

# Alpha 2017 Corporate Social Responsibility Report



## About this Report

Alpha Networks Inc. (hereafter referred to as “Alpha” ) will begin publishing a corporate social responsibility (CSR) report every year from 2018 onwards. The CSR report will present to all stakeholders the investments and accomplishments made by Alpha in terms of business operations, corporate governance, environmental protection, employee rights and community involvement.

This CSR report is available in both Chinese and English. Stakeholders can download the contents of this publicly available report from <http://www.alphanetworks.com>.

### Reporting Period

Information disclosure in the 2017 CSR Report covers the period between January 1, 2017, and December 31, 2017.

The report was published for the first time in 2018 and will continue to be published in July on an annual basis in the future years.

### Scope and Boundary

This Report discloses the measures implemented by Alpha Networks in the CSR domain and their outcomes. In addition to Alpha Networks (Hsinchu), parts of the Report also encompass the following factories located in China but not its sites in Chengdu (China), Japan, the U.S., and other corporate entities not directly controlled by Alpha.

- Alpha Networks Inc.: Corporate Headquarters. Known as Alpha Networks (Hsinchu) for short.
- Alpha Networks (Dongguan) Co., Ltd. ( “Alpha Dongguan” )
- Alpha Networks (Changshu) Ltd. ( “Alpha Changshu” )

### Guidelines and Principles

The GRI Standards Core option was used as the basic framework for the disclosure of sustainability issues and information at Alpha in 2017. The GRI Standards Index is also provided in full as an index to the contents of each section.

### Contact Information

Please do not hesitate to contact us with any questions or suggestions:

Alpha Networks Inc.

Address: No. 8, Li-shing 7th Road, Science-based Industrial Park, Hsinchu 30078, Taiwan

Contact: Joyce Chen

Telephone: +886-3-563-6666 ext. 6275

Fax: +886-3-567-8124

Website: [www.alphanetworks.com](http://www.alphanetworks.com)

E-mail: [public@alphanetworks.com](mailto:public@alphanetworks.com)

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## From the Chairman

There is a Taiwanese folk song “Let’s Go Watching Clouds” from the seventies and the lyrics mentions “to go outdoors and go watch clouds together.” to encourage a sad young lady who might be done with someone. With the passing of time, today’s Internet generation means this young lady can now find many other ways of “forgetting that setback.” For example, she can follow net flicks at home over a 4G or wireless connection, or use a matchmaking service with a cloud-based database to find a new romance and go watch clouds together hand-in-hand.

“Cloud” , “edge computing” , “4G” and the upcoming “5G” have greatly changed how people live and socialize. They’ve also created new culture and history. Alpha is fortunate to find itself amidst this wave of technology. We hope to use our expertise and advanced products to make this world a better place.

Since its creation in 2003, Alpha has thrived to provide top global brands around the world with product design, development and manufacturing services. Our product lines include LAN/MAN, Wireless Broadband, Digital Multimedia and Mobile Enterprise Solutions. We have set up subsidiaries in North America, Japan and China. Our global workforce now number 4,100 employees. Our vision is to “Forge the Internet to connect people and things.” We hope that people, events, and objects can be connected seamlessly over the Internet; our mission is to become a globally recognized, professional networking DMS supplier that provides customers with the best service through advanced technology.

Network communications saves energy! “Use the network to save on legwork.” Green energy and environmental protection is in our DNA. The green design philosophy is introduced during the R&D phase of our products and we constantly make active improvements to our production process. We also disclose our corporate carbon emissions and conduct product carbon footprint inventories. In our everyday operations, employees often bring their own eco-friendly utensils, practice recycling, and follow energy-saving practices during work to conserve the Earth’s resources. We aim to become a green benchmark for the network communications industry.

Human talent is the source of our competitiveness. We provide employees with a sound working environment and place a strong emphasis on talent development. I often teach classes in person to broaden the horizons of employees through the sharing of the latest trends in technology development. We also provide employees with career planning based on their individual traits and specializations; in addition, we listened to the needs of female employees by providing more flexibility and a range of care options from pregnancy, birth, baby care, nursing to child-rearing as part of our push to become a happy enterprise.

Looking after disadvantaged groups in society is constantly on our mind as well. The “Alpha Networks Foundation” and “Alpha Foundation” were established in 2006 to continue giving back to society as well as participate in educational, cultural and social welfare activities. Through direct

intervention, we help children from disadvantaged families that slip through the government and society’s safety nets so that they can live a better life and study better.

I like this quote from Laozi’s Daodeching: “Shrinking from taking precedence of others, I can become a vessel of the highest honor.” What it means is that one should be humble in the handling of everything in order to become the leader of everyone. I follow the same approach in corporate governance as well. The pursuit of company profits is balanced with corporate social responsibility so that Alpha can become a leading networking company that embraces sustainable development and create a better life for everyone through constant advances in networking technology.



Chairman John Lee

# Alpha Policies

## Corporate Social Responsibility Policy

Alpha upholds the following principles in the practice of its CSR:

- Implement corporate governance.
- Fostering a sustainable environment.
- Uphold public interests.
- Strengthen CSR information disclosure.

## RBA Policy

Alpha actively supports the Code of Conduct - Responsible Business Alliance, RBA Version 6.0, (previously known as the EICC) to ensure a safe working environment throughout the entire supply chain and for sub-contractors, every employee is treated with respect and dignity, business operations are environmentally friendly and ethical.

In addition to the continued review of our own progress in labor, health and safety, environment and ethics, and agreeing to on-site audits by third-party verification bodies, we are also committed to actively asking for our suppliers to adopt the tools and standards of RBA. To fulfill this commitment and build a business environment for sustainable development, we have formulated RBA-related policies based on integrity and making no compromises. We will strive to work relentlessly for the rights and interests of the electronic industry supply chain and operators.

## Conflict Minerals Policy

We are committed to monitoring the issue of conflict minerals and to investigate the source of the Gold (Au), Tin (Sn), Tantalum (Ta) and Tungsten (W) minerals we use to ensure they are "Conflict-Free."

We promise to form a long-term relationship of mutual growth with suppliers. We expect suppliers to disclose the refineries and mines they work with, and also require suppliers to comply with RBA rules so that we can fulfill our corporate responsibility to the environment and society together.

## Ethics Policy

All business activities at Alpha must uphold the principles of integrity and fairness, comply with laws and regulations, and adhere to business ethics. Employees are prohibited from engaging in bribery, corruption, and accepting or giving of gifts, money and hospitality not commensurate with commercial value from suppliers, customers and stakeholders. The confidential information, assets and intellectual property of Alpha, customers and suppliers must be placed under strict protection.

Alpha believes strongly in ethical business management and all forms of inappropriate behavior are banned. A system for protecting the identity of whistleblowers and the accused has been put into place.

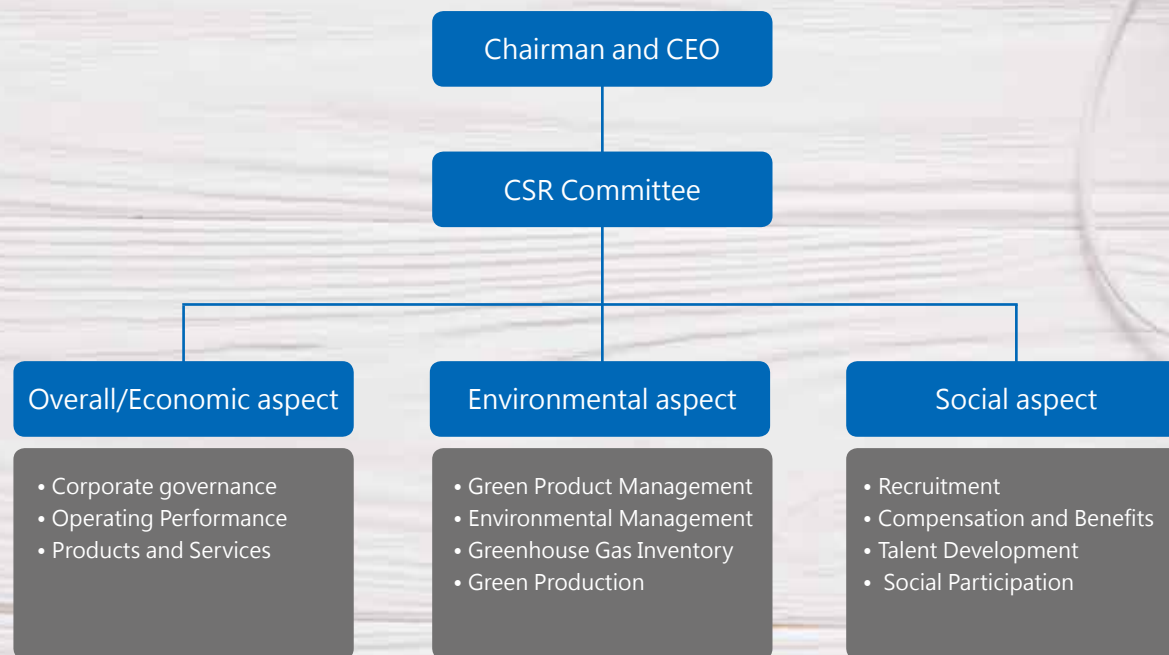
A channel for complaints is provided if any illegal behavior is detected. A thorough investigation will be carried out by Alpha with protection given to the whistleblower. The content and outcome of the investigation will also be strictly protected to avoid harming the rights and interests of relevant personnel.



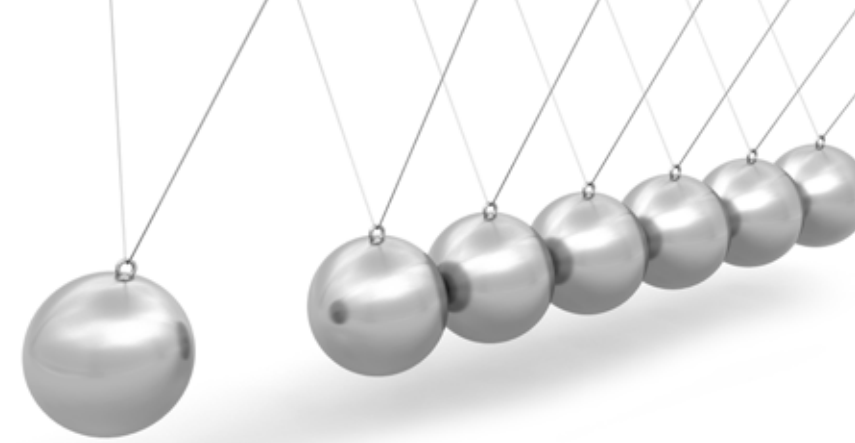
## Alpha CSR Committee

The CSR Committee is organized as follows:

The Alpha CSR Committee was authorized by Chairman John Lee to evaluate global sustainability trends, the Company's business development targets, as well as key issues in the corporate governance, environmental, and social aspects. Organizational resources such as the Chairman's Office, the President's Office, Legal Affairs, Corporate Auditor's Office, Finance & Accounting, Business Units, Manufacturing Center, Quality Assurance, Labor Safety, Human Resources, and the Alpha Foundation were then brought together to complete this first CSR report.



# Stakeholder Communication and Identification



## ■ Identification Process of Materiality



## ■ AA1000 SES-2011 Five Principles

Responsibility	groups or individuals to whom the organization has, or in the future may have, legal, commercial, operational or ethical/moral responsibilities.
Tension	groups or individuals who need immediate attention from the organization with regard to financial, wider economic, social or environmental issues.
Diverse perspectives	groups and individuals whose different views can lead to a new understanding of the situation and the identification of opportunities for action that may not otherwise occur.
Influence	groups and individuals who can have impact on the organization' s or a stakeholder' s strategic or operational decision-making.
Dependency	groups or individuals who are directly or indirectly dependent on the organization' s activities, products or services and associated performance, or on whom the organization is dependent in order to operate.

The Alpha CSR Committee uses internal questionnaire surveys to study the types of stakeholders. Six main types of stakeholders were compiled including customers, employees, investors, suppliers, regulators/neighborhood and the media. Different communication channels have been established for different stakeholders. Communication with stakeholders will hopefully give us a better idea of stakeholder requirements and expectations.

The opinions of stakeholders can be used to help Alpha examine and develop its corporate strategy, and to create value for Alpha and stakeholders.

The principles of Responsibility, Tension, and Diverse Perspectives from the AA1000 Stakeholder Engagement Standard are used to establish the stakeholder communication process, identify the stakeholders and engage in communication.

# Stakeholder Issues of Concern Survey

The Alpha CSR Committee met to list the sustainable development issues linked to our Company based on the GRI Standards. The aspects to be surveyed included sustainable economy, sustainable environment, and sustainable society. 23 issues of concern to stakeholders were listed and compiled for the Alpha CSR Stakeholder Survey. The survey was issued to the members of the CSR Committee. The Committee also directed the representatives of each department unit to identify the issues of stakeholder concern based on their experience from routine business contact.

 Sustainable economy aspect	1	Operating performance	 Sustainable society aspect	13	Employment relations
	2	Market position		14	Employer-employee relations
	3	Indirect economic impact		15	Occupational safety and health
	4	Purchasing practices		16	Education and training
	5	Innovative R&D		17	Employee diversity and equal opportunity
 Sustainable environment aspect	6	Raw material management		18	Human rights assessment
	7	Energy resource management		19	Neighborhood
	8	Water resource management		20	Supplier social evaluation
	9	Carbon emissions management		21	Customer health and safety
	10	Wastewater/waste management		22	Marketing and labeling
	11	Environmental compliance		23	Customer privacy
	12	Supplier environmental assessment			



# Identification and Sorting of Material Issues

Issues of Concern	
5	Innovative R&D
9	Carbon emissions management
11	Environmental compliance
13	Employment relations
15	Occupational safety and health
16	Education and training

The Alpha CSR Committee was convened to discuss the recovered surveys. The frequency stakeholder interest in each issue and impact on operations were analyzed to determine the six issues most material to Alpha: innovative R&D, employment relations, environmental compliance, occupational safety & health, education & training, and carbon emissions management. A formal response to stakeholder concerns was issued by using the GRI Standards as the basis for disclosure in the CSR report. The handling of material issues is indicated in the GRI Index and explained for each indicator.









# Stakeholder Communication Mechanism

Alpha assigned a corresponding internal unit or working group to each issue of concern for communicating and responding to stakeholders through a variety of channels in order to understand stakeholders' expectations of Alpha, and to compile them in a systematic manner to serve as an important reference for compiling the CSR report for next year.

The Alpha website (<http://www.alphanetworks.com>), public e-mail address (see Alpha website > CSR > Stakeholder Contact Information), annual report, and market observation post system (<http://mops.twse.com.tw>) serve as our routine channels for communication. Stakeholders can use the above channels to find out about important Alpha information and contact the relevant units.

The communication channels and frequency for issues of concern to stakeholders have been collated in the following table.

Stakeholders	Material Issue of Concern	Communication Channel and Frequency
Customers	 <ul style="list-style-type: none"> <li>• Operating performance</li> <li>• Innovative R&amp;D</li> <li>• Employment relations</li> <li>• Environmental compliance</li> <li>• Customer privacy</li> </ul>	<ul style="list-style-type: none"> <li>• Customers satisfaction survey (annual)</li> <li>• Quarterly business review (quarterly)</li> <li>• Customer complaints management system (ad hoc)</li> </ul>
Employees	 <ul style="list-style-type: none"> <li>• Operating performance</li> <li>• Employment relations</li> <li>• Occupational safety and health</li> <li>• Education and training</li> </ul>	<ul style="list-style-type: none"> <li>• Employer-Employee Meeting (quarterly)</li> <li>• Employee Welfare Committee (monthly)</li> <li>• Occupational Safety and Health Committee (quarterly)</li> <li>• Education and training platform (ad hoc)</li> </ul>
Investors	 <ul style="list-style-type: none"> <li>• Operating performance</li> <li>• Innovative R&amp;D</li> <li>• Market position</li> </ul>	<ul style="list-style-type: none"> <li>• Shareholders' Meeting (annual)</li> <li>• Investor conference (annual)</li> <li>• Market Observation Post System (ad hoc)</li> <li>• Corporate website (ad hoc)</li> </ul>
Suppliers	 <ul style="list-style-type: none"> <li>• Operating performance</li> <li>• Environmental compliance</li> <li>• Purchasing practices</li> </ul>	<ul style="list-style-type: none"> <li>• Supplier platform (ad hoc)</li> <li>• Supplier evaluation (ad hoc)</li> <li>• Supplier conference (ad hoc)</li> <li>• Supplier visit (ad hoc)</li> </ul>
Regulator Neighborhood	 <ul style="list-style-type: none"> <li>• Employment relations</li> <li>• Environmental compliance</li> <li>• Wastewater/Waste management</li> <li>• Carbon emissions management</li> </ul>	<ul style="list-style-type: none"> <li>• Local authorities (monthly)</li> <li>• Corporate website (ad hoc)</li> </ul>
Media	 <ul style="list-style-type: none"> <li>• Operating performance</li> <li>• Innovative R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>• Press release (ad hoc)</li> <li>• Press conference (ad hoc)</li> </ul>

*|| A globally recognized,  
professional networking DMS supplier.*

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## Sustainable Development

Company Operations and Development  
Operating Performance  
Sustainable Products and Services  
Corporate Governance  
Ethical Management  
Risk Management

## Company Operations and Development

### About Alpha

Alpha Networks Inc. was established in 2003. After D-Link split the branded and OEM businesses in 2003, Alpha focused on the design, development and manufacturing of networking products. Alpha now provides customer the full range of DMS services spanning product software/hardware design, system integration, mechanical design, product testing and certification.

Alpha possesses comprehensive product lines in the networking industry. These include the LAN/MAN, Wireless Broadband, Digital Multimedia and Mobile enterprise solution business units.

Technologies now under development at Alpha include 5G mobile communications as well as Advanced Driver Assistance Systems (ADAS) and Internet-of-Vehicles (IoV) applications. The exceptional R&D and technology integration ability of Alpha resulted in a grant under the Taiwan Industrial Innovation Platform High-value Program of the MOEA Industrial Development Bureau for "Automotive Sensor Fusion of Integrated Radar & Camera for FCW System Development Program" in 2016; the "M-ECHO (Mobile-Edge Cloud Hetnet Orchestra)" also received approval from the "A+ Industrial Innovation R&D Program" of the MOEA Department of Industrial Technology.

The networking industry is set to enter a new age of high speed and intelligent integration. Alpha will invest more of our time and effort on upgrading our standard of technology and product differentiation in the future. Every effort will be made to develop new technologies with core competitive advantages. Pioneering technologies will be harnessed to develop optimal solutions for customers that maximize their overall value.



#### Vision

Forge the Internet to connect people and things.



#### Mission

Alpha Networks is a globally recognized, professional networking DMS supplier.  
We use advanced technology to provide our customers with outstanding solutions at the best value.



#### Values

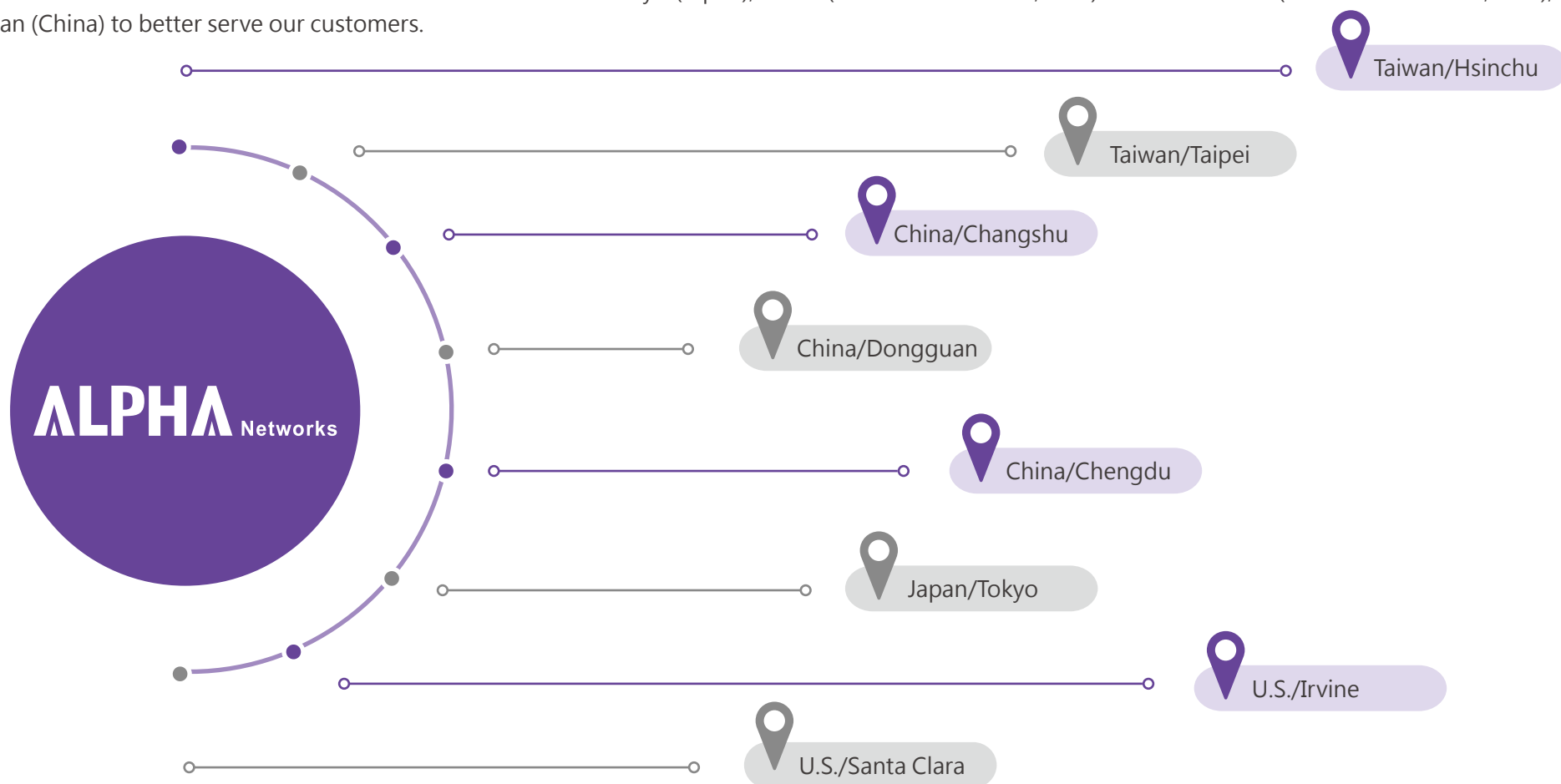
- Ethics
- Customer Values
- Agility
- Network Performance

Company Name	Alpha Networks Inc
Chairman	John Lee
Headquarters	Hsinchu, Taiwan
Establishment Date	2003/9/04
Public Listing Date	2004/12/20 (TWSE: 3380)
2017 Capital	NT\$4.445 billion
2017 Revenue	NT\$19.06 billion (consolidated revenues)
2017 Earnings per Share	NT\$1.26
2017 Total workforce	4,119 (worldwide)



## Global Presence

Alpha headquarters is located at Hsinchu Science-based Industrial Park in Taiwan. We have established service or manufacturing sites in the U.S., Japan and China to provide the full spectrum of services and efficient localized support. The combination of offices and workshops at Alpha headquarters support R&D, testing, sales and services, supply chain, manufacturing and RMA services. Headquarters is responsible for coordinating customer requirements and the allocation of resources. Our primary manufacturing sites are located in China. They consist of the Dongguan plant in Guangdong Province, and the Changshu plant in Jiangsu Province. Sales subsidiaries have also been established in Tokyo (Japan), Irvine (southern California, USA) and Santa Clara (northern California, USA), and Dongguan (China) to better serve our customers.



## Management Systems

System/Factory	Alpha Networks (Hsinchu Factory)	Alpha Networks (Dongguan Factory)	Alpha Networks (Changshu Factory)
ISO 9001	●	●	●
TL 9000	●	●	●
IEC QC 080000	●	●	●
ISO 14064-1	●		
ISO 14001	●	●	●
IATF 16949			●
AEO	●		
C-TPAT		●	●
OHSAS 18001		●	●

International management system certifications such as ISO 19001, TL9000, IATF-16949, ISO 14001, QC080000, ISO 14064-1 and AEO were actively introduced at the three Alpha manufacturing sites.



## Memberships

Alpha actively participates in networking industry associations and technology alliances. We hope to stay on top of industry trends through frequent networking with members of the industry.

We are involved in the following organizations:

Memberships
25G/50G Ethernet Consortium
Dolby Laboratories
High-Bandwidth Digital Content Protection (HDCP)
High-Definition Multimedia Interface (HDMI)
IPC-Association Connecting Electronics Industries
MULTEfire Alliance
Open Compute Project (OCP)
QuEST Forum
Telecom Infrastructure Project
Wi-Fi Alliance
Driver Information Platform Development Alliance (DIPDA)
Taiwan Vehicle Team
Autonomous Driving Systems Industrial Platform
Automotive Ethernet Alliance
Intelligent Vision System Industry Academia Consortium (iVSIAAC)

## Operating Performance

### Operating Performance and Financial Information

Alpha reported consolidated revenues of NT\$19.057 billion for the year ended December 31, 2017. In terms of product categories, there was significant growth from telecommunications broadband upgrades and mobile broadband-related equipment. There was new progress from automotive millimeter wave radar products as well. Nevertheless, a shift away from non-core products as well as a strong NTD meant 2017 revenues were down approximately 12.7% from the previous year. Cost management and optimization of product portfolios however saw gross margin increased to 15.2% compared to the previous year. Operating expenses were lowered to NT\$2.28 billion showing that business efficiencies are continuing to improve. Operating profits were NT\$612 million and net operating margin grew to 3.2% as well, up slightly from 2016. Net income for 2017 amounted to NT\$549 million, equivalent to earnings per share of NT\$1.26.

The consolidated operating performance, related financial information, profit analysis of Alpha over the last five years as well as its 2017 revenue portfolio are presented below in graph form. For more information about Alpha's operating performance and finances, please refer to the "Alpha Networks Inc. 2017 Annual Report" or check with the Market Observation Post System.

Operating Performance	2013	2014	2015	2016	2017
Operating revenue	24,103,755	23,277,512	22,995,238	21,830,730	19,057,109
Operating costs	20,393,544	20,012,133	20,095,471	18,647,259	16,164,744
Gross profit	3,710,211	3,265,379	2,899,767	3,183,471	2,892,365
Operating expenses	2,876,133	2,796,217	2,801,336	2,534,479	2,280,474
Operating profit and loss	834,078	469,162	98,431	648,992	611,891
Non-operating income and expenses	130,444	188,881	(359,522)	154,581	84,463
Profit Income (loss) before tax	964,522	658,043	(261,091)	803,573	696,354
Income tax expenses	185,005	122,270	79,017	195,534	147,816
Profit after tax Net Income (loss)	779,517	535,773	(340,108)	608,039	548,538

Unit: Thousand NTD

Financial Information	2013	2014	2015	2016	2017
Total assets	18,049,760	16,725,522	14,313,914	14,261,424	13,724,615
Paid-in capital ordinary share capital	4,943,441	4,971,271	4,429,144	4,344,697	4,443,967
Total equity	9,787,000	9,683,098	8,411,088	8,518,656	8,694,960
Cash dividend	555,680	663,265	579,293	217,130	451,630
Book value per share	20.18	20.04	19.37	19.62	19.58
Cash dividends per share	1.36	1.20	0.50	1.04	1.00
Average closing price per share	19.27	20.99	18.10	18.36	23.80

Unit: Thousand NTD

Profitability	2013	2014	2015	2016	2017
Return on assets (%)	5	3	(2)	4	4
Return on equity (%)	8	6	(4)	7	6
Profit Before Tax to Capital Stock (%)	20	13	(6)	18	16
Net profit ratio (%)	3	3	(1)	3	3
Earnings per share (NTD)	1.60	1.10	(0.74)	1.40	1.26

## Project Grants

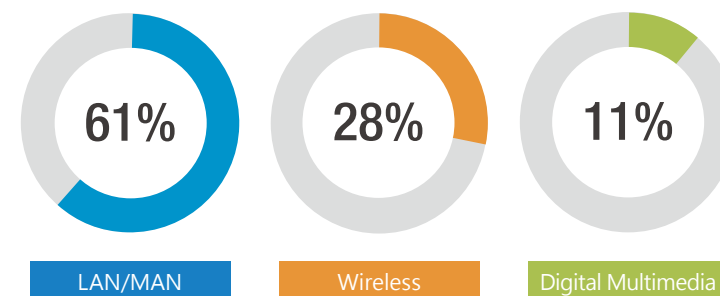
Technology development at Alpha focuses on the development, manufacturing and support of networking equipment. Alpha is now actively investing in the development of 5G mobile communications, Advanced Driver Assistance Systems (ADAS), Internet-of-Vehicle applications.

Alpha is now leveraging its outstanding R&D and technology integration capability along with support for the government's "industrial innovation upgrade" policy to secure related grants and tax deductions from the government.

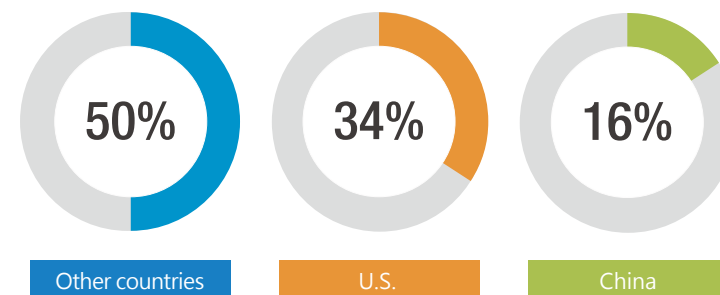
Project	Grant Type	Grant Basis
Taiwan Industrial Innovation Platform High-value Program Automotive Sensor Fusion of Integrated Radar & Camera for FCW System Development Program	Grant received (note)	Statute for Industrial Innovation - Industrial Development Bureau, MOEA
The A+ Industrial Innovation R&D Program M-ECHO (Mobile-Edge Cloud Hetnet Orchestra)	Grant received(note)	Statute for Industrial Innovation - Department of Industrial Technology, MOEA
Investment credit	Tax credits obtained	Statute for Industrial Innovation - Industrial Development Bureau, MOEA

Note: Income from technology development programs are in the form of multi-year grants.

## 2017 Revenues by Product Categories



## 2017 Revenues by Region





## Sustainable Products and Services

To prepare for the two major industry opportunities represented by “next-generation communications (5G)” and “automotive electronics”, Alpha has now adopted a “mobile communications centric” development strategy on the integration of our Ethernet switch, wireless broadband, audio-video signal processing, mmWave antenna design, IoT and automotive electronics technologies. We have also introduced Qisda as a strategic partner through private placement. By leveraging our complementary strengths, we hope to build new markets together in an age of smart applications driven by 5G mobile communications and video resolutions of up to 8K. In the future, Alpha will continue to invest in advanced technologies and to strengthen our core competitiveness so that we can take advantage of opportunities for industry growth.

### Products and Services

#### 1. LAN/MAN

We possess extensive expertise in the design, manufacturing and support of Ethernet switching software and hardware. We develop complete switching solutions that satisfy the needs of customers in different market segments.

- Data Center Switch:  
Includes 10G/25G/50G/100G/400G Leaf and Spine Ethernet switches
- Enterprise Switch:  
Includes 1G/2.5G/10G/40G/100G Pizza box and Chassis Ethernet switches

- SMB Switch:  
Includes 1G/2.5G/10G PoE and Non-PoE Ethernet switches
- Carrier-Grade Ethernet Switch:  
Includes B4G/5G core network switches, front haul network switches, broadband access and aggregation network switches
- IoT Ethernet Switch:  
Includes Ethernet switches for smart homes, smart transportation and smart long-term care

#### 2. Wireless Broadband

We provide wireless networking and broadband communication products. Key products include:

- Wi-Fi router: Includes home and enterprise Wi-Fi Router/AP /Repeater/Module
  - Wi-Fi module: Mini PCI-E/ USB Module
  - Mobile communications: Small Cell & LTE CPE/ IoT
- Wireless antenna design for different spectra as well as the development of 5G mobile broadband technology
- Network device antenna: Encompasses integrated solutions for internal and external antennae in Wi-Fi related applications

#### 3. Digital Multimedia

We provide a variety of multimedia network devices. Our products include IP cameras, IoT, home networks, home storage and home entertainment that can provide users with an all-new digital home experience that delivers

security, smart technology and visual enjoyment. Key products include:

- IP camera:  
Indoor Camera/Outdoor Camera/Battery Camera/Doorbell Camera/Network Video Recording
- IoT: Z-Wave, Zigbee Gateway & Sensors
- Home network: HomePlug AV1/AV2 & G.hn PLC, and Wi-Fi PLC
- Home storage: NAS & Wi-Fi Storage
- Home entertainment: IP STB & Network Multimedia Player

#### 4. Mobile Enterprise Solutions

Providing integrated solutions for smart automotive applications through our expertise in the design and development of network communications and radio antennae. Key products include:

- Wireless products: mmWave radar module
- Video products: Ethernet AVB camera module
- Wired products: Ethernet AVB switch/gateway



## Industry Competition

Global advances in technology have led to breakthroughs in wired and wireless product technologies. The rapid evolution of new technology also translates into shorter product life cycles and uncertainty during new product development. To lower costs or simplify product functionality, many vendors have now adopted a strategy of competing on price.

Alpha has a complete product range of any networking equipment maker in Taiwan. Our many years of experience with product development and design means we can provide a one-stop solution for large international brands. The networking industry will continue to develop in the direction of smart applications and integration in the future. Networking technology will become faster as well. Only vendors capable of developing the full range of networking software and hardware technologies will be equipped to provide customers with the latest and the most complete solution.

## Product Development Trends

### 1. Mobile broadband roll-out and upgrade

An increasing number of subscribers around the world can now enjoy mobile broadband services and the transmission of mobile audio-video content, driving demand for high-speed mobile network access. The 4G LTE subscriber market will continue to grow at a fast pace while 5G mobile

communications networks will begin entering commercial service in 2020.

### 2. Demand for fixed bandwidth to continue increasing

Copper-wire broadband will be upgraded from ADSL to VDSL and G.fast. Fiber broadband will be upgraded from GPON to 10G PON. User network applications have now expanded beyond the simple transmission of data to include multimedia and interactive requirements. The demand for bandwidth has continued to increase and carriers will continue to roll-out more bandwidth. Different set-ups such as FTTH and FTTdp have led to the development of different product combinations as well.

### 3. Ethernet switches with even faster transmission speeds

The demand for high-speed switching equipment from enterprise users will continue to increase. Growth in cloud computing services and high-quality multimedia content traffic will drive the construction and upgrading internal networks at data centers. The bandwidth requirements of switches will be upgraded from 10Gbps and 40Gbps to 25Gbps and 100Gbps. A new generation of Ethernet networking technology with speeds of up to 400 Gbps is poised to enter the market.

### 4. Boost to Wi-Fi transmission speeds and more applications

The 802.11 series has become the de facto market

standard for wireless networking technology and it is being adopted in an increasing number of enterprise applications. The penetration rate of the even faster 802.11ac Wi-Fi standard is continuing to increase, while 11ac Wave 2 mid and high-end models that support MU-MIMO technology are becoming more common. They will also be upgraded to the 802.11ax high-speed wireless networking standard. The increase in mobile data traffic means carriers will need to continue rolling out Wi-Fi hotspot in order to offload the mobile data traffic and maintain network quality of service.

### 5. Smart home development trends

The incorporation of artificial intelligence into the design of smart home products will become a trend in home security surveillance and smart homes. Advances in voice control and image recognition will also lead to even more smart applications.



## Research and Development Focus

### 1. LAN/MAN Business Unit

Alpha has long invested in the development of Ethernet network switching software and hardware technologies. No effort has been spared on the development of high-end switches as well. We have accumulated a great deal of experience with mass production and product delivery as a result. Our comprehensive range of switch products span data center switches, enterprise switches, SMB switches and carrier-grade switches. The need for high-speed and accurate carrier-grade switches in the coming age of 5G mobile communications has raised the technical entry threshold as well. Alpha's expertise is not limited to switching technology. Our proficiency in mobile broadband technologies equips us to provide customers with 5G network infrastructure solutions. To prepare for future trends such as core networks for 5G mobile communications, edge computing systems and Cloud RAN architecture, Alpha is now developing 4.5G/5G virtual networking for switching and server hardware platforms that will meet the needs of carrier and enterprise network systems. Technical specifications will be upgraded from 10G, 25G, 40G and 100G up to 400G in response to the continued demand for high-speed transmission from the market.

### 2. Wireless Broadband Business Unit

The coming of 5G mobile communications represents a golden opportunity for our company's wireless broadband products. In

addition to investing in Small Cell and IoT sensing technologies such as NB-IoT, Alpha is also actively moving into the Cloud RAN market as well. The Alpha portfolio covers all of the necessary network communications software and hardware technologies. Cloud RAN brings together our carrier-grade switching, mmWave antenna and radio frequency, audio-video signal cache, network function virtualization (NFV) and Wi-Fi network aggregation technologies. Alpha plans to develop the complete range of 5G Cloud RAN networking packages and systems to expand its application market and boost our core competitive advantage. We are also developing next-generation 10G fiber networks to meet the demand for high-speed bandwidth from the base stations of future 5G mobile communications. The coming of 802.11ax high-speed wireless networking as well as the diverse developments in wireless network transmission technologies driven by IoT will reinforce Alpha's advantage in smart antenna design and high-speed signaling technology as well as match the demand for high-end wireless equipment from the market.

### 3. Digital Multimedia Business Unit

In response to trends in the development of IoT and smart homes, Alpha will incorporate AI technology into smart home solutions for the development of smart speech and image recognition technologies. Alpha will continue to build on the IP-CAM market through outstanding multimedia streaming technology. Our expertise in smart antenna design and Beamforming technologies will

also be leveraged along with AI functionality to provide customers with products that offer a competitive advantage and differentiation. In addition, Alpha will focus on the development of smart gateways with highly integrated IoT technology that incorporate AI functionality to serve as the central hub for next-generation smart homes. We will also provide customers with smart home solutions that integrate smart gateways with IP-CAM.

### 4. Mobile Enterprise Solutions Business Unit

Alpha's mmWave radar product is now making headway in the Advanced Driver Assistance Systems (ADAS) market for commercial and passenger vehicles. Our proficiency in high-frequency and antenna design as well as an in-house capability for software and algorithm development equip us to provide customers with products tailored to their requirements. Apart from stand-alone 24GHz and 77GHz mmWave radars, a fusion of radar and image sensing technology is now in the works to provide a more precise anti-collision function. Alpha is also working on Ethernet AVB technology to take advantage of future opportunities in Internet-of-Vehicles (IoV).



## Manufacturing and Quality Services

At Alpha, we believe in “getting quality right the first time.” All products undergo rigorous and thorough design validation before the start of mass production, including quality testing, product safety certification, electromagnetic interference and resistance testing, compatibility certification testing, environmental and reliability testing, and more. All products go through a series of checks to ensure compliance with international standards; before products enter production all parts go through exhaustive incoming material inspection to keep defective parts out of the production line; quality on the production line is constantly monitored by quality control personnel during the production process; once production is complete, final products are sample tested by quality control personnel to ensure that their functionality and appearance are up to standard; an electro-static protection policy is in place throughout the transport, development, production, process control, inspection, testing and repair during process management to ensure that sensitive parts are not damaged by static electricity; comprehensive after-sales support is provided by Alpha once a product has been shipped as well.

We are therefore committed to the following:

- Make it a matter of honor to get quality right the first time.
- The pursuit of excellence through continuous review and improvement.

- Manufacture the products that customers need and provide customers with satisfactory service. Alpha will continue to enforce the above principles in the spirit of sustainable development and educate all of our employees accordingly. Quality-related feedback from within the company and from customers shall all be handled swiftly and appropriately.

## Intellectual Property

Education and training

Education and training together with internal bulletins are used to remind employees to respect intellectual property rights, laws and regulations governing trade secrets, and the use of legal licensing. New employees are educated on the rules, management and use of intellectual property and trade secrets during orientation training and in their employment contract, and required to sign relevant agreements. Classes on intellectual property rights are held on an ad hoc basis for current employees to provide and update the information on the latest laws and practices.

## Respect for Intellectual Property and Boosting Competitiveness

A patent search of innovative technologies is conducted before R&D projects are formally launched to reduce the risk of infringement. It can also help avoid duplicate investment of resources and our R&D direction can be adjusted based on

competitor intelligence gleaned during the search. Innovative technologies and the output of our R&D processes are protected through patent/trademark applications and copyright to increase the value of our company's intangible assets.

## Management and Protection of Confidential Information

To ensure the reasonable protection of the company's and customer's confidential information, non-disclosure agreements are signed with external customers and business partners while employees undergo regular education and training on laws governing the protection of trade secrets. Employees are required to adhere to the terms of non-disclosure agreements in their use of confidential information. Messages shall also be transmitted through the legal and proper use of e-mail or other methods to ensure. These are to ensure confidential information owned by the company and customers are used legally during business activities without violating any of the relevant laws.

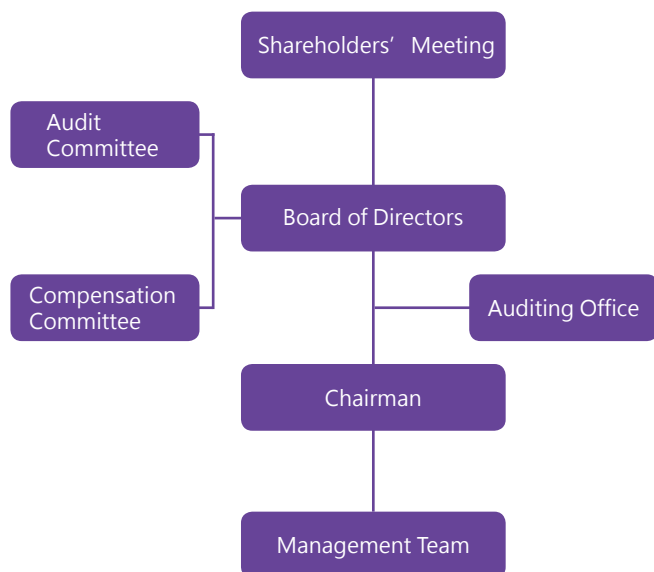




## Corporate Governance

To ensure ethical business management, Alpha complies with the Company Act, Securities Exchange Act and other relevant laws. We also formulated the "Corporate Governance Best Practice Principles", "CSR Best Practice Principles", "Insider Trading Prevention Management Regulations", and "Code of Ethical Conduct" to protect shareholder rights and interests, strengthen the function of the Board of Directors, and boost the effectiveness of the Audit Committee and Compensation Committee in order to improve the company's business performance and realize the ideal of sustainable corporate development.

### Governance Structure



### Board of Directors

The top governance body at Alpha is the Board of Directors. In accordance with the Articles of Incorporation, between 5 ~ 9 directors may be elected to the Board for terms of 3 years and for successive terms. At least 3 of all directors shall be independent directors. Directors are elected from a list of nominated candidates. The "Rules Governing the Election of Board Directors" and the "Corporate Governance Best Practice Principles" explicitly calls for diversity in the overall composition and membership of the Board of Directors such as having different professional backgrounds, professional specialties and genders.

The 5th Alpha Board of Directors is composed of seven directors that have the necessary wealth of experience or professional qualifications in business, legal affairs, finance, accounting or company operations. The seven directors include three independent directors and two are women. Please refer to the Alpha annual report or the TWSE market observation post system website for the directors' resumes, positions with other companies and continuing education.

The responsibilities of the Board include supervising corporate compliance, financial transparency, appointment and removal of executives, and deciding on important company issues. The management team assists the Board with its decision-making by providing information or briefings on business operations and situation. The Alpha "Rules Governing the Agenda of the Board of Directors" and "Audit Committee

Organic Charter" all include regulations on avoiding conflicts of interests. If a director or the institutional investor they represent has a conflict of interest with any matter on the agenda, they shall explain the conflict of interest during the meeting of the Board or the audit Committee. If the company's interests may be harmed then the director shall recuse himself/herself from the discussion and voting, nor may they exercise the proxy votes of other directors.

The Alpha Board of Directors is convened at least once every quarter. In 2017, the Board was convened 5 times and the average attendance of each director was 85.8%. Important resolutions passed by the Board are also announced on the TWSE Market Observation Post System and the corporate website in a timely manner.

The Audit Committee and Compensation Committee were established as functional committees by Alpha to achieve the goals of operational transparency, respect for shareholders interests and ensure the sound operation of the Board.



## ■ Members of the Board of directors

Title	Name	Gender
Chairman and CEO	John Lee	Male
Director and President	Yu-Chin Lin	Male
Institutional director representative	Mei-Lin Wei	Female
Institutional director representative	Shih-Kuo Lin	Male
Independent director Audit Committee member	Harry Huang	Male
Independent director Audit Committee member	Mao-Chao Lin	Male
Independent director Audit Committee member Compensation Committee member	Emily Chou	Female

## Audit Committee

The Audit Committee at Alpha was established on June 15, 2012. The Committee shall be convened at least once a quarter and was convened 4 times in 2017. The Committee is made up of all independent directors and shall have at least 3 members, one of whom shall come from an accounting or financial background. Committee members serve 3-year terms and may be elected for successive terms. The purpose of the Committee is to supervise the expression of financial reports, the appointment (dismissal) of accountants, ensure the effective implementation of internal controls, compliance with the relevant laws and regulations, and managing existing or potential risks to the company.

## Auditing Office

The Auditing Office is an independent unit that reports to the Board of Directors. Auditors carry out the annual auditing plan approved by the Board. They also review compliance with internal controls by Alpha Dongguan and Alpha Changshu and its subsidiaries to ensure their continued effectiveness and to provide a basis for further revisions to the internal controls.

The head of auditing shall not only brief the Audit Committee regularly on auditing affairs but also attend Board of Directors meetings to present reports as well. Any defects or potential risks identified during the audits may also be immediately reported if necessary.

Alpha embraces ethical business practices and adheres to the law. Effective internal controls and a dedicated enforcement unit have been put into place and are now implemented throughout Alpha including Alpha Dongguan and Alpha Changshu.

The internal control system at Alpha is based on the relevant regulations of the "Standards for Publicly Held Companies to Internal Control Systems."

In addition to annual self-reviews of internal control systems, the effectiveness of Alpha's internal controls are constantly being reviewed and revised in response to changes in the internal and external environments. Such revisions are then evaluated by the Audit Committee and Board of Directors.

## Compensation Committee

A Compensation Committee was established by Alpha on December 23, 2011. The Committee is responsible for formulating and regularly reviewing the policies, systems, standards and structure of

governing executive performance evaluation and compensation. The Committee also assesses and sets the compensation for directors and executives. Our Articles of Incorporation cap directors' compensation at no more than 1% of the annual profits (profit before tax minus employee and directors' compensation) and these are paid in cash. Executive compensation includes fixed components such as base salary, bonuses, and benefits as well as variable components in the form of bonuses, dividends (cash/stock), stocks (restricted stock/treasury stock) and stock options. The fixed components shall, in principle, maintain the average competitiveness of the company in the industry. The variable components shall be based on company and individual performance as well as their personal contributions. Assessment items, goals and weightings are set at the start of each year based on internal and external business developments. Performance targets and industry compensation standards are then taken into account and reviewed by the Compensation Committee. It is then submitted to the Board of Directors for approval and implementation. The Committee currently has three members all of whom are independent directors.

The Compensation Committee shall be convened at least two times each year and was convened two times in 2017. Meetings may be convened at any time if necessary. Members may invite the Chairman or CEO to attend meetings of the Committee. They shall however recuse themselves if there is a conflict of interest and not participate in the discussion. Directors, internal auditors, accountants, legal advisors and other personnel may be invited to attend the meetings to provide any necessary information.

## Ethical Management

### Regulatory Compliance

Ethics, fairness, compliance and adherence to business ethics have always been the overriding guiding principles in the business activities of Alpha. Company employees are prohibited against bribery, corruption, receiving or giving of gifts, and hospitality out of proportion to business etiquette from/to suppliers, customers and stakeholders. In addition to complying with the laws on labor, labor safety, information security, environmental protection, finance, and intellectual property rights as well as business regulations in Taiwan where we are headquartered, Alpha also applies the same standard to adherence with the laws and regulations of the country where our factories or offices are located during our business activities. Alpha has established a dedicated unit for legal compliance and advice. Proper compliance is enforced in concert with professional advice from external consultants and ad hoc internal regulatory updates/education to reduce and control the risks in company operations as well as protect the rights and interests of our employees and shareholders.

### Reporting Channels and Whistleblower Protection

To protect the legal interests of stakeholders, Alpha has not only appointed dedicated personnel for communicating with the relevant stakeholders but also set up whistleblower mailbox for stakeholders to serve as the proper channel for complaints. Stakeholders can report any violations of corporate governance or illegal activity through this channel. The whistleblower mailbox for stakeholders is handled by dedicated personnel at Alpha to protect the identity of the whistleblower and the contents of their complaint.

Whistleblower mailbox for stakeholders:  
improvement@alphanetworks.com

### Information Security Management Policy

Alpha strives to build a secure information environment to protect the information security of the company, customers and partners. An information security management policy and related regulations have been drawn up in accordance with the ISO 27001 standard. An internal audit mechanism is also used to ensure the proper implementation and continuous improvement of the information security system so that the confidentiality, integrity and availability of information assets can be maintained.

Management processes for IT equipment usage, network communications, account permissions, removal of computer equipment, physical printing and remote connections have been put into place based on the information security rules to ensure strict management of information at each stage of use and to reduce the risks to information security.

Encrypted connections are used throughout internal and external information systems to ensure the security of information system connections and transmissions. Transmissions are logged for traceability and particular emphasis placed on the protection of personal information defined in the Personal Information Protection Act to avoid the inappropriate use or compromise of confidential company and customer data.

For physical security, environmental control systems provide real-time monitoring of the






information system's environmental status and effectively maintain the stability of data center operations. An enterprise cloud platform was also set up to centrally protect the information security of our company's R&D, manufacturing and business systems. A redundancy mechanism is also in place for the cloud system to ensure the continuity of the information system. In addition, Business Continuity Planning (BCP) was carried out in accordance with ISO 22301 specifications to ensure the security of information systems and data. Regular backups and disaster recovery drills are conducted, and backup data stored off-site at a third-party data center to ensure that company data is not lost due to human action or natural disasters.

A software asset audit system has been introduced to ensure compliance on "intellectual property rights." "Software real-name system" management along with regular user audits are used to effectively enforce proper software licensing; to strengthen information security awareness, we not only hold information security classes for employees but also continue to use internal information security bulletins to distribute information on information security and software licensing. We hope these efforts will realize the goals of enterprise information security and continuity of operations.



## Risk Management

Alpha collects and studies the risk issues of concern to each stakeholder through each functional organization. Strategic analysis tools are used to assess the impact of process risks in order to prevent and minimize the risks; the following risks have been identified by Alpha:

Potential Risks	Risk Sources	Response Measures
Natural disasters 	<ul style="list-style-type: none"> <li>• Earthquake</li> <li>• Power outage</li> <li>• Fire</li> <li>• Notifiable infectious diseases</li> </ul>	<ul style="list-style-type: none"> <li>• Fire safety education and training carried out quarterly</li> <li>• BCP event drill carried out each year</li> <li>• Carry out disaster recovery in accordance with the disaster recovery regulations</li> </ul>
Information security 	<ul style="list-style-type: none"> <li>• System functionality crash/malfunction</li> <li>• Hacker attack</li> <li>• Protection of customer privacy</li> </ul>	<ul style="list-style-type: none"> <li>• Construct a comprehensive data center environmental monitoring system to ensure the security of physical environment for information systems.</li> <li>• Perform regular backups of information and data, set up off-site backup and recovery system, and in accordance with the integrity and availability of data.</li> <li>• Formulate information security management policy and information security protection regulations based on the ISO 27001 standard.</li> <li>• Set up information security systems such as firewalls, network anti-virus and mail filtering. Define rules governing the use of network and computer equipment to prevent information security risks.</li> <li>• Coordinate the management of internal/external information transmission by the company with the information technology division and legal affairs department.</li> </ul>
Supply chain disruption 	<ul style="list-style-type: none"> <li>• Raw material shortage</li> </ul>	<ul style="list-style-type: none"> <li>• Form strategic alliance with suppliers that have high supply risk</li> <li>• Monitor market supply and demand to adjust delivery times as necessary and prepare safety inventory levels</li> <li>• Establish alternative materials</li> <li>• Look for spot markets</li> <li>• Discuss response measures with suppliers or ask for materials to be supplied early</li> </ul>
Financial risk 	<ul style="list-style-type: none"> <li>• Bad debt</li> <li>• Exchange rate</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct general risk assessments for related businesses on correspondent banks, customers and suppliers. Implement any necessary controls to reduce credit risk.</li> <li>• Establish a currency hedging mechanism to avoid risks from currency rate fluctuations.</li> </ul>
Regulatory compliance 	<ul style="list-style-type: none"> <li>• Legal policy</li> <li>• Standard changes</li> </ul>	<ul style="list-style-type: none"> <li>• Establish dedicated unit</li> <li>• Ad hoc/regular updating of regulatory information and hosting of education &amp; training</li> </ul>
Product development trends 	<ul style="list-style-type: none"> <li>• Wrong direction in technology R&amp;D</li> <li>• Patent infringement</li> </ul>	<ul style="list-style-type: none"> <li>• Host regular strategy meetings and use of risk analysis tools to check the accuracy of R&amp;D and product development/design.</li> <li>• Review mechanism and procedure is in place for patent technology search and inventory before the start of R&amp;D on new technologies.</li> </ul>



*Attract, develop and inspire global talents.*



2

## Friendly Workplace

Recruitment  
Compensation and Benefits  
Talent Development  
Social Participation

## Recruitment

Alpha currently has a global workforce of approximately 4,100 employees at the end of 2017. The major part is manufacturing personnel at 59%, followed by R&D personnel at 26%. Our overall personnel distribution is as follows.

To build a working environment that embraces diversity and equality at Alpha, the Group has formulated the following employment policy:

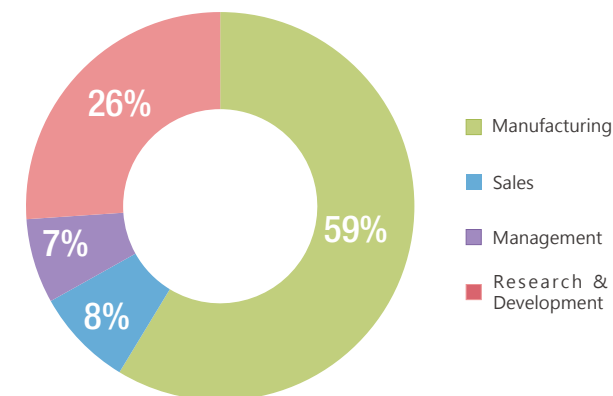
1. Free choice of employment.
2. Child labor prohibition policy
3. Leave policy shall comply with local laws and regulations.
4. Employee salary and benefits shall comply with local laws and regulations.
5. Every employee is to be treated fairly and with respect; employees may not be subjected to inhumane treatment including violence, insults and abuse.
6. Each candidate and every employee are to be provided with equal opportunities. Employees shall not be discriminated against on the basis of race, color, age, gender, sexual preference, disability, pregnancy, religious belief, political affiliation, social membership or marital status.

7. To respect employees' legal right to freedom of association. Protection is given to employees so that they may openly communicate with the management on working conditions without fear of reprisal, threats or harassment.

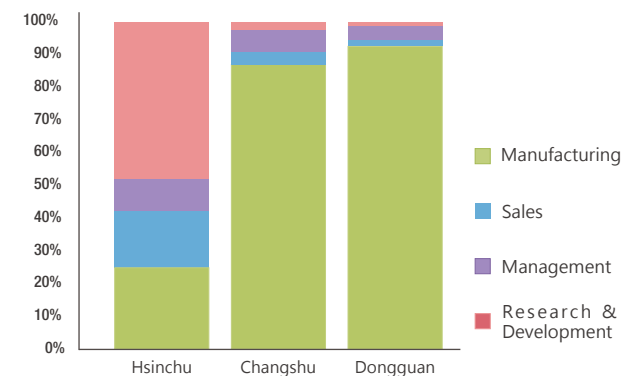
Alpha guarantees promotion and development opportunities for local employees. Alpha actively develops local employees to take management positions. Over 95% of managers are local residents.

Alpha (Hsinchu) participates in campus recruitment and Research & Development Substitute Service (RDSS) every year to link up with schools and recruit newcomers to the work force.

■ Job Distribution



■ Job Distribution per Factory



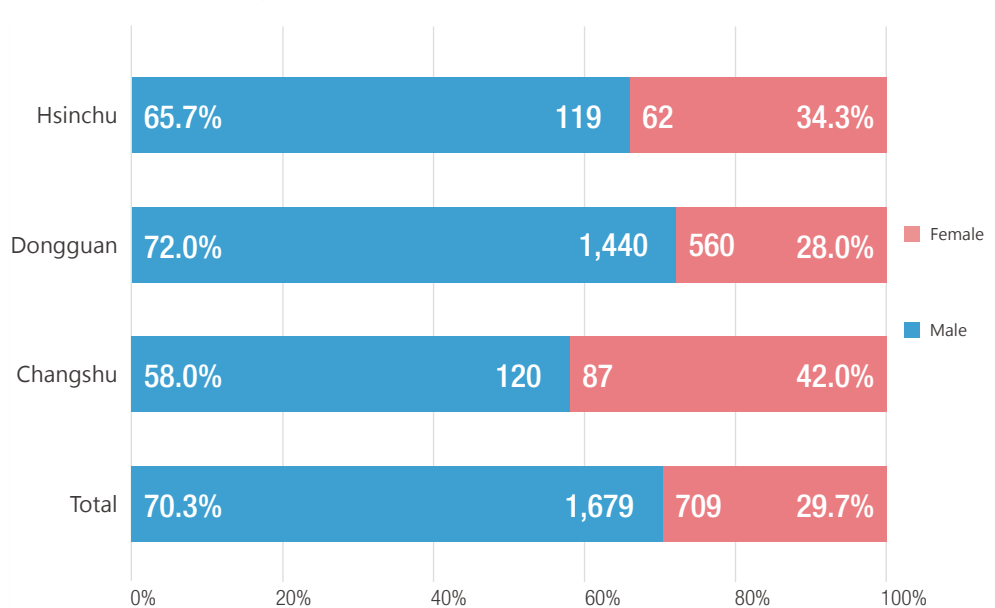
## ■ Permanent Employee - New

New	Number		Age				
	%	18~20	21~30	31~40	41~50	51~60	60~
Hsinchu	Number	0	80	66	29	6	0
	%	0.0%	44.2%	36.5%	16.0%	3.3%	0.0%
Dongguan	Number	689	1,067	235	8	1	0
	%	34.5%	53.4%	11.8%	0.4%	0.1%	0.0%
Changshu	Number	3	129	69	6	0	0
	%	1.4%	62.3%	33.3%	2.9%	0.0%	0.0%
Permanent employees	Number	692	1,276	370	43	7	0
	%	29.0%	53.4%	15.5%	1.8%	0.3%	0.0%

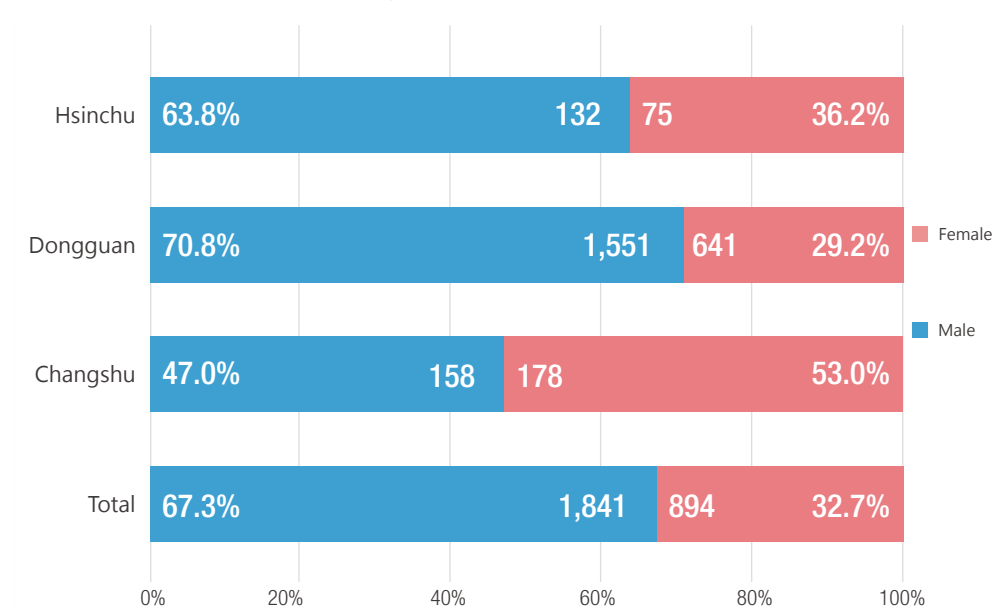
## ■ Permanent Employee - Resignation

Resignation	Number			Age			
	%	18~20	21~30	31~40	41~50	51~60	60~
Hsinchu	Number	0	54	95	51	7	0
	%	0.0%	26.1%	45.9%	24.6%	3.4%	0.0%
Dongguan	Number	664	1,202	305	19	2	0
	%	30.3%	54.8%	13.9%	0.9%	0.1%	0.0%
Changshu	Number	5	219	106	6	0	0
	%	1.5%	65.2%	31.5%	1.8%	0.0%	0.0%
Permanent employees	Number	669	1,475	506	76	9	0
	%	24.5%	53.9%	18.5%	2.8%	0.3%	0.0%

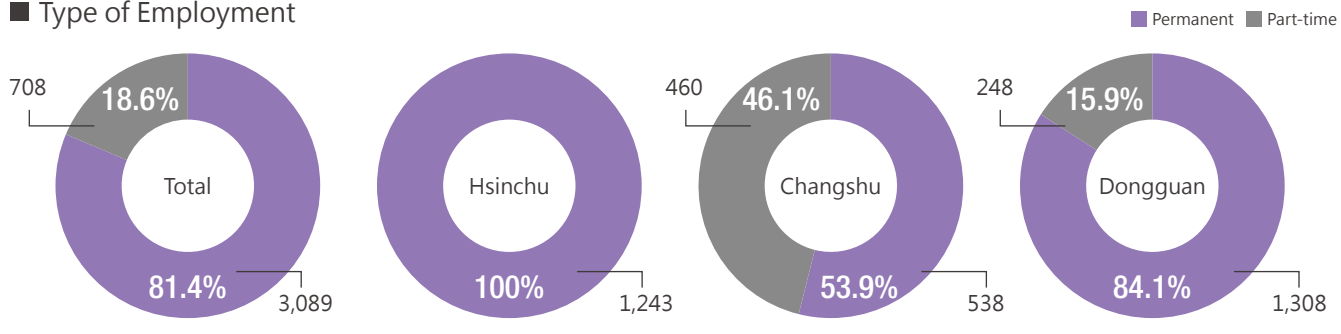
## ■ Permanent Employee - New



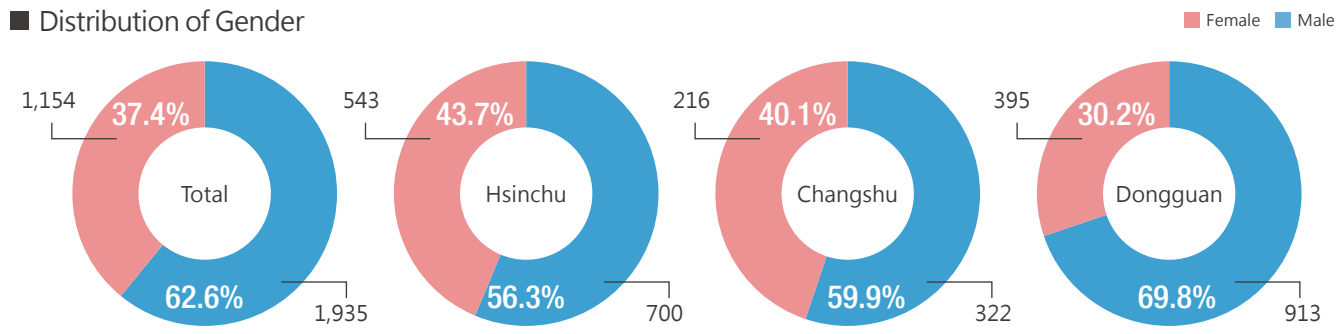
## ■ Permanent Employee - Resignation



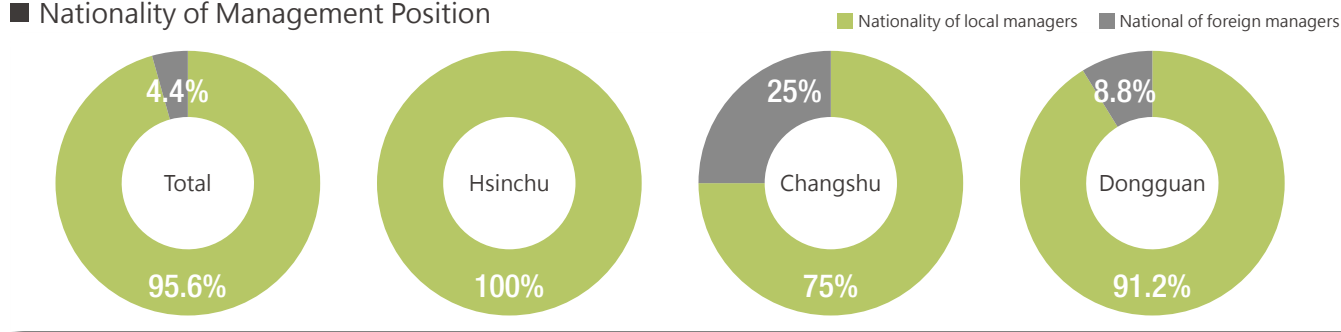
### ■ Type of Employment



### ■ Distribution of Gender



### ■ Nationality of Management Position





## Compensation and Benefits

Alpha offers competitive salaries and benefits to attract and retain outstanding professional talent from different fields. Salaries and benefits are regularly reviewed to see how they measure up against the law and the prevailing market rates so that a motivating salary scale can be designed. Over 10% of company profits in recent years were allocated to employee dividends. Apart from maintaining our competitiveness in the job market, it also showed employees that talent is truly valued by Alpha. The compensation strategy at Alpha is to set salaries based on individual expertise, education, experience, seniority and performance. Subsequent salary adjustments are then based on an overall assessment of individual performance, market rates and contribution. Long-term and short-term financial incentives are also given based on industry practices and business performance to encourage employees to make long-term contributions and to grow with the company. We hope this will serve to attract, retain and motivate outstanding employees. Compensation decisions are not affected by personal factors such as gender, race, nationality and age.

### ■ New Permanent Employee – Average Salary

Region	Type	Female	Male
Hsinchu	Direct employees	1.10	1.10
	Indirect employees	2.32	2.32

Note: Starting salary for new employees/ Statutory minimum wage

### ■ New Permanent Employee – Starting Salary

Region	Type	Female	Male
Hsinchu	Direct employees	1	1
	Indirect employees	1	1

Note: Distribution of starting salaries for new employees = Starting salary of new female employees/ Starting salary of new male employees

In addition to providing a range of insurance benefits and pension contributions in accordance with local laws and practices, Alpha (Hsinchu) plant also makes monthly pension contributions to statutory accounts in accordance with the pension contribution standards set out in Article 55 of the “Labor Standards Act” and to the labor pension fund in accordance with Article 56. Employer contributions to employee pension funds under the new and old systems are 6% and 2% respectively. 100% of all permanent employees are enrolled in a pension plan in accordance with the “Labor Pension Statute.” Only 24 people are enrolled under the old system, while no pension contributions are necessary for apprentices and foreign employees. In addition,

permanent employees and contractors are enrolled in the group insurance plan from their starting date. Employees are provided with insurance coverage that exceeds the government mandated level of coverage to protect their safety at work and in everyday life.

### ■ Monthly Pensions Contributions at Alpha (Hsinchu)

Type of pension plan	Source of contributions	Contribution ratio
Old system (Labor Standards Act)	Employer contribution	2%
New system (Labor Pension Statute)	Employer contribution	6%
		Up to 6%

Alpha (Dongguan) and Alpha (Changshu) both provide social insurance to employees from their starting date in accordance with local laws.

To provide employees with a working environment that balances their mental and physical development, the leave management system implemented by Alpha notifies employees of their outstanding special and overtime leave time at the start of each month. The notification reminds employees to plan their leave in advance and promotes the concept of the healthy workplace. On encouraging employees to get married and have children, we offer pregnant women parking spaces, nursing rooms, pre-natal inspections, nursery leave, family care leave, marital leave, and cash gifts from the Employee Welfare Committee for new births. In accordance with the rights granted to workers under the Gender Equality Act, both female and male employees can apply for maternity and nursery leave. In 2017, 34 employees applied for maternity leave and over 91.1% chose to return to work at the end of the leave period. 34 male employees applied for nursery leave and 100% returned to work at the end of the leave period.

### ■ Maternity and Nursery Leave at Alpha (Hsinchu)

Maternity and nursery leave developments										
Year	Female	Male	No. of people on maternity leave	No. of people on nursery leave	Returned to work after maternity leave		Returned to work after nursery leave		Returned to work	
					employees	%	employees	%	employees	%

## Talent Development

### Training and Development

Alpha knows that a company's most valuable assets are our employees. Continuous learning is encouraged in Alpha. Alpha invests resources every year to provide our employees the best learning opportunities, resources and platform for development.

Alpha has developed a comprehensive training system based on the different needs of employees in each phase.

- **New employee training:**  
Alpha provides every new employee with full new employee training. The training covers company organization, core competencies, core systems as well as environmental safety and health. Employees quickly learn about the company and blend in with the organizational culture.
- **Management training:**  
Management courses corresponding to the management skills needed by managers at each level are held to strengthen management ability at every level.
- **Professional training:**  
To ensure that the professional knowledge and skills of Alpha can be passed down in their entirety, internal trainings are organized by unit heads and the HR department. Such training facilitates the exchange of experience between different professions and help to build a learning organization.
- **External courses:**  
Apart from the systematic internal training, Alpha also encourages employees to take part in external training based on their unit functions and personal development requirements. Courses such as R&D, safety rules, labor safety and human resources provide employees with a full range of training channels.

In 2017, Alpha conducted face-to-face instruction classes for around 16,500 people. Total cumulative face-to-face instruction time for the year amounted to around 27,000 hours.

Chairman John Lee regularly teaches internal courses on the latest technologies and market trends. The Chairman's 2017 internal course "Looking up at the sky in 2020" on 5G mobile communications talked to employees about pioneering concepts in 5G and future prospects. The course contents were later digitized by the HR department for the E-Learning platform to expand the course coverage to all employees.

In 2017, Alpha (Hsinchu) completed the "Talent Quality Management System Assessment - Enterprise and Institutional Edition" (known as "TTQS" for short) organized by the Workforce Development Agency, Ministry of Labor. Employee training is now organized along through the management loop of Plan (P), Design (D), Do(D),

Review (R) and Outcome (O). Alpha has therefore demonstrated its commitment to employee training and the quality of training received government recognition as well. To encourage employees to engage in active learning and sharing, Alpha (Hsinchu) introduced the following measures:

- **Instructor's Award:**  
To encourage employees to share their professional experience and know-how, an Instructor's Award is conducted every year. Electronic greeting cards and gift vouchers are sent out to internal instructors for professional courses to thank them for their hard work and promote mutual development through teaching and learning. 278 employees received the reward package in 2017.
- **Language training subsidy:**  
Language skills are essential for international integration. Employees are therefore offered language training subsidies and language testing rewards. Subsidies are provided for languages such as English, Japanese, French, German, Spanish and Russian that the company uses more frequently to motivate self-learning by employees, improve their foreign language proficiency and boost the company's competitiveness.

Alpha has set up an E-Learning system to provide a complete learning environment with digital course resources. Employees can use this platform to take online courses for more flexibility and efficiency in learning. Employees can also apply to take part in internal departmental training, internal and external training, submit course reports, fill out course satisfaction surveys and query their personal training records.



## Performance Management

A comprehensive performance management scheme and system has been set up to improve employee performance and ability. The system is used to measure the accomplishment of the company's short, medium and long-term goals, and to provide a basis for internal assignments, promotions, salary adjustments, prizes, bonuses, training and development.

Performance management at Alpha includes the measuring of tangible work targets as well as assessments of conduct. At the start of the year, supervisors interview with employees based on organizational business strategy and the department's annual goal. The interviews are used to set each employee's goal, tasks and development plan. In the middle of the year, progress is jointly reviewed by the supervisor and employees to see if the goal need to be adjusted. For the end-of-year performance evaluation, employees shall complete their assessment of the work targets, core competencies and personal development plan. The supervisor provides the employee with feedback based on performance interview. Each employee's goal and development will refer to supervisor's feedback. Alpha places a strong emphasis on communication between the supervisor and employee as well as communication frequency during the initial target setting, interim performance

review and end-of-year performance evaluation phases. This is to ensure that both parties are on the same page when it comes to the targets set and achieved.

## Promotion Management

Alpha offers both management and non-management tracks to employees who demonstrate outstanding performance and potential. Those willing to take on greater challenges and responsibility can do so, while specialists can also demonstrate their skills in their chosen field.

Alpha provides supervisors with a list of staff who fulfils the performance and seniority criteria. Supervisors can nominate candidates. Nominees will be reviewed by the authorized manager. Supervisors will arrange for nominees to attend management competency courses if they are suitable for management positions.

## Employee Events

A variety of employee events such as annual banquets, family day, club activities, ball games and birthday parties are held outside of work to foster employee friendships and help balance work and life. Seminars are held by Alpha at various times on popular topics such as workplace communications, child rearing, investment management, and art appreciation.





## Social Participation

Alpha embraces the spirit of “giving back to society.” In 2006, Alpha established the “Alpha Networks Foundation” in Hsinchu County dedicated to giving back to society as well as supporting educational cultural and charitable activities. Alpha Chairman John Lee is the current president of the foundation.

Since the establishment of the Alpha Foundation, we have sought to recruit corporate volunteers from among the 1,300 employees at our Taiwan headquarters. By undertaking actual charity work in all corners of society, they can learn how to observe with empathy, put themselves in other people's shoes, and to provide the most effective and practical assistance.

The founding of the Alpha Foundation is more than just about giving back to society. We also hope to teach our employees how to give to others. By taking an interest in the people, events and objects around them, they can share the ideals of charity, gradually accumulate the power of compassion, and convert them into a world-changing “Butterfly Effect” that will make the world a better place!

Alpha Foundation involve education, environmental protection or rural assistance. Charitable activities in 2017 including a beach clean-up activity for Earth Day in Hsinchu City, Hsinchu City's International Family Day, the Shih Guang Education and Nursing Institution in Jhudong, the Ai-Heng Training Center for Mental Retardation in Hsinchu, the Taiwan Home Service Strategic Alliance, and the Old Five Old Foundation. The injection of manpower, materials and financial support from the Alpha Foundation puts the spirit of social participation into action and maximizes the influence a business can exert. Employees also

gain happiness and a sense of achievement through the process of giving.

Social participation is also actively promoted at the overseas factories of Alpha. In 2017, employees at Alpha (Changshu) donated supplies to rural mountain regions. Employees at Alpha (Dongguan) took part in a local firefighting operation and were publicly recognized by the Public Safety Fire Department. No matter where they may be, Alpha employees are always contributing to society in the spirit of giving back to society.”







*Environmental protection is an important element of the Alpha business spirit.*

3

## Sustainable Environment Development

Green Products Management  
Environmental Management  
Greenhouse Gas Inventory  
Safety and Health

Supply Chain Management and Social Relations  
Conflict Minerals Due Diligence  
Green Production and Continuous Improvement  
Customer Satisfaction Survey and Analysis

Stringent measures are taken by Alpha to ensure that all products comply with the EU RoHS, WEEE and other directives. Product performance is also continuously being refined to comply with the requirements of the EU ErP directive. Life Cycle Thinking (LCT) is already introduced in the product development phase. The green design philosophy is also being progressively added with adjustments made as necessary based on changes in international environmental protection regulations.



### Recyclable and design for disassembly

In accordance with the EU WEEE product design principles, components are made from materials that can be recovered and reused where possible. Design that hampers disassembly such as paint coatings, welding and adhesives are avoided where possible. Technical documents such as product disassembly manuals and WEEE 3R report are also produced. The goal of achieving a high product recycling rate has now been achieved.



### Pollution prevention

LCT is introduced at the product development phase in the hopes of identifying a product's key environmental considerations and minimizing its environmental impact during resource extraction, manufacturing, distribution and sale, use, disposal and recovery.



### Energy conservation

Product energy efficiency is based on the guidance of the EU ErP, the (EC) No.1275/2008 implementing directive for Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment, and (EC) No.278/2009 implementing directive for external power supplies.



### Low toxicity

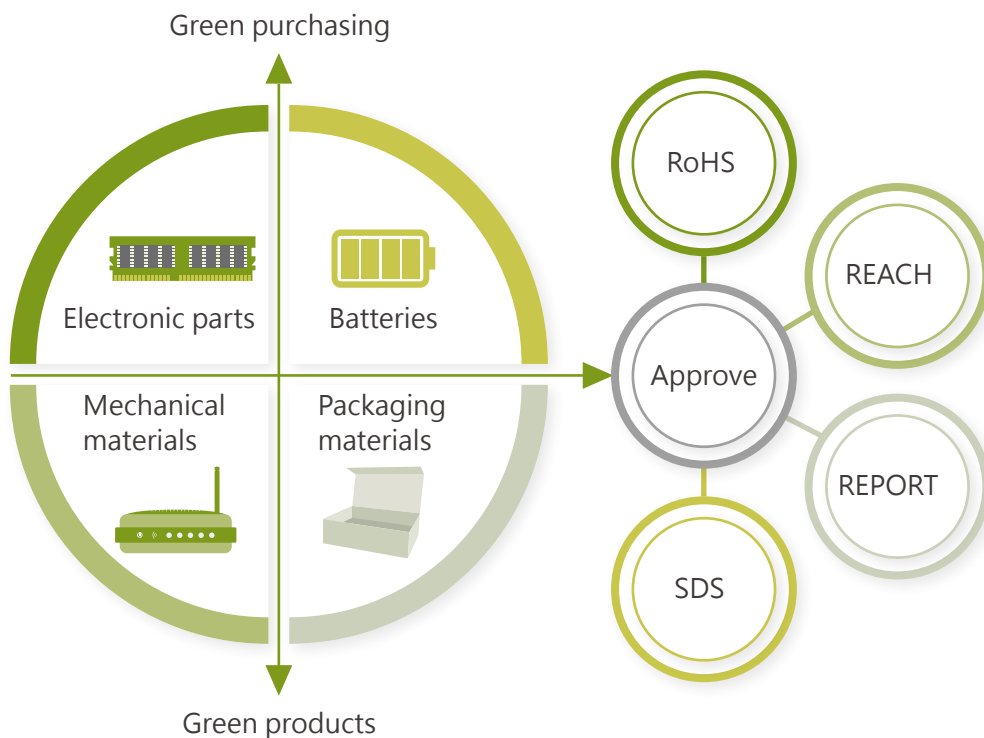
In addition to the introduction of lead-free production processes through the green product management platform and strict internal controls, all parts manufactured by Alpha comply with the requirements of EU RoHS directive and REACH regulations.



## Green product Management

### Green Purchasing

To fulfill our environmental responsibility as a global citizen, practice sustainable development of green products, embrace green production and green consumption, as well as reduce the use of natural resources and toxic substances, Alpha has now adopted green purchasing and requires suppliers to comply with the requirements of the "Green Declaration of Non-use."



### Green Regulation and Database Establish

- International Green Regulations

Rules banning the use of hazardous substances and on waste recovery have been imposed by international regulations such as the "Waste Electrical and Electronic Equipment" (WEEE) directive and the "Restriction of the use of certain hazardous substances in electrical and electronic equipment" (RoHS). The use of six kinds of hazardous substances was specifically banned from July, 2006 and the importation of non-compliant electronic, information and communication products was prohibited as well. With the Eco-design principles were therefore incorporated into the design and manufacture of products during manufacturing, recycling and export.



Impact of Regulations and Guidelines

## International, regional, national and customer-defined green regulations:

Regulation	Content	Effective date
Restriction of Hazardous Substances Directive (RoHS)	The RoHS Directive is an environmental protection directive that took effect on July 1, 2006, in the EU restricting the use of six major chemical substances (Pb/Cd/Hg/Cr6+/PBB/PBDE) in electronic and electrical products in the EU market. The directive was updated on July 1, 2011 to formally include RoHS into the declarations for the CE Mark; On June 24, 2015, the (EU) 2015/863 amendment took effect adding four Phthalates (PAEs) (DEHP/BBP/DBP/DIBP) to the restricted list as well.	2002/95/EC: 2006.07.01 2011/65/EU: 2011.07.21 2015/863/EU: 2019.07.22
China-Restriction of Hazardous Substances (China RoHS)	The China-RoHS was formally issued on February 28 2006. All electronic IT products manufactured in or imported into China are now required to undergo CCC verification of hazardous substances based on the product list defined the "Key Management Catalogues."	2006.2.28
Bureau of Standards, Metrology and Inspection (BSMI)	The BSMI in Taiwan added electronic and electrical products in 91 IT and audio-visual categories to the CNS 16663 section 5 requirements on "Content labeling." RoHS was added to the "required commodity inspection" standard along with the CNS 15663 Section 4 "content labeling" testing requirements as well. Mandatory testing for RoHS took effect from July 1, 2017.	2017.7.01 BSMI Commodity Inspection Mark
Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE)	The EU 2002/96/EC "Waste Electrical and Electronic Equipment Directive" was officially issued in 2003. The purpose of the directive is to reduce the amount of waste electrical and electronic equipment, as well as encourage the recovery, reuse and recycle of electrical and electronic products. The goal of the directive is to promote sustainable production and consumption, and to improve the actual environmental performance of participating electrical and electronic equipment throughout their life cycle.	2003.2.13
California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)	The Safe Drinking Water and Toxic Enforcement Act of 1986 required all businesses selling goods within the boundaries of California to inform residents of the state the amount of chemicals that the home furnishings they purchase or the products in their workplace may contain or emit into the environment.	Implemented from 1986
Sweden offers tariff reductions or exemptions for restricting the use of certain chemical compounds in electrical and electronic products	The Swedish government offers tariff reductions and exemptions on the restricted use of Bromine, Chlorine and Phosphor compounds in some electrical and electronic products	Took effect on April 1, 2017, and enforced from July 1, 2017
TÜV Green Product Mark	A voluntary standard for consumer products and their impact on the environment. A variety of related certification requirements and standards are compiled for different products. Products that pass testing are issued the green product mark to facilitate identification of eco-friendly products by the consumer.	Voluntary certification mark
Eco-design Requirements for Energy-related Products Directive (ErP)	The ErP Directive (2005/32/EC) of the European Council is aimed at reducing the environmental impact of energy-related products including total energy power consumption throughout the product life cycle. The directive sets out a framework for defining the energy-saving requirements for all energy-using products in homes, tertiary industries and the industrial sector. Implementing Directive (EC) No.1275/2008 for standby and off mode electric power consumption of electrical and electronic household and office equipment Implementing Directive (EC) No.278/2009 for external power supplies Implementing Directive (EC) No.107/2009 for simple set-top boxes Amending Directive (EU) No.801/2013 for network communications equipment with power consumption in standby mode.	Implemented from 2008
California Energy Commission	Encompasses all products that use external power supplies (such as chargers and adapters) including mobile phones, home cordless phones, portable music players, hand-held gaming devices, and toys. These products were also required to make more efficient use of energy in standby mode and during use.	New mandatory testing method for battery charging systems introduced on November 16, 2016
EU Code of Conduct on Energy Consumption of Broadband Communication Equipment	The eco-design objectives for broadband infrastructure must conform to the EU Code of Conduct on Energy Consumption of Broadband Communication Equipment	2017.2.10 Broadband Equipment Code of Conduct – Version 6.0

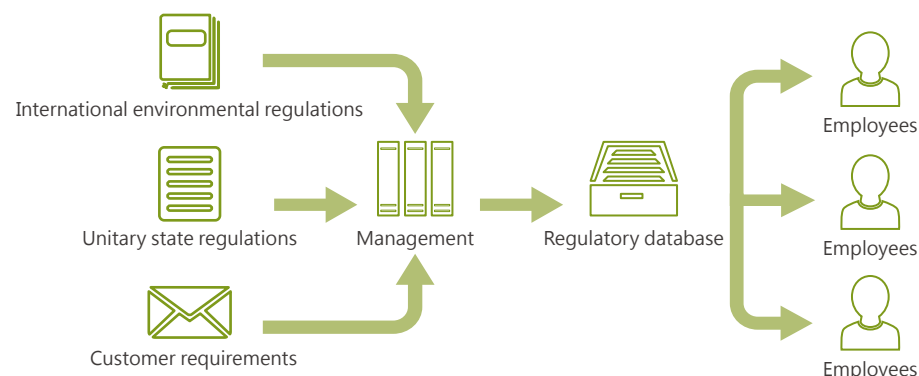


- Building a Regulatory Database

Alpha clearly defines hazardous substance usage standards for products able to and environment-related control requirements by regularly updating the green product control guidelines. Alpha is therefore fulfilling its commitment to social responsibility by ensuring product compliance with all the relevant requirements. Apart from complying with existing standards on restricted, banned and controlled substances, Alpha monitors international regulations and requirements on environmental substances including regional or national laws and regulations restricting or banning the use hazardous substances. In keeping with Alpha's commitment to environmental protection, suppliers are asked to conform to and adhere to the relevant laws and regulations as well as their reporting obligations. To strengthen the enforcement of relevant regulations, a fast and detailed regulatory management database has been set up to improve company personnel's understanding of enforcement efforts and progress.

For substances whose use may be restricted or banned in the future, we will continue to evaluate our options where the technology does not impact product quality, safety reliability, human health and increase environmental impact. We will consider revising the timetable for restricted/banned substances, and look at alternatives or improvements that will reduce the level of environmental impact and effect in order to comply with customer requirements as well as international, regional, and national green regulations. An "Alpha Regulatory Database" has been set up for storage and queries to facilitate effective communication.

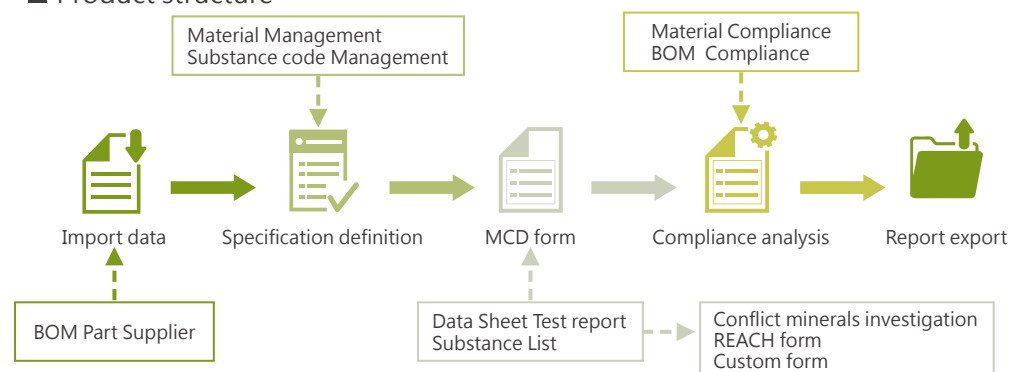
Environmental compliance by Alpha in 2017 resulted in no litigation or serious fines for violations of environmental laws and regulations.



## Hazardous Substance Management

A Green Product Management System (GPM) has been implemented by Alpha in response to the international environmental regulations and customer requirements. In addition to control procedures, suppliers are also required to sign written declarations and submit third-party test reports to ensure that products comply with the rules of the restricted substances list, avoid the effects of hazardous substances, and to ensure that the product adheres to the spirit of environmental friendliness from development through to after production.

### Product structure



### 1. Restriction of Hazardous Substances

All Alpha products, semi-assemblies, raw materials, packaging and auxiliary materials conform to current EU RoHS directive and REACH international regulations. All chemical substances used in products, parts and components as well as during the production process are strictly managed in accordance with the usage, restricted use or banned use requirements for hazardous substances through the GPM system. The GPM system's management mechanism ensures that all products are in compliance.



### 2. Hazardous Substance Management System Certification

The Electrical and Electronic Components and Products Hazardous Substance Process Management System Requirements (HSPM) were issued by the International Electrotechnical Commission (IEC) in October 2005. Alpha has obtained the latest IEC QC 080000:2017 system certification.

### 3. XRF Inspection

To comply with the EU RoHS directive as well as each country's requirements on rapid testing of hazardous substance content in electronic and electrical

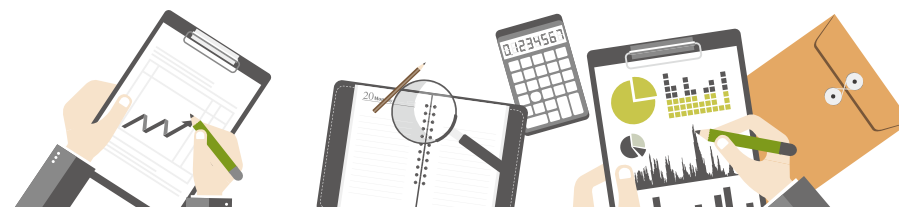
products, Alpha uses XRF inspection to quickly and effectively test for substances such as Cd, Pb, Hg, Cr and Br. Products can be sold with assurance once their compliance with green products have been verified.

### Product Disassembly and Recovery Design

ALPHA consider the product disassembly and recovery design at the design stage. Product assembly design does not use complex tools and linking processes for production. Plastic components weight 25g or more should also marked. The use of more than two types of materials should also be avoided. Recovery and disassembly (3R) and EU WEEE directive (WEEE) all form the basis of green product design. Recyclable materials are therefore chosen by Alpha during system design to better comply with EU environmental requirements.

### Product energy-saving design

ALPHA in product design stage, consider energy efficiency and reduction of energy consumption. While product in standby and off modes, compliance EU related Product directive (EC) No.1275:2008 (Lot6) and (EU) No.801:2009 (Lot26) the networks equipment standby and off modes energy consumption requirement.



## Environmental Management

### Environmental Policy/HSF Policy

- Adhere and comply with environmental laws and the RoHS directive
- Develop green products with fully HSF products as the ultimate goal
- Promote recycling of resources and waste reduction
- Continue to improve processes to reduce their environmental impact
- Improve environmental awareness among employees and to participate directly in environmental protection initiatives.
- Conserve energy and improve energy efficiency.

There were no violations of local environmental laws or regulations by Alpha in 2017. Related items are outlined in the following section.

### Wastewater Management

Wastewater produced by Alpha consists of domestic wastewater and kitchen wastewater. As the wastewater is not from the production process so voluntary disclosure covers only domestic wastewater.

#### Discharge Testing:

Environmental testing organizations accredited by the Environmental Protection Administration of the Executive Yuan are commissioned every year to carry out testing and keep a record of the test results. All wastewater discharges comply with the rules of the Regulation for the Use and

Management of Wastewater Treatment and Sewage System in the Science-based Industrial Park. The sampling wells are also cleaned and the wastewater flow meter calibrated annually.

#### Flow meter calibration:

A calibration rule is used to measure and record the overflow height of the triangular weir conduit at the site. The flow rate shown on the display is then compared against the flow rate calculated using the formula.

#### ■ Factory Wastewater Discharge, 2015 ~ 2017 (Tonnes)

Year	2015	2016	2017
Hsinchu Factory	25,686	29,953	30,083
Changshu Factory	198,779	111,999	116,656
Dongguan Factory	40,381	93,817	70,694

Source1 - Hsinchu Factory – Meter readings reported to the Science Park Administration's sewage treatment factory each month.

Source2 - Changshu Factory and Dongyuan Factory – Data is based on tap water consumption statistics (local regulations do not require the tracking of sewage volume so the sewage discharge figures are based on tap water consumption)

#### ■ 2017 Discharger water quality test result

Test item	pH	BOD	COD	SS	Oil	Ammonia-Nitrogen	Phosphate
Hsinchu Factory	7.3	104mg/L	267mg/L	63mg/L	7.9mg/L	-	-
Changshu Factory	6.03	-	-	48 mg/L	25.6 mg/L	22.2mg/L	2.74 mg/L
Dongguan Factory	7.22	<0.5mg/L	<0.2mg/L	8mg/L	0.07mg/L	<0.025mg/L	<0.01mg/L

Source - Discharge water test report

## Drinking Water Maintenance Management

Alpha takes measures to ensure that the quality of drinking water is up to standard to protect the safety and hygiene of all employees' water supply. Water dispenser equipment is maintained in-house or by contractors every month. An environmental testing organization accredited by the EPA is retained to test the quality of the treated water for level of e.coli and total bacteria count every three months. Maintenance tasks and water quality test results are recorded in the "Water Dispenser Water Quality Testing and Equipment Maintenance Record Form" and posted prominently near the water dispensers.

Drinking water quality standard:

According to the Enforcement Rules of the Act Governing Drinking Water Management: e.coli count  $\leq 6$  CFU/100mL

Total bacteria count  $\leq$  \* CFU/mL

■ 2017 Drinking water quality test results

Test item	E.coli count (Unit: CFU/100mL)	Total bacteria count (Unit: CFU/mL)
Hsinchu Factory	< 1	< 5
Changshu Factory	< 1	< 5
Dongguan Factory	Not detected	6

Source - Alpha Networks drinking water quality test report

## Waste Management

A waste management procedure has been formulated by Alpha to establish an effective internal waste management system to prevent the polluting of the environment through improper waste management. Waste is divided into general waste, hazardous industrial waste and general industrial waste.

To meet the waste reduction goal, Hsinchu Factory strengthened its awareness campaign on waste sorting and marking in 2017. Statistics suggest that there was a significant decrease in the amount of resource waste, hazardous industrial waste, and general industrial waste in 2017 compared to 2016. Resource waste was reduced by 11,001kg, hazardous industrial waste was reduced by 5,883.5kg, and general industrial waste was reduced by 4,310kg.

Domestic waste in 2017 was 970kg higher than 2016. Analysis found that this was due to inadequate sorting by a small minority. To meet our waste reduction target, Alpha will continue to strengthen our educational efforts on waste sorting and marking efforts.

■ Waste Output of Each Factory Between 2016 ~ 2017 year(Kg):

Type	Factory	Year 2016	Year 2017	Method of disposal	
General waste	Resource waste	Hsinchu Factory	43,382	32,381	Recycle
		Dongguan Factory	278,675.39	304,074.65	Recycle
		Changshu Factory	226,949	337,571.8	Recycle
	Domestic waste	Hsinchu Factory	2,720	3,690	Incineration
		Dongguan Factory	36,000	36,000	Collected and processed by government
		Changshu Factory	202,250	182,500	Incineration/Landfill
Hazardous industrial waste	Hsinchu Factory	16,950.5	11,067	Incineration/Physical treatment	
	Dongguan Factory	600	600	Processed by EPA-accredited contractors	
	Changshu Factory	36,695.5	36,606.8	Trimming (Recycle) Waste organic solvent (Incineration) Waste oil rags (Incineration)	
General industrial waste	Hsinchu Factory	15,020	10,710	Incineration/Landfill	
	Dongguan Factory	200	200	Incineration	
	Changshu Factory	2,560	36,500	Recycled by contractor	



## Noise Control

Noise control at Alpha (Hsinchu) is divided into a work area and surrounding environment in accordance with Occupational Safety & Health Act and Noise Control Act regulations.

For noise control in the surrounding environment, the Noise Control Zone Designation Guidelines require class 3 controls at the Alpha (Hsinchu) site as it is located within a science-based industrial park. If a significant noise source is installed or moved around the site then the noise level must be measured by an outside contractor to ensure compliance with control standards.

There were no significant noise sources in the Hsinchu Factory's surrounding area. No protests were received from neighboring factories or residents either.

## Emission Control

Industrial emissions can be divided into particulate emissions and gaseous emissions. To ensure the effective control and reduction of emissions from the production process, Alpha (Hsinchu) retains an EPA-accredited environmental testing organization to measure the composition of emissions from the production process and reduce their environmental impact. All emissions must conform to the discharge standards set by law.

### ■ 2017 Flue Exhaust Inspection Result

Flue No.	Hsinchu Factory		
P002	Lead	Particulate pollutant	Total Hydrocarbons
	ND(mg/Nm <sup>3</sup> )	1(mg/Nm <sup>3</sup> )	4(ppm)
P003	Lead	Particulate pollutant	Total Hydrocarbons
	ND(mg/Nm <sup>3</sup> )	ND(mg/Nm <sup>3</sup> )	2(ppm)
P004	Lead	Particulate pollutant	Total Hydrocarbons
	ND(mg/Nm <sup>3</sup> )	1(mg/Nm <sup>3</sup> )	4(ppm)

Source- Alpha (Hsinchu) flue exhaust test report

Flue No	Changshu Factory		
#1	Test item	Tin and its compounds	Non-methane hydrocarbon (counted as Methane)
	Emission concentration (mg/ m <sup>3</sup> )	5.07	17.6
	Emission rate (kg/h)	0.066	0.228
#2	Test item	Tin and its compounds	Non-methane hydrocarbon (counted as Methane)
	Emission concentration (mg/ m <sup>3</sup> )	2.68	2.51
	Emission rate (kg/h)	0.020	0.019
#3	Test item	Tin and its compounds	Non-methane hydrocarbon (counted as Methane)
	Emission concentration (mg/ m <sup>3</sup> )	1.04	1.88
	Emission rate (kg/h)	3.34*10 <sup>-3</sup>	6.04*10 <sup>-3</sup>
#4	Test item	Tin and its compounds	Non-methane hydrocarbon (counted as Methane)
	Emission concentration (mg/ m <sup>3</sup> )	1.36	3.66
	Emission rate (kg/h)	0.024	0.064
#5	Test item	Tin and its compounds	Non-methane hydrocarbon (counted as Methane)
	Emission concentration (mg/ m <sup>3</sup> )	0.754	2.50
	Emission rate (kg/h)	2.11*10 <sup>-3</sup>	6.98*10 <sup>-3</sup>

Source - Alpha (Changshu) Emissions test report



## Fire Safety Equipment Inspection and Reporting

The three types of maintenance cycle for fire safety equipment at Alpha (Hsinchu) are monthly maintenance, quarterly maintenance, and annual inspection/registration. For monthly and quarterly inspections, the condition of the equipment is recorded by the inspection personnel in the inspection form. Annual inspections of fire safety equipment are contracted to fire safety companies and registered in accordance with the Operational Criteria for the Inspection and Registration of Fire Safety Equipment in All Premises.

## Building Public Safety Inspection, Certification and Registration

Alpha (Hsinchu) not only complies with the relevant laws and regulations but also attach great importance to the working and living environment of employees. Every effort is made to create a workplace where employees can feel safe.

### ■ Fire Safety Equipment Inspection and Registration Results, 2017



Source - Fire safety equipment inspection and registration form

### ■ Building public safety inspection, certification and registration results, 2017



Source- Alpha (Hsinchu) building public safety inspection, certification and registration form

## Energy Resource Management

Alpha is committed to promoting energy conservation and carbon reduction, making improvements to energy-intensive equipment, as well as upgrading environmental safety and health facilities of the company. This will not only improve the software and hardware for energy conservation and carbon reduction at Alpha (Hsinchu) but also achieve the goals of energy conservation, GHG reduction, and safety & health management. Alpha is also a participant in the Industrial Development Bureau of the Ministry of Economic Affairs' Industrial Greenhouse gas and Energy Reduction Corps program.

Electricity accounts for the bulk of energy consumption at Alpha (Hsinchu). Suitable energy conservation measures have been introduced to reduce the amount of power consumption: For example, timer-control of basement air circulation equipment, timer-control of air-conditioning equipment on each floor, timer-control of passenger and freight elevators, adjustments to the load of the chiller unit and attached equipment, and switching over to LED energy-saving lamps. Energy-saving initiatives in recent years include the following:

### • Timer-control of basement air circulation equipment

Purpose: Maintain air circulation and keep CO concentrations within limits

Method: Operations are now divided into three time slots: Morning, Lunch, and Evening. Running time now reduced from several hours to 30 minutes.

Benefits:

Basement air circulation equipment	Operating mode	Total operating hours per year (hrs.)	Estimated power consumption (kwh)	Energy savings (kwh/year)
- Total of eight 30 HP blower (22.5kw)	1 hour	6,336	142,560	71,280kwh
	30 minutes	3,168	71,280	

Source - Estimated from equipment rating plate

- Timer-control of air-conditioning on each floor

Purpose: Maintain the air quality of working areas and reduce equipment workload.

Method:

Summer months - Operating time shortened due to high outdoor temperatures to reduce the load on chiller units. Operating time reduced from 8 hours to 2 hours

Non-summer months - Operating time extended due to low outdoor temperatures to reduce heat-exchange loss and reduce the load on the chiller units (left at 8 hours)

Benefits:

	Operating mode	Total operating hours per year (hrs.)	Estimated power consumption (kwh)	Energy savings (kwh/year)
Each floor has twenty 7.75 HP (5.6 kW) blower units	8 hours	28,160	157,696	118,272
	2 hours	7,040	39,424	

Source - Estimated from equipment rating plate

- Timer-control of passenger and freight elevators

Purpose: Support energy conservation and carbon reduction, and encourage people to exercise.

Method: Passenger and freight elevators are switched off by security guards after office hours. All but one elevator in each lobby is switched off.

Benefits:

Controlling the usage of passenger and cargo elevators	Standby hours per year (hrs.)	Power consumption in standby (kw)	Energy savings (kwh/year)
7	39,312	0.25	9,828

Source - Estimated from equipment rating plate

- Adjusting the load of the chiller unit and attached equipment

Purpose: Make automatic adjustments in response to ambient temperature to save energy and reduce carbon emissions

Method:

The load of the chiller unit and attached equipment are automatically adjusted in response to the outside temperature and actual cooling requirements on-site to optimize system stability, maximize performance and minimize energy consumption.

Benefits:

Power Consumption for the Year/ Month	January	February	March	April	May	June
Actual Power Consumption of the Chiller Unit and Attached Equipment in 2015 (kwh)	103,710	102,360	128,560	177,380	227,200	282,720
Actual Power Consumption of the Chiller Unit and Attached Equipment in 2016 (kwh)	101,960	81,670	122,840	151,240	216,670	267,510
Actual Power Consumption of the Chiller Unit and Attached Equipment in 2017 (kwh)	106,200	88,060	121,570	134,580	184,530	223,790

Power Consumption for the Year/ Month	July	August	September	October	November	December
Actual Power Consumption of the Chiller Unit and Attached Equipment in 2015 (kwh)	267,020	266,120	236,180	194,030	177,110	118,510
Actual Power Consumption of the Chiller Unit and Attached Equipment in 2016 (kwh)	268,200	280,130	239,440	213,850	136,760	126,010
Actual Power Consumption of the Chiller Unit and Attached Equipment in 2017 (kwh)	234,610	288,340	217,920	194,830	136,150	114,960

Source- Data from digital power meters

- Upgrading to LED energy-saving lamps

Purpose: Save energy to save money and protect the environment

Method: Progressive replacement by zone over 3 years

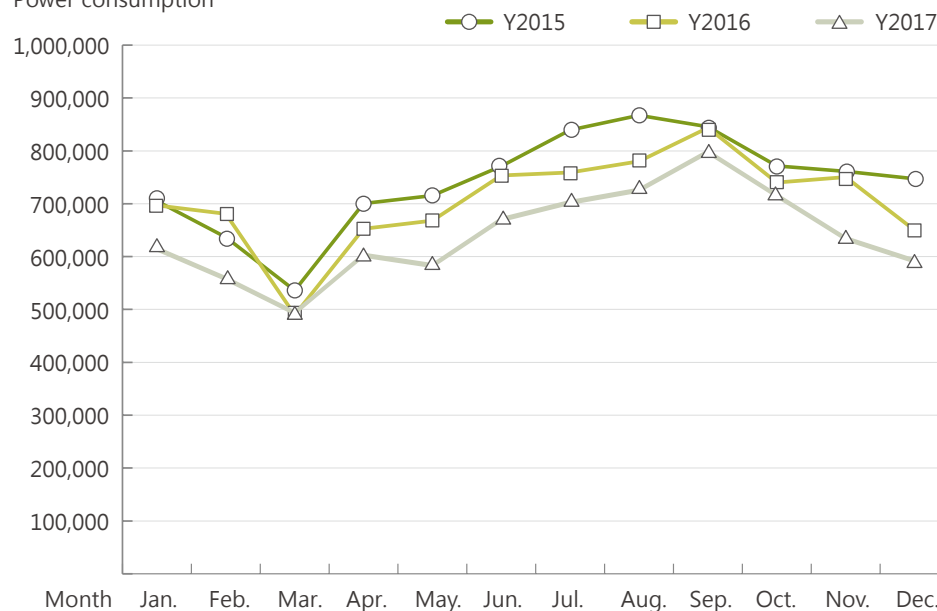
Benefits:

Upgrading to LED energy-saving lamps	Number of LED lamps and down-lights replaced	Actual power consumption (kwh)	Energy savings (kwh)
2012	Actual power consumption from baseline year: 11,348,000 (kwh)		
2013	Installed 13,187 LED energy-saving lamps Installed 1,078 down-lights	10,077,600	Reduction compared to previous year: 1,270,400
2014		9,219,200	Reduction compared to previous year: 858,400
2015		8,896,000	Reduction compared to previous year: 323,200
2016		8,465,200	Reduction compared to previous year: 430,800
2017	-	7,690,000	Reduction compared to previous year: 775,200

Source - Total amount of electricity consumption per year based on power bills

#### Power consumption management at HsinChu Factory in 2017

Power consumption



Month	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Y2015	705,200	636,400	536,000	700,400	715,200	770,800	839,600	867,200	845,600	771,200	761,200	747,200
Y2016	696,800	680,800	489,600	652,800	668,000	753,600	759,200	780,400	843,600	740,000	750,400	650,000
Y2017	614,400	558,400	493,600	602,800	583,200	670,000	702,400	725,600	798,000	715,600	634,000	592,000



## Greenhouse Gas Inventory

Alpha is keenly aware of the impacts that greenhouse gases (GHG) are making on the Earth's climate, ecology and environment. Due to global green policies, the green economy and to fulfill our corporate responsibility as a global citizen, GHG inventories are conducted by Alpha to help slow the pace of global warming, effectively track and manage GHG emissions, as well as promote voluntary GHG reduction plans. As a result, Alpha won an excellence award from the Hsinchu Science-based Industrial Park Carbon Reduction Awards.

The increasing severity of global climate change has led to a concerted international push on energy conservation and GHG reduction initiatives. In response to the impact of global climate change, Alpha has joined the Carbon Disclosure Project (CDP). We also engage in disclosure of enterprise emissions (ISO 14064-1) and product carbon footprint inventory (ISO 14067/PAS 2050) to track our GHG emissions and make reductions when appropriate.

■ An excellence award from the Hsinchu Science-based Industrial Park Carbon Reduction Awards



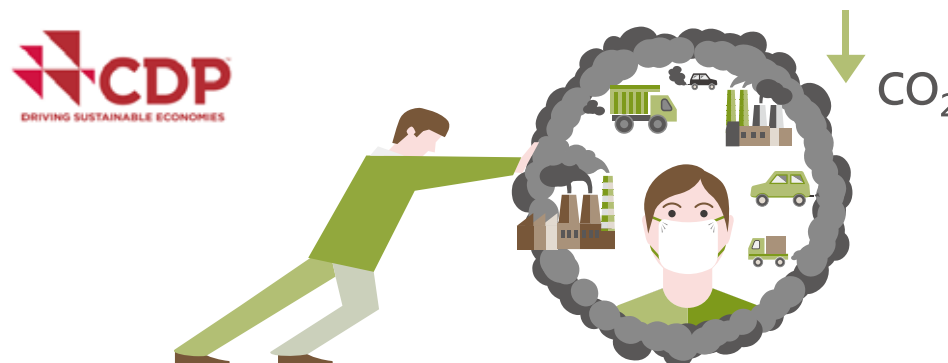
## Greenhouse Gas Inventory and Policy Statement

Climate anomalies caused by global warming is now threatening our living environment. As a leading network communications equipment maker, we fulfill our social responsibility by creating a toxin-free, healthy and sustainable living environment for future generations. To this end, we promise the following:

- Facilitate the tracking of internal carbon emissions by committing to the disclosure of enterprise carbon emissions.
- Work with our business partners to expand the scope of reduction initiatives.
- Provide our consumers and users with more low-carbon options.
- Increase transparency and reduce product carbon footprints.

## Carbon Disclosure

Alpha has been a member of the Carbon Disclosure Project (CDP) since 2013. Our GHG inventory records are registered with the CDP website (<https://www.cdp.net/en>) for the reference of our customers and stakeholders.





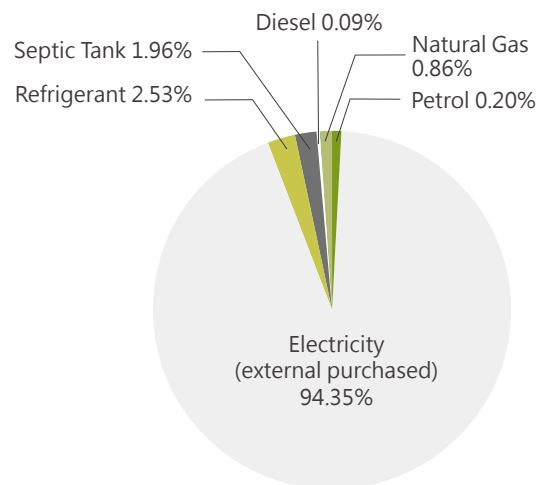
## Greenhouse Gas Emissions

The operational boundaries of Alpha (Hsinchu) encompass direct, energy-indirect and other indirect greenhouse gas emissions. Types of GHG identified by Alpha: Carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O) and Hydrofluorocarbons (HFCs).

Alpha (Hsinchu) set the 2008 inventory as the baseline year. Our Scope 1 direct emissions of GHG in the baseline year amounted to 130.11 tons of CO<sub>2</sub>e and accounted for 1.68% of all Company emissions. Scope 2 indirect emissions came from electricity and in 2008 amounted to 7610.38 tons of CO<sub>2</sub>e, or 98.32% of all Company emissions. Total emissions (Scope 1 and Scope 2) were therefore 7740.49 tons of CO<sub>2</sub>e.

In 2016, Alpha (Hsinchu)' s GHG emissions from all sources (Scope 1 and Scope 2) totaled 4645,00 tons of CO<sub>2</sub>e. Scope 1 direct GHG emissions were 262.66 tons of CO<sub>2</sub>e and accounted for 5.65% of all Company emissions. Scope 2 indirect GHG emissions were 4382.34 tons of CO<sub>2</sub>e, or 94.35% of all Company emissions.

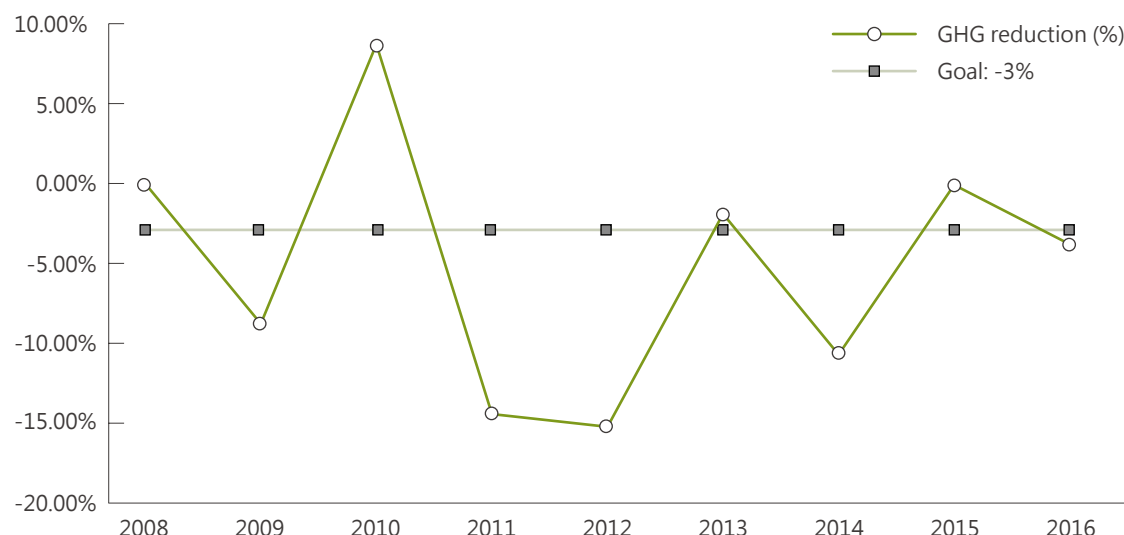
External verification: Our 2016 GHG report was verified by TÜV Rheinland Taiwan Ltd. and revisions made where necessary.



Tonnes CO<sub>2</sub>e/year ■ Greenhouse Gas Emissions between 2008 ~ 2016



■ Percentage of Reduction in Greenhouse Gases between 2008~2016



Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
GHG reduction (%)	0.00%	-8.81%	8.76%	-14.49%	-15.29%	-1.90%	-10.75%	-0.82%	-3.81%
Goal: -3%	-3%	-3%	-3%	-3%	-3%	-3%	-3%	-3%	-3%

## Safety and Health

Alpha Safety and Health Policy:

- All unit managers are committed to enforcing and participating in routine safety and health management activities.
- Protect the safety and health of all employees by preventing the occurrence of occupational disasters.
- Obey and comply with domestic safety & health laws as well as any other related regulations.
- Improve the effectiveness of safety and health management through continuous reviews and improvements.
- Safety, production and quality are all of equal importance.

The Alpha Safety and Health Committee is made up of workers' representatives in accordance with the "Safety and Health Committee Regulations." Workers make up 100% of the Committee including those involved in internal organizational administration.

Safety and health activities at Alpha (Hsinchu Factory) in 2007 focused on Voluntary inspection:

- Voluntary inspections were regularly conducted on the environment of each unit, facilities and special operations.
- Safety observation and audit: Random safety observations and audits were conducted to protect the safety of employees and prevent the occurrence of occupational disasters by reducing the number of unsafe environments and behaviors.

- Chemical control banding management:  
Chemical investigations are conducted in accordance with the Management Regulations Governing the Evaluation and Control Banding of Hazardous Chemicals, control banding is enforced for health-related hazardous chemicals. Hazard education courses are held to strengthen awareness on safe use of chemicals.
- Detection of factory risk factors:  
To monitor the working environment of factory employees and assess their level of exposure to determine if it is in compliance with the law, Alpha commissions external measurement organizations to carry out environmental monitoring at the factory (including the offices and workshops). CO<sub>2</sub>, illumination, organic solvent concentrations and noise measurements are taken in accordance with the "Working Environment Measurement Management Procedure" to protect the safety and health of workers.
- Safety and Health training:  
Fire prevention training: Internal fire drills, response exercises and internal firefighting teams are organized every quarter. Classes and actual exercises are used to help prevent disasters.
- Intruder and abnormal postal package exercise:  
Intruder and abnormal postal package exercises are held for security and receiving room personnel to improve their disaster prevention and response skills.
- Safety and Health training for new and current employees:  
Safety and health management regulations are enforced to strengthen the safety, hygiene and health awareness of new and current employees as

well as prevent disasters. Occupational Safety and Health management knowledge and skills are also cultivated to support the company's occupational Safety and Health management program.

- Civil defense corps training:  
To strengthen the safety awareness of employees assigned to the response teams, emergency response and civil defense corps training are organized every year to improve their emergency response capabilities.
- Ionizing radiation in-service training:  
To strengthen the safety and protection awareness of employees working with ionizing radiation, in-service training for ionizing radiation is organized every year.

■ Number of people that underwent safety and health training at Alpha (Hsinchu Factory) in 2017

Type	No. of employees
New employee safety and health training	191
Current employee safety and health training	501
Firefighting training	84
Civil defense corps training	78
In-service training for ionizing radiation safety	21

■ Number of people that underwent safety and health training at overseas sites in 2017

Type	Factory	No. of employees
Hazardous chemical operator training and spill drill	Alpha (Dongguan Factory)	17
	Alpha (Changshu Factory)	10
New employee occupational safety training	Alpha (Dongguan Factory)	2,062
	Alpha (Changshu Factory)	178
Factory-wide fire evacuation drill	Alpha (Dongguan Factory)	1,144
	Alpha (Changshu Factory)	932

■ Fire hydrant operator training



## Occupational Injury Statistics

Alpha has defined management regulations on incident reporting and investigation. Work-related injuries, ill health, disease and accidents are investigated through an effective investigation and response mechanism to trace the origin and potential causes. Mistakes in the Safety and Health management system are identified for effective corrective and preventive measures to be taken. This ensures that the same work-related injuries, ill health, disease and incidents do reoccur.

Type/Factory	Alpha (Hsinchu)		Alpha (Dongguan)		Alpha (Changshu)	
Gender	♂	♀	♂	♀	♂	♀
Frequency of Disabling Injuries	0	0	0	0	0	0
Days lost due to disabling injuries	0	0	0	0	0	0
Disabling Injury Frequency Rate (I.R.)	0	0	0	0	0	0
Lost Days Rate (L.D.R.)	0	0	0	0	0	0
Occupational Disease Rate ( O.D.R. )	0	0	0	0	0	0
Absentee Rate ( A.R. )	0	0	0	0	0	0
Work-related Fatalities	0	0	0	0	0	0

**Note 1:** Occupational injury records cover occupational injuries that occur on-site while working. It does not include injuries from traffic accidents while commuting to and from work.

**Note 2:** Disabling Injury Frequency Rate (I.R.) = Frequency of Disabling Injuries / Total work hours x 200,000

**Note 3:** Lost Days Rate (L.D.R.) = Days lost due to disabling injuries / Total work hours x 200,000

**Note 4:** Occupational Disease Rate (O.D.R.) = Incidence of Occupational Diseases / Total work hours x 200,000

**Note 5:** Absentee Rate (A.R.) = Total Absentee Hours (Sick leave and special leave) / Total work hours x 100%

## Contractor Safety and Health Management

The outcomes of contractor safety and health management at Alpha (Hsinchu Factory) are compiled below:

A total of 173 applications for construction work were made including 112 cases related to special high-risk operations on-site. A total of 264 people entering the site for the first time received hazard warnings and safety & health training. No occupational injuries resulting in more than one day of lost work occurred at Alpha (Hsinchu Factory) during the course of 2017.

Management statistics for contractor carrying out work on-site at Alpha (Hsinchu Factory) in 2017

Control type	Work application	Industrial safety training for on-site contractors	Special operations applications
Number	173 cases	264 people	112 cases

## Food Hygiene and Safety

Food safety management measures have been implemented at all Alpha sites to provide employees with safe, hygienic and health group catering:

A "Catering Committee" was set up to review group catering, make improvements, and ensure food safety/hygiene for all employees.

The Kitchen Safety and Hygiene Management Regulations were defined with clearly defined management responsibilities and measures for incoming ingredients, ingredients processing, utensil safety, caterer management, and environment/equipment maintenance management.

Qualified catering contractors are chosen through a strict selection process. Catering conditions are inspected daily, and caterers are required to comply with food safety and hygiene related laws.

## Health Promotion

### Employee Health Care

- A dispensary staffed with two occupational health nurses have been set up. Contract specialists also hold clinics on-site three times each month to promote health care, health promotion and special protection.
- On-site health exams that exceed statutory requirements are provided every year. The results of the health exams are categorized for management. Full-time factory health instructors and on-site physicians provide management measures such as one-on-one interviews, re-exams and follow-ups. Data from the past three years are provided in the health report to help employees manage their health over time. In 2017, the annual health exam participation rate was 97.6%.
- A list of personnel assigned to special hazardous operations such as noise and ionizing radiation is compiled by industrial safety personnel every year and provided with physical and health exams appropriate to their workplace. The examination rate in 2017 was 100%.

Two key management initiatives "Prevention of Work-triggered Cerebrovascular Disease" and "Maternal Health Protection" were developed in accordance with the law. One-on-one follow-up measures such as risk assessment and tiered management are used to prevent the occurrence of cerebrovascular disease and to ensure the maternal health of female employees. To take care of mothers, a reporting system lets the company occupational health nurse keep track of pregnant employees. Protective care and interviews can then be conducted to eliminate potential hazards at work and provide related consultation/care during and after the pregnancy. A warm and comfortable expressing environment is provided for the use of female employees.



- A “Musculoskeletal Symptoms Survey Form” is filled out by employees during their annual health exam. The data is analyzed so that suitable health education, physician interviews, and follow-up preventive/corrective actions can be provided. A “Preventive Human Factor Engineering in the Office” seminar is hosted every month when the physician is on-site. All employees are required to attend.
- To help employees identify potential health problems, cancer screenings (e.g., abdominal ultrasound, 3-in-1 exam for women's health) are held on a regular basis. It is hoped that “early detection and early treatment” will reduce the severity of illnesses and their overall impact on individual lifestyles. Average satisfaction is 95%.
- Free physical fitness tests are held to learn more about the physical condition of employees. Around 120 people take part every year.
- Preventive services, such as flu vaccinations at own cost, are also held. Around 100 people usually take part.
- Seminars are held on an ad hoc basis. 131 employees attended the 4 seminars held in 2017.
- Giving back to society through charity events
- Two blood drives are hosted every year. Around 280 employees took part in the two blood drives and donated 400 bags of blood.



## Supply Chain Management and Social Relations

### Supplier Management

Alpha requires all local suppliers to comply completely with all relevant laws and regulations. Alpha also takes a close interest in the management of labor rights, environmental protection, safety and health risks by the supply chain.

Alpha used the Code of Conduct - Responsible Business Alliance (RBA) (previously known as the EICC) to develop the Basic Supplier Code of Conduct. All suppliers are required to comply with the relevant commitments on social responsibility and ethics.

Alpha conducted annual audits and introduced new suppliers in 2017. Total 28 companies were found to be compliant with the standards on labor rights, health and safety, environmental protection, ethics, management systems and social impact.

Suppliers are not only required to conduct quality, cost, delivery, service and technical assessments but to also practice purchasing management based on the Green Supply Chain. Hazardous substance controls have also been incorporated into the incoming material verification procedure. For raw materials that violate the controlled substance rules, suppliers are required to propose corrective and preventive measures right away.

### Supplier order management

Alpha has developed its own supplier transaction platform. We adhere rigorously to privacy laws and confidentiality agreements in order to create a secure and smooth-running platform environment.

#### Supplier Portal



## Supplier Management

### 1. Supplier Selection/Evaluation/Reward and Punishment

The selection of suppliers is based on set criteria. Qualified suppliers must also undergo on-site audits or host review meetings to examine their performance. A high-priority supplier management list is maintained by Alpha based on each department's evaluation of vendor performance in five domains: quality, cost, delivery, service and technical. The evaluation outcomes are used as the basis for adoption of key parts and to motivate suppliers.

### 2. Monthly/Quarterly Supplier Evaluations

- **Supplier Quality Performance Evaluation**  
Evaluation time: An evaluation of supplier performance during the preceding month is provided by the 5th day of each month.
- **Supplier evaluation standard:** Supplier quality is graded in the following manner as defined in the "Incoming Material Management Procedure" :  
Excellent (Grade A):  $\geq 95$ ,  
Good (Grade B): 94~90,  
Acceptable (Grade C): 89~85,  
Inferior (Grade D): 84~80,  
Poor (Grade E):  $< 80$ .  
A supplier quality evaluation score of 80 is required for a qualified supplier.

In 2017, 98.4% of suppliers were graded Excellent (A) or Good (B). There were no suppliers with a grade of Poor (E).

To improve the overall quality of supplier deliveries, Alpha continued to assist suppliers with a grade of Acceptable (C) and Inferior (D) on rectifying their problems.

- **Supplier Rating**  
The Supplier Evaluation Operation Guidelines set the quarter as the statistical interval. The evaluation results are reported in the following month of each quarter.

All key Alpha suppliers (involving large quantities and transaction amounts) are evaluated by the Purchasing, Engineering, and QA units in terms of quality, cost, delivery time, service, and technical capability (see table below). Those with a score below 60 are designated as non-preferred suppliers.

A total of 520 suppliers evaluations were conducted in 2017 and there were no non-preferred suppliers.

Content	Score distribution			Total score
	Component Quality Control Division	Supply Chain Management Center	Engineering Units	
Quality	45			45
Cost		20		20
Delivery		10		10
Service	5	5	5	15
Technical			10	10
Total score	50	35	15	100

- **Supplier Education and Training**  
Supplier training is held every quarter at Alpha (Hsinchu Factory), Alpha (Dongguan Factory), and Alpha (Changshu Factory).

#### ■ Supplier Education and Training Timetable, 2017

Class location/time	Q1	Q2	Q3	Q4
Alpha Networks (Hsinchu Factory) No. 8 Li-hsing 7th Rd., Science-based Industrial Park, Hsinchu City	3/15 (Wed.)	6/14 (Wed.)	9/13 (Wed.)	12/13 (Wed.)
Alpha Networks (Dongguan Factory) Xingang Road, Xin'an Area, Chang An, Dongguan City Guangdong Province	3/24(Fri.)	6/23(Fri.)	9/22(Fri.)	12/22(Fri.)
Alpha Networks (Changshu Factory) No.369, Yintong Road, Southeast Development Zone Changshu, Jiangsu Province	3/21(Tue.)	6/20(Tue.)	9/19(Tue.)	12/19(Tue.)

## Supplier Purchasing Contract

To build a green supply chain, Alpha suppliers are required to adhere strictly to our "Hazardous Substance Guidelines." Test report from independent third-party bodies must be submitted where necessary. Source management is practiced for supplier production processes, green product design and hazardous substances. Green management principles have also been incorporated into the supplier management system. "Supplier Purchasing Contracts" were signed with a total of 15 material suppliers in 2017. In the future, Alpha will continue to sign purchasing contract guarantees with the suppliers that we deal with to ensure the products we design and manufacture can also comply with customers' RoHS-related international regulatory requirements and fulfill the goal of building a Green Supply Chain.

## Corporate Social Responsibility Audit

As CSR has become an important topic in corporate sustainability, Alpha hopes that suppliers can contribute to the fulfillment of CSR and establish stable, long-term partnerships.

The "Supplier CSR Code of Conduct" was developed using the Code of Conduct - Responsible Business Alliance (RBA) as a guide. A "Supplier CSR Survey" is also used to learn about a supplier's accomplishments in labor, health and safety, environmental protection, management system and business ethics. All new suppliers are now required to sign the "Supplier CSR Declaration" and explicitly commit to the fulfillment of their CSR.

568 suppliers were investigated in 2017 and the results of the investigation are tabled below.

Factory	No. of Systems	Number Issued	Completed	Not Completed	No Transaction	Not Available due to Other Reasons	Completion Rate
Alpha Networks (Hsinchu Factory)	195	179	179	2	14	-	100%
Alpha Networks (Dongguan Factory)	387	196	196	117	74	-	100%
Alpha Networks (Changshu Factory)	377	193	193	52	125	7	100%

## Supplier Partnerships

Alpha values our interactions with suppliers and learning from each other. In addition to routine business reviews, awards are also presented during the annual supplier convention to outstanding suppliers or those that made a special contribution to thank them for their support. The quality of products and services are also reviewed and goals set with suppliers during the convention. Alpha and our partners also update each other on the latest industry developments so that we can jointly provide products and services that meet the needs of that market.

80 suppliers took part in the Alpha Networks Group Supplier Convention in 2017. 12 suppliers were public recognized as outstanding partners on the day.

## Conflict Minerals Due Diligence

### Conflict Minerals Policy

Alpha is committed to monitoring the issue of conflict minerals, and to investigate the sources of gold (Au), tin (Sn), tantalum (Ta) and Tungsten (W) minerals to ensure they are "conflict-free." We promise to form long-term partnerships for mutual success with our suppliers. We expect and require suppliers to disclose the refineries and mines they work with. Suppliers are also asked to comply with the RBA Code of Conduct in fulfilling their corporate environmental and social responsibilities together.

Suppliers have been required to sign the "Declaration on Non-use of Conflict Minerals" since 2013. CMRT conflict mineral investigations are also regularly conducted. As of the end of 2017, 574 suppliers have signed the declaration and responded to the CMRT survey.

## Green Production and Continuous Improvement

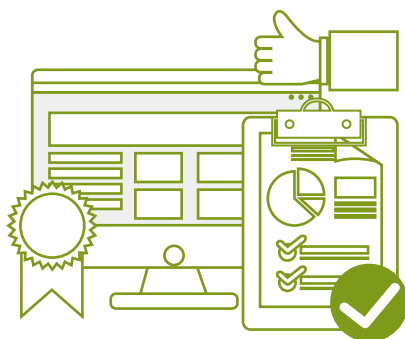
### Green Commitment

Alpha is actively investing in the green product R&D and manufacturing processes. We are also promoting environmental awareness among all employees. IISO 9001, TL9000, IATF16949, ISO14001, QC080000, ISO14064-1 and AEO management systems are strictly enforced during all production activities. The goal of achieving IATF 16949 certification in 2018 has been set to maximize the benefits of green activism.

#### ISO9001/TL9000/ IATF16949 quality policy

ISO9001/TL9000/IATF16949 quality policy

- Do the right things at the first time
- Time continuous improvement for better quality.
- 100% Customer Satisfaction.



#### Environmental Policy/HSF Policy

- Obey and meet environmental regulations and restricted instructions for harmful substance.
- Research and develop green products to pursue the goal of perfection in HSF product.
- Advance levels of resource recycling and promote decrement of waste amount.
- Continually improve production processes and mitigate negative environmental impacts.
- Promote knowledge of environmental protection to all employees to ensure us fulfill our mission.
- Save energy and enhance the rates of resource utilization efficiency.

Note:

QC 080000 (Hazardous Substance Management System)  
HSF (Hazardous Substance Free)



#### Greenhouse Gas Inventory and Policy Statement

Everyone at Alpha is committed to fulfilling our corporate environmental and social responsibility as a quality contract manufacturing enterprise for networking products against a backdrop of global warming. For this reason, we hereby declare that we will:

- Committed to make Carbon Disclosure, in order to facilitate the corporate really grasp the situation.
- Facilitate the tracking of internal carbon emissions by committing to the disclosure of enterprise carbon emissions.
- Work with our business partners to expand the scope of reduction initiatives. Provide our consumers and users with more low-carbon options. Increase transparency and reduce product carbon footprints.

Note:

Greenhouse Gases (GHG) ISO 14064-1 Guidelines for the quantification and reporting of GHG emissions and reductions at the organizational level.



#### AEO Authorized Economic Operator safety policy

Implement AEO system Policy statement:

- All employees and suppliers must adhere to the policy to ensure the safety of Alpha and related business partners' assets.
- Practice risk management Policy statement: Strengthen supply chain security management through the identification of threats to security, risk assessment and risk management process so that the necessary risk reduction and control measures can be implemented.
- Supply chain security performance Policy statement: Improve employee abilities and understanding through education and training. Enforce management reviews and continuous improvement to ensure the applicability and validity of the supply chain security system.





To meet our Delivery, Quality, Customer and Service goals, Alpha develops our corporate vision, unit organizational goals (KPI, MBO) and employees' individual performance goals from the top to down every year. Different quality techniques, tools and systems are introduced around our corporate values of "Integrity", "Customer Value", "Agility" and "Collaboration" to ensure compliance with the quality management standards of green production from product development through to production and manufacturing.

The same set of manufacturing system and quality management standards are used at all Alpha production sites, including Manufacturing Execution System (MES), SAP, PLM, e-JIT (Just-in-Time) and Supplier Management System (SMS). Each production site collaborates with the Quality Center on the promotion of continuous improvement projects and the introduction of performance management such as Total Productive Management (TPM), Total Customer Satisfaction (TCS), 6 Sigma, Quality Control Cycle Circle (QCC), Quality Improvement Team (QIT) and the improvement proposal mechanisms. Everyone participates in the analysis and discussion to prevent the same problems from happening again. The registration and tracking of the Key Performance Indicators (KPI) and Management by Objective (MBO) set by each unit each year is also used to predict potential risks so that preventive mechanisms can be planned in advance. Continuous improvement through the PDCA cycle is used to do our part in corporate responsibility.

To ensure proper anti-static protection measures and mechanisms are in place for all parts and products during the manufacturing process, all sites including Alpha (Hsinchu), Alpha (Dongguan), and Alpha (Changshu) follow the ANSI/ESD 20.20 electro-static discharge protection certification standard. An access control system also permits only authorized personnel to enter the site after passing ESD measurement to ensure that ESD protection is fully enforced.



## Business Continuity Management

To ensure the continuity of operations and reduce the impact of major faults or disasters on critical business processes, Alpha introduced the Business Continuity Management (BCM) in 2014. Two disaster drills (including power outage, natural disaster, infectious diseases, IT failure, supply chain interruption and major accident on production line, etc.) are conducted at different times each year to contain operational impact of any disasters.

Business continuity management policy : Alpha Networks Inc. strives to provide quality networking products and to form partnerships for mutual growth with our customers.

The top priority in our business continuity management is to provide customers with diverse, high-quality and uninterrupted manufacturing services for networking products.

- Conduct business impact analysis and risk assessment. Formulate business continuity strategy and restore operations to normal as quickly as possible.

- Allocate and invest the necessary resources in the event of a disaster or impact. Continue to review further improvements.
- Protect the interests of customers and stakeholders as much as possible.

## Continuous Improvement Activities

Alpha (Changshu Factory) 6σ Promotion Plan Purpose:

- Improve business management capabilities.
- Reduce business operating costs.
- increase customer value.
- improve service standards.
- build corporate culture.

6-Sigma is a technique for improving business quality process management. The business goal of “zero defect” is used to drive large decreases in cost of quality. Improvements in financial performance and breakthroughs in business competitiveness can then be ultimately realized.

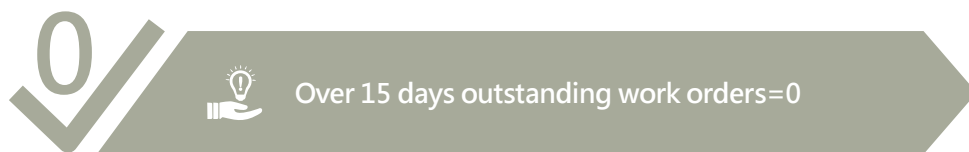
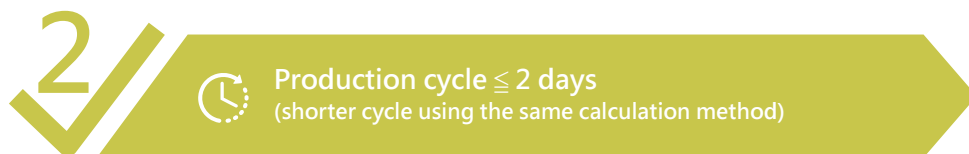
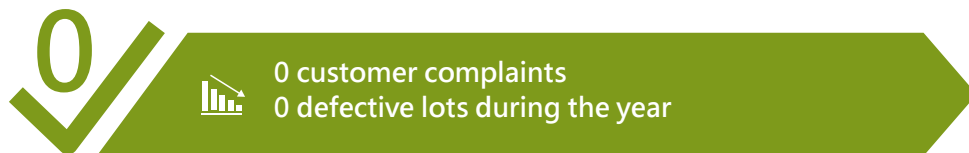
Progress: The 12 teams involved in the 5th round of quality activities in 2017 delivered their presentations on December 20. The 12 project activities of 2017 total cost saving is 2,314,078 RMB.

Year	Circle (Q'ty)	Presentation Time	Participating Units
2013	6	2013/12/26	SMT 、WS 、PE 、MD2 、SQE 、IPQC
2014	8	2015/1/14	SMT, IPQC, SQE, RMA, Label Room, PTH, Assy & PK
2015	6	2016/1/16	IPQC, PTH, SQE, CE, Assy & PK, Testing
2016	7	2016/12/13	IE, PE, SMT, CQC, Assy & PK, Testing
2017	12	2017/12/20	IT/IE/TDD/Labor Safety/HR, MD1, Operations, MTD, MD2, IPQC, RMA, CQC, PM/Finance, MDD

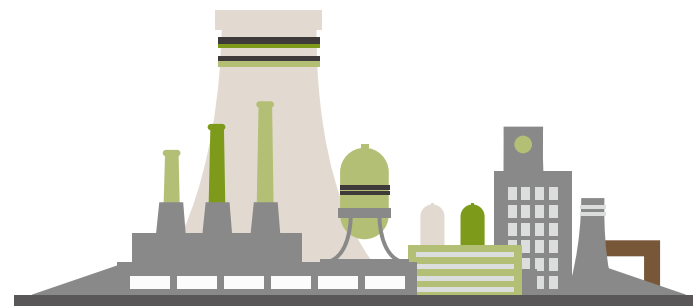


## Alpha (Dongguan Factory) Lean Production

- The purpose of lean production is to improve the production process and reduce costs through the streamlining of personnel and work flows.
- Activity goals



Project	Description	Outcomes
Reduction in work hours	Assy:11%, PK:25%, DIP:20%	Average reduction in production work hours: 19%
TPM	Phase 3 of TPM Plan	<ul style="list-style-type: none"> <li>• 6 Sigma improvements: 39</li> <li>• Tri-drawings: 27</li> <li>• OPL production: 25</li> <li>• LCIA introduction: 13</li> <li>• Maximum material removal rate: 0.63%</li> <li>• Air purity: 65,000</li> </ul>
Layout adjustment	<ul style="list-style-type: none"> <li>• One stream production; reduction of islands, interruptions, transportation, pick-up/drop-off; improve line balance, teamwork;</li> <li>• Cell introduced for 15 teams with 8 people per team. Average savings of 1.5 people per team.</li> </ul>	Savings: 22.5 people per month
	<ul style="list-style-type: none"> <li>• Inventory relocation: 30,000</li> <li>• Cell restructuring: 230,000,</li> <li>• One stream restructure: 40,000</li> </ul>	Approximate investment: 300,000
Approximate returns: 810,000 - 300,000 = 510,000		



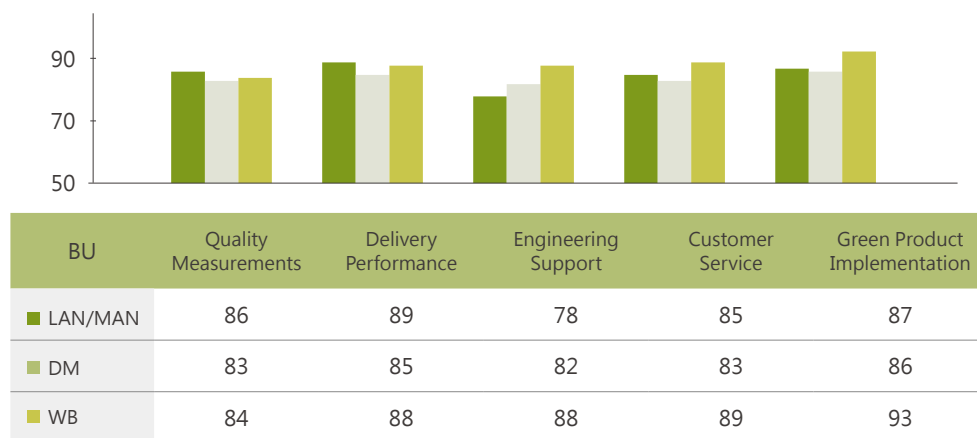
## Customer Satisfaction Survey Analysis

The customer satisfaction survey is used by Alpha to build a quality system oriented around the satisfaction of customer requirements. A general assessment of customer satisfaction with our products and services is performed using objective techniques to determine the gap between customer requirements and expectations. This provides a basis for improvements to the quality system so that the goal of sustainable development can be realized.

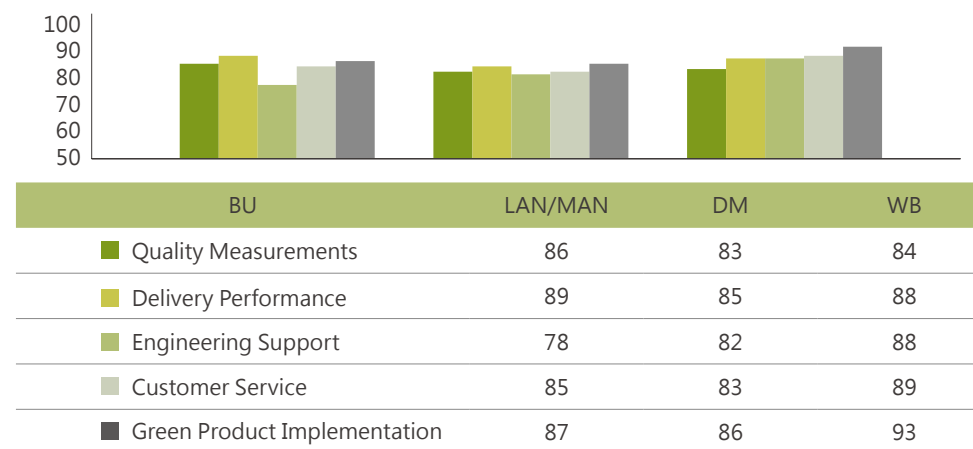
### Analysis of differences in customer satisfaction between different customer groups

The average scores for each category from Alpha surveys of different customer groups are shown below:

■ Figure 1. Comparison of average satisfaction among BU customer groups in the five key subject



■ Figure 2. Comparison of the five key subject and average BU customer satisfaction



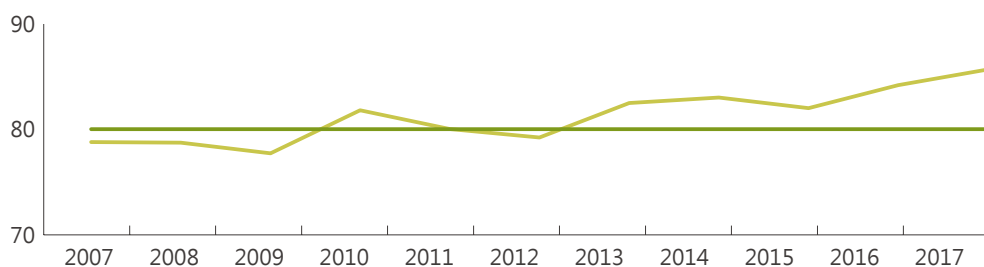
- The results in Fig. 1 showed that customers were relatively consistent on their satisfaction with "Quality measurements." Customers diverged more on their satisfaction with "Engineering support" however.
- Fig. 2 looks at BU customers. The average score from DM BU and WB BU customers for all satisfaction topics were relatively similar indicating that customers did not perceive any major differences in the service we provided. LAN/MAN BU customers showed a greater spread in the satisfaction scores indicating larger differences in their perception of the service we provided.





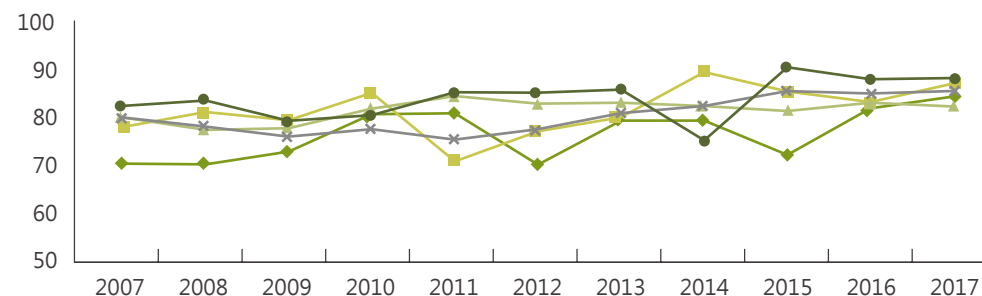
## The annual satisfaction targets and results are tabled below

The following table shows ALPHA satisfaction since 2013. The outcomes of the survey have all reached the target is (80 points).



Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Annual Score	79	79	78	82	80	79	82	83	82	84	85.6
Target	80	80	80	80	80	80	80	80	80	80	80

The following table shows that satisfaction with "Delivery performance" improved the most between 2016 and 2017 while satisfaction with "Engineering support" showed signs of decreasing between 2016 and 2017.



Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Quality Measurements	71	71	74	81	82	71	80	80	73	83	85
Delivery Performance	79	82	80	86	72	78	81	90	86	84	88
Engineering Support	81	78	79	83	85	84	84	83	82	84	83
Customer Service	81	79	77	78	76	78	82	83	86	86	86
Green Product Implementation	83	84	80	81	86	86	86	76	91	89	89





# 4

## Appendix

GRI Standard Index  
Assurance Statement

## GRI Standard Index

### General Disclosure

GRI Content Index	Disclosure	Chapter	Page	Exclusion
GRI 102: 2017 General Disclosure	102-1	Name of the organization	About Alpha	11
	102-2	Activity, brand, product and service	About Alpha	11
	102-3	Location of headquarters	About Alpha	11
	102-4	Location of operations	About Alpha	12
	102-5	Ownership and legal form	About Alpha	11
	102-6	Market served	About Alpha	11
	102-7	Scale of organization	About Alpha	11
	102-8	Information on employees and other workers	Recruitment	25
	102-9	Supply chain	Supply Chain Management and Social Relations	49
	102-10	Significant changes to the organization and its supply chain	No significant changes	N/A
	102-11	Precautionary Principles or approach	Risk Management	23
	102-12	External initiatives	Alpha Policies	4
	102-13	Membership of associations	About Alpha	13
	102-14	Statement from the senior decision-maker	From the Chairman	3
	102-16	Values, principles, standards and norms of behavior	Alpha Policies	4
	102-18	Governance structure	Corporate Governance	20
	102-40	List of stakeholder groups	Stakeholder Communication and Identification	6

GRI Content Index	Disclosure	Chapter	Page	Exclusion
GRI 102: 2017 General Disclosure	102-41	Collective bargaining agreements	No union organization at present	N/A
	102-42	Identifying and selecting stakeholders	Stakeholder Communication and Identification	6
	102-43	Approach to stakeholder engagement	Stakeholder Communication Mechanism	9
	102-44	Key topics and concerns raised	Stakeholder Issues of Concern Survey	7
	102-45	Entities included in the consolidated financial statements	Operating Performance	14
	102-46	Defining report content and topic boundaries	About this Report Stakeholder Communication and Identification	6
	102-47	List of material topics	Identification and Sorting of Material Issues	8
	102-48	Restatements of information	None	N/A This is Alpha's first CSR report
	102-49	Changes in reporting	None	N/A This is Alpha's first CSR report
	102-50	Reporting period	About this Report	1
	102-51	Date of the most recent report	None	N/A This is Alpha's first CSR report
	102-52	Reporting cycle	About this Report	1
	102-53	Contact point for questions regarding this report	About this Report	1
	102-54	Claims of reporting in accordance with GRI Standards	About this Report	1
	102-55	GRI Content Index	GRI Content Index	59
	102-56	External assurance	Accuracy of Disclosure	63

## Material Topics

### Innovative R&D

GRI Content Index	Disclosure	Chapter	Page
GRI 103: 2017 Management Approach	103-1	Explanation of the material topic and its boundary	Sustainable Products and Services Product Development Trends Research and Development Focus 16 17 18
	103-2	The management approach and its components	Sustainable Products and Services Product Development Trends Research and Development Focus 16 17 18
	Product development trends	Product Development Trends	17
	Research and development focus	Research and Development Focus	18

### Talent cultivation

GRI Content Index	Disclosure	Chapter	Page
GRI 103: 2017 Management Approach	103-1	Explanation of the material topic and its boundary	Talent Development 29
	103-2	The management approach and its components	Talent Development 29
GRI 404: Training and education	404-1	Average hours of training per employee per year	Training and Development 29
	404-2	Programs for upgrading employee skills and transition assistance program	Training and Development 29
	404-3	Percentage of employees receiving regular performance and career development reviews	Training and Development Performance Management 29 30

### Employment relations

GRI Content Index	Disclosure	Chapter	Page
GRI 103: 2017 Management Approach	103-1	Explanation of the material topic and its boundary	Recruitment Compensation and Benefits 25 28
	103-2	The management approach and its components	Recruitment Compensation and Benefits 25 28
	401-1	New employee hires and employee turnover	Recruitment 25
GRI 401: Employment Relations	401-2	Benefits provided to full-time employees	Compensation and Benefits 28
	401-3	Parental Leave	Compensation and Benefits 28



## Environmental compliance

GRI Content Index		Disclosure	Chapter	Page
GRI 103: 2017 Management Approach	103-1	Explanation of the material topic and its boundary	Green product Management	32
	103-2	The management approach and its components	Green product Management	32
GRI 307: Environmental compliance	307-1	Non-compliance with environmental laws and regulations	Building a Regulatory Database	32
			Environmental Management	36

## Occupational safety and health

GRI Content Index		Disclosure	Chapter	Page
GRI 103: 2017 Management Approach	103-1	Explanation of the material topic and its boundary	Safety and Health	44
	103-2	The management approach and its components	Safety and Health	44
GRI 403: Occupational health and safety	403-1	Workers representation in formal joint worker-management health and safety committees	Safety and Health	44
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Occupational Injury Statistics	45

## Carbon emissions management

GRI Content Index		Disclosure	Chapter	Page
GRI 103: 2017 Management Approach	103-1	Explanation of the material topic and its boundary	Greenhouse Gas Inventory	42
	103-2	The management approach and its components	Greenhouse Gas Inventory	42
GRI 305: Emissions	305-1	Direct (Scope 1) GHG emissions	Greenhouse Gas Inventory	42
	305-2	Energy indirect (Scope 2) GHG emissions	Greenhouse Gas Inventory	42
	305-3	Other indirect (Scope 3) GHG emissions	Greenhouse Gas Inventory	42
	305-4	GHG emission intensity	Greenhouse Gas Inventory	42
	305-5	Reduction of GHG emissions	Greenhouse Gas Inventory	42

## Assurance Statement

This Report was prepared in accordance with GRI Standard issued. And has been certified to AA1000 Type I with a moderate level of assurance by TÜV Rheinland Taiwan Ltd.



### Independent Assurance Statement

#### Introduction:

TÜV Rheinland (Guangdong) Ltd., member of TÜV Rheinland Group, Germany (TÜV, We) has been entrusted by the management of Alpha Networks Inc. (Alpha, the Company) to conduct independent assurance of Alpha Corporate Social Responsibility Report 2017 (the Report). All contractual contents for this assurance engagement rest entirely within the responsibility of Alpha. Our task was to give a fair and adequate judgment on the Alpha Report 2017.

The intended users of this assurance statement are stakeholders having relevance to the Alpha overall Sustainability Performance and impacts of its business activities during 2017 (January 2017 ~ December 2017). TÜV Rheinland is a global service provider of CSR & Sustainability Services in over 65 countries, having qualified professionals in the field of Corporate Sustainability Assurance, Environment, Social and Stakeholder Engagement. We have maintained complete impartiality and independence during the assurance engagement and were not involved in the preparation of report contents.

#### Assurance Standard:

The Independent Assurance was carried out in accordance with AccountAbility, U.K Standard AA 1000 AS (2008) and related standards AA 1000 APS(2008), AA 1000 SES (2015), Principles of Inclusivity, Materiality & Responsiveness, Global Reporting Initiative (GRI), 'In accordance'-Core" reporting guidelines as per GRI-Standards.

#### Scope & Type of Assurance:

Our Assurance engagement covers the following:

- Alpha Corporate Sustainability performance as described in the report 2017 in accordance with GRI reporting guidelines and performance indicators and according disclosure on management approach (DMAs) from Economic, Environment & Social category, also defined in Reporting boundaries.
- Evaluation of disclosed information in the report as per the Assurance Standards.
- Type-I, Moderate as per AA 1000 AS (2008)

**Limitation:** The assurance engagement was carried out at Alpha Hsinchu Campus at Hsinchu Science Park, Hsinchu City, Taiwan. The consultations with external stakeholder were not carried out. We have not observed any significant situations to limit our assurance activity. The verification is carried out based on the data and information provided by Alpha, assuming they are complete and true. We did not verify the reported financial data as same is verified by another third party in annual report.

#### Assurance Methodology:

TÜV has challenged the report contents and assess the process undertaken by Alpha from source to aggregate in disclosure of information/data related to Sustainability performance. Our judgment is based on the objective review of reported information as per criteria defined under Assurance standards.

Analytical methods and the performance of interviews as well as verification of data, done as random sampling, to verify and validate the correctness of reported data and contents in light of contractual agreement and the factual Alpha Corporate Social Responsibility strategy (CSR) as mentioned in the report. Our work included consultation with over 20 Alpha representatives including senior management and relevant employees. The approach deemed to be appropriate for the purpose of assurance of the report since all data therein could be verified through original proofs, verified database entries.

The Assurance was performed by our multidisciplinary team of experienced professionals in the field of Corporate Sustainability, Environment, Social and Stakeholder Engagement. We are of the opinion that our work offers a sufficient and substantiated basis to enable us to come to a conclusion mentioned below and based on the content of our contract.

#### Adherence to AA 1000 principles:

**Inclusivity:** Alpha has established the Stakeholder Engagement Management Process to identify and understand their stakeholder, and to use the communication mechanism to identify the material issues.

#### Materiality:

Alpha has implemented the material issues identification processing. The identification was based on the requirements and focus of attention of the stakeholder, the consideration of the company internal policy, shareholders meeting, questionnaires and the understanding and communication on the sustainable development content. In response to the materiality principle, TÜV proposed two recommendations:

- 1) Alpha should enhance the analytical capacity of survey information on concerned issues of the stakeholder, to more clearly and effectively evaluate and identify the material issues.
- 2) Alpha should continuously improve the identification processing of the material issues, to better promote the company comprehensively and objective understanding the material issues and its priority of the sustainable development.

#### Responsiveness:

Alpha has implemented the policy including environment and safety, hazardous substances, quality and intelligent property management, and new established corporation social responsibility policy. The report disclosed the management system of the company, such as energy management and its performance, stakeholder engagement, responding to their stakeholders against material issues of the sustainable development.

#### Conclusion:

In conclusion, we can mention that no instances or information came to our attention that would be to the contrary of the statement made below:

- Alpha Corporate Social Responsibility Report 2017 meets the requirement of Type-1, Moderate Assurance according to AA1000AS(2008) and Global Reporting Initiative (GRI), 'In accordance'-Core" reporting guidelines as per GRI-Standards.
- The Report includes statements and claims that reflects Alpha achievements and challenges supported by documentary evidences and internal records
- The performance data we found in the report are collected, stored and analyzed in a systematic and professional manner and were plausible.
- TÜV Rheinland shall not bear any liability or responsibility to a third party for perception and decision about Alpha based on this Assurance Statement.



For TÜV Rheinland Group

Daniel Pan

Lead Verifier

Guangzhou, 10th June 2018



**ALPHA** Networks

[www.alphanetworks.com](http://www.alphanetworks.com)

**Alpha Networks Inc.**

TEL : +886-3-563-6666

FAX : +886-3-567-8124

No.8 Li-shing 7th Rd., Science-based  
Industrial Park, Hsinchu, Taiwan, R.O.C