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ECTC2011, Florida, USA

Western China: Opportunities for Electronic Packaging Industry

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Outline

1. Western China: Focus area of China economic growth
2. A glimpse of packaging industry in Western China
3. Opportunities：supported by policy and China development history
4. Tian Shui Hua Tian Technology（TSHT）can be your service partner in packaging and testing
5. Summary

1. Western China: Focus area of China economic growth

1. Where is Western China (9+1)?
2. Have you ever been in Western China?
3. What does Western China attract you?

Facts of Western China

1. Population of 400 million (24.6% of China);

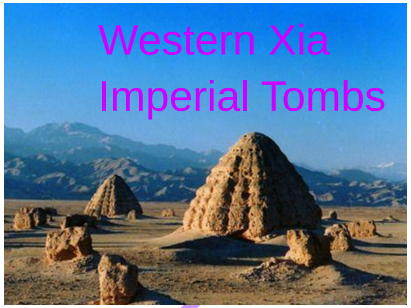
   Land area of 5.5 million km^2 (57% of China);

2. The cradle of Chinese civilization; the headstream of Yellow and Yangzi rivers; the place where President Mr. Hu Jintao used to work, the homeland of next president Mr. Xi Jinping;
3. The important base of China Electronic Industry + aerospace / aeronautics;
4. Top priority region to be developed in next ten years under the "Development Planning of Guanzhong-Tianshui Economic Zone" (**《关中—天水经济区发展规划》** ,June 10, 2009) .
5. Long historical culture, e.g. Xi'an (Terracotta Army, Mount Hua, Dayan Pagoda), other famous cities include Chengdu (Intel, ASE, SMIC…) , Chongqing (mountain city), Lanzhou(gold city), Tian Shui(dragon city)…
6. Rich Human and Natural Resources: - Universities (Xi'an Jiao Tong Univ., Xidian Univ., Lanzhou Univ., Sichuan Univ., Chengdu Electronic Univ., Northwestern Univ.…); - Complete industrial supply chain

Facts of Western China


Qinghai Lake


Maiji Mountain


Western Xia Imperial Tombs


Heaven Pool


Terracotta Army

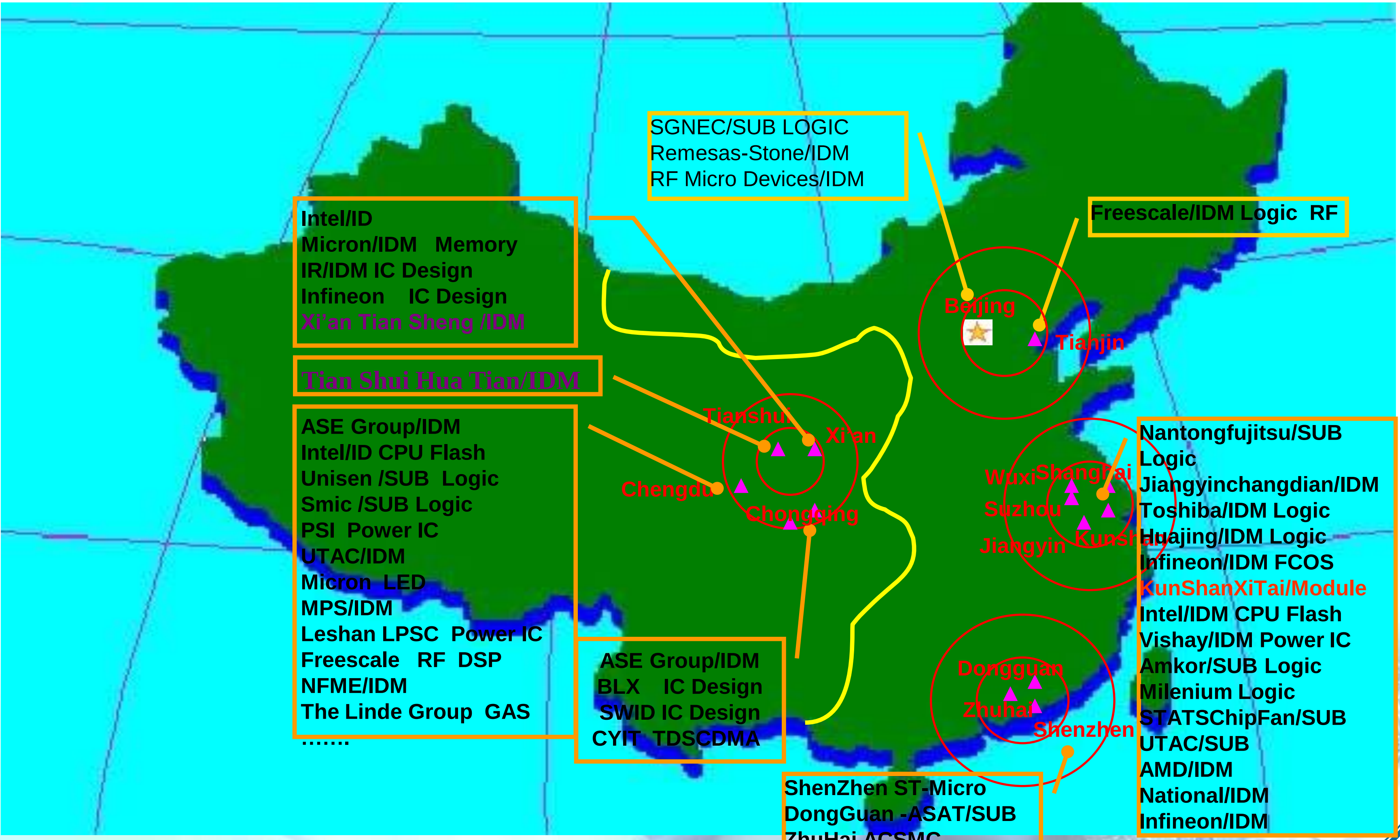

the Potala Palace


Huangguoshu Waterfalls


Three Gorges


Chongsheng Temple

2. A glimpse of packaging industry in Western China



SGNEC/SUB LOGIC
Remesas-Stone/IDM
RF Micro Devices/IDM

Freescale/IDM Logic RF

Intel/ID
Micron/IDM Memory
IR/IDM IC Design
Infineon IC Design
Xi'an Tian Sheng /IDM

Tian Shui Hua Tian/IDM

ASE Group/IDM
Intel/ID CPU Flash
Unisen /SUB Logic
Smic /SUB Logic
PSI Power IC
UTAC/IDM
Micron LED
MPS/IDM
Leshan LPSC Power IC
Freescale RF DSP
NFME/IDM
The Linde Group GAS
…….

ASE Group/IDM
BLX IC Design
SWID IC Design
CYIT TDSCDMA

ShenZhen ST-Micro
DongGuan -ASAT/SUB
ZhuHai ACSMC

Nantongfujitsu/SUB Logic
Jiangyinchangdian/IDM
Toshiba/IDM Logic
Huajing/IDM Logic
Infineon/IDM FCOS
KunShanXiTai/Module
Intel/IDM CPU Flash
Vishay/IDM Power IC
Amkor/SUB Logic
Milenium Logic
STATSChipFan/SUB
UTAC/SUB
AMD/IDM
National/IDM
Infineon/IDM
……..

2. A glimpse of semiconductor industry in Western China

Semiconductor industry chain in Western China

Industry Feature	Highlights	No. of corporate	Representative local and foreign enterprises
Raw (Si) material	Rich in Silicon resources; Silicon developing enterprises are built up	9	SiJia, SC XingGuang, Xi'an LiJing, CQ JinYi, JS DaQuan
IC Design	National industrialization base; Special& General IC chip design	95	Infineon, Micron, NXP, Freescale, MPS, BLX, Xi'an DaTong
Manufacturing	Developing 8-12inch wafer; Line width of 0.35um-0.11um	17	TI, SMIC, PHOENIX, XiYue, WSC
Packaging &Testing	Rapid development	20	Intel, UTAC, SMIC, Unisem, ASE,TSHT, Zetex, TI, MPS, NFME
Affiliated service	Form an entire supply &service chain	16	Messer, The Linde Group, ULVAC, Air Liquide
IC Products & applications	Accelerating consumer electronic products & applications development	34	AMD, Samsung, Agilent, TOSHIBA, HUAWEI, MOTOROLA, Nokia
……	……	…	……

2. A glimpse of Electronic Packaging industry in Western China

Major Famous Packaging & Testing Enterprises

ASE GROUP
日月光集團

PHŒNIX CONTACT
INSPIRING INNOVATIONS

UTAC

Micron®

SMIC™

intel®

TEXAS INSTRUMENTS

unisem

MPS®
Monolithic Power Systems®

Infineon
technologies

ZETEX
SEMICONDUCTORS

3. Opportunities in Western China

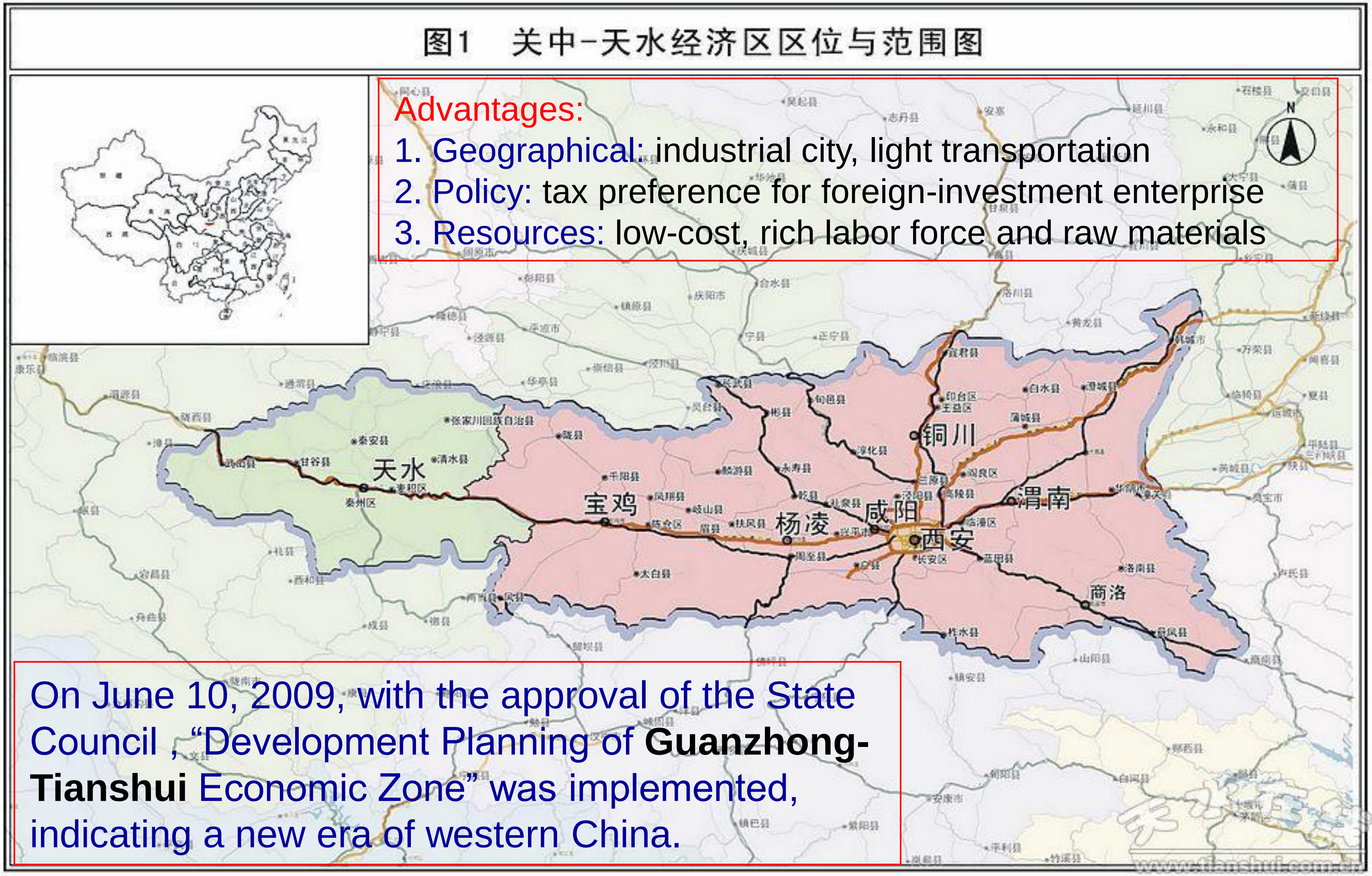


图1　关中–天水经济区区位与范围图

Advantages:

1. Geographical: industrial city, light transportation
2. Policy: tax preference for foreign-investment enterprise
3. Resources: low-cost, rich labor force and raw materials

On June 10, 2009, with the approval of the State Council , “Development Planning of **Guanzhong-Tianshui** Economic Zone” was implemented, indicating a new era of western China.

3. Opportunities in Western China

图4　关中-天水经济区天水发展重点布局图

甘谷：重点发展蔬菜种植、果品、农产品加工、建筑建材、商贸旅游，建成蔬菜、建材、轻工生产基地。2020年，城市建成区人口达到25万人，面积

秦安：重点发展果品、养殖和商贸旅游，建成全省桃果产业重点城市。2020年，城市建成区人口达到20万人，面积控制在25平方公里。

张家川：重点发展畜禽养殖、牧草种植、清真食品和旅游。2020年，县城建成区人口达到10万人，面积控制在20平方公里。

清水：重点发展果品、畜禽养殖、乳品加工和旅游。2020年，县城建成区人口达到15万人，面积控制在20平方公里。

武山：重点发展蔬菜种植、农产品加工、建筑建材、商贸旅游，加快武山钼矿开发，建成蔬菜、建材、矿产资源加工基地。2020年，城市建成区人口达到20万人，面积控制在25平方公里。

天水市：重点发展机械制造、电工电器、电子信息、医药食品、特色农业及商贸旅游等产业。2020年，城市建成区人口达到80万，面积控制在80平方公里。

Electronic Packaging Industry with TSHT Group as the representative

Trading and Tourism with the representative of Mai-ji mountain, Fuxi temple and Dadi gulf

TSHT: Packaging & Testing Figure of Western China

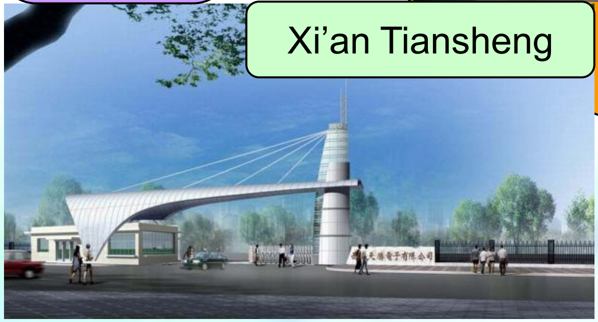
Tianshui plant

LF based packages
LED
MEMS

Electronic Industry Park

FBGA
SiP
QFN/DFN
TSSOP

TSV-CIS
WLO
WLC
WLP



Xi'an Tiansheng

Kunshan QTech

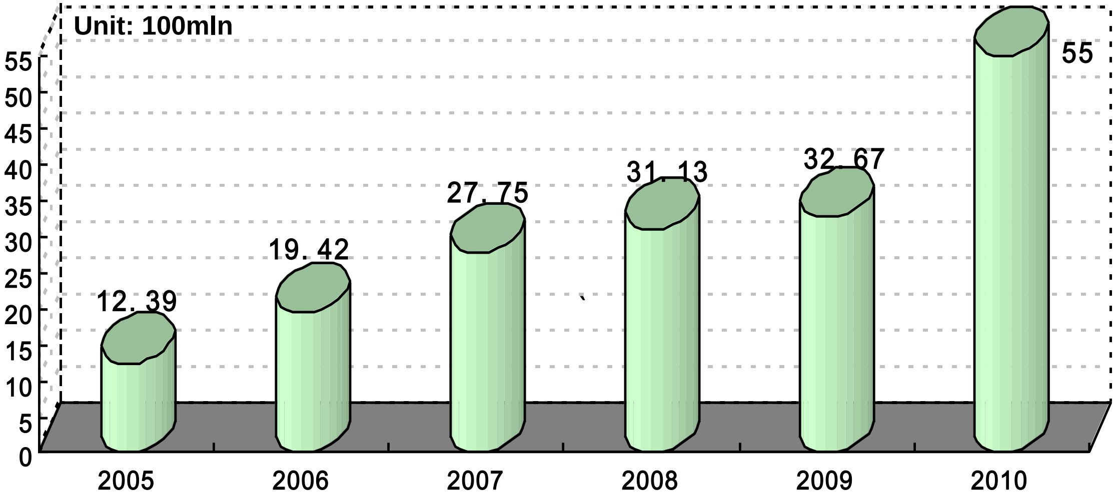
TSHT: Packaging & Testing Figure of Western China

The grouping by IC package assembly units is:

1. Amkor Technology, Inc.
2. Carsem
3. ASE, Inc.
4. Lingsen Precision Industries, Inc.
5. SPIL
6. UTAC
7. PowerTech Technology Inc.
8. **Tianshui Huatian Technology Co., Ltd.**
9. Orient Semiconductor Electronics (OSE)
10. Unisem Group

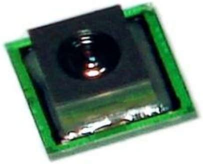
Extracted from :

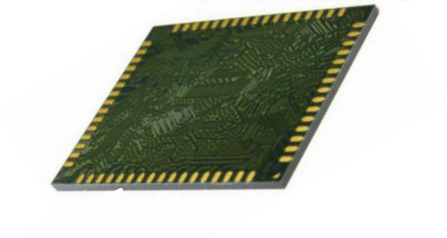
Chip Scale Review Mar/Apr 2011

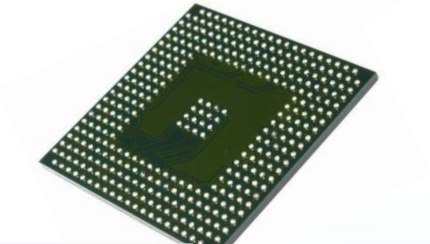


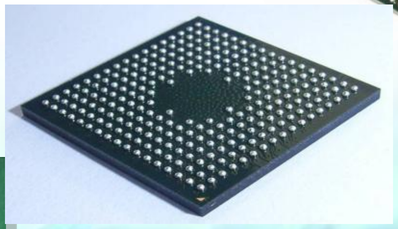
TSHT: Packaging & Testing Figure of Western China

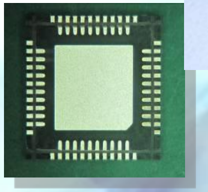
1. Main package type











TSV-CIS

MCP(MCM)

SiP / LGA SOT

FBGA

QFN/DFN

(e)LQFP/TQFP

TSSOP

SOP

DIP

Consistent Technology Innovation Caught Government Eyes

1. **02 Key State Project " multi-row V/UQFN, FCQFN and AAQFN packaging technology development and industrialization"**

   One of the key national science and technology project supported by central government during the 12th five-year period

2. **Copper wire bonding technology**

   Nation authorized new technology;

   Product coverage > 50%

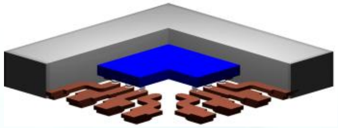
荣誉证书
HONORARY CREDENTIAL

第四届（2009年度）
中国半导体创新产品和技术

名称：集成电路铜线键合封装技术
单位：天水华天科技股份有限公司

中国半导体行业协会
中国电子专用设备工业协会
中国电子材料行业协会
中国电子报社
2010年3月

V/UQFN

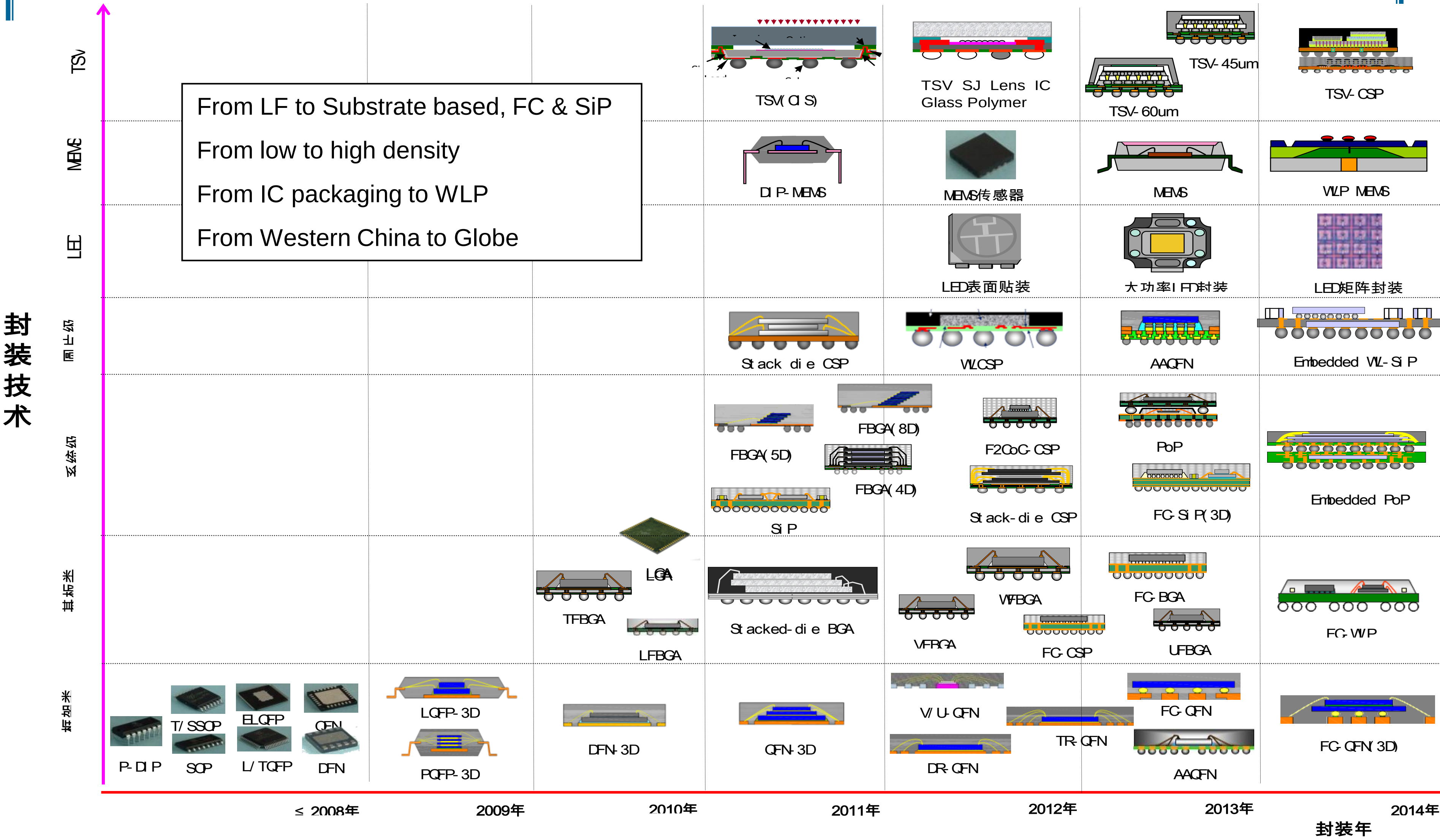


FC-QFN

AAQFN

Roadmap of TSHT Packaging Service

TSHT's Vision : TO BE INTERNATIONALLY BRANDED ENTERPRISE IN ELECTRONIC PACKAGING AND TESTING



From LF to Substrate based, FC & SiP

From low to high density

From IC packaging to WLP

From Western China to Globe

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Summary

1. Western China is the cradle of Chinese civilization with a long history and brilliant culture.
2. Western China is top priority region of future rapid development and economic growth.
3. Western China has all-around semiconductor packaging and testing industry supply and service chain.
4. Tian Shui Hua Tian Technology (TSHT) is ready to be your partner and aims at internationally branded enterprise in electronic packaging and testing.

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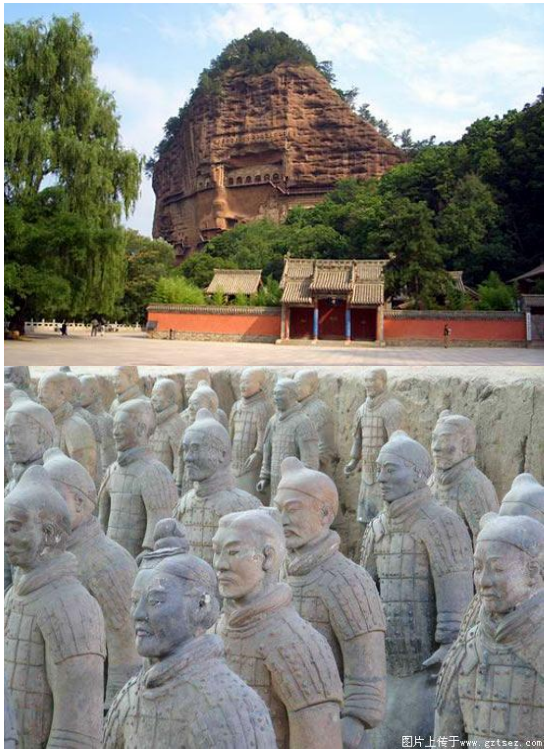

Welcome to Western China.
Welcome to Xi’an.
Welcome to Tianshui.
Welcome to Kunshan.

Sincerely hope cooperating with you as a credible partner.

thank you