

**ASI Technology Summit Q1 2021**  
**Harnessing the Power of IOT and 5G**

0:00  
Hello.

0:02  
I am Wily Kok the R&D manager here at ASI.

0:19  
Today, I hope to provide you information that may help you understand where the market is heading, and what was impossible, is possible now.

0:30  
We'll cover a little market trends, a little bit of that unit product, and more on how to position them in there'll be a life applications.

0:39  
Let's start with some market trends.

0:55  
The IOT markets, over \$200 billion in 2019, and forecast to reach US. Dollar, one point six trillion dollars. Yes, that is Trillion with a T, not a B, by 2025.

1:20  
Well, if you really want to know, really wanted to know, the PC market forecast, is 222 million. Yeah, that's the M unfortunately, by 2025.

1:34  
Here's the IOT endpoint market by segment in 2020.

1:38  
This shows IOT technologies, it's widely adopted in all industrial segments, asked me about five point eight billion units in 2020, and that is 21% increase from 2019. So, I'll show you a more case study around this industry shortly, OK?

1:57  
In the past 20 years, technology advances in the areas of data collection, analytics, machine learning, an augmented realities, have power the rise of smart, automated manufactories.

2:09  
Yet, connectivity has remained a critical barrier to the full potential of what is known as industrial 4.0.

2:16  
Even the most advanced WI fi networks that was difficult to manage enlarge,

2:25  
Now five G can live manufacture a reliable alternative.

2:29  
This would enable critical communications such as wireless control of the robot.

2:33  
Autonomous robotics and machineries. That will unlock the full potential of industrial ...

2:39

by 2030, The manufacturing sector for January, additional, \$400 to \$650 billion of global GDP impact according to the research by the McKinsey Global.

2:53

If you look at today's 5G IOT market, it doesn't really exist.

2:58

The rule will be a dramatics, and you can see from the chart here, the bitcoin price in the early 2009 is actually zero initially.

3:09

Yesterday, it's \$57,870 each. Well, it kind of you get the point here.

3:19

Visually inspection: Real-time processing control feed the pin picking, Augmented Reality, or AR.

3:28

An ATV automated guided vehicle, off just a few many 5G IOT applications that do not exist in the past and all have high potential value.

3:41

Next is solution.

3:43

OK, off before that, let me quickly introduce our partner first.

3:48

So you know where the product that we thought we'd be talking about come from.

3:58

Focusing on the model board, batch computing for manufacturing, business, and retail industries. Aim to be the world leader in AI IOT product.

4:08

Next is ASUS IOT.

4:11

Offer a full portfolio of hardware software and tailor made internet of things and artificial intelligence solutions.

4:19

And the next one is Giga IPC experience in Computing Market to Overbought Level and system level product for five G IOT machine visions, industrial automation, spot retail, and Healthcare's.

4:36

The last, but not the least, I'm happy to introduce our newest partners, F I I to join.

4:42

ASI in the fastest growing markets You're probably thinking about F I I who is F I I He is FI I The logo, set it off.

4:55

Foxconn industrial Internet. F I R U S. A is created to not just solution in 5Gs IOT.

5:02

Industrial AI took a business to transform me to the industrial flop on environment.

5:10

All these partners have a similar vision and they found it for one reason, 5G IOT, the key element to industrial ....

5:21

Without further ado, let's dive into some of the unique products.

5:25

The product that I'm showing next will be something you probably do not know is existed unless you already focused in the IPC or IOT market.

5:35

I'm not going to bore you and read line by line of text back.

5:40

You can look it up later if you want to, or you can check with ASI Sales Associates.

5:45

So, I can have time, so I can save time on the case study. That's more important for you guys.

5:53

Let's speak here.

5:54

None of this part of sponsor my webinars, I brought me a lunch.

5:59

So I picked this product that I thought was interesting to me, and hopefully to you as well.

6:05

So let's buckle up and enjoy the ride.

6:12

First part here is a famous AI, IOT Edge computing.

6:17

Powered by Intel as a serious process of a nice. Just IOT a totally silent machine that operate it, harsh enlightenment vision.

6:24

Next year, 20, 60, C we have del F N, well, like the headset's famous, or moving parts, it's not the same server, or PC that.

6:36

No, only one that no 135 C.

6:39

At the same time, you probably sounds like a jet engine.

6:44

This is a newly released a famous industrial edge compute of asphalt Industrial Supply 11 gen Intel core processes.

6:55

Also, up to four display, this is probably the most powerful and quite edge computing in the market today.

7:06

This Cubic Pro, W P, also mean waterproof.

7:11

Embedded system is designed for extreme environment, indoor outdoor weather system exposure, exposed to water, splashes, and dust.

7:21

It's offer IT 67 rated Pilot Protection, and Amtrak Connector, as you can see on the picture there.

7:27

Data for waterproof and dust proof capacity.

7:31

If operating temperature between -20, 70 Cs, This is big actually. I mean, you mentioned, how hot is 70 Cs?

7:42

The nominal rocket and coal should protect the system from corrosion as well.

7:47

And of course, this is also famous.

7:53

Next, is this Gig IPC, also Cubic Pro product.

7:57

This is the world's first, again, it's a world first embedded system to support 5G modules in the industrial market, enable remote operations such industrial automation, artificial intelligence, machine learning, and IOT applications equipped with Intel Core ...

8:17

processes, which provide stability and high performance for embedded system.

8:22

It should have awful harsh environment and operating temperatures.

8:27

By the way, Did you notice that All purists, three fairness, IPC product, that I have just talked about.

8:37

All, have something that you probably can't find on most modern PC, that is the serial ports.

8:44

Sometimes the company for a lot of them are those we won't be using, still plugged flow your keyboard or mouse anymore.

8:51

In the industrial application, COO port ...

8:55

are still D, connection of choice.

9:03

Here's another world's first gig IPC, cubic Jetsons, GPU compute unit.

9:11

As a matter of fact, I just got this yesterday.

9:14

A matter of fact, it was last night so I added Into this webinar so Eek, I can look at it firsthand.

9:22

Is the first famous GPU AI, deep learning compute power by ND the Jetson 928 core Maxwell's GPU. Again, this is 128 core or Jetson Savvier Annex 384 core envy the Nvidia Volta, GPUs.

9:43

This is not your ordinary for or a cloth Intel AMD, IOT IBC using GPUs to perform the computation can accelerate compute intensive application by spreading computing workloads over multiple core.

9:58

This full feature, GPU compute unit.

10:02

Come with built-in eight ...

10:05

and to get good reports, also support WI-fi and 5Gs and backward compatible that 4G as well.

10:13

Just like other famous IOT, IPC products, Dell, you can see from there that's a full complement, right? So.

10:22

This product is designed for application such that intelligence surveillance, not ..., ..., surveillance, AI, powered network video recorder. Again, not any and not any VR.

10:36

This is AI power, automate it up optical inspection, and any AI IOT application for industrial four.

10:48

Well, we have enough of the fans stuff, less code to some unique product here. In the IOT IPC category, there's still plenty of standard form factor model as well. But I'm not going to look at those. I'll pass on those and focus on something different and unique.

11:06

So, this is the SBC, SBC, stainless single board computer.

11:10

I'm estrous IOT is a tiny 5.4 inch board that had more feature built-in than a full-size ATX motherboard.

11:19

Every inch of the sport is being useful for the built in features with the Intel Core i5 processor embedded.

11:27

Yeah, I know some of them looking at the pictures.

11:30

Waste of house? Where's the processors?

11:35

Yeah.

11:37

It's not there, right?

11:38

Of course, because the CPU is up the other side is on the backside.

11:43

So, as I said, it's just being used, so even the back of it.

11:50

So, this is another SPC example from Giga IPC. This is the full feature AMD of rice.

11:57

And that platform, if the size similar to the previous 1.5 point 4 inches.

12:02

Again, every inch of this body is being used for purpose.

12:06

As you can see on the picture here on top, well, Desta, IMD horizon processes.

12:12

So, you get what you pay for it. Don't worry about it.

12:19

OK, Next is one of the most popular tinkle boards, that's to make two main category of this product.

12:26

Think of what ..., with political arm based processes feature at Google Edge TPU.

12:32

A machine learning accelerator does speed up processing efficiencies.

12:37

Lower power demand, make it easier to build connected device and intelligence applications.

12:42

The other thing you can port is called Singapore S.

12:45

Also, with quad core based processor, features the base, Mani T 760 MP 4 CTU, desktop for HD and ultra HD video playback.

12:56

It looked like a Raspberry Pi.

12:58

Well, one of those DIY SPC bought in the market today, but I think the board is more advance even at a similar price point.

13:10

Here's a unique Q seven modules.

13:13

We have carrier board.

13:15

The carrier board is a standard micro ...

13:18

board that looked like a regular model bought.

13:21

Good.

13:21

I'm just sticking this is this as the SPC that I showed you earlier. The processor is not on the back. So you don't have to flip the board. It's not there.

13:33

It's actually do not have any process on this board.

13:37

And not only that, it doesn't even have any key component on this board.

13:41

It's just a carrier board.

13:43

To make this this usable in the ITC Light Industrial Application, you'll also need a Cue seven modules that next to it.

13:53

So, they are in astral industrial off of both Intel and AMD.

13:58

Processors built in modules, the ability of this I'm sorry.

14:04

I touch and mouse to quickly set State Mouse, the Duty Justice, IPC setup, is essential for industrial purpose when a system is deployed.

14:15

It's not easily serviceable, all the device connected and tucked away.

14:21

When important cell such as CPU chipset, Nam Reveal.

14:26

you don't just get it back to work.

14:28

You just have to simply replace the Q seven Module with there'll be moving the component unit or disconnect. Disconnected any connected devices.

14:39

Next.

14:40

It's also Astro Industrial product.

14:44

Call Com Express is a similar time, not just Q seven, the carrier board is ATX Foreign Factors, and a key component also resides on the Comm modules Com Express module, actually.

14:57

So.

15:00

It makes any service jobs easier in the instructional environment.

15:11

Next product is, we call it love, you all know.

15:14

Know, it's the end, you see as the Intel 10 foot next unit of computing.

15:19

When Astro Industrial put AMD advising on the same form factor board, well, they cannot call it that nope anymore because you get into a nozzle from Intel. So they call it a 4 by 4.

15:34

So it's basically an AMP version of the Intel nuc Mother Board.

15:37

And you can see the CPU selection on each path forms, that's planted to choose film, detached on your neat.

15:49

This is something Neil is focusing on five G.

15:54

maffei, they call it the data transmission unit.

15:58

In short CTU is basically the adapter to connect to IOT the ITC to the ... Server or Cloud so five G frequency.

16:09

This particular DT, you utilize feet GPP E outer really snide ket 12 standard well it's a muscle on that The bandwidth of 41 and 40 seat 46 frequency bandwidth That's another version as well under C P R S C P L S stands for Citizens Band Radio surfaces. Is a pilot 4 G 5 G network?

16:35

CVR S is a fan of radio frequency Spectrum from 3.5 to 3.7 gigahertz based on the FAA FCC Standard.

16:50

Utilize the five G technologies, F I, I also offer a wide range of four K, five G surveillance, IP cameras that provide superior security and reliability surface. Same IP camera, also offer in the CV, our technology solution, as well.

17:13

A small cell is basically a unit that collect and transmit data from a 4 G 5 G device, to the edge or Cloud Surface.

17:25

Our servers support up to 128 device simultaneously upload and download.

17:32

We've covered a range of, yep, 100,000 square foot up to 10 miles.

17:41

So, this is not your home Wi-Fi router.

17:46

That's starting to break up, going from your bedroom to your bathroom.

17:57

So, let's jump into some case studies or applications.

18:02

I hope you have seen enough, incredible products.

18:04

I'm sure you have a lot of questions.

18:07

That's just the tip of the iceberg.

18:09

Having the best technologies is just the beginning, We need to put them into the right application, in order to fully utilize that capabilities.

18:19

Let's look at some real life study.

18:22

Some use cases I will send you in a short video.

18:26

So I can take a break \*\*\*\*\*, enjoy them.

18:29

A few of them are Vue application that were deployed using our partners products. Unfortunately, in mice, decided to come and watch the video is not very good. So, it's not gonna be high def, because I have to put my my next to my \$10 speakers so you can hear it. So, anyway, here we go.

18:50

five G IOT are everywhere.

18:52

Such a factory automation and robotics, energy, and utility, public safety, healthcare, public transportation, media, entertainment, automotive, financer, surface, retail, agricultural, and whatever industries you're in.

19:10

Here's a self-service foot ordering kiosks with H G Touchscreen Display Full Fledged Selections, a barcode scanner for scanning coupon, transmitted orders to the kitchen computer monitor, credit card reader.

19:24

And, we see trends for your customer: ordered, deliver best, better, in-store experience and processing time, a mini ICS, industrial motherboards with plenty of IO connection to handle hash, and vitamin.

19:39

It's perfect for such application.

19:46

Here's a video of HIV if you don't know what an HIV is. Autonomous guided vehicles.

19:52

So here we go.

19:56

To ensure production efficiency within a delivery or response, whatever, due to.

20:07

Parents cannot be supplied in time, bronstein, remain in need of necessary components, reducing the overall equipment production.

20:18

five G.

20:22

The development of an automated system for real-time materials.

20:30

A GPS system includes intelligence scheduled.

20:33

The time machines have real-time monitoring and alerts.

20:39

This system helps improve, production efficiency, reduces downtime of critical stations, meaningfulness, components, and allows for easier implementation of holies three production schedules with intelligence.

20:58

That's, that sets forth that with you.

21:03

So, the next scenario is like, if you have a shop at Wal-Mart, you might have seen it, or you may even used it before.

21:13

If not, I'm gonna show you a short video about these things.

21:20

New technology here, let me show it to you.

21:23

It's called the pickup tower and this thing is massive.

21:26

You miss it when you walk into the store, it's a place where you can pick up your online or take a look.

21:34

So this is the pickup tower, it's 16 feet tall, and it's basically a giant vending machine that is just chock full of goodies, all the stuff that people order online. If they choose the online tower pickup.

21:49

Next thing, you know, they come into the store and they get a text ads, they pick up their item. So let me say how it works. I place an order.

21:57

Once you place an order, and Verify said it's in the store, they come on over here, some machine, and look at that, so you see how it just kinda opened up.

22:05

So, come on, unclos.

22:08

So, I get my little barcode here, This is the barcode that they sent me for my item and all I have to do is literally scan it.

22:17

All right. So, you see how it works and probably you have done it yourself.

22:23

And online to offline commercials.

22:25

Crucial to a retail market, especially during the pandemic, usually make purchase online and pick up in-store without any human interactions.

22:35

This for just application offenders, industrial products, what's used in just Wal-Mart, South Pickup Tower equipped with a high definition high, high definite touchscreen display and control automate Mechanicals.

22:49

So customer can access the product on my purchase, just naturally bring it right to them right at the door, means the window.

22:56

I mean, next, it's automations.

23:03

This famous IPC with full appeal E lamp was elected to use on this mission visions.

23:10

To improve automate it, inspection in yield rate, multiple camera connected to the cloud like images, data, for initial inspection and transfer the data to the main server flow analysis.

23:21

That showed it especially we saw, back on the display, full WGA or HDMI port, other lamp what can also control the robotic arm and then do for the product for 360 degree view.

23:32

Barcode scanner, a connected to the USB com port to read the barcode. To make sure the correct product being inspected.

23:40

So next, I'm gonna show you another video. though. This is also a video about machine vision.

23:48

The quality of products has always been a concern for factory managers and it's sort of production line.

23:55

Product defects caused at previous stations are usually not detected until the final quality inspection the processing of defective products when stations because a few it's waste of resources and production capacity.

24:09

It's halogen system is developed in this factory to prevent late defect detection IOT sensors on machine machine signal acquisition systems and by using automated optical inspection.

24:24

The quality of each product at each station can be assessed to form extreme of quality.

24:31

This way, product defects can be found and repaired in real time.

24:35

The system can improve the overall production yield.

24:39

Meanwhile, workers can repair the products in real time, based on the defect information provided by the system.

24:47

Strength quality reduces rework and scrap costs with AI naval construction.

24:55

All right, slippery to get, Most under the next scenario.

25:02

So here's an IPC Mada board that was use for law enforcement to identify suspicious vehicles, connected to a multi camera zwei USB three port for Continuous Hi, definitely the recording.

25:14

Upload footage to the data center by WI Fi Connection to compare suspect vehicles.

25:19

fund the database in the vehicles, display support to the HDMI port to view this we play or record video together with the Vehicle License Plate. Reader.

25:30

four is an avid to apprehend suspect and stop crime instantly.

25:38

Next, I'm gonna show you another video. This is about Smart Supply Chain. So we need our audience, it's one of those, OK, here we go.

25:48

Manufacturing, often thesis supply chain issues, material shortages, inventory backlogs, unexpected disturbances, in order to lay. The smart scheduling system can automatically optimize the production plan according to time constraints and delivery priorities, resulting in dynamic management optimization.

26:12

The system can improve workflow processes and time order fulfillment.

26:18

As a result, managers also receive reliable worker, machine root cause evaluations for a better management uptake Production process. Production downtime is reduced due to better materials.

26:36

Yeah.

26:38

All right.

26:40

So we all can't get more products.

26:44

Pandemics, The demand for high-tech personal protective equipment has increased just drastically.

26:51

A company create an AI face recognition intelligent tower with a shoe a Singapore: With high fishing temperature measurements, without contact, face recognition, real-time monitoring of likes and recognizing people, even wearing a mask, and wireless design that can't place in any locations.

27:14

five G Play, a major role in autonomous robots, by providing connectivity for robot.

27:20

For Robotics, which it needs for a fiver, or cable tethering.

27:26

Additionally, five, to enable live remote monitoring of video stream for robotics, and five G lower latency, enable remote control application for robots.

27:39

Here's an example of how IPC issues in the automatic parking lot K control systems with multiple com port USB.

27:47

And LVADs port that control mechanical lift gate, payment devices, on screen displays, and license plate recognition, cameras, modules, that can operate in the right range of temperature, and outdoor enlightenment, of course.

28:06

Here's a video about mish, Manufacturing Safety Surveillance.

28:10

Here we go.

28:14

Someone asked me entering unsafe risk easily be injured by a robot. Install cameras in the robots working area. Send video streams, running over five edge server, to be analyzed for human presence within the restricted area.

28:36

If anyone wants to send out an alarm, I find the operator to stop the robot.

28:44

System promotes safety by guaranteeing no one will be injured by the robots. The system also makes sure that the robot operating environment is safe for employees because we care.

29:00

Well, I care too.

29:03

Here's the next one.

29:06

Let's just talk about surveillance.

29:09

Surveillance, which is a key component of smart cities. Usually surveillance cameras to transmit real-time, ultra high definition and 360 degree video streaming over five G network.

29:21

Those video stream are transmitted to a control room or edge data sensors that can monitor BC public places and critical structures.

29:33

So, here is a basic IP CN or industrial ties. it's several network setup.

29:41

Industrial equipment such as HIV we just talked about earlier.

29:46

Other Madea Assembly line, Autonomous Robotics, Security, or surveillance devices are connected to different kind of five ... transmission devices. You'll also see that in some of the previous picture, as well. And it will trust, trust me, it's through the small cell. Basically, it can be a rocket die, small cell, indoor outdoor kind of many different favors, actually then into the Cloud Edge Surface.

30:16

Here's a sample of how I PCN Cuff Rachel White.

30:22

In a two tau, ...

30:24

2000, 200,000 square foot manufacturing facility that utilize IPC end, will only we quiet too sparse cell.

30:35

That cover hundred thousand square foot for each, What should the traditional Wi-Fi setup?

30:43

You're going to need six Wi-Fi routers, IPC N can handle 64 device simultaneously was very stable signal and high bandwidth compared to Y five, it will deteriorate quickly over dense vitamin and perform poorly on latency as well.

31:09

Well, OK.

31:13

IPC and surveillance cameras have Men Advantage over traditional Y and wireless expressions.

31:20

ITC and Surveillance, which this wire, they all plug and play, there's no tethering, cabling allows allow reconfiguration of layout.

31:30

No disruption from damage wires extends a range of data transmissions.

31:36

An IPC in which this wireless also slowly you will have increased throughput increased data security, increase coverage, and improve quality of services.

31:49

So you are using a surveillance products, and the most important for surveillance product is security.

32:01

It doesn't work that way.

32:02

Sometimes, take a look today on this headlines, March nine, though, that's the date that I start preparing this presentation for the ....

32:11

Just that day, you can see all kinds of packer's leek on surveillance.

32:19

five G is the technologies to network IOT and for why a peace of mind and sense of security.

32:28

Smart manufacturing is well established in some verticals.

32:32

Manufacturers are using network machinery to monitor the product production process and collect data to improve performance today.

32:41

But the degree of adoption vary between the verticals and deployment are fragmented.

32:47

In this last slide, the potential of five G IOT to promote Industrial four is promising. But not without barriers.

32:56

Current operation is required to drive adoptions awareness of the features that offers significant significant value to accompany is critical for the deployment, and the integration of five G IOT into manufacturing process.

33:11

ASI and our partners here talk with you all to make the impossible possible.

33:21

Thank you very much for joining this, webinars, I hope the information, I deliver today is useful to you.

33:28

I'm gonna get it back to Kent.

33:31

All right, great, thank you. Willie, thanks for the detailed presentation. Really appreciate it.

33:37

I know that there is a lot products in there, that our customers are probably not familiar with.

33:43

So, this is a really good overview, and a good, kind of broad stroke presentation of where this market is and where some of the opportunities are for customers to engage with different clients who they may already have today.

33:59

A few questions in, and just a reminder to everybody.

34:03

If you have a question that you want to ask, really, go ahead and type it into the to the question box, and I'll be sure to ask the question. A couple of things. Up the top you had showed a lot of motherboard products in the beginning, under the product portion of your session. On the ASI have all of the other components that go with the motherboards. We have the cases. We have the power supplies. I know, on the panelists devices, those were complete devices inside the chassis. But what about the other one that you were showing the motherboard?

34:39

do we have all the other components to go with those boards?

34:43

Yeah we do actually the partners that polis the SPC, actually all the those we call those carrier board. While the can't report is basically a standard form factors.

34:55

You can create any form factors, standard form factors, chassis, and power supply, and make it work together. Lots of those unique one, It's like the qualified for it, now, I mean basically, you know, those are standard form factor in adult form factor. Basically. Our partner do provide a full solution and if if that's a solution that you need to customize or do it in a very different way, we do have many partners that can help us to create a custom solution for you as well.

35:29

OK great, so um, I got some questions about IP CN.

35:37

So can you talk a little bit more about what that is and is there a special licensing required for that?

35:44

Can you go into a little more detail on that one?

35:48

Sure.

35:51

I actually have and then panelists here, some F I I to how on that topic?

35:58

Before he, John, This IP Scanner is actually, we call it license spectrums.

36:05

So it's not similar to one of those.

36:08

I call those AT&T, T-Mobile, Verizon, five G Spectrum, Dose of a licensed one dose and locked in, so you, like, you cannot have AT&T Spectrum and lock into AT and T, Mobile, or otherwise versus.

36:26

So those half identify spectrums that using, if you're using the same, I say the like a D T, you are the small cell.

36:37

They will connect in the same network, basically, is really similar to like no wireless raga today.

36:44

You want to fight, see all the coupon for, so it's similar.

36:49

But in a much higher level, basically, with the security, because it will be in a frequency that was restricted for only the five G oddest CPL as signals.

37:01

So, I'm not sure I can answer that correctly or clearly.

37:04

But, yeah, I mean, it is a unlicensed spectrum meaning that it's not restricted.

37:11

Uh, long sets wants the bend that we are using on dose, equipment doesn't interfere with, of course, you got AT&T, T-Mobile, arises bandwidth.

37:27

So for the other ones for like LTE based dilutions, do you need to be licensed for those?

37:34

No, actually, you do not.

37:36

It actually, we, the i-pod to do cover the F the LTE version but it just the technologies the frequency, it will be on a different frequency just like really plain and simple, like you're listening to AM radio versus FM radios.

37:54

So they are in a different frequency.

37:56

So although the technology is the same, the frequency is in the air, but you won't get interference between those.

38:07

So look, looking at the, the camera solutions, and forgive me for pausing. Some of the questions are quite technical in nature, So for, for you guys that are sending in the questions, I think it's great that we have these questions.

38:24

If I don't get a chance to ask, it may be either, because, A, we didn't have time to get to it. Or be, I didn't understand the question in a way to give it a justification To ask really. But this is a great opportunity for us because what we can do is have Willie, or somebody from his team follow up with you directly to have a discussion in more detail about this. So, I love all the questions that, we're getting. you. Know, like I said, some of them are pretty pretty detailed, which is great. Because that's an indication that you, guys are our learning uneducated. Or already engage the market.

39:03

So, that's a good opportunity for us to connect Willie and his team with, with you directly. So, I'm gonna say initially, forgive me if I don't ask your question, because I may not, may not feel that I have. the ability to ask. And properly but many of them.

39:23

Yeah, But let me ask on the cameras, though, you were talking about the surveillance cameras for the PTV, auto tracking those, does that also work in home solutions or are there, or are these, you know, things that you're talking about, really, kinda too advanced for the, for the home market?

39:45

Well, they work in an industrial application, off asleep. They can work anywhere, But it's a matter of whether you can afford it, and can how to put it, I mean, definitely it can be more expensive than your, your, your security ...

40:01

best Buy, and you also need to configure them, although, most likely, those cameras, it cannot work with Dell, the, I call the transmission unit. It will not, it will not work without the cell.

40:18

So, so, you'll have a whole infrastructure setup in order to use still equipments. Because those such as client and you need to have the the medium between the signal and the surface. So, yes, you can use it at home. I think eventually five G should cover FTC.

40:38

I mean, like I said earlier, um, five G coverage is crazy. This is crazy. It's up to 10 miles.

40:47

So you can live, literally, have a connection, if you want to have your own network, I mean, you have your workplace. It's only 10 miles or less than 10 miles away.

40:59

I mean, you can have your own networks. Just just build your own. I mean, it. Is it happening?

41:05

It will happen naturally for the futures, but at this point is so Neil. and we're focusing this mainly on the consumer use.

41:15

I mean, on on-site, for the industrial use only, all the in the, in the business, use only.

41:21

So, great. So let me kinda jump back to the product specifically a little bit. You talked earlier about the Waterproof Industrial Solution and how those can go into different types of environments. But was there a max temperature that those can handle?

41:40

And let's also look at not only the max heat, but what about, you know, cold in those environments as well?

41:49

Yeah, that's a good question.

41:51

I believe it or not, I mean, when I look at the specification on this, on those fatness product, especially given the, the one with the worst press pool, splash pool or or waterproof unit, dose or really extremes, operating temperatures.

42:11

Most of them actually can live. like the one you mentioned. There was a waterproof one, actually can operate under.

42:18

, T P C, two up to 70 plus C, So, it's a really wide range of temperature, it can handle. So, I mean, I don't know how hot is 70 SCH. I'd never experienced it myself. But, no, , I did. But not 70 C. So, it can handle extreme environment and still operational.

42:43

So, yes, I mean, yeah, you don't have to worry about it. Unless you're sending that machine into martial. Somebody at someplace that I love this Well, it probably have a problem if you're operating in in in this well.

42:56

I don't see any problem operating that those machines So still looking at the product specifically you talked in the presentation about the Tinker boards and is there?

43:10

Advantages of tinker boards over Raspberry Pi, and, you know, is there there are differences in terms of, you know, Roi or cost between those two types of platforms.

43:24

Yeah, I do not have a lot of information on that plot, but I do know that that they should offer a selection of Development softwares that that actually get you started on the tensorboard. Basically, you can actually get ready to kill the Development Kit or software's that you can use, undertake the board right off the bat, Bother me, if you have a Raspberry Pi, it doesn't cover anything.

43:55

So, you basically, unless you know like Linux, you know, you bunch you all those applications, you're going to have a lot. You're going to have to spend a lot of time in researching and how to get it to work on those SPC in the market. But the Singapore, you'll get a full support from issues with a selection of development kit available to you right off the bat.

44:21

Yeah, I don't know how much we should be talking about Raspberry Pi right around lunchtime. But for her covering that, actually, you're talking about it's starting to make me hungry.

44:35

But one of the customers did put a note in the question box, but 70 degrees Celsius is 158 degrees Fahrenheit. So if anybody, yes, so that's quite hot. I don't think you've ever experienced anything now.

44:53

Congratulation on that.

44:56

So let me see here let me take another quick look, actually, I have a question regarding Blockchain Amina or any of these products, no Suitable or ideal for blockchain.

45:09

Uh, I read all the documentation. I go through all the product information.

45:16

I did not see anything about blockchain.

45:19

I don't see any problem with that though.

45:21

I mean, uh, I tell you what I mean. People use ...

45:25

bought a Raspberry Pi footfall for bitcoin Mining so blockchain I don't see a problem using that but I do not think blockchain. Will we CLI industrial application?

45:38

Ah, So, yes, I mean, absolutely. If you want to put a blockchain in the seventies, C, and vitamin, yet, it will work and will do just fine.

45:48

Yeah, I've got a great question here because, actually, this is something that Willie and I were talking about the other day.

45:57

Because we hear a lot in the market today about five G for cell phones, right? You can hardly turn on your TV without hearing a five G cell phone advertisement.

46:08

So maybe you can talk a little bit about the difference between five G for cell phones and home, birth, five G, industrial, that we're really kind of talking about here in your deck, OK? I'll do my best on that plot. That's a quick question then I tried to get collect more information on that as well myself, As you all know, I mean, if you are using five G network on your cell phone or tablet, or whatever consumer equipment you have already is you go through a cell towers.

46:42

So the cell tower actually, it can be Android O has to be everywhere in order for you to receive five G signals So Those are the signals that are tested at a certain fan.

46:57

All spectrums like I said, the like what I call the 5.7 gigahertz of 5.5 gigahertz so those podcasts in the southern spectrums semester LTE four G LTE so there are also podcasts and difference.

47:15

Frequency, especially rooms, full, Industrial preface. Although I PSTN, it's on your your, your purpose.

47:24

As I said, FCC opened up a few of those fractions.

47:29

Actually, if you go back to Australia Cannot if, if you seen one of the slide on the TTC or the small cell, those spectrums are located, actually restricted meany for the IPC Network.

47:45

So so you won't have first of all, you won't interfere.

47:49

You cannot interfere, actually tasked by the FCC said that those two standards cannot operate at the same time.

47:57

so you won't have to worry about yourself or get jammed into your industrial IP Surveillance camera Or the IP surveillance ... camera will champion to your cell phone because, as I said, it's like AM and FM radio, they will jump together because they are on this at different signal.

48:16

Something, I mean, you, actually, if you're going to deploy AI PCN networks, you're gonna have your own infrastructures, you're gonna have to set your own frequency. So, you'll have to define that yourself.

48:29

It's like, as I say, on this, and now, we have two small cell to cover, 200,000 square foot industrial for, so you have full control of your network, basically, so, nobody else from the outside can see.

48:44

It will interfere from it.

48:46

So, that's how it worked, basically.

48:51

Great.

48:53

So, I'm gonna go ahead and kind of wrap this up up, here.

48:59

So, I want to ask everybody just to kind of hanging in with us for a couple of seconds, I think, maybe, what a lot of you are kind of, thinking about, as you saw this presentation, then you're, You're considering what opportunities there are for your business and areas that you can move into is that, Yes, IOT really is everywhere. There are opportunities for IOT in all the different. Oh, I'm sorry.

49:28

Oh, sure.

49:29

I'm sorry about interruption.

49:32

I think, and I actually discussed this when I have this webinar's presentation is that's a lot of concern about southern country of origin.

49:45

So actually, all these products, including the F I product, that's mainly focused on the five Gs RTA compliance.

49:54

So there's no worry about it using it in any way in the United States.

49:59

So that's all I have to say, thanks again.

50:02

Yeah, very, very important. For the interruption, always, definitely need when they need to know that.

50:12

Yeah, so anyway, what I was really kind of talking about more business perspective for you guys, and, kinda what you might be thinking about for your business.

50:22

Where there are opportunities and, and there really are opportunities for IOT and a lot of space.

50:28

I think a lot of the examples that Willie showed might've look like, wow, this is really too large for me.

50:34

I don't have customers that use robotics, or I don't have the type of accounts that might be doing the applications that maybe we showed here, which are really just things to kind of get you thinking about where there are opportunities for you to engage with IOT and five G. The reality is, that there are opportunities popping up everywhere.

50:57

I know for ASI as an example, because of the ...

51:02

19 situation, we now have thermal body scanners for coming in and out of our warehouse and coming in and out of our building.

51:10

There's thermal scanners to scan your temperature before you come in or out of ASI, especially in our warehouse, with these type of things that are not only do being deployed in warehouses, but also, you think about, you work with schools and school districts, whether they're preschool, all the way up.

51:30

These are things that are probably coming to your school near you very soon. So, facial recognition, body scan. Those are all types of things that have opportunities for you guys out in the market.

51:44

We're giving away today a DJI drone.

51:47

Drones are highly used in the IOT space, especially in agriculture or surveillance applications, where the drones fly out and take surveillance farmers, crops, and then bring back information into the server. That then gets analyzed by software to determine where do I need to water. What parts of my crops need more fertilizing.

52:12

Where should I, should I plant? next?

52:16

All of this information being gathered through the drones and then communicated and analyzed through the computer system.

52:23

The digital signage, things that we talked about earlier, some of the applications that Willie showed there are for all kinds of restaurants. They don't have to just be for Burger King, as an example.

52:35

There are thousands and thousands of smaller restaurants that need to think about ways to engage or re-engage with their customers as they come back into the businesses and figuring out how they can make that experience more enjoyable.

52:51

And deploying digital signage, An automated ordering, an online ordering.

52:56

And all these things are methods to have that done, and what all of these things have in common when we're talking about, you know, the small or medium sized businesses. But, yeah, there's a lot of those businesses out there.

53:10

They need they need support. They need resellers. They need bars.

53:15

They need people that understand how to connect to these technologies, and how to do the networking piece, and how to have that information get into the servers, so that it's usable by the business, right?

53:28

So that's the area where, you know, you guys really come in and have a major advantage in going broad scale with these types of application. So, just kinda wanted to share that, and put that on top of what Willie had already talked about.

53:44

And hopefully help you guys.

53:47

Think even deeper and broader about you know your business and where you might be able to take it in the area of IOT and five G. And certainly as you expand into that, ASI has a lot of products as what really showed today.

54:03

And we have not only these products that he demonstrated, but we have a lot of other things from other vendors that we work with, that we can bring in. So, customized cases, or you need different kinds of designs in that area ASI definitely is, can help you with that.

54:20

And we have partners, um, that we've worked with on other projects and that we can work with on your project to help deploy these types of solutions.

54:29

So your salesperson is obviously your main point of contact, but Willi, it's also here to help you guys and his team is here to help you.

54:40

So if you have questions, I'm gonna make sure that all the questions that you guys said today, get over to Willie because I know from reading them there are several of you that need to absolutely connect with Willie to have some discussion about the IOT and the industrial Computing in the five G and all those things that he showed today.

55:01

So, Absolutely, there's, there's communications and discussions that need to take place there, but if you need Willie the e-mail it's willey W I L L Y.

55:13

Dot cos K OK at ASI partner dot com and you're more than welcome to shoot them an e-mail with your question on anything related to the the Industrial products that he showed today.

55:25

So, I know that's a lot there to think about, and, you know, really appreciate willey going through this presentation with us today. Excellent job, it's a really broad, broad topics, so we probably could have spent a lot more time on this and dove into a lot of areas in more detail. But this is a good broad stroke painting that I think will help a lot of us.

55:47

So, thank you for doing that. Really. So, with that said, I'm, I am going to wrap things up. There are some prizes that we need to give away, but I need to download the report to be able to see who the winners of those items are. So, we have the DJI drone.

56:01

And we have the all in one that we're giving away, I will send out an e-mail to everybody who let you know who won. We want to make sure that you all know that, yes, we had a lot of great prizes that we gave away, and real people did win those.

56:16

So, I will be letting you know, you know, who the winners are for that, so that you all have it available, and could see it.

56:24

We'll also be sending out the slide deck and recordings for all the presentations, so that you have as well.

56:30

So, you guys will be getting that from, from us. So, on behalf of ASI, I really want to thank you all for joining up. The attendance for this entire week was really, really phenomenal.

56:42

We so much appreciate you guys come in every day to join us for an hour to have these discussions.

56:51

And we, we thank you very much for doing that. So, \*\*\*\*\*\*, we can see your e-mail.

56:56

So I see you have a lot of work to do, and we'll let you get to that. And I'm sure that everybody on the phone, you guys also have a lot of things that you need to get to. So I want to wish everybody a happy weekend safe weekend. Thank you so much for joining us. And we look forward to connecting on future events again.

57:15

So, thanks, everybody.

57:19

Thanks, everybody.