



*Radbon*

# Radbon Electronics

COMPANY PROFILE

# Radbon AT A GLANCE

Founded  
**2015**

Headquarters  
**Taiwan**

Service Network  
**Worldwide**

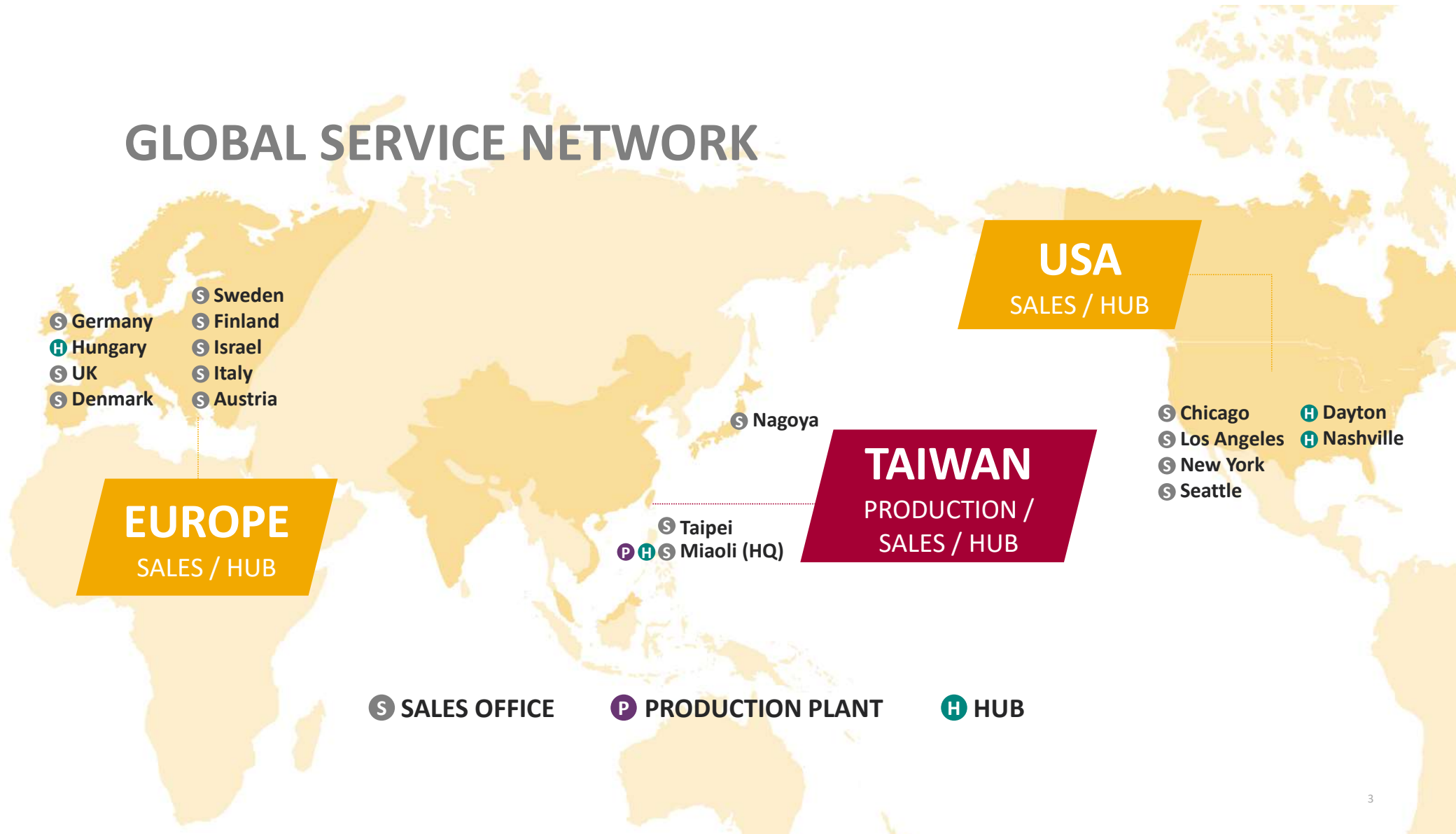
Employees  
**150 ↑**

Major Product  
**E-BOX Assembly, Cable Assembly & PCBA**

**Radbon** as an integrated **SOLUTION PROVIDER** in the aviation and defense industries, its our mission to create increasing value through continuous development on technologies and services to our customers worldwide.



# GLOBAL SERVICE NETWORK



# MANUFACTURING CAPABILITY - TAIWAN

## Features

E-Box assembly  
Cable assembly & harness  
PCB assembly  
High mix low volume  
Clean room (Class 6.5, 100,000)

## Available Space

Factory – 3,000 m<sup>2</sup> +

## Employees

>150+

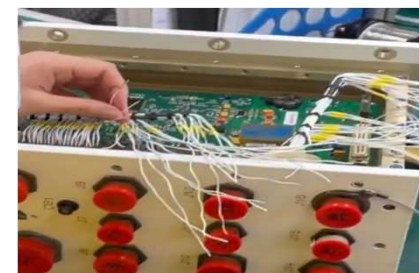


MIAOLI

TAIPEI



Cable Assembly Workshop



E-Box Assembly

# OUR CAPABILITY

## Core Competencies

- Technical documentation management
- E-traceability system
- Customized Products
- Flexible manufacturing
- Original and certified tooling
- Low volume high mix

## Certifications-Quality System



AS9100D



ISO 9001



ISO 27001

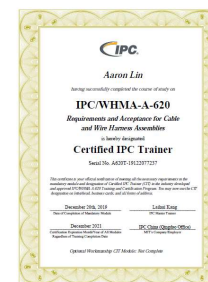
## Certifications-Inspection Standards



NASA-STD-8739.4  
Crimp, cable and harness



IPC-A-610  
PCBA (Class 3)



IPC-A-620  
Cable (Class 3)



IPC-J-STD-001  
Soldering (Class 3)

# APPLICATIONS

## Aerospace



Power module



Rocket Cable



Gyroscope Testing Cable



Launcher Cable



Aircraft Engine



Mechanical Cable

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## Vessel

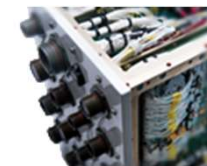


Communication device



Engine Cable

## Land Vehicle



Communication device



Interconnection system



Land Vehicle ABS system

# SUB-SYSTEM CAPABILITY



# SUB-SYSTEM STANDARD

| Item                          | Spec.   |
|-------------------------------|---|
| Electromagnetic Compatibility | <ul style="list-style-type: none"> <li>MIL-STD-461 EMI/EMC Test</li> </ul>  |
| Environmental Engineering     | <ul style="list-style-type: none"> <li>MIL-STD-810 Test</li> </ul>  |
| Chassis                       | <ul style="list-style-type: none"> <li>MIL-I-46058C Multilayer Military Conformal Coating</li> <li>MIL-STD-1547B Corrosion Treatment on Aluminum</li> <li>MIL-C-83286B External Surface Painting</li> </ul> |
| PCBA                          | <ul style="list-style-type: none"> <li>MIL-S-13949/5 Class V Printed Circuit Board</li> <li>IPC-4101 Specification</li> </ul>   |
| Interface                     | <ul style="list-style-type: none"> <li>MIL-DTL-55302F Class I VME bus Connectors</li> <li>MIL-C-24308C Class I Cannon Type D</li> <li>Other MIL Standard connector</li> </ul>                               |
| Gasket                        | <ul style="list-style-type: none"> <li>MIL-R-6130C EMI/EMC Gasket</li> </ul>  |
| Fan                           | <ul style="list-style-type: none"> <li>MIL-B-23071C &amp; MIL-B-28873 Fans</li> </ul>   |
| Power                         | <ul style="list-style-type: none"> <li>MIL-STD-704F &amp; MIL-STD-1275D Power Supply</li> <li>MIL-E-7016F Electric Load &amp; Power Source Capacity, aircraft</li> </ul>                                    |
| Screws                        | <ul style="list-style-type: none"> <li>AISI 316 (A4) Screws, Inserts &amp; Accessories</li> </ul>   |
| Components                    | <ul style="list-style-type: none"> <li>MIL-STD-202 Electronic and Electrical Component Parts</li> </ul>   |



# CHASSIS



## Printed Circuit Board

MIL-S-13949/5 Class V

## Multilayer Military Conformal Coating

MIL-I-46058C

## Corrosion Treatment on Aluminum

MIL-STD-1547B

## External Surface Painting

MIL-C-83286B



# INTERFACES

## Spec.

- Ethernet 10/100/1000 Base T LAN/WAN interfaces for radio/satellite
- RS232 for applications connectivity
- RS422/423 for applications connectivity
- MIL-STD-118-114A Electrical Characteristics of digital interface circuits
- USB local management interface

RS232/422 interface



8 Ethernet 10/100/1000 Base T LAN/WAN interface



UHF/HF/VHF interface

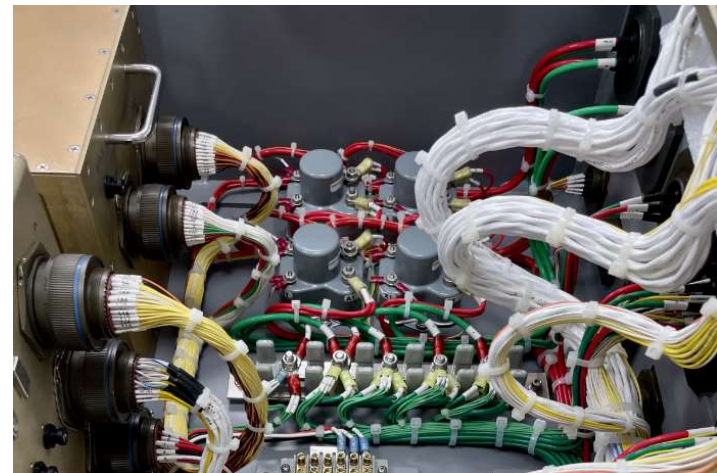


MIL-DTL-55116 connector

# E-BOX TEST STATION



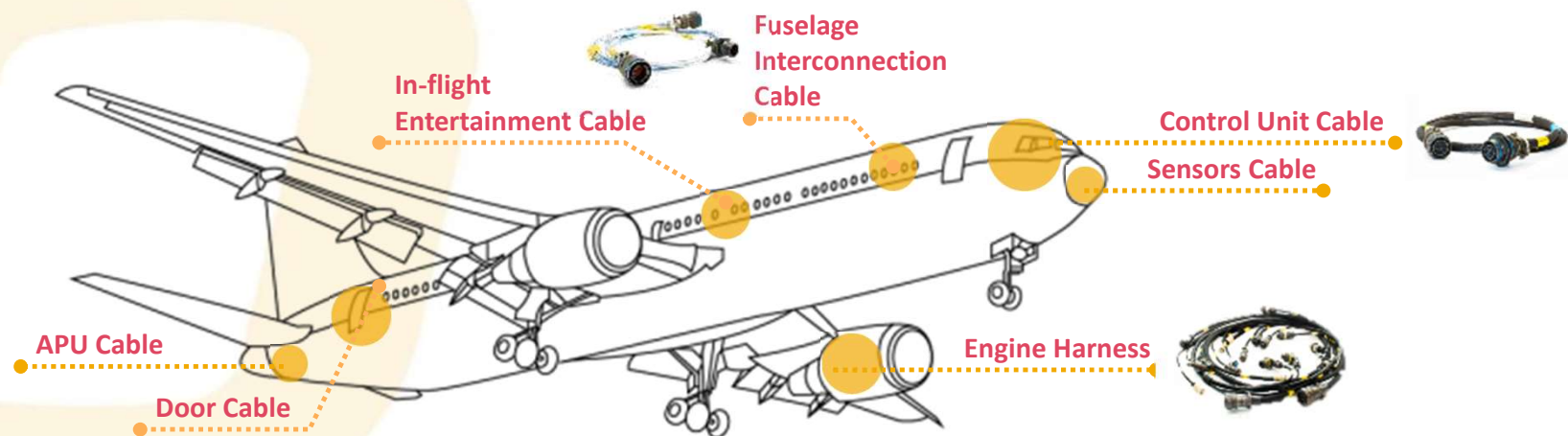
## E-BOX ASSEMBLY





# CABLE CAPABILITY

# SOLUTIONS FOR AVIATION INDUSTRY



## Light Weight

Reduce the overall weight of aircraft and saving fuel costs

## High Stability

Anti-vibration features ensures your electronics stay connected in high vibration environments

## Anti-EMI

Protects your system from interference and EMI

## Tech Data





Temp. range -55°C-200°C  
Voltage rating 600/1000V AC

## Reliable

AS9100 & ISO9001  
IPC-A-620 Class 3  
IPC-J-STD-001

# SOLUTIONS FOR AVIATION INDUSTRY

## Product Experience

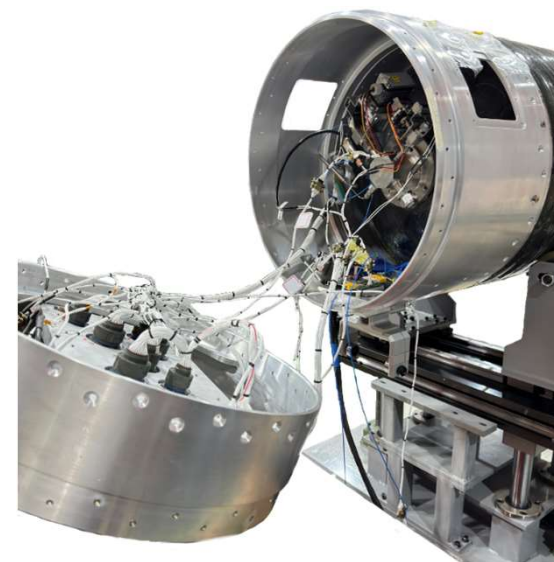
| Application              | Picture   | Feature  |
|--------------------------|---|--|
| Engine Harness           |    | <ul style="list-style-type: none"> <li>Fiberglass material for protection from extreme heat</li> <li>Light-weight materials used to reduce the weight of cable assembly</li> <li>Complex cable harness with numerous branches, fixed tightly with M85049/128 bands</li> </ul>                  |
| Pylon Cable              |    | <ul style="list-style-type: none"> <li>Precise metal cutting &amp; surface finishing for mechanical assembly</li> <li>Anti-EMI protection to reduce interference</li> <li>Locating pin design for push-pull coupling system</li> <li>Rugged design to operate in harsh environments</li> </ul> |
| Fuselage Interconnection |   | <ul style="list-style-type: none"> <li>Lightweight solution minimizes the weight of cable assembly</li> <li>MIL-DTL-17 coaxial cable application in military circular connector</li> <li>60m long fuselage cable</li> <li>Anti-EMI protection keeps away interference</li> </ul>               |
| Control Unit             |  | <ul style="list-style-type: none"> <li>Customized braiding for better mechanical protection</li> <li>Anti-EMI protection ensures reliability of control unit</li> <li>Excellent resistance to vibration and shock</li> </ul>   |



# SOLUTIONS FOR SPACE INDUSTRY

## Product Experience

| Application    | Feature  |
|----------------|--|
| Rocket Harness | <ul style="list-style-type: none"> <li>• Select materials that meet lightweight and environmental requirements.</li> <li>• Excellent resistance to vibration and shock</li> <li>• Provide on-site assistance to the customer in assembling the entire rocket harness.</li> </ul> |



# CABLE + PCB ASSEMBLY



- DIP and SMT process capability
- Single sided, double sided
- BGA rework station
- Lean production
- SMT Error Prevention System (EPS)
- Includes **ICT, AOI, J-TAG, SPI**, and other regular tests
- PCB size : 50x50mm~460x510mm
- Chip size : QFP, BGA,  $\mu$  BGA, CSP (Max.:100\*100mm)
- Chip dimensions: 0201 (inch)
- Mounting accuracy:  $\pm 0.035$  mm  $\sim 0.08$  mm/chip (Cpk $\geq 1.33$ )
- Excellent at **soldering** and meets **IPC 610** standard tests

# WIRE & CABLE(US)

## Features

- MIL-STD / Military & space grade equivalent
- Light Weight & Flexible Cables
- EMI / RFI / EMP protection
- Resistant to Moisture, Acids, Fuel, Impact
- Heat and cold resistant
- Low fluorine / Smoke / Outgassing solution
- Various Insulation / Jacket Materials
- And other custom solutions

## Distributor of Wire and Cable, Inc.

### Space Wire

**M22759**

**M24640**

**M81044**

**M27500**

**M17**

**M16878**

**LL142**

### Custom Aerospace

**Custom Ground**

**Custom Shipboard**

**Coil Cords**

**QQ-W-343**

**UL & CSA**

**SAE-AS85485**

**LL335**



TO: Radbon Avionics Inc.  
FROM: SEA Wire and Cable, Inc.  
DATE: Calendar Year 2023/Jul/3 to 2023/Dec/31

SUBJECT: Agent Letter

We, SEA Wire and Cable, Inc. (SEA), headquartered in Madison, Alabama, as the manufacturer and supplier of many Military and Commercial Airframe / Aerospace Products hereby verify that Radbon Avionics, located No. 582, Guohua Rd., Miaoli City, Miaoli County 360031, Taiwan (R.O.C.), is an Agent Distributor of our products. This includes all products manufactured or carried by SEA Wire and Cable. This is SEA's authorization to distribute the specified product lines within Asia. This authorization will be reviewed and extended annually.

Sincerely,



7/3/2023  
Date:

Joe Denny  
Chief Sales Officer  
451 Lanier Rd.  
Madison, AL 35758 USA  
  
WIRE AND CABLE

# WIRE & CABLE(EU)

## Features

- Italian Navy approved
- Power, control and signaling cables for naval and offshore applications according to IEC standards
- Oil and chemical substances resistance
- UL / CSA approval
- Various Insulation / Jacket Materials
- Custom solutions with low MOQ



TO: RADBON ELECTRONICS CO., LTD.  
FROM: Unika S.p.A. and KU Distribution S.r.l.  
Date: Friday , December 20, 2024

SUBJECT: Agent Letter

We, **Unika S.p.A.**, headquartered in Via Lombardia, 13/15, 37044 Cologna Veneta (VR), Italy, as the manufacturer and KU DISTRIBUTION S.r.l. in Via dell'Euro 5, Bagnolo San Vito Mantova ( MN) Italy, as distributor of : **cables with a wide range of applications for the Defence and Marine except for Marine Cables for Yachting sector**, hereby confirm that **RADBON ELECTRONICS**, located No. 669, Guohua Rd., Miaoli City, Miaoli County 360031, Taiwan (R.O.C.), is an exclusive Agent Distributor of our above detailed products.

The term of this authorization is effective for one year commencing on this date and is renewable if agreed upon by both parties. Unless a sooner termination is hereafter provided with 3 months advance notice

All standard Terms and Conditions of sales will be discussed on each quotation and PO stage



# SEMICONDUCTOR COMPONENTS

## Features

- Military and Industrial grade Semiconductors
- JAN, JANTX, JANTXV, JANS, HI-REL units
- Customized SPEC
- Approved for use with aircraft, land vehicle, naval and missile systems

## Distributor of



From: Thomas Carucci  
President  
Semtex Industrial Corp.  
80 Commercial Street  
Freeport, NY 11520

To: Aaron Lin 林國平  
Factory Manager  
Radbon Avionics Inc.  
No. 562 Kuo Hua Rd Miaoli 360 Taiwan

Thursday, July 27, 2023

Authorization Agreement

Dear Mr. Lin,

This authorization agreement is in reference to your organization RADBON AVIONICS to purchase, sell and distribute Semtex Industrial Corp product.

The agreement is made and entered into on Monday, August 07, 2023, between Semtex Industrial Corp., a corporation organized and located in Freeport, New York, and Radbon Avionics, located in Miaoli, Taiwan.

The Semtex management team of our organization has reviewed your company profile and history and have found your company to be good standing and have decided to provide you with authorization rights within your territory. This letter is intended to confirm authorization rights to acquire Semtex products, along with other franchised products offered by Semtex Industrial Corp.

The term of this authorization is effective for one (1) year commencing on this date and is renewable if agreed upon by both parties. Unless a sooner termination is hereafter provided.

All standard Terms and Conditions of sales will apply.

Sincerely,

Tom Carucci

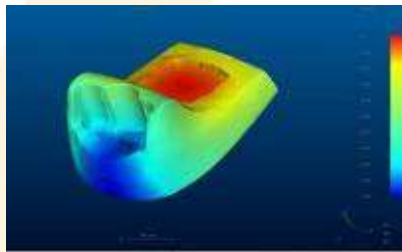
Semtex Industrial Corp.  
By:   
Name (Print): THOMAS CARUCCI  
Title: PRESIDENT  
Date: 8.7.23

Radbon Avionics Inc.  
By:   
Name (Print): Aaron Lin  
Title: CTO  
Date: 8.7.23

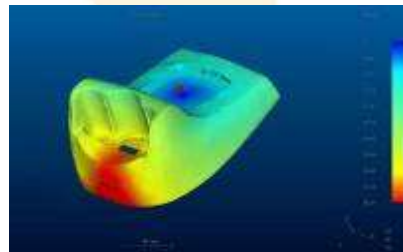


# OVERMOLDING ENGINEERING

## Mold Flow & Draft Analysis



**Fill Time Evaluation**  
Evaluate the fill time of molding



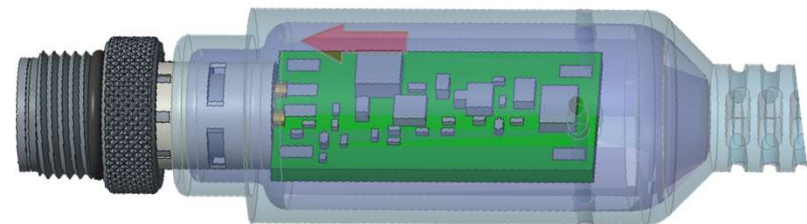
**Pressure Drop**  
Analysis pressure distribution to reduce deformation



**Weld Line Locations**  
Analyze where they may form to prevent deformation



**Draft Analysis**  
Simulate the angles of pattern draw to reduce possible errors



# RF CABLE CAPABILITY



# HIGH FREQUENCY CAPABILITY



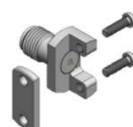
Cable



PCB



Flange



EM/EL



Adaptor



SMP



SMPM

| Connector | Freq. (Max.) | Description   |
|-----------|--------------|---|
| 1.00mm    | 110 GHz      | <b>All connectors come with 100% compliance to MIL-STD, available in:</b> <ul style="list-style-type: none"> <li>Different orientation – STRAIGHT or RIGHT ANGLE</li> <li>Cable type – such as .031", .047", .086" and .092" SEMI-FLEX or SEMI-RIGID</li> <li>PCB type – THRU HOLE or SURFACE MOUNT</li> <li>Adapter – plenty options for transition between POLARITY or INTERFACE</li> <li>Custom feature – FLANGE for panel, IP6X sealing, EDGE LAUNCH or MOUNT... more!</li> </ul> |
| 1.85mm    | 67 GHz       |   |
| 2.40mm    | 50 GHz       |   |
| 2.92mm    | 40 GHz       |   |
| 3.50mm    | 34 GHz       |   |
| SMA       | 12.4/27 GHz  | <b>A proper high-dense B2B solution in associate with SMP or SMPM:</b> <ul style="list-style-type: none"> <li>Available in FULL or LIMITED DETENT, SMOOTH BORE or CATCHER's MITT mating type</li> <li>Various length of BULLET with minimum 4.50mm overall to support different B2B height</li> <li>Custom packing method – T&amp;R, protection cap, retention cap or multi-pocket tray</li> </ul>  |
| SMP       | 27/40 GHz    |   |
| SMPM      | 31/50/65 GHz |   |

# WIRE SPECIFICATION

Flexible RG Cables

Semi-Rigid &  
Conformable Cables

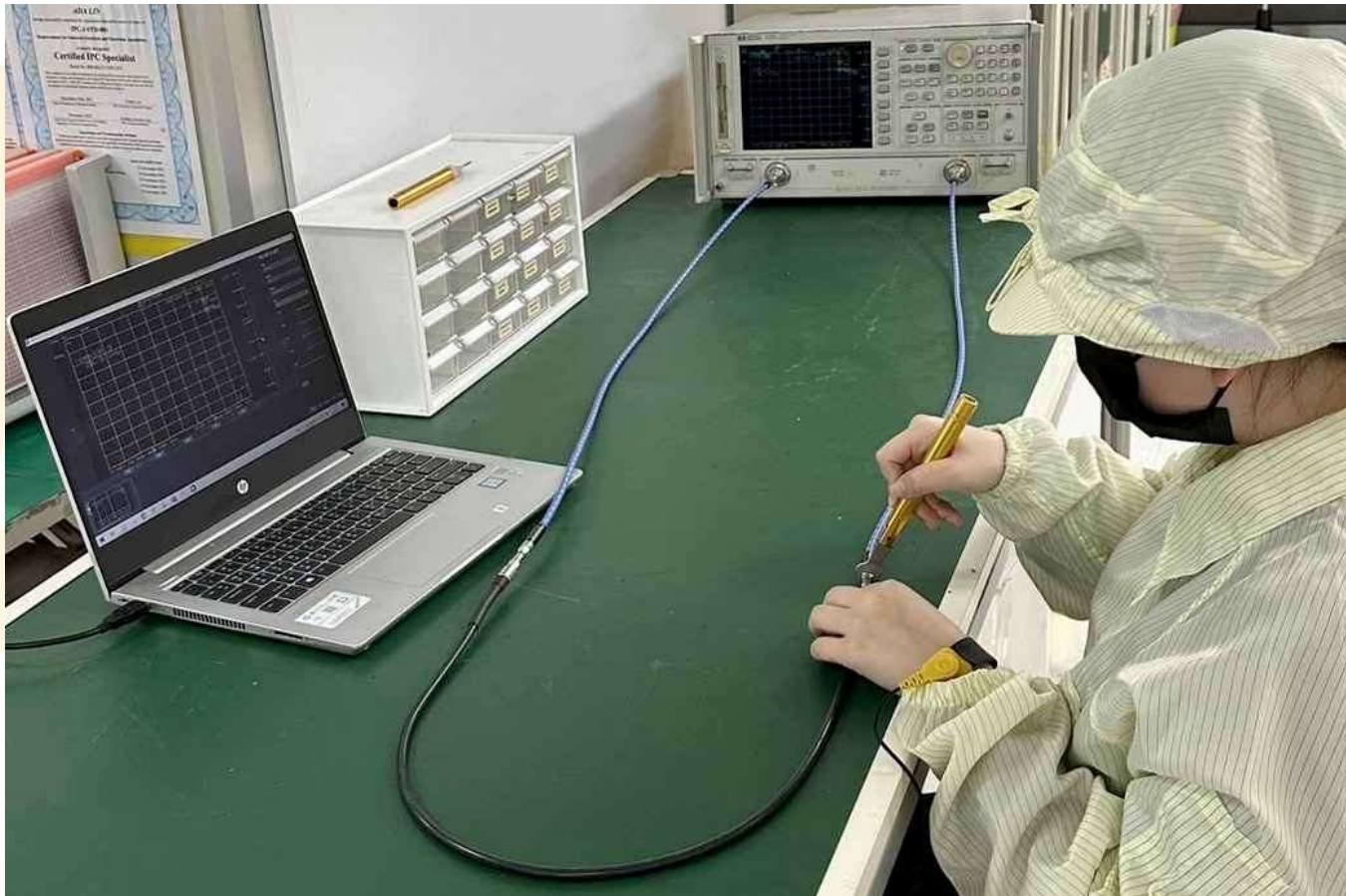
Low Loss Cables (LMR®)

Micro-Coaxial Cables

| Cable Type    | Impedance | Temperature range* | Description  |
|---------------|-----------|--------------------|--|
| Flexible RG   | 50Ω       | -55 to +200°C      | <b>Features:</b> <ul style="list-style-type: none"> <li>High-performance, cost-effective cable solution for DC to 40GHz</li> <li>Cable type – such as .031", .047", .086" and .092" SEMI-FLEX or SEMI-RIGID</li> <li>Extended frequency flexible cable.</li> <li>Available Order Options: Standard and Custom</li> </ul> |
|               | 75Ω       |                    |  |
| Semi-Rigid    | 50Ω       | -40 to +100°C      |  |
| Low Loss      | 50Ω       | -40 to +85°C       |  |
| Micro-Coaxial | 50Ω       | -70 to +150°C      |  |

\*This temperature range does not contain all cable types available. Please contact our representative for your specific request.

# RF TEST STATION



# RF CABLE EXPERIENCES

## Phase Matching

- Available in RELATIVE or ABSOLUTE matching per lot
- Available in unit of SECOND or DEGREE/RADIAN
- Available in pairs or more quantities per request



27GHz SMA jack to SMA jack



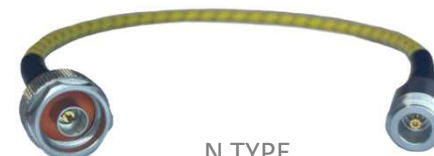
SMA jack to SMA jack



Multi Channel



Semi Rigid



N TYPE

# QUALITY CAPABILITY

# QUALITY MANAGEMENT

## Quality



- Material control through barcodes and data system, implement FIFO
- Data storage a traceability matrix for all product's
- Analyze quality issues fast and precisely
- 100% inspection
- Follow MIL STD and IPC

## Supply Chain



- Check traceability of abnormal materials and report to suppliers instantly
- Analyze material issue's fast and accurately

## Lab



- Manage fixture checklist and inspection date with traceability programs
- Use tests application system to save test data

## MES



- Material traceability from vender to manufacturing to finished goods with data storage
- Fully-fledged computerized system

\*MES = Manufacturing Execution System

# TESTING IN HOUSE

- Life cycle test
- Thermal shock test (temp. range : -50 - 150°C)
- Electricity test (network analyzer)
- Moisture resistance test
- Static humidity test
- Cold impact test
- High-pot test
- Coating test

- Cold bending test (temp. range : -50°C-150°C)
- Bending test (angle: 45°/ 60°/ 90°/ 120°/ 180°)
- Pull force testing (capacity range: 0.1 ~ 50 kg)
- Drag chain test
- Fixture test
- Grinding test
- Coiled cable extraction test



# LABORATORY



# TOTAL SOLUTION SERVICE



*Rodbon*

**THANK YOU!**