

FDCT Projects

- High-performance wideband data conversion interfaces for an evolving informative world, 055/2012/A2, MOP4,332,630
- Design of digitally-controlled low-dropout regulators, 122/2014/A3, MOP1,174,300
- Development of a system-in-a-chip (SOC) integrated circuit for closed-loop neuronal manipulation of in vivo behaving animals , 093/2015/A3, MOP1,225,000
- Design of voltage references and regulators for IoT, 093/2016/A, MOP320,000
- Integration of Digital & Channel Microfluidic Systems for High-throughput Drug Screening, 110/2016/A3, MOP1,923,000
- R&D Timing Interleaving Techniques in Multi-channel High-speed Data Converters for Communication Systems, 117/2016/A3, MOP1,636,000
- Study and design of DC-DC KY boost converters in nanoscale CMOS technology, 120/2016/A3, MOP1,200,000
- Research on mm-size Extremely Power-Constrained Implantable ECG System on Chip Design, 006/2016/AFJ, MOP1,808,000, **NSFC-FDCT Joint Project**
- Low DC-link voltage and wide operation range hybrid grid-connected inverter for integrating renewable energy generation and power quality conditioning, 025/2017/A1, MOP1,110,000
- Research of Power Efficient Wideband Oversampling Delta-Sigma Modulator ADCs, 076/2017/A2, MOP1,247,200
- R&D Wideband Delta Sigma Modular for Next Generation LTE Mobile Communication Standard, 077/2017/A2, MOP1,540,000
- Research and Realization of Ultra-low-power Phase Quantizer and Power Management for IoT Wireless Communication Application, 0068/2018/A2, MOP1,543,000
- Low-Phase-Noise Wideband Oscillators and Frequency Synthesizers for 5G mm-Wave Transceivers in CMOS, 0044/2019/A1, MOP1,469,000
- Pico-pipette in Digital Microfluidic System for Precise Sample Delivery with Wide Range, 0053/2019/A1, MOP2,243,000
- Hybrid DC-DC Converter with High Efficiency High Power Density and Large Voltage Conversion Ratio, 0093/2019/A2, MOP1,777,000
- Research and Development of Ultra-low-power PUF circuits for emerging IoT Systems, 0108/2019/A2, MOP1,550,000
- Ultra Low Power Analog Edge Computing Artificial Intelligence Chip for Internet-of-Things, 0110/2019/A2, MOP1,266,800
- An integrated design for Real-time Closed Loop Optogenetic Neural Control (CLONC) system for advanced neuroscience applications, 0144/2019/A3, MOP1,182,000
- Research on Power Management System for Multi-core CPU, 0145/2019/A3, MOP1,605,000
- Research on Key Technologies of Millimeter Wave Sampling Ultra-High Speed Analog-to-Digital Converter, 0003/2019/AFJ, MOP1,953,500, **FDCT-MOST Joint Project**
- SeaSenseX - Next-generation microsensors for marine mutagens and carcinogens, 0011/2019/APJ, MOP1,000,000, **FDCT-FCT Joint Project**
- Digital Microfluidic Chip for Fast Coronavirus Detection (Anti-NCP epidemic), 0018/2020/A, MOP408,000, **Novel Coronavirus Pneumonia (NCP)**

PROJECTS

- Research on Key Control Technologies of Dynamic Wireless Power Transfer System for Electric Vehicles, 0028/2020/A1, MOP1,288,000
- Ultra-Low-Voltage (sub-0.5V) Single-Crystal-Multi-Clock Reference System for Energy-Harvesting IoT Devices, 0043/2020/A1, MOP1,360,000
- Customized high-voltage interfacing silicon-on-insulator integrated circuit for miniaturized magnetic resonance imaging system, 0071/2020/A2, MOP1,389,000
- Research and Development on Ultra-Compact Energy Harvesting Power Management IC for mm-Scale Internet of Things Application, 0148/2020/A3, MOP1,987,000
- Development and Industrialization of New Generation of Shipborne Solid-State Navigation Radar, 0036/2020/AGJ, MOP1,012,000, **FDCT-GDST Joint Project**
- Development and Industrialization of Mobile Robotic Core Integrated Circuits Based on Simultaneous Localization and Mapping (SLAM) with Visual-LiDAR Fusion and Voice Interaction, 0052/2020/AGJ, MOP828,000, **FDCT-GDST Joint Project**
- Digital Microfluidic System for Breast Cancer Biomarker Detection and Drug Screening, 0072/2020/AGJ, MOP977,000, **FDCT-GDST Joint Project**
- Develop Power-Efficient High-Resolution GHz-Range Analog-to-Digital Converters in Advanced Nanometer-Scale Technology, 0004/2020/AKP, MOP11,957,000, **FDCT-AKP**
- R&D of Millimeter-Wave Multi-Resonant-Tank Voltage-Controlled Oscillator for 5G Communication, 0024/2021/A, MOP410,000

* **FDCT-NSFC:** The Science and Technology Development Fund - National Natural Science Foundation of China Joint Project

* **FDCT-MOST:** The Science and Technology Development Fund - Ministry of Science and Technology Joint Project

* **FDCT-FCT:** The Science and Technology Development Fund - Fundação para a Ciência e a Tecnologia (FCT) (Portugal) Joint Project

* **FDCT-GDST:** The Science and Technology Development Fund - Guangdong Department of Science and Technology Joint Project

* **FDCT-AKP:** FDCT Key Project

NSFC Fund

用於GPU的細粒度、全集成電源管理系統, 61974046, RMB590,000

用於毫米波無線通訊應用的高能效模數轉換器, 61604180, RMB190,000

面向48V電源系統的高集成、低損耗混合結構負載點轉換器, 62104269, RMB240,000

Industrial Consultancy Projects

Over MOP 14,000,000 of industrial consultancy projects with companies in the Greater Bay Area, in the area of ADC, PLL, DC-DC Converter and microfluidics in 2017 – 2020.