Intercom Electronics, Inc.

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2. Business Area
3. Major Customers / Programs
4. Major products developed by Intercom
5. Line Cards as of Representative / Distributor
## Contents

1. Overview  
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5. Line Cards as of Representative / Distributor
1. Overview

- As of an Engineering Company serving Military, Aerospace & Industry application market fields, InterCom company is providing a total solution for customers’ convenience.

- Our major applications are Weapon Systems, Avionics, Satellites, Simulation Systems, Information Technology and etc.

- Founded in 1999.

- Representative agreement with Vectron in June 2010.

- Number of employee : 10

- 2013 Booking : U$5.5 million
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2. Business Area

System Integration business

- Weapon systems, Avionics, Satellites, Information Technology, Simulation Systems using Hardware of VME / cPCI / PCI / PMC / PC104+ / Embedded Module and Software of Windows, VxWorks, RTOS, Linux and etc.

Components business

- RF/Microwave components, DC/DC converters, Power Supply, EMI Filters, Avionics Controllers
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3. Major Customers / Programs

**Military Customers**

- Government Institute : Military Program Leader
- LIG Nex1 Co., Ltd
- Hanwha THALES
- Hanwha Techwin
- KAI KOREA AEROSPACE INDUSTRIES, LTD.
- FOOSUNG
- FIRSTEC
- DOOSAN
- Doosan DST
- Huneed
- HYUNDAI
- Rotem
- Hanwha

**Space & Commercial Avionics Customers**

- KAI KOREA AEROSPACE INDUSTRIES, LTD.
- KARI Korea Aerospace Research Institute
- KAIST Korea Advanced Institute of Science and Technology
3. Major Customers / Programs

• Korea Major Military Programs

ADD (Agency for Defense & Development)
Government Institute Program Leader for military programs

- Korea Aerospace Industries (KAI)
  - T-50 Jet Trainer
- Hanwha Thales
  - K.H.P. (Korea Helicopter Program)
- K.H.P. (Korea Helicopter Program)
- K21 Infantry Vehicle (scopes)
- K.F16 Licensed Production

- Hanwha
  - MLRS

- Doosan DST
  - Missile I.N.S.

- LIG Nex1
  - Missile S.I.

- ROTEM
  - K2 Tank

- K2 Tank (scopes)
- Missile Actuator
- MSAM
- Torpedo
- K21 Infantry Vehicle
- UAV
- K21 Infantry Vehicle
- LIG Nex1
  - Missile S.I.
- Torpedo
- K21 Infantry Vehicle
- UAV
- K21 Infantry Vehicle

Korea Major Military Programs

- Hanwha
  - MLRS

- Doosan DST
  - Missile I.N.S.

- LIG Nex1
  - Missile S.I.

- ROTEM
  - K2 Tank

- K2 Tank (scopes)
- Missile Actuator
- MSAM
- Torpedo
- K21 Infantry Vehicle
- UAV
- K21 Infantry Vehicle
3. Major Customers / Programs

- Korea Space Programs

KAIST
(Small Scientific Satellites)
Academic College

STSAT-3

KARI
(Korea Aerospace Research Institute)
Government Institute

Satellite Programs
Smart U.A.V.
Launching Rocket

Weather Satellite
KOMPSAT
KSLV-1

KAI / Samsung
Thales / Korean Air

Satrec Initiative
(Private Company)
Satellite export

Various Foreign Satellites
Dubai-Sat
Turkish-Sat
3. Major Customers / Programs

A.D.D. (Agency for Defense Development); Government Agency

- Maritime Underwater Weapon System

- Ground Weapon System

- Torpedo Acoustic Countermeasure (TACM)

- 155mm self-propelled howitzer, K9

- Quadruped Legged Robot
3. Major Customers / Programs

A.D.D. (Agency for Defense Development); Government Agency

- Information Electronics Warfare
  - ALR-200K (LYNX) Electronic warfare support equipment

- Aircraft Missile Weapon System
  - Chunma Missile System (K-SAM)
Korea Aerospace Research Institute (KARI) is playing a key role in the satellite and launch vehicle areas of the nation’s space development.


The KOMPSAT-5 project is ongoing, and remote sensing research and space environment tests are also being carried out.

In the launch vehicle area, KARI developed single-stage and two-stage scientific sounding rockets in 1993 and 1998 respectively.

The KSR-III with liquid propellant engine system was launched successfully in 2002. Currently, KARI is developing Korean-satellite launch vehicles and the Naro space center.
3. Major Customers / Programs

K.A.R.I. (Korea Aerospace Research Institute)

Korea Space Launch Vehicle Program

Korea Aerospace Research Institute (KARI) in accordance with the National Space Program aims to develop its own space launch vehicle and is conducting ongoing research and development. KARI already successfully carried out the development of Korea Sounding Rockets (KSR-I, KSR-II, KSR-III). Based on them, KARI has been developing Korea’s first space launch vehicle KSLV-I or NARO, since 2002 to deliver a 100kg-class satellite into a Low Earth Orbit since 2002.

KARI launched KSLV-I in 2009, 2010 and on January 30, 2013. In addition, since 2010 KARI has been developing its own KSLV-II to put a 1.5 ton-class application satellite into a 600~800km Sun-Synchronous Orbit on the basis of the technical achievements and experiences of KSLV-I.

KARI hopes that the KSLV program will be a steppingstone for Korea’s entrance into the international market of launching service.
3. Major Customers / Programs

K.A.R.I. (Korea Aerospace Research Institute)

- Canard Aircraft (The Firefly)

- Smart UAV Development Program
K.A.R.I. (Korea Aerospace Research Institute)

Korea Helicopter Technology Advancement Program

The dual-use components for KHP development
3. Major Customers / Programs

- **Missiles products**
  - PEGASUS (Short-Range Surface-to-Air Guided Missile)
  - MSAM (Middle Range Surface to Air Missile)
  - KGGB (Air-to-Surface GPS/INS Guided Bomb)
  - C-STAR (Ship-to-Ship Missile)
  - SAAM (Surface-to-Air Anti-Missile)
  - HyeonGung (Mid-Range Infantry Guided Missile)
  - 2.75” Guided Missile
  - RAM (Rolling Airframe Missile)
  - Chiron (Portable Surface-to-Air Guided Missile)
  - K-SAM (Mid-Range Surface-to-Air Missile)
  - Tactical Ship-to-Surface Missile (Guided Missile)
3. Major Customers / Programs

**LIG Nex1**

- **Radio products**
  - TMMR (Tactical Multi-Band Multi-Role Radio)
  - PRC-999K FM Radio
  - JTDLS Korean Joint Tactical Data Link System
  - BTCS (Battalion Tactical Command System)
  - Tactical Data System Tactical Data System (TDS) for minesweepers

- **Electronic Warfare System**

- **Mobile Satellite Communication System**
3. Major Customers / Programs

• Radar products
  – Low-Altitude Surveillance Radar (TPS-830)
  – KSS-III (Korean submarine) Navigation Radar System
  – Next-Generation Local Air Defense Radar
  – Air Force Long-Range Surveillance Radar
  – TA/FA-50 (Korean Jet Trainer & Fighter) Radar
  – Next Generation Artillery Locating Radar
  – Ulsan-I Class Surveillance Radar
  – Surveillance Radar for Patrol Killer Guided Missile
3. Major Customers / Programs

LIG Nex1

- Torpedo products
  - White Shark (Underwater Guided Missile Mounted With a Tracking System)
  - Red Shark (Anti-Submarine Guided Missile)
  - Next-Generation Heavyweight Torpedo
  - Submarine-Launched Mobile Mine
  - Blue Shark (Lightweight Torpedo)
  - Self-propelled Decoy
3. Major Customers / Programs

• Other products
  – Ulsan-I Class Hull Mounted Sonar
  – UAV
  – Robotics (Robot Soldier)
  – Surveillance Sensor Network
  – Next Generation Satellite Communications System
3. Major Customers / Programs

K.A.I. (Korea Aerospace Industries)

**FIXED WING**
Improve Korean aviation's independent technology.
- T-50
- IKT-1
- KC-100

**ROTARY WING**
Create a myth of exports via development of the Korea-type helicopter.
- KUH SURION
- LAH, LCH

**UAV**
Expand the scope of business to the domestic and overseas unmanned aerial vehicle markets based on KAI's technology and experience.
- UAV

**AIR FRAME**
Prepare for penetrating into the civil completed plane market based on a development ability.
- BUSINESS AIRBUS
- BUSINESS BOEING
- OTHER

**UPGRADE & MODIFICATION**
Perform a remodelling and improvement business for the world-grade best performance improvement.

**MRO BUSINESS**
Implement maintenance and operation of aircraft based on a stable aircraft maintenance ability.

**TRAINING SYSTEM DEVELOPMENT**
Provide an optimum and efficient training system via the world standard-oriented training system.

**SATELLITES DEVELOPMENT**
Realize 100% localization as the Korea's only and single satellite system development company.
3. Major Customers / Programs

K.A.I. (Korea Aerospace Industries)

- **Fighters & Trainers**
  
  ![T-50](image1)
  ![T-50B](image2)
  ![TA-50](image3)
  ![FA-50](image4)

- **Helicopters**
  
  ![SURION-ASW/ASuW Version](image5)
  ![SURION-Amphibious Version](image6)
  ![SURION-MEDEVAC Version](image7)
  ![SURION-Forest Version](image8)
  ![SURION-Fire fighter Version](image9)

  - Anti-submarine / Anti-ship mission
  - Rapid Amphibious landing operation
  - Medical support and rapid evacuation
  - Forest observation and multirole cargo transport
  - Rescue, fire fighting mission
3. Major Customers / Programs

K.A.I. (Korea Aerospace Industries)

- Satellite Development & Manufacturing

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<th>2011~14</th>
<th>2015~20</th>
<th>2021 ~</th>
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<tr>
<td>INFRA CONSTRUCTION</td>
<td>EXPAND THE CAPABILITY</td>
<td>GLOBALIZATION/DIVERSIFICATION</td>
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</table>

- 3A BUS S1
- Geo-KOMPSAT 2A/2B
- GEO-STATIONARY SATELLITE
- AIRCRAFT ELECTRICAL UNIT
- LOCALIZATION OF GEO-KOMPSAT, MILSATCOM
- TOTAL SOLUTION PROVIDING WITH CONCEPT OF NETWORK BATTLE FIELD
- PRIME CONTRACTOR, PURSUING EXPORT
- GEO-KOMPSAT BUS SYSTEM INTEGRATOR
- ENTERING THE EXPORT MARKET FOR SATELLITE
- KOMPSAT-7 EO
- KOMPSAT-6 SAR
- KOMPSAT-7 EO
- SURVEILLANCE & RECONNAISSANCE SYSTEM AND COMMAND & COMMUNICATION SYSTEM

Satellite Development & Manufacturing
3. Major Customers / Programs

K.A.I. (Korea Aerospace Industries)

- Helicopters
  - LAH LIGHT ARMED HELICOPTER
  - LCH LIGHT CIVIL HELICOPTER

- UAV
  - RQ-101
  - RQ-101 UPGRADE
3. Major Customers / Programs

Hanwha Thales

• Optronics
  - EOTS (Electro-Optical Tracking System) for UAV
  - HFLIR (Electro-Optical Tracking System for Helicopter)
  - FALCON (KPSAM Thermal Imager Sight)
  - TAS-21 (Target Acquisition System)
  - TAS-815 (Long Range Target Acquisition System)
  - LRF (Laser Range Finder)
3. Major Customers / Programs

Hanwha Thales

• Radars
  – MSAM MFR (Middle-range Surface to Air Missile Multi Function Radar)
  – KSAM STS (Search & Tracking System for KSAM)
  – Short Range Tracking Radar for Ships
  – GRS (Ground Surveillance Radar)
  – Plane Array ABF (Adaptive Beam Forming) Device
  – Active Array Radar Basic Model
3. Major Customers / Programs

Hanwha Thales

• Naval Combat Management System
  – NS ICMS (Naval Shield Integrated Combat Management System) for KDX-II
  – NS ICMS for LPH
  – NS ICMS for PKG (Patrol Killer)
  – NS ICMS for FFX
  – NS ICMS for Next Generation Landing Ship (LST-II)
  – NS ICMS for KSS-III
3. Major Customers / Programs

Hanwha Thales

- Command Control & Communication System
  - TICN (Tactical Information Communication Network)
  - JTDLS (Joint Tactical Data Link System)
  - MILSATCOM (Military Satellite Communication System)
  - Army Tactical C4I for Rear Area
  - High-Speed Radio Transceiver
  - Spider Network (Various kinds of small radios)
3. Major Customers / Programs

- Avionics/Electronic Warfare System
  - Tac Elint Pod (Tactical Electronic Intelligence Pod)
  - Naval Patrol Plane (P-3C) Radar
  - EO/IR system on Lynx helicopter
  - KUH (Korea Utility Helicopter)
  - KFX (Korea Fighter Aircraft)
  - Korea Attack Helicopter
  - T-50 Fighter
  - KT-1 propelled trainer
  - UAVs
3. Major Customers / Programs

Samsung Techwin

- Artillery System

**K9 Thunder is the world-class Self-propelled Howitzer developed with our own technology.**

K9 Thunder, with the perfect ability, secures various strong-point defenses and has great fire power. K9 has an increased rate of fire to provide fast and concentrated fire power in real time and after firing, it offers rapid displacement with high mobility and survivability.

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**K10 ARV is the world first fully automatic robotized ARV that supplies ammunition to K9 Thunder.**

Developed with our own domestic technology, K10 Ammunition resupply vehicle is a robotized equipment with fully automated control system that moves to the firing position after loading the ammunition stored in the ammunition dump or on the truck, to resupply it to K9 Thunder.
3. Major Customers / Programs

• Artillery System

**Samsung Techwin**

*K77 FDCV commands and controls fire mission rapidly with accuracy to K9 Thunder.*

Artillery Fire Direction Center Vehicle has a proper mobility and survivability needed in the modern warfare and self propelled howitzer and logistical support systems are equally applied. Therefore, K77 can continuously command fire mission in any circumstances such as receiving fire mission while moving in counter battery or CBR battle.

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**K55A1 Self-propelled Howitzer is a performance improvement of in-service K55 self propelled howitzer to meet future operational environment.**

Retrofitting many improved technologies to the in-service K55, K55A1 SPH is equipped with the same fire control system, navigation system and automatic gun laying system of the K9 Thunder and improved the rate of fire, the reactivity and the survivability.
3. Major Customers / Programs

Samsung Techwin

- Artillery System

K56 ARV is an automatic tracked vehicle to supply ammunition to K55A1 Self-Propelled Howitzer.

K56 Ammunition resupply vehicle is a tracked vehicle with fast, precise and continuous ammunition supply to support combat power and to secure military strength capability of K55A1 Self-propelled howitzer.
3. Major Customers / Programs

Doosan DST

• Various kinds of Launchers

Surface-to-Surface Missile Launcher
The surface-to-surface missile launcher was first developed in the 1980’s and currently is deployed to the Korean military. Nicknamed a “God Protecting the North”, the Hyeon Mu surface-to-surface missile launcher was developed and deployed to the Korean military.

Torpedo Tube
KMK32 MOD5, a light weight torpedo launcher developed and manufactured by Doosan DST is currently in use by the Korean Navy.

Ship-to-Ship Missile Launcher
It is the launcher system for ship-to-ship missiles with a precise attack capability against target ships far beyond up to 150km. The system developed and manufactured by Doosan DST is currently in use by the Korean Navy.
3. Major Customers / Programs

Doosan DST

Composite Ground Navigation System
Mounted in the K21 infantry fighting vehicle and the XK2 next generation main battle tank, the system provides navigational data such as vehicle position, speed, azimuth and posture. The navigation system features command and control functions interfaced with the C4I system, providing improved firing accuracy and enhanced firing control capability.

Inertial Navigation and Guidance Unit
The inertial navigation and guidance unit controls the navigation, guidance and position of space satellites for entry to the target orbit.

Inertial Navigation System for Railroad Cars
The inertial navigation system for railroad cars provides the information regarding position and location information needed for the maintenance of railroad infrastructure.
3. Major Customers / Programs

Doosan DST

**K21 Infantry Fighting Vehicle**
Doosan DST's K21 infantry fighting vehicle is recognized as a major contribution to drastically improving the Korean military's operation execution capability in future battlefield environments.

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**Korean Infantry Fighting Vehicle**
The Korean infantry fighting vehicle, offering armor protection and mobility to infantry, is the key equipment for the successful mechanized infantry operation in any battle field environment.

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**Various Armored Vehicles List**
- Recovery vehicle
- NBC reconnaissance vehicle
- 40mm Turret vehicle
- Mortar carrier
- Command post vehicle
- Smoke generation vehicle
3. Major Customers / Programs

**Doosan DST**

- **Air Defense System**

  **Bi Ho, 30mm Self-propelled Anti-Aircraft Gun System**
  
  Bi Ho, a 30mm self-propelled anti-aircraft gun system, is currently in actual use by the Korean military. It will greatly help enhance air defense in countries that require low altitude anti-aircraft weapon systems.

  ![Bi Ho Image]

  **Chun Ma, Surface-to-Air Missile System**
  
  Chun Ma, Korea’s first self-propelled surface-to-air missile system is an innovative guided weapon system that enhanced the air defense of the Korean military significantly. Along with Bi Ho, it has greatly improved the air defense of the nation.

  ![Chun Ma Image]
3. Major Customers / Programs

**Firstec**

- Avionics products

**T-50**
- Simulator
- Full Scale Air Frame Structure Test
- Cockpit Panel

**KUH**
- Control Display Unit
- Combined System
- Search Light
- Landing Light
- Throttle Quadrant System
- Fire Extinguishing System
- Air Data System
3. Major Customers / Programs

Firstec

- Aerospace Weapons
3. Major Customers / Programs

Firstec

- Guided Weapons
3. Major Customers / Programs

- Guided Weapons

Firstec

- Ship-to-ship Missile
- Korean Anti-submarine Missile

Guidance Control Units
Actuation System

Actuation System
Control Cable
Valves
3. Major Customers / Programs

- Ground Weapons

**Firstec**

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<tr>
<th>K-9</th>
<th>Driver Panel Unit</th>
<th>Driving System</th>
<th>Speed Sensor Kits</th>
<th>Slip Ring</th>
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</thead>
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<tr>
<td>K-10</td>
<td>Driver Panel Unit</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>K-55</td>
<td>Electrical Kits</td>
<td>Driver Panel Unit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Major Customers / Programs

Firstec

- Maritime Weapons

- **76mm Warship Guns**
  - Rocking Arm Assembly
  - Safety Firing Gear Assembly

- **Hand Fire Launch Equipment**
3. Major Customers / Programs

Firstec

- Maritime Weapons

Submarine
- Deceiving system against torpedo
- Signal Ejector

Minelayer Ship
- Mine laying system
- Mine laying Controller
3. Major Customers / Programs

Firstec

- Unmanned System
3. Major Customers / Programs

Firstec

- Unmanned System
3. Major Customers / Programs

- **Missile Applications**

- **Telemetry (Remote Measurement Control)**:
  - Graphic Compression Module
  - Communication Signal Processing Module
  - MIL-STD-1553B Interface Module
  - S-bandwidth Receiver & Antenna Module.

- **Command Link (Command TX/RX Control)**
  - Decoder Module
  - BEACON Module (C,X bandwidth)
  - UHF receiver module
  - Antenna Module
3. Major Customers / Programs

Danam Systems

• **Ground System**
  - Ground System for Korea Airforce T-50 Jet Fighter
  - UHF Transmit system
  - X-band emergency command transmit system
  - Test Equipment System

• **Custom RF Module (Command TX/RX Control)**
  - S, UHF bandwidth Transmitter & Receiver
  - S,X bandwidth SSPA
  - S,C,X bandwidth Transponder
  - RF module

• **Custom RF Module**
  - Telemetry Antenna
  - GPS Antenna
3. Major Customers / Programs

Danam Systems

• **Avionics Application**
  – Avionics Storage Device : Black Boxes
  – Avionics Cockpit
  – Avionics Security Check : DAQ, Data Test Equipment, Data Storage System
  – Flight Measurement System

• **Space Application**
  – Developed various Telemetry products for KSLV-1 (Korean Satellite Lunch Vehicle)
3. Major Customers / Programs

MTG (Microwave Technology Group)

- **Log Periodic Antennas**
  - Single Polarization Log Periodic
  - Dual Polarization Log Periodic

- **Spiral Antennas**
  - Spiral Antenna

- **Horn Antennas**
  - Double Ridged Horn Antenna
  - Quad Ridged Horn Antenna

- **Transmitting/Receiving Antennas**
  - Single Monopole Antenna
  - Bi-conical Dipole Antenna

- **Reflector Antenna**
  - Wide-Band Reflector Antenna
  - Dual Polarization Reflector Antenna
MTG (Microwave Technology Group)

3. Major Customers / Programs

<table>
<thead>
<tr>
<th>Receiving Antenna</th>
<th>Measurement Antenna</th>
<th>Reference Antenna</th>
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<tr>
<td><strong>Antennas</strong></td>
<td><strong>Antenna</strong></td>
<td><strong>Antenna</strong></td>
</tr>
<tr>
<td>Active Monopole</td>
<td>Open-Ended Waveguide</td>
<td>Standard Gain</td>
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<tr>
<td>Antenna</td>
<td>Probe Antenna</td>
<td>Horn Antenna</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Dipole</td>
<td></td>
<td>Reference Dipole</td>
</tr>
<tr>
<td>Antenna</td>
<td></td>
<td>Antenna</td>
</tr>
</tbody>
</table>


3. Major Customers / Programs

**MTG (Microwave Technology Group)**

- **Customized Antennas**

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<tr>
<th>Antenna</th>
<th>Frequency Range</th>
<th>Application</th>
<th>Product Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loop Array Antenna</td>
<td>S-Band</td>
<td>Phased Array Antenna for Radar</td>
<td><img src="image1" alt="Image" /></td>
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<tr>
<td>Waveguide Slotted Array Antenna</td>
<td>S-Band</td>
<td>Ship Born Radar</td>
<td><img src="image2" alt="Image" /></td>
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<tr>
<td></td>
<td>X-Band</td>
<td>Ship Born Radar</td>
<td></td>
</tr>
<tr>
<td>Microstrip Patch Array Antenna</td>
<td>X-Band</td>
<td>Wide Band SAR</td>
<td><img src="image3" alt="Image" /></td>
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</table>

<table>
<thead>
<tr>
<th>Antenna</th>
<th>Frequency Range</th>
<th>Application</th>
<th>Product Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tapered Slot Antenna Array</td>
<td>Mid Band (2-6GHz)</td>
<td>Active Phased Array Antenna for EW</td>
<td><img src="image4" alt="Image" /></td>
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<tr>
<td></td>
<td>High Band (6-18GHz)</td>
<td>Active Phased Array Antenna for EW</td>
<td><img src="image5" alt="Image" /></td>
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<tr>
<td>Dipole Array Antenna</td>
<td>L-Band</td>
<td>Phased Array Antenna for Radar</td>
<td><img src="image6" alt="Image" /></td>
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<tr>
<td></td>
<td>S-Band</td>
<td>Phased Array Antenna for Radar</td>
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</tr>
</tbody>
</table>
3. Major Customers / Programs

MTG (Microwave Technology Group)

- Satellite Tracking System

<table>
<thead>
<tr>
<th>Medium Size</th>
<th>Small Size</th>
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<tbody>
<tr>
<td>• Frequency Range : 7.8 ~ 8.5GHz</td>
<td>• Frequency Range : 1.7 ~ 2.3GHz</td>
</tr>
<tr>
<td>• Reflector Size : Up to 3.6m</td>
<td>• Reflector Size : Up to 1.6m</td>
</tr>
</tbody>
</table>
3. Major Customers / Programs

Huneed Technology

- TICN (Tactical Information Communication Network)
- Spider & CNR (Multi-Channel Radio; UHF/VHF/HF Radio)
- Digital Entry Message Device
- Data Link Systems
- Smart UAV
3. Major Customers / Programs

Saterec Initiative

- Satellite manufacturing exporter

- Space Programs
  - RazakSat (Malaysian), DubaiSat-1 & 2 (UAE), RASAT (Turkish),
  - KOMPSAT (Korea Multi-Purpose Satellite) -1, -2, -3, -3A, -5
  - COMS-1 (Korean Geostationary Satellite), KSLV-1 (Korea Satellite Launch Vehicle)

- Defense Programs
  - Next Generation Tank,
  - Defense Robot
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<th>Customers</th>
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<td>F-16K AIFF Test Equipment</td>
<td>Feb. 2007 ~ July 2007</td>
<td>Korea Air Force</td>
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<td>KT-1 Electronic Engine Indicator (EEI) Test Equipment</td>
<td>Oct. 2010 ~ 2011</td>
<td>Korea Air Force</td>
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<td>KT-1 Electronic Flight Indicator (EFI) Test Equipment</td>
<td>Oct. 2011 ~ 2012</td>
<td>Korea Air Force</td>
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<tr>
<td>KT-1 Data Converter (DC) Test Equipment</td>
<td>Oct. 2012 ~ 2013</td>
<td>Korea Air Force</td>
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</table>
4. Major products developed by Intercom

F-16K AIFF Test Equipment

- Specifications
  - MIL-STD-1553B Bus Controller
  - MIL-STD-1553B Bus Monitor
  - Checkup & Report of F-16K AIFF
  - INTERROGATER application and result display
  - Question/Response signal generation
  - TRANSPONDER application and result display
  - S/W : Visual C++ 6.0
  - Mode 1, 2, 3 & C Question & Response signal generation
  - Response signal analyze function
  - Automatic Response function
  - Question/Response signal display
  - S/W : LABVIEW 8.2
4. Major products developed by Intercom

**MIL-STD-1553B Communication Card**

- **Specifications**
  - MIL-STD-1553B BC/RT/MT
  - DDC's 1553B Controller Control using TMS320C6713
  - MIL-STD-1553B Communication using Code Composer BIOS
  - Program downloading using RS232C
  - Data logging via RS232C or RS422
  - TTL I/O
4. Major products developed by Intercom

F404 Engine FADEC Test Equipment for T-50 Jet Trainer

- **Specifications**
  - Controlling ‘Engine FADEC’ data communication
  - MIL-STD-1553B BC/RT/MT
  - LVDT signal measurement
  - Data Save & Display on BUS
  - Data Transmission using TCP/IP
  - S/W : LabVIEW / Visual C++ .NET
4. Major products developed by Intercom

Test Equipment for Armored Vehicle Panoramic Sight

- **Specifications**
  - For performance evaluation of Armored Vehicle Panoramic Sight
  - Power Supply for Panoramic Sight
  - Self-Test Instruction
  - Range information
  - Fault Diagnostics & FCS computer simulation
  - RESOLVER signal handling
  - Analog signal IN/OUT
  - S/W : Visual C++ .NET
4. Major products developed by Intercom

Test Equipment for Armored Vehicle Panoramic Sight
4. Major products developed by Intercom

**KT-1 (Propelled Trainer) EEI, EFI Test Equipment**

- **Specifications**
  - For repair of Electronic Engine Indicator
  - ARINC429 Interface Control
  - ARINC568 (TACAN) Interface Control
  - DISCRETE signal Control
  - Remote Power Control
  - Bezel Control Panel Simulation
  - Bright Control
  - Automatic Fault Diagnostics
  - S/W: Visual C++ .NET
4. Major products developed by Intercom

**KT-1 (Propelled Trainer) Engine DC Test Equipment**

- **Specifications**
  - For Engine DC (Data Converter) Repair
  - ARINC429 Interface Control
  - Fuel Control
  - Analog IN/OUT Control
  - DISCRETE signal Control
  - Remote Power Control
  - Bezel Control Panel Simulation
  - Automatic Fault Diagnostics
  - S/W: Visual C++ .NET
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5. Line Cards as of Representative / Distributor

Components Division

- Vectron
- HOLT IC
- Interpoint
- Signal Technology
- Merrimac Industries
5. Line Cards as of Representative / Distributor

- Oscillators (OCXO, EMXO, TCXO, VCXO, MEMS etc)
- Frequency Translators / Jitter Attenuators (FX, CS, CDR)
- Crystal Filters, LC Filters, Saw Filters
- Crystal Oscillators (XO)
- Precision Timing Solutions
- High Temperature Oscillators
- High Shock & Vibration
- Low g-sensitivity

➡️ http://www.vectron.com
5. Line Cards as of Representative / Distributor

Signal Technology / Crane Microwave solutions

- **Low noise RF and Microwave sources**
  - VCOs, DROs, (Dielectric Resonator OSC) Synthesizers, Crystal Oscillators and complex Oscillator and Multiplier Assemblies

- **Frequency conversion products**
  - Up and Down Converters

- **Signal switching products**
  - Switches, Limiters, Attenuators and Switch Matrices

- **Signal detection products**
  - Detectors, Log Amplifiers and Detector Log Video Amplifiers

5. Line Cards as of Representative / Distributor

Merrimac Industries / Crane Microwave solution

• Passive products
  – Mixers, Power Dividers, Couplers, Hybrids, Modulators,
  – Beamformers, Phase Shifters and Antenna Elements

• Complex Passive Networks and Devices
  (Beamforming networks)

• Multi-Mix® Integration Technology

• Space Qualified Designs

⇒ http://www.craneae.com/AboutUs/MerrimacIndustries.aspx
5. Line Cards as of Representative / Distributor

Interpoint / Crane Power solution

- **Power Conversion**
  - DC-DC Converters: For Military & Space
  - EMI Filters: For Military & Space
  - AC/DC Power Supply VME board

- **Custom Microelectronics**
  - Medical devices
  - Radio and microwave frequency device
  - Custom power converters

- **Electronic Manufacturing Services (EMS)**
  - Turn-key, co-design, or build-to-print solutions including SMT, box-build and systems with excellent time-to-volume.

⇒ [http://www.craneae.com/AboutUs/Interpoint.aspx](http://www.craneae.com/AboutUs/Interpoint.aspx)
5. Line Cards as of Representative / Distributor

- MIL-STD-1553 DATA BUS CONTROLLER (CHIP)
- ARINC-429 LINE DRIVER & RECEIVER (CHIP)
- Transformers for MIL-STD-1553B controllers
- Military LCD Display DRIVER
- Quad OP AMPS (On-semi & Motorola’s discontinued parts for PIN-to-PIN replacement)
- COMPARATOR (On-semi & Motorola’s discontinued parts for PIN-to-PIN replacement)

⇒ http://www.holtic.com
5. Line Cards as of Representative / Distributor

- Abaco Systems
- Excaliber Systems
- Innovative Integration
- LUMISTAR
5. Line Cards as of Representative / Distributor

Abaco Systems

- **Avionics products**
  - MIL-STD-1553 card, ARINC 429 card
  - Bus Analyzer(PASS3200), Bus Tool, DataXpress
  - Graphic PMC cards (Commercial & Conduction-Cooled)

- **SBC (Single Board Computer ; CPU Board)**
  - Processor type: Intel & PowerPC
  - Form factor: VME, VXI, cPCI3U, cPCI6U, PC/104+ ...

- **I/Os**
  - FPGA cards, FPGA based VIDEO & GRAPHIC cards, Digital I/O, Analog I/O, Serial I/O
  - Multi-functional I/O, IP (Industry Pack) Module, IIOC (Intelligent I/O Controller)
  - SCSI Adaptor cards, VME, cPCI, PMC, AMC board type SCSI Hard Drive & Solid State Drive with Flash, STORAGE, Bus Adaptor, DataBlizzard, Infiniband, Fiber Channel
  - Reflective Memory cards, Expansion boards, Expansion systems, Carrier cards

5. Line Cards as of Representative / Distributor

Excalibur Systems

- MIL-STD-1553/1760, ARINC Boards, 1553/1760 BUS REPEATER (BUS & STUB)
- Accessories (Coupler, Connector, Cable, Terminator, Bus Switch...)
- System Level BOX Design (LRU)

→ http://www.mil-1553.com
5. Line Cards as of Representative / Distributor

**Innovative Integration**

- **DSP boards**
  - DSP boards
  - DSP + FPGA boards
  - DSP stand alone boards
  - Data Acquisition boards
  - OMNIBUS boards (I/O + FPGA, A/D, D/A, Digital I/O, Serial I/O,
    - on-board TCXO, LVDS pairs DIO, Motion Control, Decoder, Servo Control)
  - PMC/XMC I/O Modules (Gigabit Ethernet, Fiber Channel, Infiniband, FPGA, Digital Receiver)
  - Military Spec boards are also available.

[http://www.innovative-dsp.com](http://www.innovative-dsp.com)
5. Line Cards as of Representative / Distributor

- **Telemetry Systems**
  - Telemetry Receiver Boards
  - Bit Sync Boards & Systems
  - Multi-Function Boards
  - Combiner Boards
  - Telemetry System

➡️ [http://www.lumi-star.com](http://www.lumi-star.com)
Thank you.