**

**SATPRO**

- New integration opportunities with expanded portfolio (iQ 200, iQ 800)

# Terminal Integration Service Offering

# Terminal Integration Services Offering

Supporting the Integrator through all phases of design, integration, test, and certification of a complete satellite terminal for fixed and mobility markets

1. Discovery

2. Design &  
Implementation

3. Integration  
& Test

4. Terminal  
Certification

# 1. Discovery and Consultation Phase

- Initial consultation phase to understand goals and requirements
  - Documentation is provided with existing reseller agreement or NDA
  - Answer questions related to the deliverables of integration services
- Provides insight into the scope of integration work
  - Evaluate the Terminal Integration Services available and what you needed from ST Engineering iDirect
  - Statement of Work (duration) is finalized
  - Statement of Work (standard version issued through SFDC via the Quotation)



# 2. Design and Implementation Phase

- Technical Consulting Services
  - Terminal design advise
  - Explain SW and HW architecture of iDirect remotes
- Documentation Explanation
  - STEP, CAD drawings
  - Integration Guide
  - Interface Control drawings, etc.
- Design
  - Recommendations to improve products and integrations
  - Aero integrators – Real skew angle
  - Maritime / Fixed – Acquisition recommendations
  - GX integrators – understanding global signaling channel



# 3. Integration and Testing Phase

- Network/Equipment Set Up
  - Provide assistance in configuring iDirect networks
  - Optional access to an iDirect test network (Herndon)
- Test
  - Acceptance testing support
- Debug
  - Help with debugging issues in your implementation (if any)
  - Coordinate with PLM/Engineering if any bugs are reported



# 4. Terminal Certification Phase

- Assist with Self Qualification
  - **Review** OpenAMIP self qualification test results and provide feedback
  - Award **certification**
  - You will be **acknowledged** on ST Engineering iDirect's website of self certification
- Assist with Satellite Operator network certification
  - Review certification success criteria
  - Help with debugging issues in your implementation
  - ST Engineering iDirect can prepare you for certification in operator network



# Access to Lab Networks

- Provide access to a lab IF network in weekly increments
  - Access to an IF network running an iDirect supported release with desired downstream and upstream symbol rates and desired remotes
  - Install integrator's terminal equipment in ST Engineering iDirect's Lab
- Provide ability to connect integrator's equipment remotely
  - Provide access details to login and remotely access the network
  - Provide address plan to navigate the IF network
  - Provide contact information for people to address any issues or answer questions related to network access and configuration



# Benefits

- Accelerate time-to-market
  - Dedicated engineers for contracted period of time
  - Leverage engineering experts who designed the hardware, software and interfaces
  - Defined escalation path for software enhancements
  - Optional access to the ST Engineering iDirect lab networks
- Customized Offerings
  - Option to customize statement of work to individual needs (if applicable)
  - Only pay for the services/time that you need and consume
- Expand Market Reach
  - Qualified integrators will be listed on ST Engineering iDirect website
  - Leverage iDirect marketing reach (promotions through case studies, profiles, social media promotions, etc.)

# Thank You