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"We're also planning to play a start selling TVs domestically here in can be either a DVB-S or DVB-S2 modour first delivers to The Middle East." is also part of the plan. The numbers are still somewhat small; in 2011 only about 10,000 TVs were shipped. But in 2012 plans call for The Middle Eastern market are a triple tuner 3D TV in 2012 with DVB-

stronger role in TV production.", China and we expect to sell 200,000 el. "For Europe we're making TVs with comments Josie Yang. "We started TVs." Of course, selling TVs in Europe built-in DVB-T tuners." But when Josie

for a ten-fold increase. "We'll also Plug&Play versions; the built-in tuner S2, DVB-T and DVB-C tuners."

Yang spoke about 3D TVs, the conversation got much more interesting: The TVs already manufactured "We're hoping to be able to introduce





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全星科技(珠海)有限公司 Globalsat Technology (Zhu Ltd. 朗朗电子科技 Longlong Electronics

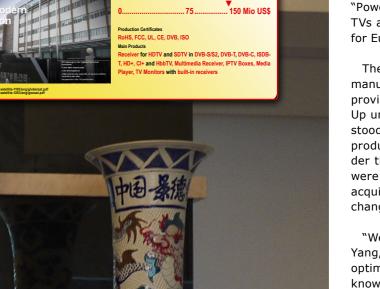
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GOOSAT has achieved the ISO9001 cetificate in 2008 and the ISO14001 in 2011

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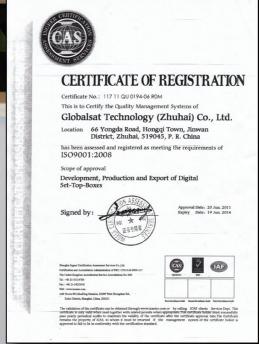


Technically this is possible but Europe has strict technical requirements that GOOSAT engineers still have to tackle: "Power usage has to be reduced; our TVs are still above the values required for Europe", we found out.

The huge numbers that GOOSAT can manufacture can also be found in other providers of TVs and digital receivers. Up until now GOOSAT has been understood to be an OEM manufacturer; they produce receivers that dealers sell under their own brand name. If GOOSAT were to find a suitable brand name and acquire it, then this situation would change.

"We are ISO certified", explains Josie Yang, "That has helped us to further optimize our production process; the knowledge contained in the ISO standard is actually quite useful for a perfect production line."

That's how the company, founded by Mick Maio in 2004 ("our first office was 14 Sq-meters in size"), has managed in just a few years to become one of the top digital TV manufacturers and thanks to the most modern production facilities have formed and excellent foundation to actively take part in the development of the international digital TV market.







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- 6. What is this Software Team employee doing? She has an exciting job; she is developing 3D technology for GOOSAT products. Michelle is Project Manager in the R&D Team and is testing the function of a brand new GOOSAT 3D model. We can't wait for this receiver to become available!
- 7. In the software testing lab. Hui Li (center) runs the team that checks the receiver software functions.
- 8. The hardware testing room. New receivers models are checked here against their technical specifications. The 12 engineers have access to the most modern test equipment.
- 9. An employee is checking the function of a receiver using this super test instrument from Rohde&Schwarz. The instrument generates the various digital TV standards from around the world so that the receivers can be checked to see if they work with these different standards.







Circuit Board Production

10. Frank Ma is arguably the most important man in production; he's in charge of the section with the SMT machines. "Roughly four million USD was invested here", namely in a total of eight of the newest SMT systems. "Each SMT line is operated around the clock in two shifts from 8AM to 8PM. We can manufacture 1500 HD receiver circuit boards or 3000 SD receiver circuit boards on each machine. On top of that we produce lead-free!" At the moment production puts out about 300,000 pieces every month; in 2012 it will increase to 500,000 pieces. The machines are located in a clean room and can only be accessed through a special air lock. This guarantees extremely high production quality.

- 11. An employee is examining a circuit board for obvious defects before she sends it to an oven.
- 12. This AOI (Automatic Optical Inspector) checks the circuit boards for the smallest of defects fully automatically. Each GOOSAT SMT machine leads to the AOI at the end of the oven in which the surface mounted components are soldered onto the circuit board. Here we see two AOIs at the end of the oven and then...
- and then...

 13. ...here we see one of GOOSAT's all new double ovens: it is fed by two SMT machines. At a T junction (center) the two conveyor belts from the two SMT machines meet; the two circuit board belts run parallel into the oven. The best part: "If one of the SMT machines is loading an HD circuit board and the other is loading an SD circuit board, then the two conveyor belts run at different speeds through the oven", explains SMT Manager Frank Ma. "One HD circuit board carries from 400 to 600 components while an SD circuit board only carries from 200 to 500 components." The soldering process runs at 274°C so the HD circuit board that has more components must run at a slower speed through the oven. The monitor on the oven displays the two conveyor belts (middle of the monitor) and the circuit boards on the belts (black dots).





Receiver Assembly

- 14. Factory Manager Ren watches over a production employee. He explains: "140 employees assemble here each shift on five assembly lines."
- 15. Video function in-process inspection.
- 16. Samples from the circuit board production line pass through quality control before assembly and are functionally checked.
- 17. The tuner is placed on the circuit board here.





24. Alvin is in charge of the Sales Team. In the past you could find him at almost any trade show. Today, though, he works more out of his office. He is constantly in contact with international customers. The Calligraphy on the wall means "If you work hard, you'll get rewarded".

25. If you want to purchase GOOSAT products as a dealer or distributor, you'll end up with the Sales Team. 35 employees handle orders that come in from around the world. Currently, the majority of GOOSAT's exports land with customers in The Middle East as well as Europe although the new markets emerging in South America (ISDB-T) and Africa (DVB-T2) have recently come into the focus of GOOSAT's Sales Managers.

