



IRIDIUM CERTUSSM

SATELLITE COMMUNICATIONS REINVENTED

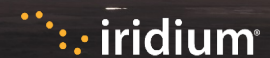
Harvey Hipperson

Director of Business Development

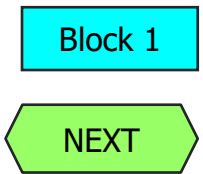
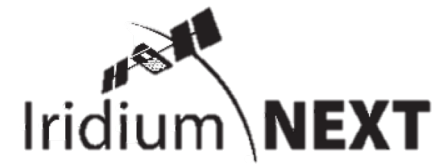
1 LAUNCH TO GO...

Launch 8 – Final Launch

- 10 satellites into plane 3 to complete the Iridium NEXT Constellation – Expected launch date Nov 2018

The Iridium logo, consisting of a cluster of seven yellow dots of varying sizes arranged in a circular pattern, followed by the word "iridium" in a lowercase, sans-serif font.The Iridium logo, consisting of a cluster of seven yellow dots of varying sizes arranged in a circular pattern, followed by the word "iridium" in a lowercase, sans-serif font, and the tagline "Everywhere" in a smaller, lowercase, sans-serif font below it.

CONSTELLATION MAP – POST L7



#FLAREWELL



Iridium NEXT

Achieving a
successful update
to our network



Iridium Certus

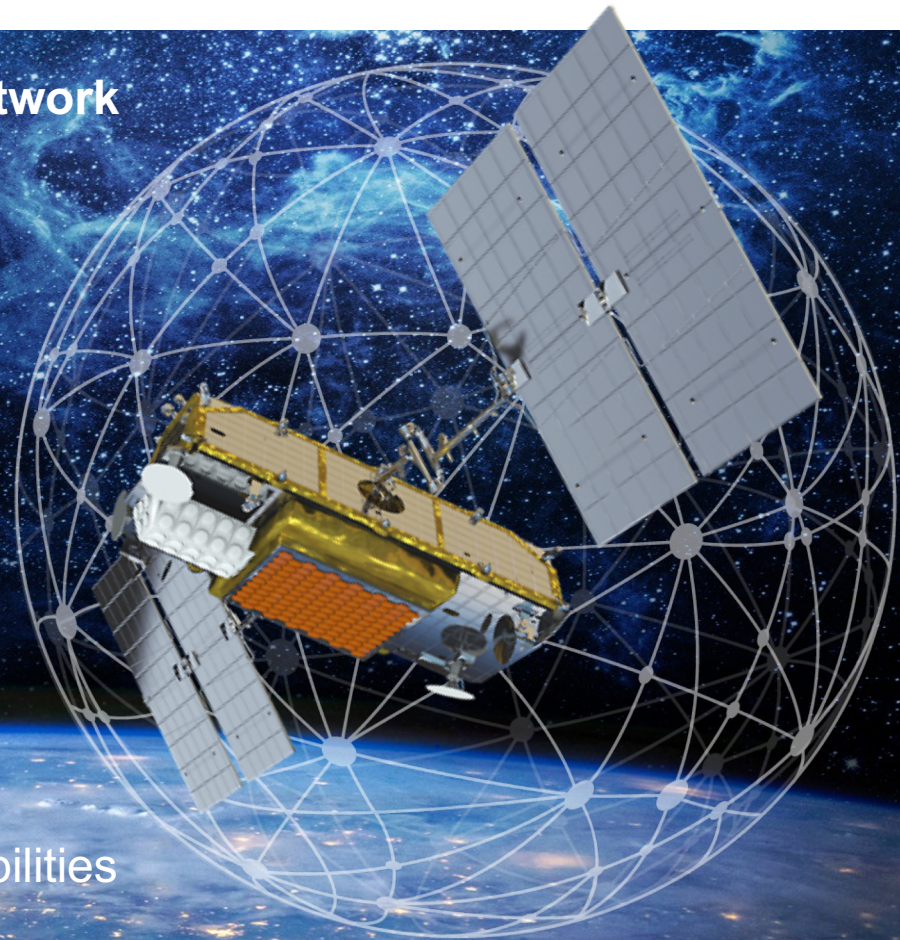
Expanding our
capabilities &
competitiveness



WHAT IS IRIDIUM NEXT?

Iridium's next-generation LEO satellite network

- Comprehensive ~\$3 billion program
- Fully backwards compatible with existing network and devices
- Retains LEO architecture with 66 new operational satellites, with in-orbit spares and ground spares
- Smooth network transition and customer continuity
- Scheduled deployment through 2018
- Significantly expanded capacity and capabilities



EVOLUTION TO IRIDIUM NEXT

Significant improvement in voice quality and data speeds with Iridium NEXT

Current Constellation	Iridium NEXT Capabilities
Voice: 2.4 Kb/s	Voice: 4.8Kb/s (HD) and 2.4Kb/s (SQ)
Short Burst Data® (SBD®)	Short Burst Data® (SBD®)
LBT Data: Circuit switched 2.4 Kb/s Up/Down	Iridium NEXT LBT Data: Circuit switched 2.4 Kbps < 22 < 88 Kbps
Broadband: Iridium OpenPort® < 134 Kbps IP data	Broadband: < 88 Kbps IP data < 176 Kbps IP data < 352 Kbps IP data < 704 Kbps IP data < 1408 Kbps IP data
Supports Current “Block 1” Terminals	Supports Current “Block 1” <u>and</u> New Terminals

Iridium CertusSM Land

Manpack



Portable



Vehicular /
Fixed



Iridium
Certus **100**

Iridium
Certus **200**

Iridium
Certus **350**

Iridium
Certus **700**

Iridium
Certus **1400**

Antenna

Height & Diameter



TBD

~2.5 cm ~7.6 cm

~6.3 cm ~7.6 cm

~7.6 cm ~30.5 cm

~10 cm ~35.5 cm

Product Types**

- Manpack
- Portable
- Vehicular

- Vehicular
- Fixed

- Portable
- Vehicular
- Fixed

- Portable
- Vehicular
- Fixed

- Vehicular
- Fixed

Telephony

Number of Voice Lines

x 2

x 3

x 3

x 3

x 3

IP Data, Background

All best-effort, maximum speeds

Download Rate

88 kbps

176 kbps

352 kbps*

704 kbps

1408 kbps

Upload Rate

88 kbps

176 kbps

352 kbps*

352 kbps

528 kbps

IP Data, Streaming

Upload/Download Rate

56 kbps

128 kbps

256 kbps

256 kbps

256 kbps

Applications**

Simultaneous usability

- Push-to-Talk
- Situational Awareness
- Email / Messaging
- Voice-over-IP

- Push-to-Talk
- Situational Awareness
- Email / Messaging
- Voice-over-IP

- Video Conferencing
- Video Broadcasting
- Web Browsing
- Enterprise Apps

*134 kbps on Iridium legacy satellites

**Depending on manufacturer implementation

The Iridium Certus Land Product Portfolio is being developed by third-party manufacturers and as such, is indicative and subject to change. Services are determined by partner implementation.

IRIDIUM CERTUS TERMINAL MANUFACTURERS

THALES

COBHAM

THALES MISSIONLINK FOR IRIDIUM CERTUS

Feature Highlights:

- WiFi hotspot for up to 5 devices
- 3 - Ethernet ports
- 3 - High quality voice lines
 - Voice calls with smartphone app, SIP phone or up to 2 Plain-Old-Telephone-Service (POTS) lines
- Location tracking
- Firewalls and usage limits
- External WAN and automatic fail-over from cellular or VSAT
- Radio-Over-IP interface for LMR radios



Offers more value than Inmarsat BGAN at competitive price.

THALES VESSELINK FOR IRIDIUM CERTUS



Antenna size & weight

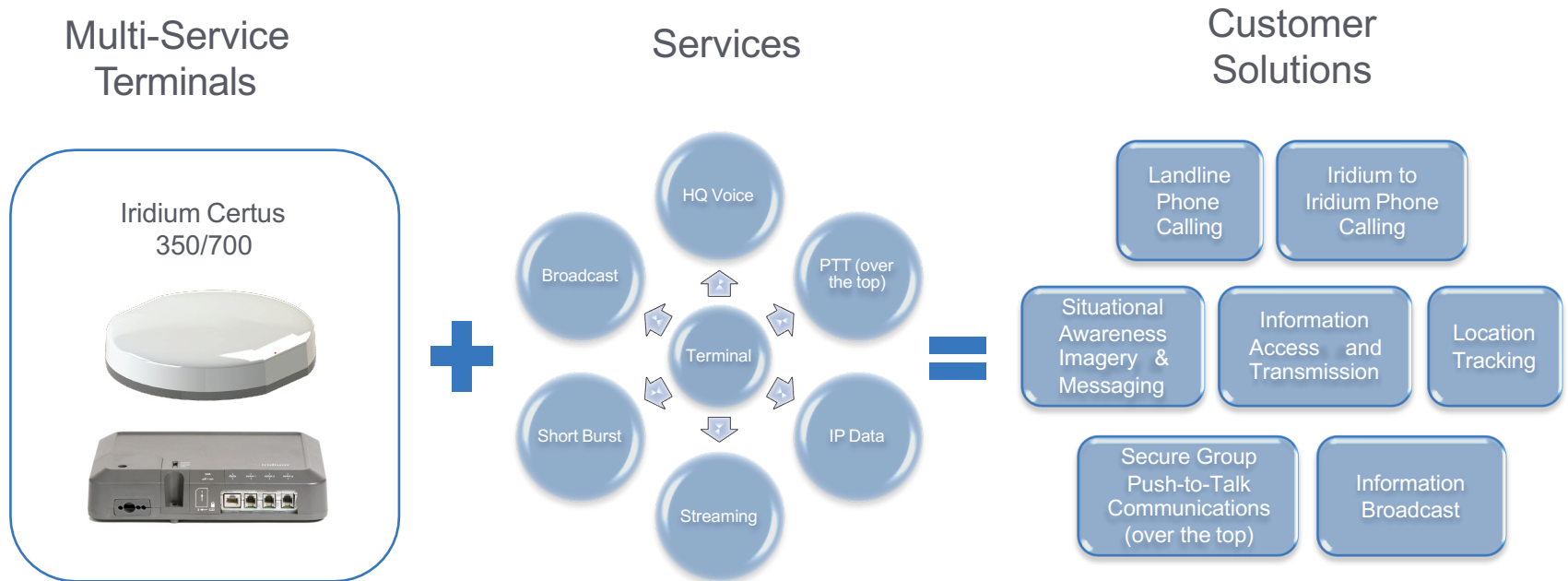
- 35 cm D x 22 cm H
- 3.2 Kg
- No moving parts - Omni directional antenna, Zero on-going annual maintenance cost on antenna
- One cable, no rewrap, thus no loss of signal
- One man install, low cost, no crane
- IP 67 rated antenna
- Low shipping cost to vessel

- Data speed: Now 352/352kbps shared IP; Expected 2H-'19 upgrade to 704/352kbps, after firmware upgrade and small fee
- Streaming IP now 14kbps; later up to 256kbps
- 3 Circuit Switched Voice Lines, VoIP additional
- Pair with cellular modem, for least cost routing
- Pair with VSAT network, for faster speed
- WIFI 802.11b/g included
- Connect up to 12 IP devices
- Rich user interphase PC, Tablet, Smart Phone
- MADE IN USA



IRIDIUM TERMINALS, SERVICES AND SOLUTIONS

- Iridium Certus will provide a common platform of services and customer solutions through multi-service terminals that will deliver more cost-effective and integrated solutions than what exist today.



POLAR RESEARCH USE CASE

- Iridium Certus will enable remote researchers to remain connected to co-workers and operation centers to improve productivity, safety, and reliability of service



© Rolls-Royce

SUMMARY

IRIDIUM WORKS EVERYWHERE.

Delivering to the Land and Sea markets the satellite communications they have always needed.

- New Satellites
- New Technology
- LEO Constellation
- New Ground Infrastructure
- World-class Manufacturers
- Choice
 - Coverage
 - Cost
 - Capability

