FIBERROAD

INTRINSICALLY SAFE

INDUSTRIAL EMBEDDED SWITCH

Managed

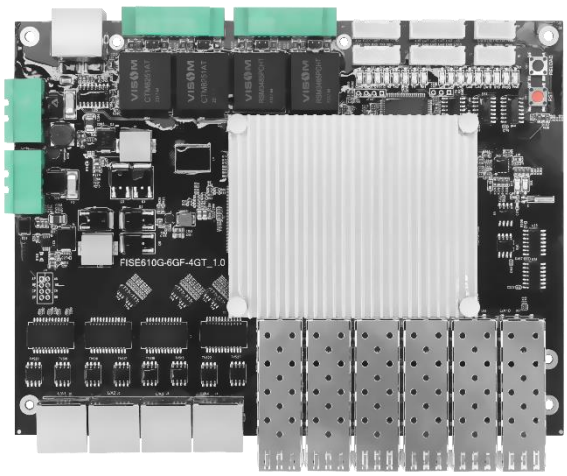
Product Data Sheet

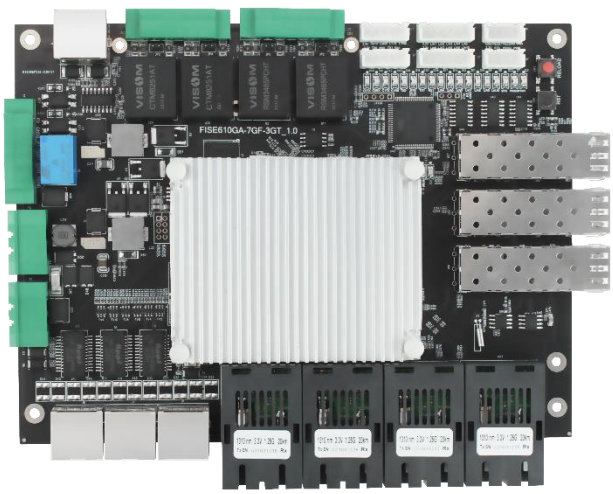
Intrinsically Safe Industrial Embedded Switch

Fiberroad intrinsically safe embedded Ethernet switch is an outstanding solution for those seeking a cost-effective and reliable network switch that can be effortlessly installed and maintained in hazardous areas. With its specialized hazardous area certification, this remarkable device allows the components to be seamlessly mounted in Zone 1 or Division 1 hazardous areas while ensuring connectivity into Zone 0. Its intrinsic safety feature guarantees utmost protection against potential explosions or fires caused by electrical sparks, making it a truly dependable choice for critical environments. This cutting-edge switch not only prioritizes safety but also offers exceptional performance, enabling seamless communication and data transmission within the network infrastructure. The engineers at Fiberroad have designed this ingenious product with simplicity in mind, ensuring that even non-technical individuals can easily install and maintain it without any hassle. With its unmatched combination of reliability, affordability, ease of use, and compliance with strict safety standards, the intrinsically safe embedded Ethernet switch from Fiberroad stands out as an excellent option for those operating in hazardous areas who value both functionality and peace of mind.

Product Features

•Flexible application: Transfer among CAN interface, Ethernet interface and RS485
•Comply with IEEE802.3, 802.3z, 802.1D, 802.1Q standards
•Supports automatic full/half duplex mode and MDI/MDIX auto-adaptation
•Supports 2xRS485 Port + 2x CAN standard port(optional)
•Supports various management functions, such as VLAN, link aggregation, multicast, static routing, and port rate limiting
•Built up Reliable optical fiber ring network supports ERPS and MSTP redundancy protocols, and the ring network convergence time is less than 20ms
•The compact design on the same side of the interface facilitates the integration of communication applications in the fusion sub-station
•Full load power consumption ≤10W, the power supply meets the requirements of the intrinsic safety circuit, support over and over voltage protection, anti-reverse design
•The whole machine meets the requirements of industrial field environment and meets the wide temperature and wide pressure Moisture-proof and mildew-proof treatment, insulation and pressure resistance design index requirements;





Ethernet Interface		
Model	FISE610G	FISE610GA
Ports	4x10/100/1000BASE-T + 6x100/1000BASE-X SFP	3x10/100/1000BASE-T + 3x100/1000BASE-X SFP+4x100/1000BASE-X 1x9
Port Mode(Tx)	Auto-Negotiation Speed Full/Half Duplex Mode Auto MDI/MDI-X Connection	
Standards	802.3x、802.3u、802.3z、802.1D、802.1Q、802.1p、802.1ab	
Packet Buffer Size	4Mbit	
Jumbo Frame	10k	
MAC Address Table	4k	
Transmission Mode	Store and Forward (full/half duplex mode)	
Switch Fabric	56Gbps	
Switching Latency	≤7us	

OT Interface	
Model	FISE610G(A)
RS485 Interface	2x Isolated RS485 Baud Rate:1200bps~115200bps Support start bit, data bit, parity bit Support 32-point polling environmental, Communication distance is 1200 meters
CAN Bus Interface	2x Isolated CAB Bus Interface Support CAN2.0A and CAN2.0B standard Baud Rate:5kbps – 1Mbps Communication distance within 2km – 5km

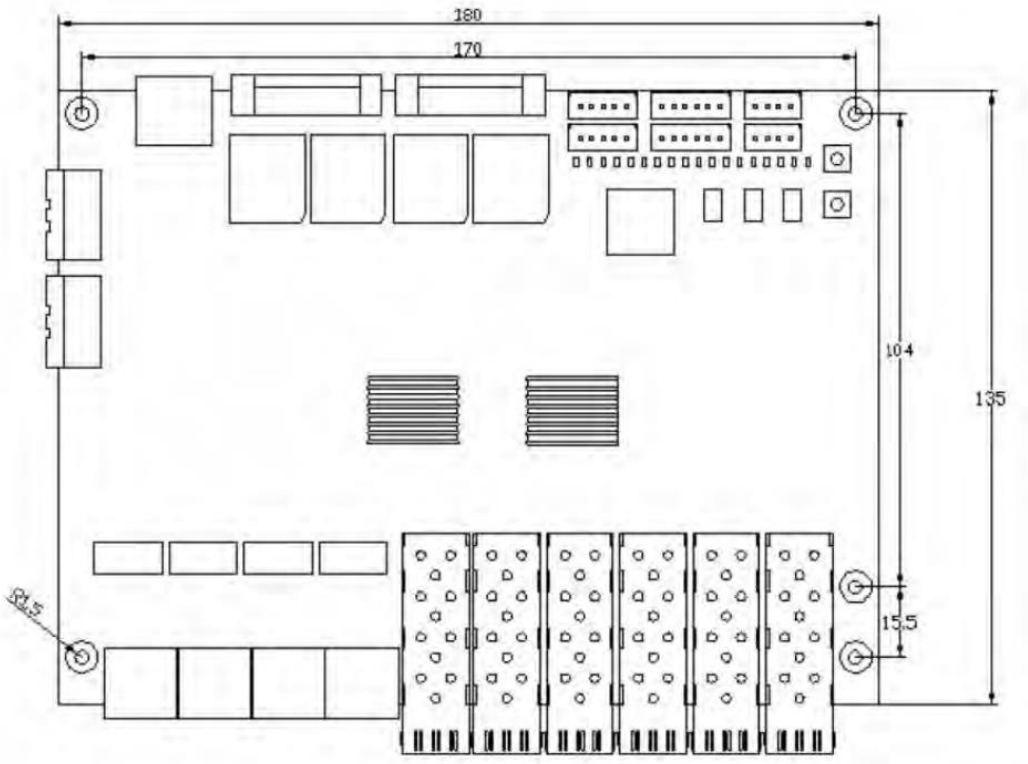
Physical Characteristics	
Model	FISE610G/FISE610GA
Dimensions	180mmx135mmx18mm
Installation	Embedded Hole Positioning
Environmental	
Operating Temperature	-40℃~75℃ (-40 to 167 ℉)
Operating Humidity	5%~95% (non-condensing)
Storage Temperature	-40℃~85℃ (-40 to 185 ℉)
MTBF	500,000 hours
Power Supply	
Power Input	DC9~36V
Connector	The 2 Pin 5.08mm Pitch industrial terminal, supports dual power input
LED Indicators	
LEDs	Power Status, System Status, Fiber and RJ45 Port Link/ACT, RS485 Send and Receive Status, CAN Data Send and Receive Status
Connectors	Support External wire,2.0mm Pitch Connectors

EMS Attributes	
Static Immunity	Air discharge ±8kv, contact discharge ±6kv
Surge Impact	Power supply common mode ±2kv/ differential mode ±1kv, network port ±2kv
Electrical transient pulse group	Power supply 1kv@5kHz, network port 0.5kv@5kHz

Software Features	
Redundancy Protocols	Support STP/RSTP/MSTP/ERPSv2, Link Aggregation
Multicast Support	Support IGMP Snooping V1/V2/V3，support GMRP, GVMP,802.1Q
VLAN	Support IEEE 802.1Q 4K VLAN，support QINQ, Double VLAN,
Time Management	SNTP
QOS	Flow-based redirection Flow-based rate limiting Flow-based packet filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS, Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	Port-based Issuing ACL ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc
Diagnostic Maintenance	Support port mirroring, Syslog, Ping
Management Function	Support CLI、WEB、SNMPv1/v2/v3，Telnet server for management, EEE, LLDP, DHCP Server/Client(IPv4/IPv6), Cloud/MQTT
Alarm Management	Support 1 way relay alarm output, RMON, TRAP
Security	Broadcast Storm Protection, HTTPS/SSLv3, AAA & RADIUS, SSH2.0 Support DHCP Snooping, Option 82，802.1X security access, Support user hierarchical management, ACL access control list, Support DDOS，port-based MAC filtering / binding, MAC black holes, IP source protection, Port isolation, ARP message speed limit
Advance Layer 2+ Features	IPv4/IPv6 Management Static Route

Dimensions

Unit: mm



Precautions

To avoid damage to the equipment and personal injury caused by improper use, please observe the following precautions:

- Keep the power off during installation, wear an anti-static wrist, and ensure that the anti-static wrist is in good contact with the skin to avoid potential safety hazards.
- The switch can work normally under the correct power supply. Please confirm that the power supply voltage matches the voltage indicated by the switch.
- Before powering on the switch, please make sure that the power circuit is not overloaded, so as not to affect the normal operation of the switch and even cause unnecessary damage.
- To avoid the risk of electric shock, do not open the case while the switch is working, even if it is not charged, do not open it yourself.
- Before cleaning the switch, pull out the power plug of the switch. Do not wipe with a wet cloth. Do not use liquid to clean it.
- The equipment installed in the rack is generally from bottom to top to avoid overload installation.
- Avoid placing other heavy objects on the surface of the switch to avoid accidents.

Order Information

Model	10/100/1000Base-T, RJ45	100/1000Base-X SFP	100/1000Base-X 1x9	RS485	CAN	Input Voltage	Operating Temp.
FISE610G	4	6	\	2	2	DC9-36V	-40 to +75℃
FISE610GA	3	3	4	2	2	DC9-36V	-40 to +75℃

The information in this document is subject to change without notice. Fiberroad has made all effects to ensure the accuracy of the information, but all information in this document does not constitute any kind of warranty. Visit our website for the most up-to-date product information

For more information

For more information about Fiberroad Smart Industrial Ethernet series products,
Visit https://www.fiberroad.com or contact your local account representative.