M12 SERIES

Railway Solution

Nowadays, proper railway infrastructure is the economic backbone for almost every country in the world. No matter if it is HSR, Inter-city rail, regional trains, commuter trains, rapid transit, tram or even light rail, passengers would like to have a pleasant journey along the road. To achieve a seamless & smooth rail operation, Wavesys provides Onboard, Wayside, and Train-to-Ground networking solutions for comprehensive infrastructure planning.

Onboard

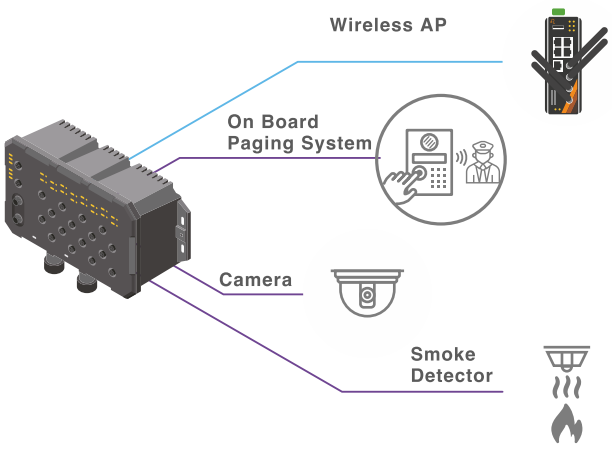
Onboard application, requiring EN 50155 standard, is combined with TCN (Train Communication Network), CCTV, PIS (Passenger Information System), and Passenger Wi-Fi. With all these systems consuming power, Wavesys provides higher PoE output standard Ethernet switches for the increasing demand on thepower output.

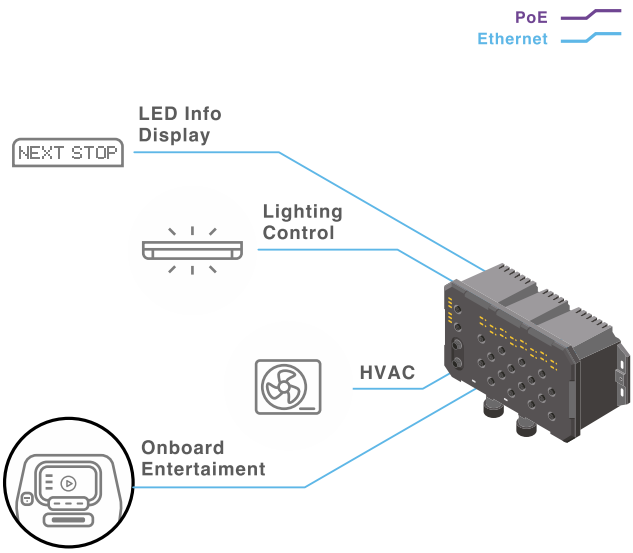
Wayside

Wayside application, requiring EN 50121 standard, is for signaling and communication purposes. Being able to collect and send the data back to the control center, Wavesys offers Ethernet switches with waterproof IP67 certification and fiber optical interface for long distance transmission.

Train-to-Ground

Train-to-Ground application, being utilized by wireless communication, sends and receives data bi-directionally, carrying both vital and non-vital data from and to the trains and ground facilities. Wavesys provides not only Ethernet switches but also wireless devices such as IoT gateway for the extended data management.



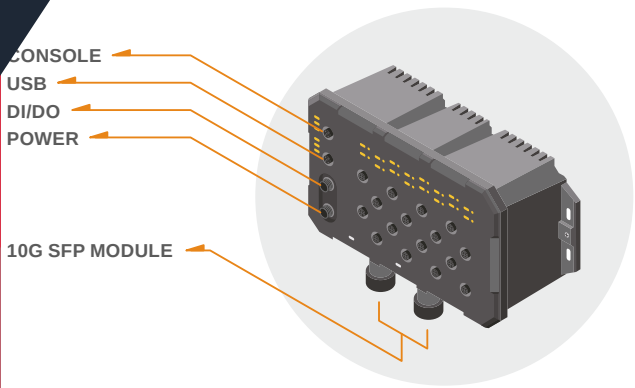


EN50155

The international standard covering electronic equipment for control, protection, diagnostic, energy supply, etc. installed on rail vehicles.

EN50121-4

The international standard covering signaling and telecommunication apparatus that is installed inside the railway environment.



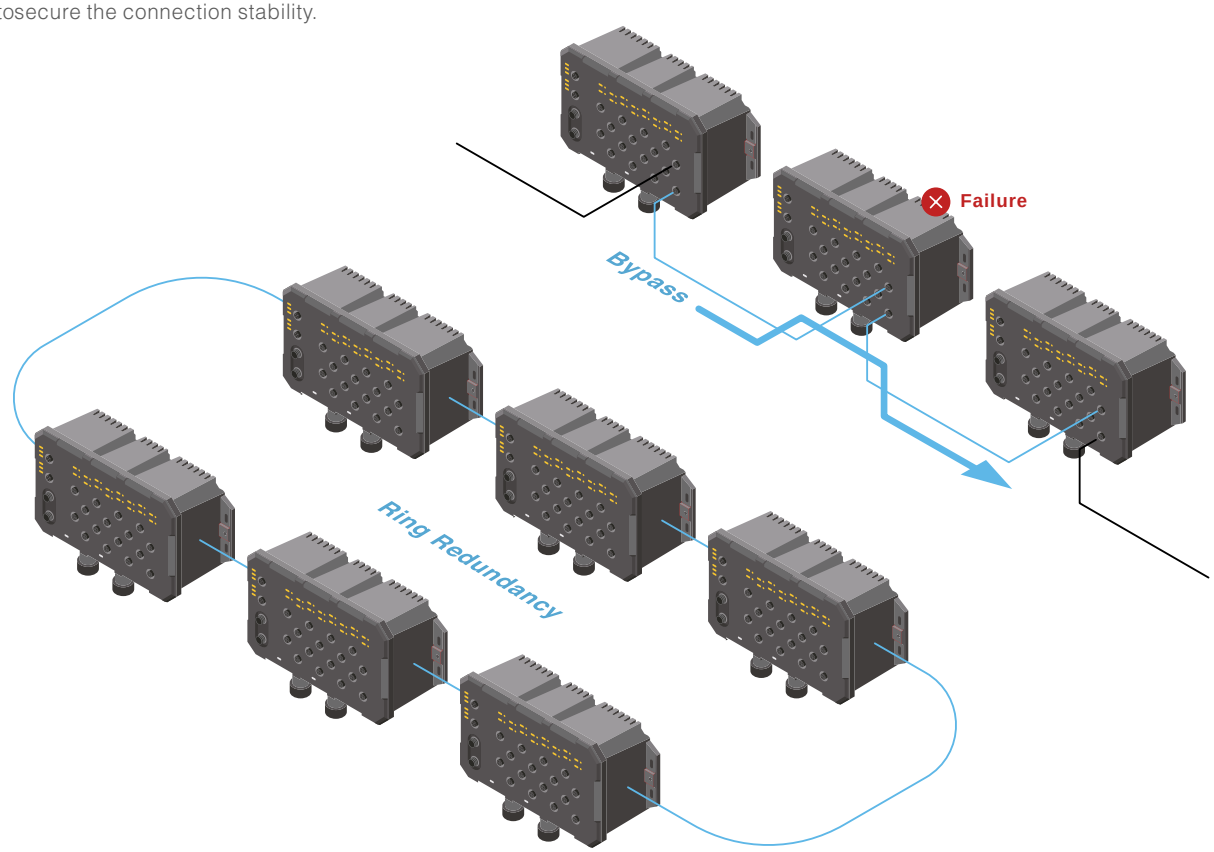
10G SFP Module Support

The industrial railway Ethernet switch, equipped with the 10G SFP fiber, first ever in the world allows users to choose suitable fiber for various applications by swapping the SFP transceivers, offering the maximum flexibility to long distance data transmission.

CONSOLE A-Coded	USB A-Coded	DI/DO A-Coded	POWER K-Coded	M12 X-Coded
1. NC 2. TX 3. RX 4. NC 5. GND	1. DN 2. VBUS 3. GND 4. DP	1. Relay Com 2. DI+ 3. DI- 4. Relay (NC) 5. NA	1. V1+ 2. V1- 3. V2- 4. V2+ 5. GND	1. DA+ 2. DA- 3. DB+ 4. DB- 5. DD+ 6. DD- 7. DC- 8. DC+

Redundancy & Bypass

Redundancy, the most crucial part of industrial networking, is ensured by the hardware bypass function. Moreover, all Wavesys managed Ethernet switches support ERPS-Ring redundancy tosecure the connection stability.



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