



Solectek KM24 PTP links bring unique advantages to the 24GHz unlicensed PTP market with ultimate flexibility in being able to adjust for desired traffic amounts in each direction in an otherwise FDD architecture with very low latency for real-time data.

Industry-leading 4096QAM modulation and 112MHz BW settings allows for 1Gbps in each direction.

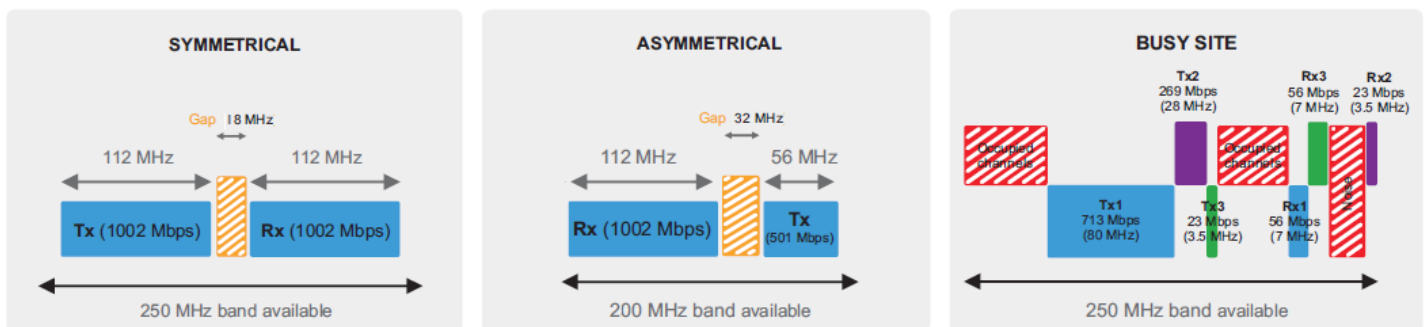
KM24's superior link budget allows class-leading long distance at full capacity (3miles / 5km, typical).

Co-location of multiple links is easy with polarization diversity (vertical and horizontal) and extremely flexible BW, channel gap, modulation for FDD config.

Low power consumption, compact form factor and SFP fiber interface facilitate installation.

FEATURE SUMMARY

- **1Gbps FDD** (2Gbps total) with ACM and ATPC
- Small compact form factor – 6.3kg with 1FT antenna mountable on a light structure.
- Flexible BW options – 3.5 to **112MHz** in each direction
- Flexible TR spacing – adjustable gap (minimum gap of 18MHz)
- Flexible modulation options – QPSK to **4096QAM** in each direction
- No dependency on GPS for colocation – traffic pattern can be tailored for each link.
- **Polarization diversity** – either V or H for easy co-location of two or more links.
- **Asymmetric FDD** – flexible traffic pattern in each direction while preserving low-latency (<200us) FDD architecture
- Low power consumption (**22W**) for solar power option
- Security provided by **AES 256-bit** encryption
- Every unit tested for reliability in climate chamber



(Left) a standard symmetric FDD setup (Center) Channels can be set up to fit asymmetric traffic patterns. (Right) multiple FDD links (blue, green purple) can be effectively set up by avoiding interference or noise (red).



SkyWay KM24 PTP Link

24GHz Unlicensed 2Gbps Radio

SPECIFICATIONS

Frequency Range (GHz)	24.00-24.25GHz (EU and other regions), 24.05-24.25 GHz (US)
Channel Spacing	3.5, 7, 10, 14, 20, 28, 40, 56, 80, 100, 112 MHz
Channel TR Spacing	Flexible, minimum 18MHz gap between channel edges
Link Capacity	2.7 to 1002 Mbps, according to modulation and BW settings
Modulation	QPSK to 4096QAM, ACM
FEC	LDPC or RS coding
Tx Output Power	-30 to 10 dBm, ATPC, no dependency on modulation
Data Interface	1 Gbe RJ-45, 1 SFP Gbe fiber slot,
Service Interface	USB-A, WiFi Adapter (option), USB Adapter
Power	POE active 37-60 VDC IEEE 802.3at; POE passive 20-60VDC, 20-60VDC direct, floating
Power Consumption	22.5 W typical, SFP max 1.25W
Time Synchronization	Sync E, 1588 v2 transparent clock
Temperature	-40 to 65°C (ETSI EN300019-1-4, class 4.1)
EMC / ESD Resistance	4kV (ENC 61000-4-5) / 8kV (EN 61000-4-2)
Dimensions and Weight	245 x 245 x 160 mm, 2.6 kg / 9.7 x 9.7 x 6.3 inches, 5.7 lbs
Antenna options	Single-pol, 1FT (37dBi, 4.0kg) 2FT (42.5dBi, 7kg) 3FT (46dBi, 17kg)
Antenna alignment	RSS voltage via BNC port
Standard Compliance	ETSI EN 300 440, EN 302 217, EN 301 489, EN 301 489-4, EN 60950-1 FCC CFR 47 Part 15

Link Capacity and Rx Sensitivity

	3.5MHz (capacity / Sens)	56MHz (capacity / Sens)	112MHz (capacity / Sens)
QPSK- S	2.7 Mbps / -99.0 dBm	48 Mbps / -99.0 dBm	97 Mbps / -85.0 dBm
QPSK	5.0 Mbps / -94.5 dBm	81 Mbps / -94.5 dBm	161 Mbps / -81.5 dBm
16 QAM	9.5 Mbps / -88.5 dBm	168 Mbps / -88.5 dBm	334 Mbps / -74.5 dBm
32 QAM	11.4 Mbps / -85.0 dBm	213 Mbps / -85.0 dBm	426 Mbps / -70.5 dBm
64QAM	14.6 Mbps / -82.0 dBm	267 Mbps / -82.0 dBm	536 Mbps / -67.5 dBm
128 QAM	17.2 Mbps / -79.0 dBm	319 Mbps / -79.0 dBm	636 Mbps / -64.5 dBm
256 QAM	19.4 Mbps / -76.0 dBm	366 Mbps / -76.0 dBm	730 Mbps / -61.5 dBm
512 QAM	21.5 Mbps / -73.0 dBm	413 Mbps / -73.0 dBm	823 Mbps / -58.0 dBm
1024 QAM	23.1 Mbps / -69.5 dBm	459 Mbps / -69.5 dBm	916 Mbps / -55.5 dBm
2048 QAM		501 Mbps / -55.5 dBm	1002 Mbps / -52.5 dBm
4096 QAM		540 Mbps / -52.5 dBm	

NOTE: Rx Sensitivity values are worst case numbers. Typical values are 1 to 2 dB higher.