DOCSIS 3.1 Outdoor Modem

RT006



Overview

The DOCSIS 3.1 outdoor gateway offers a highly effective and scalable solution for small cell and mobile backhaul networks over DOCSIS technology. It can be mounted on utility or street light poles to provide backhaul without other network infrastructure and create small cells supporting IoT such as IP camera surveillance and broadcast systems. This outdoor modem with IP68 design allows for high-bandwidth data transfer in harsh outdoor environments.

Features

Compliant with DOCSIS 3.1 & 3.0

Full band capture up to 1.2 GHz

Supports 2×2 OFDM Bonded Channels and 32×8 SC-QAM Channels

4 Gigabit Ethernet Ports with PoE and PoE+

Real-time and powerful Spectrum Analyzer

Supports IPv4 and IPv6

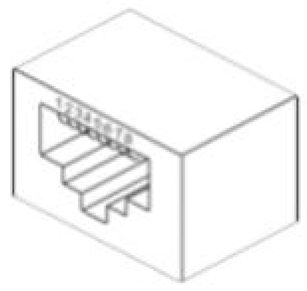
Technical Parameters

General specifications	
DOCSIS Standard	3.1
RF Interface	Female F type
Ethernet Interface	4-Port RJ45
Power Input	Cable powered 40 to 120 AC 50 / 60Hz Sin or Quasi wave
Power Consumption	8W (TYP.); 15W (Max.)
Operating Parameters Monitor	Power Consumption of System; Tamper; Temperature; RF Power Level; Voltage/Current/Class/Detect/Attenuator
Operating Temperature	-40 ~ +60°C
Surge Protection (F connector) Ring Wave Combination Wave	IEEE C62.41-1991, cat A3 6KV 200A IEEE C62.41-1991, cat B3 6KV 3KA
Dimension (L x W x H)	28.5cm x 20.5cm x 12cm
Downstream	
Frequency Range (edge to edge)	258-1218 MHz
Input Impedance	75 Ω
Input Return Loss (across freq. range)	≥ 8 dB
SC-QAM channels	
Number of Channels	32 max
Level Range (one channel)	North America (64 QAM and 256 QAM): -15 to +15 dBmV
Level Range (one channel)	EURO (64 QAM): -17 to +13 dBmV
Level Range (one channel)	EURO (256 QAM): -13 to +17 dBmV
Modulation Type	64 QAM and 256 QAM
Symbol Rate (nominal)	North America (64 QAM): 5.056941 Msym/s
Symbol Rate (nominal)	North America (256 QAM): 5.360537 Msym/s
Symbol Rate (nominal)	EURO (64 QAM and 256 QAM): 6.952 Msym/s
Bandwidth	North America (64 QAM/256QAM with α=0.18/0.12): 6 MHz
Bandwidth	EURO (64 QAM/256QAM with α=0.15): 8 MHz
Throughput	1600 Mbps (8MHz, 32 Channel Bonding)
OFDM channels	
Signal Type	OFDM
Maximum OFDM Channel Bandwidth	192 MHz
Number of OFDM channels	2
Modulation Type	QPSK, 16-QAM, 64-QAM,128-QAM, 256-QAM, 512-QAM, 1024-QAM, 2048-QAM, 4096-QAM
Throughput	3600 Mbps (2 ODFM Channels)

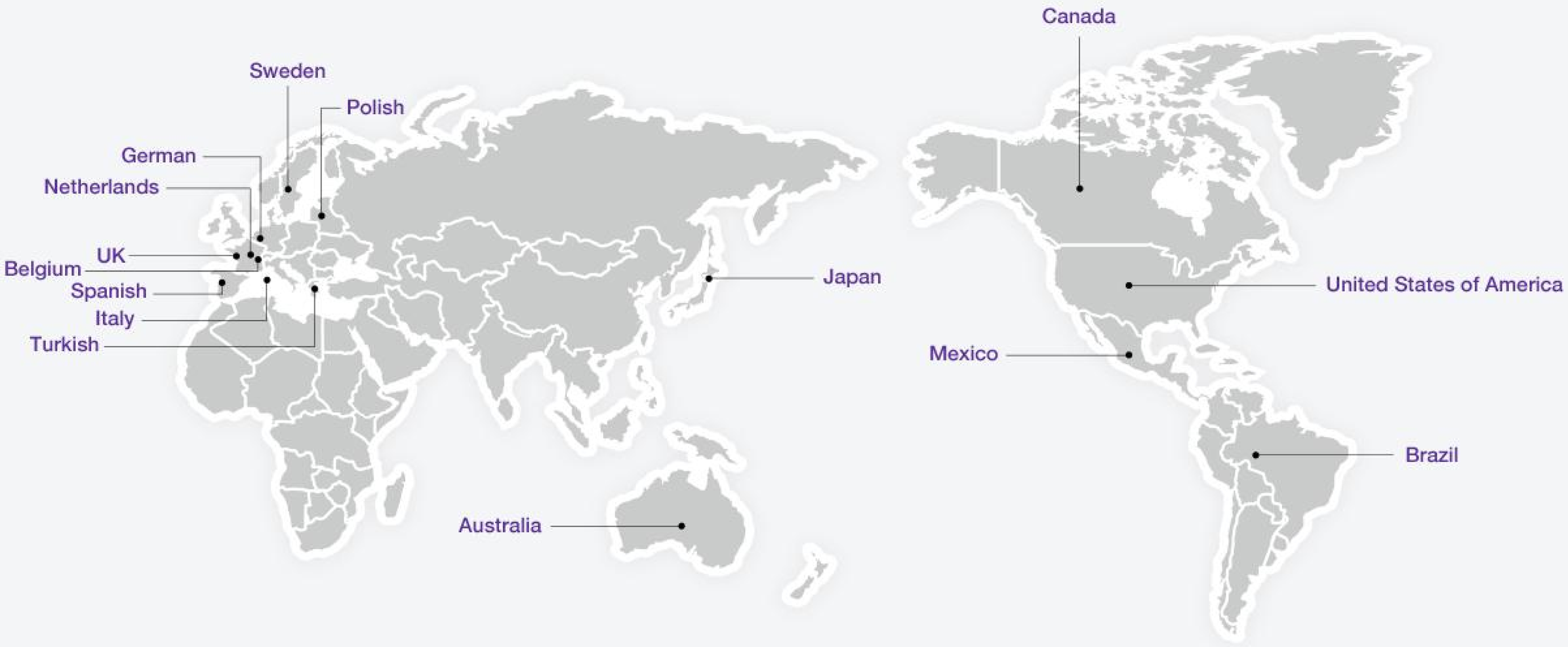
Technical Parameters

SC-QAM channels	
Signal Type	TDMA, S-CDMA
Number of Channels	8 max
Modulation Type	QPSK, 8 QAM, 16 QAM, 32 QAM, 64 QAM, and 128 QAM
Minimum Transmit Level	Pmin = +17 dBmV at ≤1280KHz symbol rate
Minimum Transmit Level	Pmin = +20 dBmV at 2560KHz symbol rate
Minimum Transmit Level	Pmin = +23 dBmV at 5120KHz symbol rate
Throughput	200 Mbps (8 Channel Bonding)

OFDMA channels	
Signal Type	OFDMA
Maximum OFDMA Channel Bandwidth	96 MHz
Minimum OFDMA Occupied Bandwidth	6.4 MHz (for 25 KHz subcarrier spacing)
Minimum OFDMA Occupied Bandwidth	10 MHz (for 50 KHz subcarrier spacing)
Number of Independently configurable OFDMA channels	2
Subcarrier Channel Spacing	25, 50 KHz
Modulation Type	BPSK, QPSK, 8-QAM, 16-QAM, 32-QAM, 64-QAM,128-QAM,
Modulation Type	256-QAM, 512-QAM, 1024-QAM, 2048-QAM, 4096-QAM
Throughput	850 Mbps (2 OFDMA Channel)

POE (Power over Ethernet)	
POE Ports	1/2/4 Configurable
Standard	IEEE 802.3af and IEEE 802.3at
Mode	Support both Mode A and Mode B, and configurable
Mode A	Twisted-pair Ethernet connection allows power to be transmitted on the data conductors. (Pins 1, 2, 3, and 6).
Mode B	10BASE-T and 100BASE-TX only requires two pairs out of four pairs for data transmissions,therefore power transmitted on unused pairs. (Pins 4, 5, 7, and 8).
POE Default	Semi-Auto (Default Factory Setting)
Ethernet Port Pin	
POE Output Capacity	PSE Side: 30W (Max.) for 2 ports + 15.4W (Max.) for 2 ports, Configurable PD Side: 25.45W (Max.) for 2 ports + 12.95W (Max.) for 2 ports
POE Output Voltage	+54V
Maximum Current	600mA per port
Ethernet Cable	CAT-5E or Better

Upstream	
Frequency Range (edge to edge)	204 MHz
Output Impedance	75 Ω
Maximum Transmit Level	+65 dBmV
Output Return Loss	≥ 8 dB



https://www.vcelink.com

Company Profile

HANGZHOU HONGJIE ELECTRONICS CO., LTD, established in 2006, is headquartered in Hangzhou, China. Under its brand "VCELINK," the company specializes in the production and sale of high-quality network accessories, network cables, optical cables, patch cords, audio-video accessories, as well as various types of tools. These products are primarily used in the fields of structured cabling, computers, and the electronics industry. VCELINK offers personalized customization services to its customers, and in addition to online direct purchases, users can also choose bulk procurement or customized services, all aimed at meeting the unique needs of various customers.

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