



WiseJet Inc.

I . Company Information

1. Overview
2. History



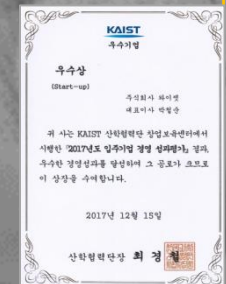
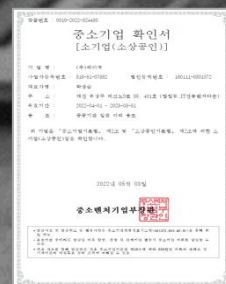
Name		WiseJet Inc.		Incorporated		February 13, 2015	
Business Registration Number		318-81-07882		Corporate Registration Number		160111-0391972	
CEO		Chul Soon Park					
Address	Office	3F, 406, Maeheon-ro, Seocho-gu, Seoul				Phone	+82-2-542-0213
Employees (2023)	Executives	Office workers	Engineers	Sales people	Others	Total	
	2	2	13			17	
Capital	KRW 649 million						
Main products	60GHz wireless communications chips, modules and products						

I Overview

Certifications and Awards



Category	Description	Date	Remark
Certifications	TI-2 grade for investment technology evaluation	'22.07.20	Acquired TI-2, the highest grade in the Tech Credit Bureau assessed by KoDATA
	Selected as a K-Global 300 company	'16.12.29	Selected as a promising ICT company with high growth potential
	NET new technology certification	'17.08.24	Acquired NET with low-power, low-latency wireless communication technology that can apply VR HMD
	Selected as a material parts expert company	'19.10.31	Selected as a material parts expert company
	Small and medium business Certificate	'15.03.30	
	Company R&D center certificate	'15.03.30	
	V-JETn product KC certified	'18.06.11	Tx : R-CRM-WV0-JET-T / Rx : R-CRM-WV0-JET-R
	V-JETn product FCC certified	'19.06.05 '20.05.22	Tx : 2ALI9V-JETT(limited) / Rx : 2ALI9V-JETRFHD
	V-JET4k product KC certified	'18.08.07	Tx : R-C-WV0-V-JET4K-T / Rx : R-C-WV0-V-JET4K-R
	V-JET4K product FCC certified	'18.10.19	Tx : 2ALI9V-VJETM2 / Rx : 2ALI9V-JETR
	V-JETi product TELEC certified	'18.09.06	Tx : 020-180117/ Rx : 020-180116
	V-JETm product KC certified	'17.05.02	MSIP-CRM-WV0-1720033001
Award	KAIST Excellence Award for Excellent Company	'17.12.15	Received Excellence Award at the KAIST Faculty Start-up Tenant Company Assessment



I Overview

History



- WiseJet Inc. incorporated (Korea Advanced Institute of Science and Technology faculty start-up)
- Founded company R&D center
- Selected for Small and Medium Business Administration's TIPS project
- Acquired a venture business certification
- Selected as an SK DVS (Dream Venture Star) company
- Participated in MWC 2016
- Selected as a K-Global 300 company
- Launched HDMI wireless transmission products (V-JETn, V-JETm)
- NET new technology certified
(Technology name: Low-power, low-latency wireless communication technology applicable to VR-HMD)
- Exported 300 sets of V-JETi to Koshidaka Holdings, Japan
- Signed a contract to develop a 60GHz solution for wireless AR Glass with S
- Selected as a material parts expert company
- Signed a contract to develop 60GHz-based wireless medical equipment with M.
- Exported 1,700 sets of V-JETi to Koshidaka Holdings, Japan
- Selected as a Big3 Venture Business Innovation Growth Company (System analog semiconductor field)
- Signed an additional development contract with S for 60GHz Solution for Wireless AR Glass
- Developed prototype adapter for neckband type wireless AR Glass
- Signed an NDA for collaboration in wireless image transmission/reception RF module application with L
- Started mass production for M
 - Received a purchase order for 15,000 units for 2022 and 18,000 units for 2023.
- Achieved KRW 2 billion in sales in 2022
- Acquired technology evaluation grade TI-2 for investment
- Total investment attraction of 10 billion won and Series A investment attraction of 5 billion won in 2023.

2015

16

2017

18

19

2020

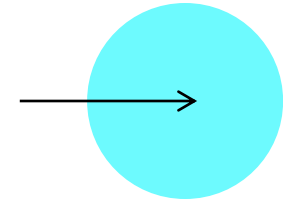
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II. Business Summary

1. Business Overview
2. Technology
3. Main Products
4. Core Business for Growth
5. Competitiveness



WiseJet was established in February 2015 by key personnel in wireless transmission technology, including professors who have been researching high-speed wireless transmission technology at KAIST

Major technological achievements

- RFIC technology for wireless transmission/reception for 6Gbps high-speed video signals based on 60GHz CMOS chip (currently being upgraded to 10Gbps)
- 60GHz antenna array design and transceiver package technology
- Technology to wirelessly transmit 4K UHD high-definition video with [no compression/no latency/no buffering](#)
- 60GHz-based software algorithm for uncompressed wireless transmission of medical images

We are pioneering the market and making commercial achievements in a field that requires real-time, non-latency data wireless transmission based on the above-mentioned technology. The following are some of our main solutions.

Wireless chip solution
for Gbps
communication in close
range(1-10cm)

XR-targeted 60GHz
wireless
communication
solution

DP/HDMI/Type-C/Vx1
display streaming
solution

Latency-free,
uncompressed data
wireless transmission
solution for medical
applications

We recently obtained the highest grade of TI-2 in the Tech Credit Bureau (TCB) as assessed by KoDATA.

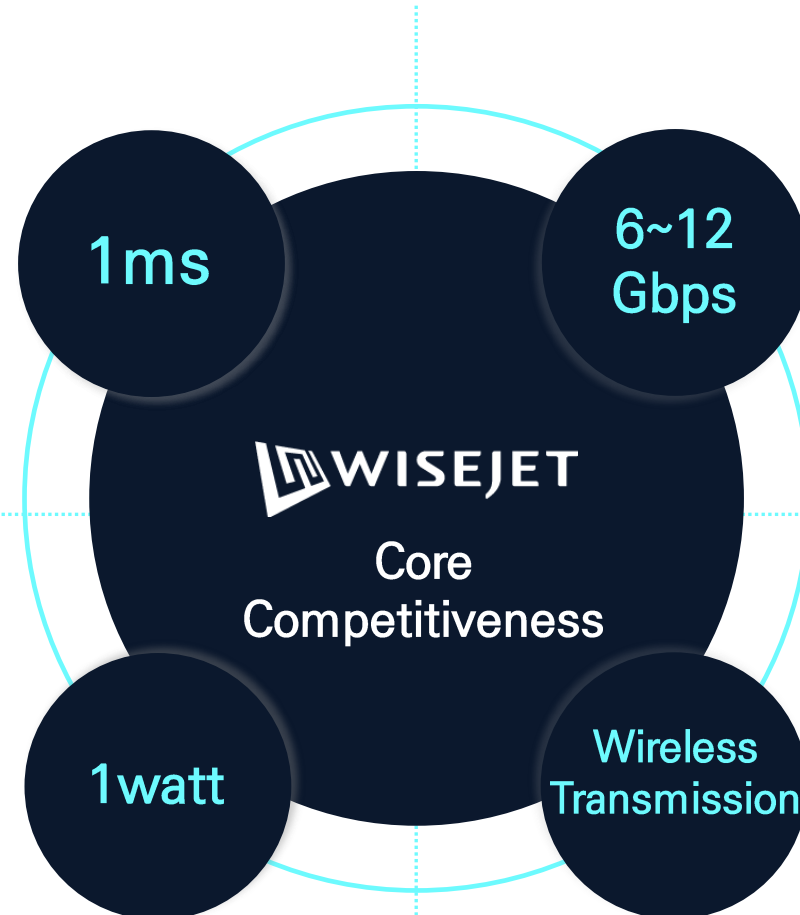
Core competitiveness of our technology

Zero Latency (1ms)

Latency factors are minimized by designing the video and data transmission method in a structure that directly transmits raw data wirelessly rather than via compression

Low Power (1Watt)

Realized simple AV PHY optimized for video transmission and low power consumption by uncompressed video processing and high-efficiency PA structure design



High Bandwidth (6~12Gbps)

- Realized no compression and no latency by allocating the full channel of 60GHz ISM band for data transmission.
- Resolution : Full-HD ~ 4K UHD/60Hz

Uncompressed A/V Wireless Transmission

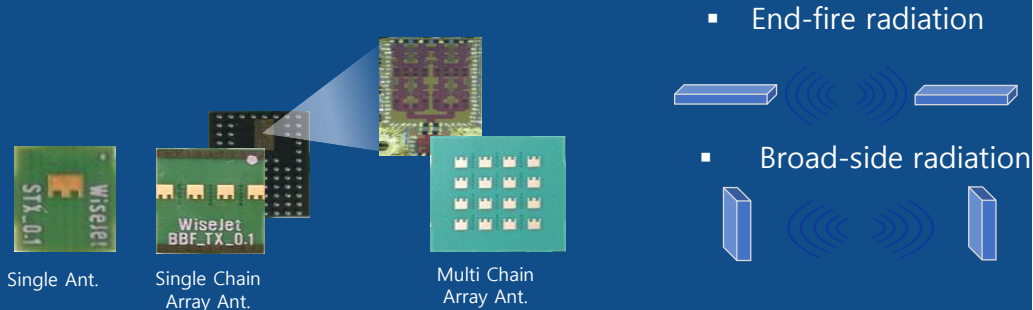
Ensure original quality, like in wired communication, by PHY and RF design in a structure that directly transmits DP and HDMI raw data wirelessly

II Business Summary

Chip Solutions



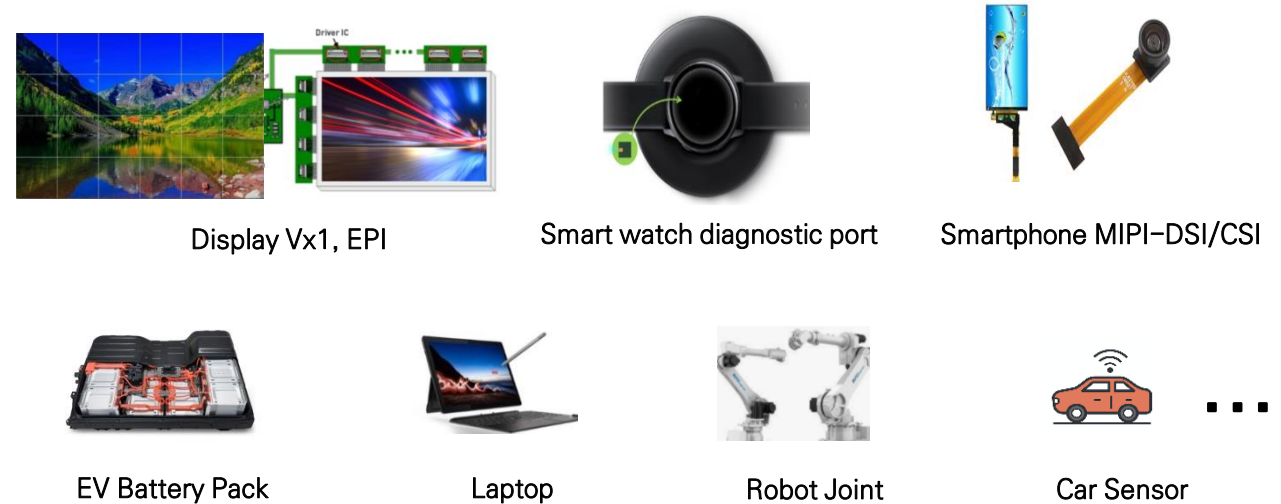
Close-proximity 60GHz Wireless Package



Company		Molex(Keyssa)	WiseJet
Throughput(Gbps)		6	6~10
Distance(cm)		< 1	1 ~ 30 or Longer
Power(mW)		< 50	< 50@1cm, < 150@5cm, > 150@30cm
Size(mm)		No Info.	4x5@Single, 6x5@Single Chain, 12x12@Multi Chain
Antenna		Predetermined	Customized design

This is a chip that can **transmit high-speed serial data without compression and without latency at a close distance of 1 to 10cm**. It is designed to replace the hinge in laptops and current wired connectors in robot joint connections, display walls, and autonomous vehicles with wireless technology, **greatly enhancing the degree of freedom and durability of products**.

➤ Target Markets

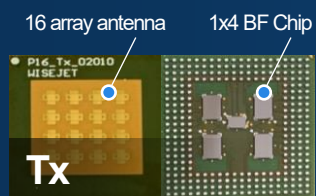


II Business Summary

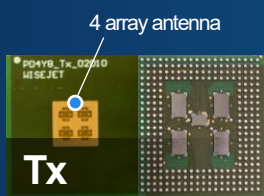
Chip Solutions



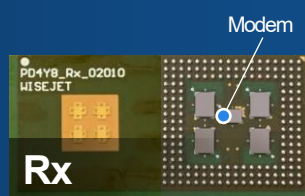
XR-targeted 60GHz Wireless Package



Size : 18.5 x 16.9 mm



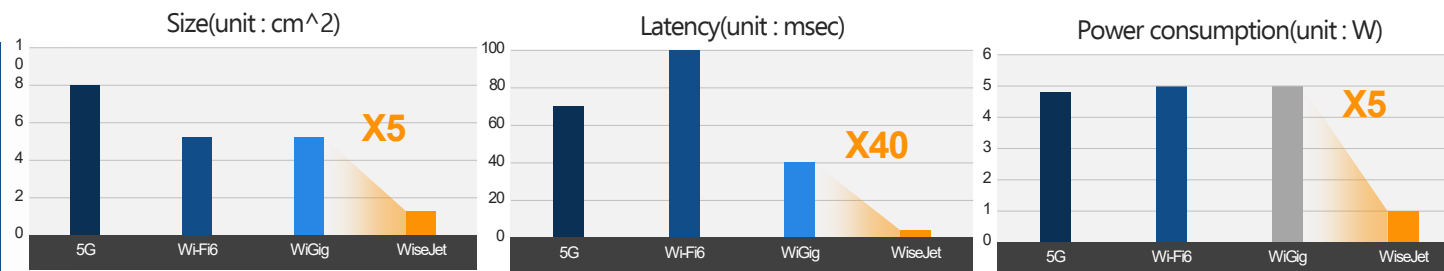
Size : 14.0 x 13.2 mm



Size : 13.2 x 13.2 mm

Features

- Frequency : 60GHz ISM band
- Throughput : 6Gbps~
- Latency : 1msec
- Resolution : 4K UHD/60Hz
- Video Format : Uncompressed video streaming
- Power : 1~2Watt



Compared to Wi-Fi (WiGig), this solution is five times smaller in solution size, forty times faster with respect to latency, and consumes five times less power.

Therefore, it is the only wireless solution that can be inserted into the glasses frame of AR Glass to make it small and lightweight.

Because it can transmit high-definition images without latency, it can also be used in a variety of fields that require image transmission between devices (wireless digital signage, dental images, otolaryngology images, laparoscopy, military applications, etc.).

➤ Target Markets



II Business Summary

Product Solutions



AR/VR Glass Wireless Neckband Prototype



This product can be wirelessly connected to a video source device (smartphone or PC) by connecting to AR Glass and VR-HMD with a commercially available Type-C or HDMI wired interface.

The neckband has a built-in battery for 60GHz-based wireless communication and a power supply for the glass, enabling prolonged use.

HDMI Video Mirroring Products



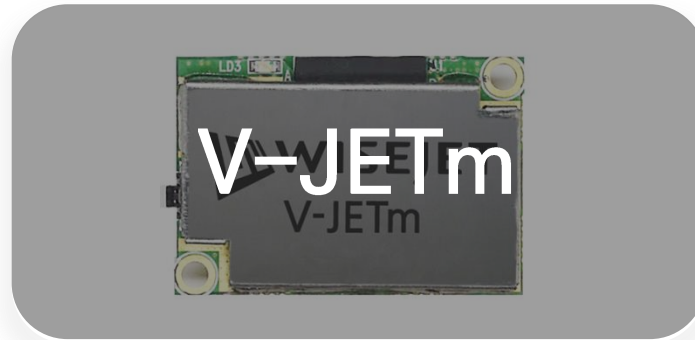
- A wireless transmission/reception product that can wirelessly transmit high-definition video/games from various smart devices (laptops, desktops, set-top boxes, smartphones, etc.) to a large-screen TV/projector through no-latency, no-buffering, no-setting, plug & play methods.
- Generates annual sales of KRW 400 million.

iPhone Video Mirroring Product



- It is the only wireless transmission/reception product that can be connected to the Lightning interface of iPhone/iPad through plug & play. It allows you to enjoy high-definition content wirelessly on a large screen. Installed in the karaoke room of Koshidaka, Japan's largest karaoke company, this product has been developed to allow customers to enjoy high-definition content and karaoke apps on their iPhone/iPad wirelessly on a large-screen TV.
- We have received a purchase order of 10,000 sets from Koshidaka, Japan, and have now completed delivery of 2,000 sets

Otolaryngology Endoscopy Image Wireless Transmission Product



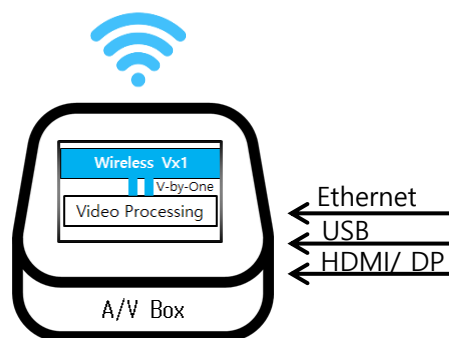
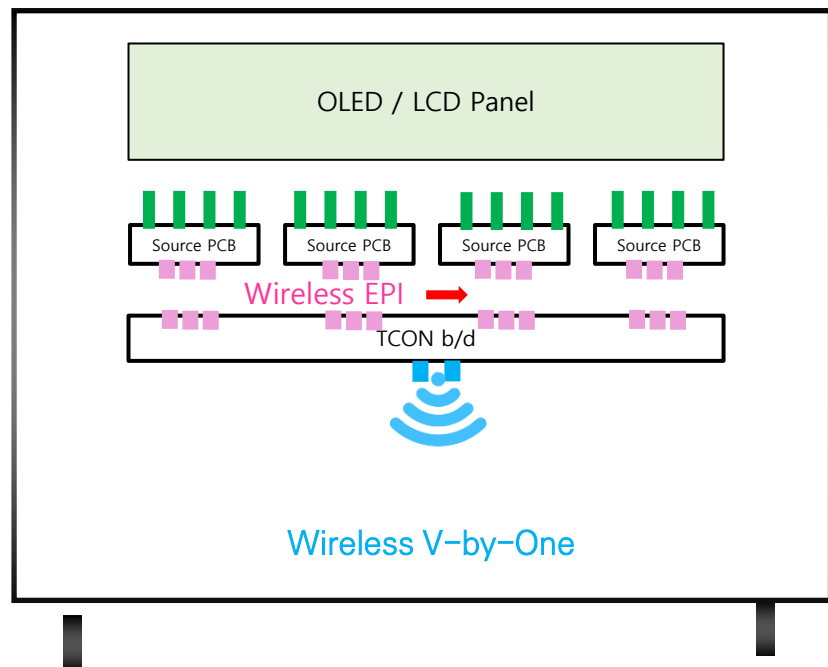
- In medical imaging endoscopy equipment, it is essential to transmit high-quality images without compression and latency. This product is the only wireless product that can satisfy this requirement. This product is a small module at 18x27x4mm and is embedded in the otolaryngology endoscope, making the current wired endoscopes wireless.
- Generates annual sales of about KRW 100 million.

Dental 3D Scanner Image Transmission Product



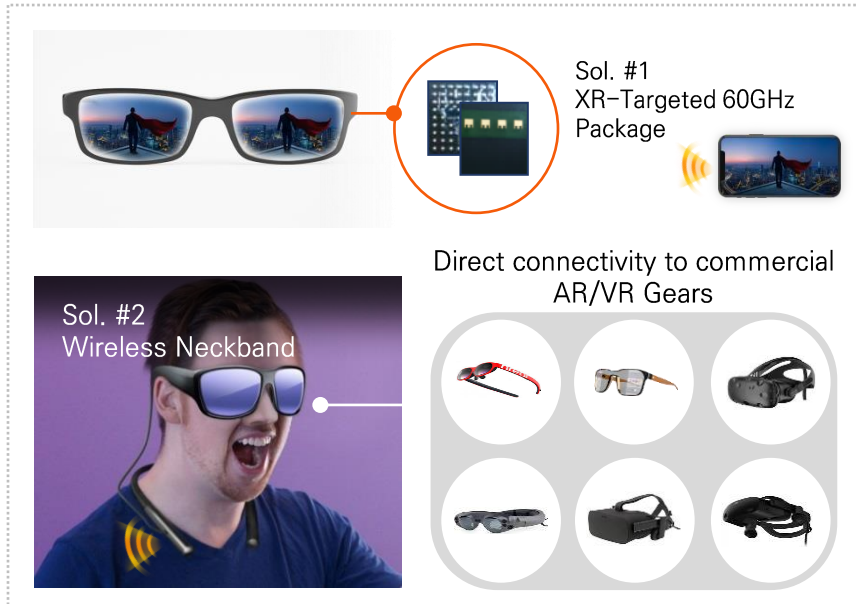
- A product developed for the “wirelessization” of 3D scanners. A 60GHz RF module that can transmit dental images at about 1,000 frames/sec.
- Received a purchase order totaling KRW 2.16 billion for the year 2022 and a purchase order totaling KRW 2.6 billion for the year 2023 from M. Achieved sales of KRW 1 billion in the first half of 2022.

Wireless V-by-One and EPI SoC



- World's first wireless module to replace wired 8K/60Hz V-by-One cable.
- 3-Lanes wireless EPI AiP to replace wired EPI between TCON and DDI.
- Improve living conditions by supplying thin and large beautiful displays.
- Place AV Box next to sofa or user convenience.
- Improved convenience of attaching and detaching various connectors.
- Can be developed such as bendable display, foldable display, rollable display, etc.

Wireless AR/VR Glass Solution



Current market situation

- Apple and Samsung have determined that AR glass is the next-generation device after smartphones and have begun its development.
- Apple plans to release a wired version in 2023 and a wireless glass that plays AR content on a smartphone and shares it wirelessly with an AR glass in 2025.
- Meta (Facebook) and Microsoft promote the AR industry based on platforms called Horizon World and Mesh, respectively.
- AR glass is emerging as a next-generation core device with the advent of the contactless era after COVID-19, but there is no wireless technology suitable for AR, so all of them remain wired AR glasses.
- We anticipate that AR Glass will be used in a variety of fields such as entertainment, industrial sites, education, shopping, and national defense, as well as for personal use in the future.

Commercialization strategy

- Collaborate with manufacturers to commercialize XR-targeted 60GHz package that can be inserted into eyeglass frames.
- Commercialize wireless neckbands that can be connected to Type-C-based commercial AR glasses and offer them B2C and B2B (education, medical, defense, entertainment, industrial sites, etc.).

WiseJet's technology is ready

Low Latency
(less than 1msec)
technology

360-degree beam-
forming technology

Type-C based image
wireless
transmission
technology

camera data back-
channel wireless
transmission
technology

Developed a prototype
of a neckband type
wireless adapter for
commercial AR glasses

Auto beam-forming
algorithm (FPGA-
based)

Proven as a core technology for Samsung
Electronics' wireless AR glass in 2019

USB Type – C Dongle



Current market situation

- Type-C is standard for all Android smartphones and tablet PCs, Type-C outputs 4K uncompressed video.
- Type-C is expected to be applied to the iPhone from 2023, and Type-C is already the standard for the iPad and Mac Book.
- Smart devices such as laptops and desktops are equipped with Type-C as standard.
- As smart devices are becoming slimmer, only Type-C is installed instead of HDMI.
- Type-C equipped monitors are the trend.
- A shift towards tablet PC-based digital education.
- As the performance of smartphones has risen to the level of PCs, we expect console games and PC games will be integrated into smartphones.
- We expect OTT services for karaoke and lodging will develop into industries where users can enjoy convenient and abundant smartphone-based services.
- Wi-Fi-based Miracast technology that wirelessly transmits smartphone images requires video compression with a transmission speed of 800 Mbps, resulting in quality degradation and latency (about 200 ms), making it impossible to enjoy immersive content.

Commercialization strategy

- Commercialization in 2023 and sell in online markets in Korea and abroad.
- Collaborate with game companies, OTT operators, and karaoke operators to commercialize smartphone-based services.
- Development of a wireless model for dual monitors.

WiseJet's technology is ready

Type-C based video and control data wireless transmission technology

Smartphone based dual screen (wireless transmission video screen and controller control screen separation) technology

Low latency (less than 1msec) and 360-degree beam-forming technology

II Business Summary

Competitiveness



Although Competitors have 60GHz-based chip technology, they are developing technology for Wi-Fi data transmission or short-distance radar sensors. Our technology is the only wireless technology that can transmit high-definition real-time video without compression and latency.

Our technology can transmit high-definition video or data wirelessly without a time delay using millimeter wave or terahertz wave that can transmit gigabits per second without compression or channel coding; broadband communication is possible, so it can accommodate gigabit and works with low power consumption. It is a technology with excellent potential for future growth based on a market with excellent potential for growth.

Categories	Wi-Fi		WiseJet's Tech.
	11ac	11ad	
Frequency	2.4GHz/5GHz	60GHz	60GHz
Data Rate	200~800Mbps	1~2Gbps	6/10Gbps
Resolution	HD	HD	Full-HD~4K
Latency	>300ms	>20ms	<1ms
Solution size(mm)	15x15	57x32	4x4@Tx, 4x5@Rx / 10x10@Tx/Rx for XR
Set-up Time	>20sec	>20sec	None
Power Consumption	Several Watts	Several Watts	mmWat~1Watt(according to application)
Transmission Distance	<30m	<10m	1cm~10m
Transmission Method	Compressed packet	Compressed packet	Uncompressed data
Interface	Miracast	PCIe	High speed serial data and HDMI/DP
Features	It is applied to the mirroring service of compressed video, and the latency is very high, making it unsuitable for real-time video transmission	It is a technology developed for general data transmission. It requires a separate AP, memory, etc., so the solution tends to get very big and there is a lot of latency, so it is not suitable for real-time video transmission	The size and power consumption are small while accommodating up to 4k video, so it can be inserted into the AR glass frames

III. WiseJet Vision and Mission

유선과 동일한 성능을 보장하는 초고속 초고용량 무지연
무선 솔루션을 개발하고 공급하여 케이블이 없는 제품을
실현하여 사용자의 편의성을 극대화한다.

세계 최고 수준의 기술을 지향하며, 업계 최고 수준의
보상을 실현한다.



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Thank you

WiseJet Inc.