



Empower
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钰泰半导体产品手册 Product Manual

2024Q4



ETA9140 High Performance PMIC
for Storage Market

Dual-phase Composite
Buck Controller

ETA2800

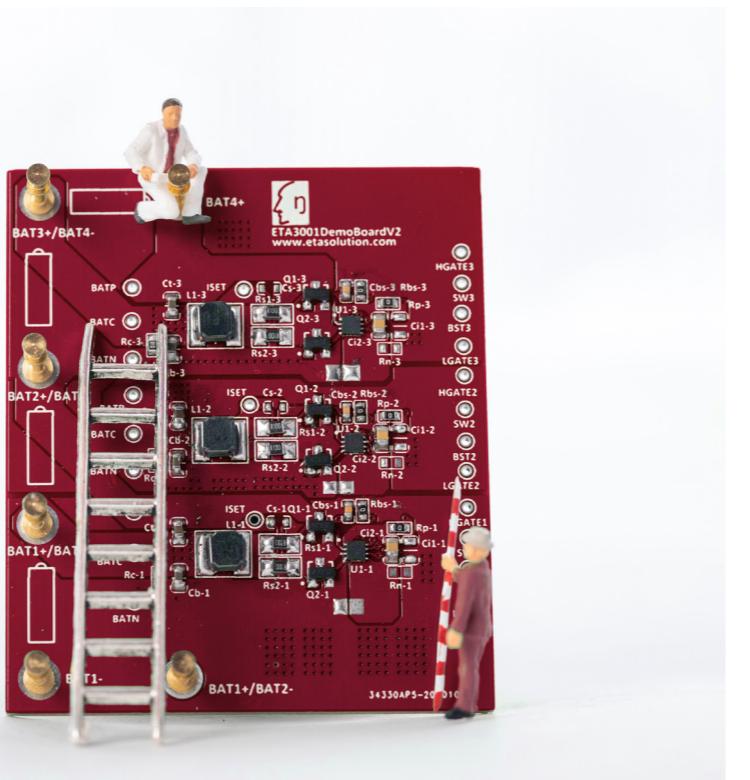
*coming soon



关于钰泰 About ETA

钰泰半导体股份有限公司聚焦于电源管理类集成电路产品的研发、设计与销售，是国家鼓励的重点集成电路设计企业和高新技术企业。公司拥有超过700款在售产品，DC/DC、LDO、电池管理、多通道PMIC、LED Driver、AC/DC、OVP、Load Switch、Level Shift、Amplifier、Sensor、电机驱动和电源模块等电源管理细分品类，广泛应用于通信设备、工业控制、消费电子、汽车电子等诸多领域，是智能电表、安防监控、手机、智能穿戴设备、智能家居设备、机顶盒、路由器等领域的的主要芯片供应商。

ETA is a key power management IC design high-tech enterprise and focuses on the R&D, design and sales of power management IC products. ETA has more than 700 products in production, covering DC/DC, LDO, battery management, PMIC, LED driver, AC/DC, OVP, load switch, level shift, amplifier, sensor, motor driver, power module and other power management sub-categories, which are widely used in communication equipment, industrial control, consumer electronics, automotive electronics and many other fields. ETA is one of the main suppliers of power management IC in the fields of smart meters, surveillance, mobile phones, smart wearable devices set-top boxes and routers.,



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公司优势 Why Choose us

全面的技术架构 Comprehensive Technical Architecture

坚持自主正向研发，已在电源管理芯片领域构筑了全面的技术架构体系，兼具DC/DC、LDO、电池管理、马达驱动、多通道PMIC和ACDC等多类别产品的设计能力。

We insist on independent and positive R&D and has built a comprehensive technical architecture system in the field of power management chips, we has the design capabilities of LDO, battery management, motor driver, PMIC, ACDC and other types of products.

丰富的产品线 Rich Product Line

超700款在售产品，覆盖DC/DC、LDO、电池管理、多通道PMIC、LED Driver、AC/DC、OVP、Load Switch、Level Shift、Amplifier、Sensor、电机驱动和电源模块电源管理细分品类，能够提供全方位、一体化的电源管理方案。

We have more than 700 products on sale, covering DC/DC, LDO, battery management, PMIC, LED driver, AC/DC, OVP, load switch, level shift, amplifier, sensor, motor driver, power module and other power management sub-categories, and can provide customers with comprehensive and integrated power management solutions.

全球化的研发团队 Global R&D Team

拥有全球化的研发团队，在中国多地、美国、越南、新加坡设有研发中心。研发骨干具有十五年以上模拟芯片领域的研发经验，研发团队超150人。

We has built a global R&D team with R&D centers in China, the United States, Vietnam and Singapore. Core R&D Team has more than 15 years of R&D experience in the field of analog chips, and our R&D team has more than 150 people.

优质稳定的供应链 High-quality and Stable Supply Chain

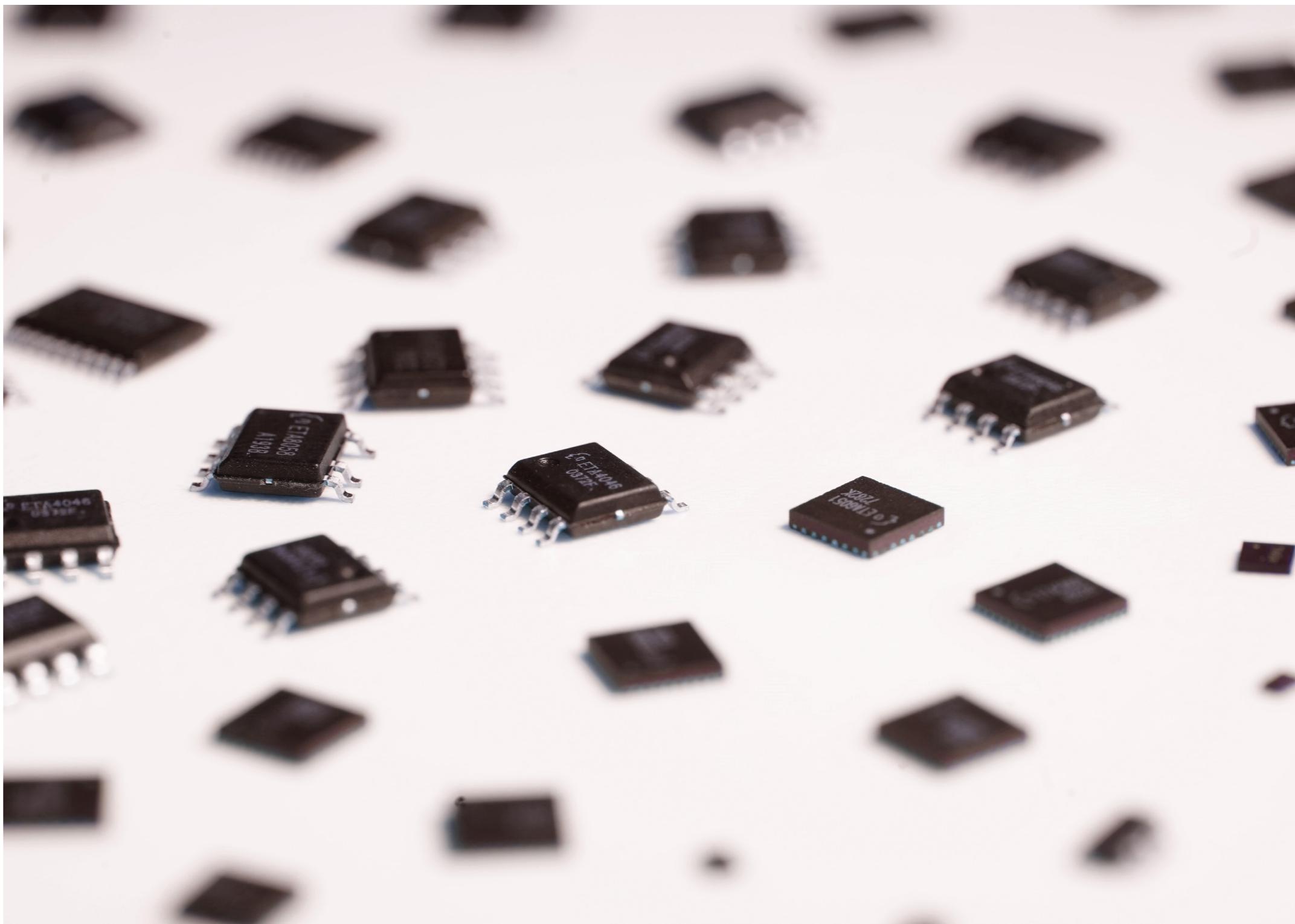
合作伙伴包括DBHiTek、和舰芯片、新唐科技、长电科技、华天科技等国内外知名厂商，长期保持着稳固、紧密、高效的合作关系。

Our Partners such as DB HiTek, Hejian Chip, Nuvoton, JCET, HT-Tech, etc. are all well-known domestic and foreign manufacturers with advanced technology, and We has maintained a stable, close and efficient cooperative relationship with them for a long time.

高质量品牌客户资源 High-quality Brand Customer Resources

产品广泛覆盖在通信设备、工业控制、消费电子、汽车电子等应用领域，并取得细分行业顶级客户的认可。

Our products are widely used in communication equipment, industrial control, consumer electronics and other application fields, and have been recognized by top customers in subdivided industries.



02 低压差线性稳压器 LDO

>30V HV Buck

Output Current	<1A	1A	1.5 A	2A	2.5A	3A	4.5A	5A
V _{IN}			ETA2821 38V 1.5A non-sync 650kHz SW Freq. PFM+PWM SOT23-6			ETA2807 35V 3A,CC/CV 250kHz SW Freq. PFM+PWM FCTSOT23-6	ETA2806H ETA2805/28331 35V 4.5A,CC/CV 500kHz SW Freq. PFM+PWM ESOP-8	ETA2805/28331 35V 5A,CC/CV 120~1100kHz PFM+PWM ESOP-8
35-38V						ETA2808 35V 3A,CC/CV 120~1100kHz PFM+PWM ESOP-8/ DFN3x3-10	ETA2809 35V 4.5A,CC/CV 250kHz SW Freq. PFM+PWM FCTSOT23-8 FCDFN3x3-8	
40-50V	ETA2850/2 42V 0.6A,COT 600k/2MHz SW Freq. 0.1% output ripple (2850) SOT23-6	ETA2853/L 40V 1A,COT 0.1% output ripple 500kHz/2MHz SOT23-6	ETA2893B 40V 2A 9uA ultra-low Iq 130k~1.1MHz PFM+PWM ESOP-8	ETA2892/3/4 40V 3A 9uA ultra-low Iq 130k~1.1MHz PFM+PWM/FPWM ESOP-8/ QFN3x4-24				
60-100V			ETA1860 60V 1.5A,COT 200K~500KHz PFM+FPWM ESOP-8	ETA1803 60V 2.5A,COT 200k~800kHz PFM+PWM/FPWM DFN3x3-10				
			ETA1805 85V 1.5A,COT 200k~800kHz PFM+FPWM ESOP-8					

特色产品Featured Products

ETA1803

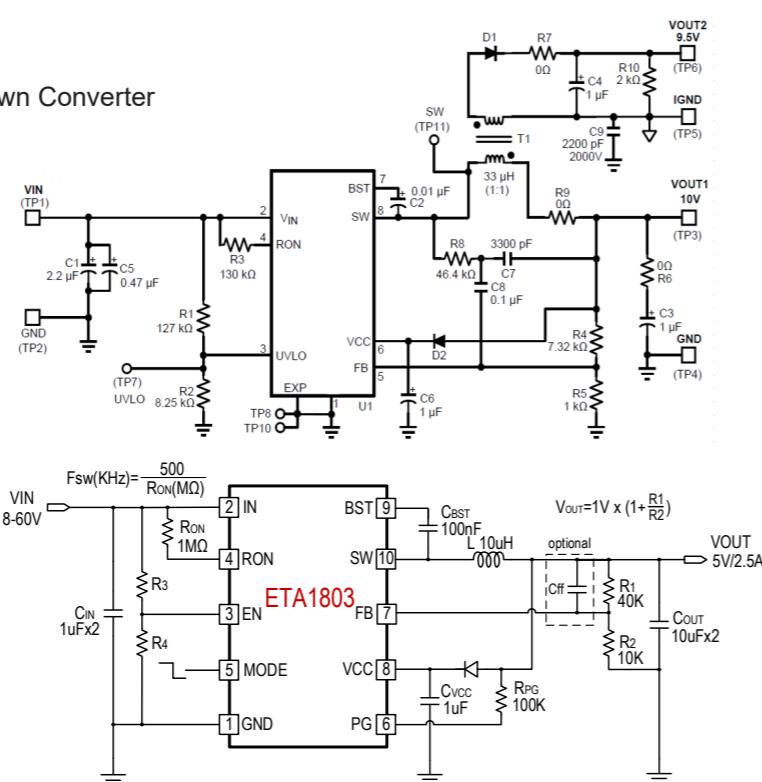
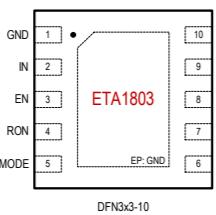
60V/2.5A, High Efficiency Synchronous Step-Down Converter

Features

- Wide Input Range: 8V-60V
- 65V Standoff Input Voltage
- Up to 2.5A Output Current
- Adaptive COT Control
- Adjustable Switching Frequency
- Selectable Power Save and Forced PWM Mode
- Ultra-fast Load Transient Response
- Internal Power FETs
- Thermal Shutdown and UVLO
- Available in DFN3x3-10 Package

Applications

- Telecommunications infrastructure
- Asset and fleet management systems
- Video surveillance



Output Current	0.15A	0.2A	0.3A, 0.35A	0.5A	1A	>1A	
V _{IN}	ETA5070 7V 150mA 0.7uA Iq DFN1x1-4/SOT23-5			ETA5051/2 5.5V 300mA 80dB PSRR 30uVRMS noise SOT23-5, fixed SOT23-6, adj	ETA5055 5.5V 500mA 4.5uA Iq, 94dB PSRR DFN1x1-4 / 2x2-6 SOT23-5 /CSP-4/SOT89-3	ETA5060/1 5.5V 1A Low drop:140mV at 1A DFN1.2x1.6-8 SOT89-5 DFN2x2-6,-8	ETA5062/3 5.5V, 1.5A/2A Low Iq 12uA Low Dropout Fixed/Adj output ESOP8
5-8V LV				ETA5030/5053 6V 300mA SOT23-3/DFN1x1-4/ SOT23-5	ETA5050 6V 500mA 37 uA Iq SOT23-5	ETA5253/4 6V 500mA Dual Channel 37 uA Iq SOT23-6	
10-30V MV				ETA5057 6.5V 300mA 1uA Iq, 69dB PSRR DFN1x1-4/SOT23-5	ETA5255 5.5V 350mA 80dB PSRR 30uVRMS noise DFN1x1-4/SOT353	ETA5056 6V 500mA 60dB PSRR Adj/fixed output SOT23-5/DFN1.6x1.6-6	
>30V HV			ETA5220 12V, 200mA 0.8uVRMS 69dB @ 1MHz MSOP-10/DFN3x3	ETA5020/5122/5123 16V/200mA 2uA Iq 66dB@1kHz DFN2x2-6/SOT23-5/89-5/23-3	ETA5021 20V/500mA 2uA Iq 66dB@1KHz SOT89-3/ESOP8		
			ETA519x 24V 200mA LDO+ Load switch SOT23-6/SOP8/ESOP8				
			ETA5080 80V 200mA 2.4uA Iq MSOP-8/SOT89-3	ETA504x 45V 300mA 2.5uA Iq, 70dB PSRR@1KHz SOT23-5/ SOT89-3/ ESOP8/ DFN 1.6x1.6-6			

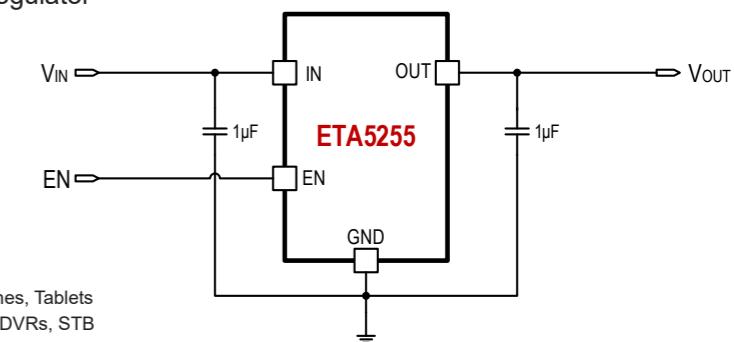
特色产品Featured Products

ETA5255

Ultra-High PSRR, Ultra-Low noise, 500mA Linear Regulator

Features

- Operating Input Voltage Range: 1.9V to 5.5V
- Fixed Output Voltage Range: 1.8V to 5V
- Ultrahigh PSRR: Up to 95dB at 20mA and 1kHz
- Ultralow Noise: 6uVRMS at 3.3V
- Low-Dropout Voltage: 88mV at 3.3V/250mA
- ±2% VOUT Accuracy Over Temperature
- Excellent Load and Line Transient Responses
- Stable with a Minimum 1μF Out Capacitor
- Pb Free, RoHS and REACH Compliant
- Halogen Free and “Green” Device



- RF Power
- Smartphones, Tablets
- Cameras, DVRs, STB

21 以太网供电芯片 PoE IC

PD (Power Devices) Interface

Part No.	PoE standards supported	PoE power level	DC/DC control	Package	PoE current limit (mA)	PoE inrush limit (mA)	Hot-swap Switch (mΩ)	Features
ETA7978	IEEE 802.3af/at	13W, 25W	PD Only	ESOP8/DFN3*3-10	1A/0.5A (Auto-adjustable Based on Classification)	140	100V, 0.5Ω	2-Event Classification, Power Good Indicator, Type-2 PSE Indicator, Auxiliary Adapter O-Ring Power Supply, MPS, Thermal shutdown

PD (Power Devices) DC-DC

Part No.	Topology	Iout (A)	Vin Min (V)	Vin Max (V)	PoE standards supported	PD power level	Package	Features
ETA7002	Flyback	1.5	36	60	IEEE 802.3af	13W	ESOP8	An integrated 0.57Ω 120V Power Switch Programmable Switching Frequency Integrated 100V Startup Circuit Internal Slope Compensation Disable Function, Built-in Soft-Start, Auto-Restart for Opened/Shorted Output Zero Load Regulation
ETA1860	Buck	1.5	7	60	IEEE 802.3af	13W	ESOP8	100V Standoff Input Voltage Adaptive COT Control Programmable Switching Frequency Ultra-fast Load Transient Response High Efficiency PFM Mode at Light Load Internal Power FETs
ETA1803	Buck	2.5	8	60	IEEE 802.3af/at	13W	DFN3*3-10	65V Standoff Input Voltage Adaptive COT Control Programmable Switching Frequency Ultra-fast Load Transient Response High Efficiency PFM Mode at Light Load Internal Power FETs

特色产品 Featured Products

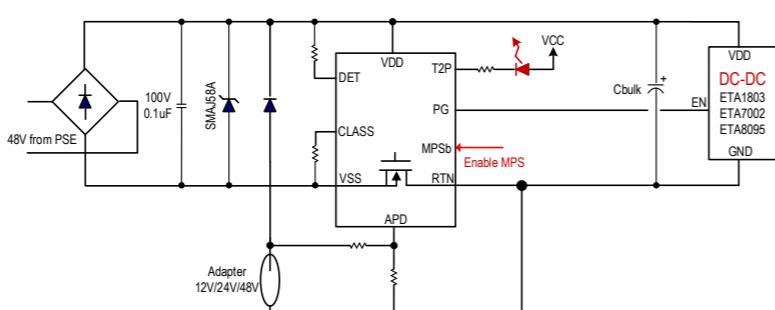
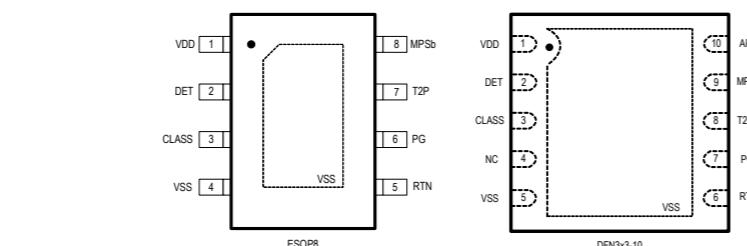
ETA7978

PoE-PD Interface Controller

Features

- Compatible with 802.3af/at Specifications
- 100V, 0.5Ω Integrated Hot-swap Switch
- 120mA Inrush Current Limit
- 840mA Operation Current Limit
- 2-Event Classification
- Auxiliary Adapter O-Ring Power Supply
- Adapter Priority Input
- Support MPS (Maintain Power Signature) Function
- Open-Drain Type-2 PSE Indicator
- Over-Temperature Protection (OTP)
- Package

ESOP-8 (p2p TPS2378)
DFN3x3-10(p2p MP8003A)



22 车用芯片 Automotive IC

Automotive Buck

Output Current	<1A	1A	2A	3A
V _{IN} 5.5V			EQ21200 2A/5.5V 2MHz SW Freq. COT / PG/ Out discharge PFM / FPWM DFN2x2-8	
			EQ21x0x 1A, 2A, 3A/5.5V Adjustable SW Frequency up to 4MHz COT / PG, PFM/FPWM SOT583/DFN2x1.5-8/SOT23-8 TPS62850x/MPQ217x	
36V	EQ24030 0.3A, 2MHz SW Freq. PFM / COT SOT23-6			EQ24x01 36V 2A/3A, 0.4/2.1MHz, PFM+PWM/FPWM QFN2x3-12
60V			EQ26200 60V 2A,COT 200k-800kHz PFM+PWM/FPWM DFN3x3-10	

Automotive LDO

Output Current	0.3A	0.5A	1A
V _{IN} 5-8V LV	EQ5130 300mA/5.5V 70dB PSRR, 1uA Iq DFN1x1-4/SOT23-5 NCV8163	EQ5150 500mA/5.5V 60dB PSRR, 37uA Iq SOT23-5/DFN2x2-6/DFN3x3-8 NCV8705	EQ5190 1A/5.5V 20uA Iq DFN2x2-6/DFN3x3-8 TPS746/MPQ20051
>30V HV	EQ5431 300mA/ 40V 70dB PSRR, 4uA Iq, PG ESOP8 AP7583Q/AQ	EQ5151 500mA/5.5V, PG SOT23-5/DFN2x2-6/DFN3x3-8 TPS745	

Automotive Local Dimming

	FET Controller	64CH	128CH	16CH
Time Multiplex Local Dimming Backlight	EQ9610 ASIL-B 2-8 Scan FET controller 20V VLED Max control 8 PFET Total solution with ETA9618/9 QFN 4*4	EQ9618 ASIL-B 16 x 90mA (With 4 Scan) Up to 20V VLED 15 bit PWM / Mixture Dimming Adaptive headroom Easy Layout and EMI Optimized	EQ9619 ASIL-B 16 x 90mA (With 8 Scan) Up to 20V VLED 15 bit PWM / Mixture Dimming Adaptive headroom Easy Layout and EMI Optimized	EQ9616 Direct Drive Local Dimming Backlight 16 x 90mA Up to 20V VLED 15 bit PWM / Mixture Dimming Compatible with Himax TCON Adaptive headroom Easy Layout and EMI Optimized

