

# SMART FFT AND ITS HIGHLIGHTS

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CLUPAV SCIENTIFIC PVT LTD  
PRASANNA KUMAR DARAM  
DIRECTOR

# US AND INTERNATIONAL PCT

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- USA FILING and grant :AUG 18<sup>th</sup> 2022 and FEB 2024
- INDIA FILING and grant:AUG 16<sup>th</sup> 2023 and FEB 2024
- 20 years of patent term

# SMART FFT Digital Receiver

Especially, detection of a low signal whose SNR is less than 10 dB is highly challenging than detecting signals whose SNR is greater than 10 dB.

Input Freq. bin	Input Freq. (MHz)	SNR (dB)	Detected FFT bin	Detected FFT Freq. (MHz)	Error (KHz)	Detected SFFT bin	Detected SFFT Freq. (MHz)	Error (KHz)
<b>100.245</b>	62.653125	11	101	63.125000	471.9	903	62.638888	<b>14.23</b>
<b>101.5</b>	63.437500	-15	Miss	Miss	Miss	929	63.437500	<b>0</b>
<b>105.794</b>	66.121250	-15	Miss	Miss	Miss	953	66.111111	<b>10.13</b>
<b>108.310</b>	67.693750	-15	109	68.125000	431.3	976	67.708333	<b>-14.58</b>
<b>111.045</b>	<b>69.403125</b>	<b>-19</b>	<b>112</b>	<b>70.00</b>	<b>596.9</b>	<b>1000</b>	<b>69.437500</b>	<b>-34.37</b>

Electronically like SFFT 10<sup>-7</sup> offers the dynamic spectrum of 30 to 55 dB with a frequency difference between one and five bins to distinguish several signals

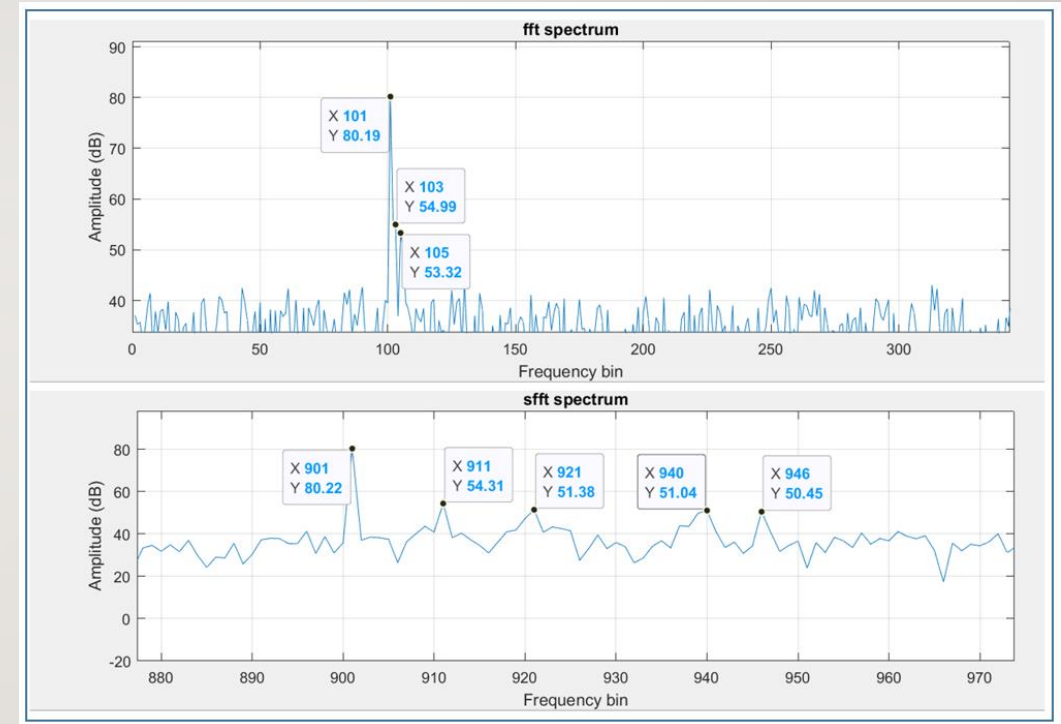
# SMART FFT Digital Receiver

- Multiple signals:

High Dynamic range is important

- Less frequency separation

The under sampled data can be used to obtain the measurement of multiple signals which are placed at a very minimum distance with superior accuracy and minimum error rate which is less than 0.625 MHz.



# SEMICONDUCTOR MARKET GROWTH

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- 2021-2029
- 573.44 billion to USD 1,380.79 billion exhibiting 12.2% CAGR of the forecast term
- Increase in the consumption of consumer devices
- Key Industry players: Broadcom, Intel, and QUALCOMM to FOCUS on Developing innovative Products to Strengthen Offering

# BY COMPONENT AND APPLICATION

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- Communication Transciever
- Satellite systems
- ADAS
- UAV
- Target tracking and precise location
- VIDEO AND MICROPHONES SPEAKERS
- DSP(others)

# BY REGION

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- North America
- EUROPE
- ASIA PACIFIC
- MIDDLE EAST & AFRICA
- LATIN AMERICA

# COMMUNICATION TRANSCIEVER

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- Transciever capable of processing high datarate better than the OFDM and HYBRID OFDM
- Improvements upto 20x times
- SMART FFT TRANSMITTER
- SMART FFT RECEIVER
- ROUTERS and WIRELESS Transport protocol



# SATELLITE SYSTEMS

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- PRECISE location in the higher accuracy to communicate the GPS and additional processes
- INCLUDES SMART FFT
- Major advantages proper guidance in maps, military purposes and data tranceiving

# ADAS

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- Advance targeting and location position accuracy
- Several kilometers and as much as possible cars can be detected including their speeds
- Angle of arrival and target velocity
- Communication among the cars

# UAV

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- Unmanned aerial Vehicle to identify the route and guide accordingly to the destination property
- Direction and maneuvering guidance

# VIDEO AND MICROPHONES SPEAKERS

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- High resolution 4K HD and 8K HD video processing
- MRI AND MRS processing
- Photos processing (image sensor) in the electronic gadgets
- Multiple other video cameras

# DSP(OTHERS)

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- DNA Sequencing
- Protein structure analysis

# MANUFACTURING

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- Total of \$1b dollars to accommodate all the applications
- Resources 100 employees
- Location Hyderabad Office building in the city
- Manufacturing time 1 year with all the products in portfolio
- Better eco system of both consumer and defense products

# PROFITS

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- 2.5% equity share and ROI 25% - profits \$250m
- 2 years \$250m – each year \$125m

# FURTHER GROWTH

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- Electronics to space technologies
- Medical
- Telecom 7 and 8 G