

Ethernet Interface Module Guide

RAD offers six Ethernet interface modules, which are used in different RAD standalone and modular products. They are also available for OEM projects. These interface modules serve as Ethernet/Fast Ethernet bridges and IP routers, with or without VLAN support.

This guide compares the Ethernet interface modules manufactured by RAD in terms of their main features, compatibility and technical specifications. In addition, it lists RAD products, which support the modules.

	WAN Rate (Mbps)	Compatibility	VLAN Support	LRS Support
IR-ETH	10	IR-ETH, IR-ETH/Q, Web RANger II, FCD-IP, FCD-IPM	No	Yes
IR-ETH/Q	2	IR-ETH, IR-ETH/Q, Web RANger II, FCD-IP, LA-240	Yes	Yes
IR-ETH/QN	11	IR-ETH, IR-ETH/Q, IR-ETH/QN	Yes	No
IR-ETH/QH	45 max	IR-ETH/QH	Yes	No
IR-ETH/V	11	IR-ETH, IR-ETH/Q, IR-ETH/QN	Yes	Yes
IR-IP	10	Any IP device	No	Yes

Notes

- It is recommended to operate the IR-ETH/Q interface module at 2 Mbps WAN rate with 128 bytes or bigger frames (including VLAN frames).
- When operating IR-ETH/Q with 64 bytes frames, the WAN rate is limited to 1.45 Mbps.

Interface Module	LAN Table [addresses]	Frame Size [bytes]	Filtering & Forwarding [packets per second]	Buffer [frames]	Latency* [μs]	Line Code	WAN Protocol
IR-ETH	10,000	1518	15,000	256	350 at 10 Mbps LAN rate	Manchester	HDLC
IR-ETH/Q	2,048	1522	3,500	256	350 at 10 Mbps LAN rate	Manchester	HDLC
IR-ETH/QN	512	1536	150,000	85	650 at 100 Mbps LAN rate	Manchester (10BT) MLT3 (100BT)	HDLC
IR-ETH/QH	1,000	1536	150,000	170	1 frame	Manchester (10BT) MLT3 (100BT)	Point-to-Point
IR-ETH/V	2,048	1536	150,000	120	300 at 10 Mbps LAN rate	Manchester (10BT) MLT3 (100BT)	Point-to-Point
IR-IP	–	1534	15,000	256	1 frame	Manchester	PPP (PAP/CHAP) Frame Relay (RFC 1490) HDLC

* Latency is given for a 64-byte frame size, 2 Mbps WAN rate.

RAD Products Supporting the Ethernet Interface Modules

IR-ETH

- ASM-20, ASM-24, ASM-31, ASM-32, ASM-40, ASM-45, ASM-40CD, ASM-60, ASMi-24, ASMi24C, ASMi-31, ASMi-31C, ASMi-50, ASMi-50C, ASMi-51, ASMi-52CD
- MTMi-20, MTMi-20C
- HTU-2, HTU-2C, HCD-4, HCD-E1, HCD-E1/2W
- FOM-20, FOM-40, FOMi-40, FOMi-40C, FOMi-40CD
- RIC-E1, RIC-T1
- FCD-2L (new), FCD-E1, FCD-E1A, FCD-E1M, FCD-T1, FCD-T1M, FCD-E1L
- Optimux-XLE1, Optimux-XLT1

IR-ETH/Q

- ASM-24, ASM-31, ASM-40, ASM-40CD, ASMi-31, ASMi-31C, ASMi-50, ASMi-50C, ASMi-51, ASMi-52CD
- HTU-2, HTU-2C, HCD-E1, HCD-E1/2W
- RIC-E1, RIC-T1
- FCD-E1A, FCD-E1M, FCD-T1M, FCD-E1L, FCD-T1L
- DXC DHS
- Megaplex-2100 HS-ETH

IR-ETH/QN

- ASM-40, ASM-40CD, ASMi-52, ASMi-52CD
- FOM-40, FOMi-40, FOMi-40C, FOMi-40CD
- RIC-E1, RIC-T1
- FCD-E1A, FCD-E1L, FCD-T1L
- DXC DHS, DXC DIM
- IMX-4E1, IMX-4T1

IR-ETH/QH

- ASM-60
- FOM-E3/ETH, FOM-T3/ETH
- RIC-E3/ETH, RIC-T3/ETH
- Optimux-XLE1, Optimux-XLT1

IR-ETH/V

- RIC-E1, RIC-T1, RIC-E1/R, RIC-T1/R
- FCD-E1LC, FCD-T1LC

IR-IP

- ASM-24, ASM-31, ASM-40, ASM-60, ASMi-31, ASMi-50, ASMi-50C, ASMi-51, ASMi-51CD, ASMi-52, ASMi-52CD
- HTU-2, HTU-2C, HCD-4, HCD-E1, HCD-E1/2W
- FCD-E1A, FCD-E1M, FCD-T1M, FCD-E1L, FCD-T1L
- RIC-E1, RIC-T1, RIC-E1/R, RIC-T1/R
- DXC DHS, DXC DIM